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A PORTRAIT



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**The Official Handbook
of Present Conditions
and Recent Progress**

52nd EDITION

Prepared in the
Communications Division
Statistics Canada

*Published under the authority of the
Minister of Supply and Services Canada*

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Preface

This, the 52nd edition of the *Canada Handbook*, marks a turning point in the evolution of a Canadian tradition. Redesigned, and sporting a new title, *Canada: A Portrait* continues a tradition of close to 60 years of publishing excellence.

In 1931, the year the first official Handbook appeared, the editors explained the genesis of the book this way:

“As the result of the growth of the Dominion and the increasing complexity of its institutions, there is an increasing need of an official handbook of Canada, dealing with the whole range of its economic and social institutions, and giving a succinct and popular account of its problems and its progress, while devoting special attention to the facts of the existing economic situation.”

Modeled on a booklet prepared on the occasion of the Diamond Jubilee of the Confederation of Canada in 1927, the handbook was “the result of an effort to survey the Canadian situation as a whole within a reasonable space, in a popular and attractive format, and at a cost which makes possible a wide distribution.”

Then, as now, our intent remains unchanged. This, the 52nd edition of the Handbook, features data from the latest Census of Canada and a revised updated description of all aspects of the Canadian communications industry. As with past editions, *Canada: A Portrait* also includes over 200 full-colour photographs from some of the nation’s leading photographers.

The content of *Canada: A Portrait* is drawn from over 60 contributors, making it impossible to acknowledge each individually. Nevertheless, our gratitude to each remains, as does our gratitude to the Canadian public for responding to the surveys and providing the data that are the foundation of this nation’s statistical system.

Ivan P. Fellegi
Chief Statistician of Canada
Ottawa

April 1989

Canada: A Portrait is planned and edited in the Communications Division,
Statistics Canada.

Director: Douglas Newson

Chief, Compendia Publications: Ellen Henderson

Editor/Photographic design: Margaret Smith

French editor: Sylvie Blais

Cover/Graphic design: Roberto Guido

Chart design: Roger Gervais

Translation: Statistical Section, Translation Office, Secretary of State

Production: Patricia Harris, Linda MacDonald, Wendy Wong
Margo Cantin, Anita Bédard, Rita Groulx,
Elaine Brassard, Chantal Caron, Colette Mayer

Technical Assistance: André La Chapelle, Diane LeBlanc

Composition: Cheryl Van Bastelaar

Special articles:

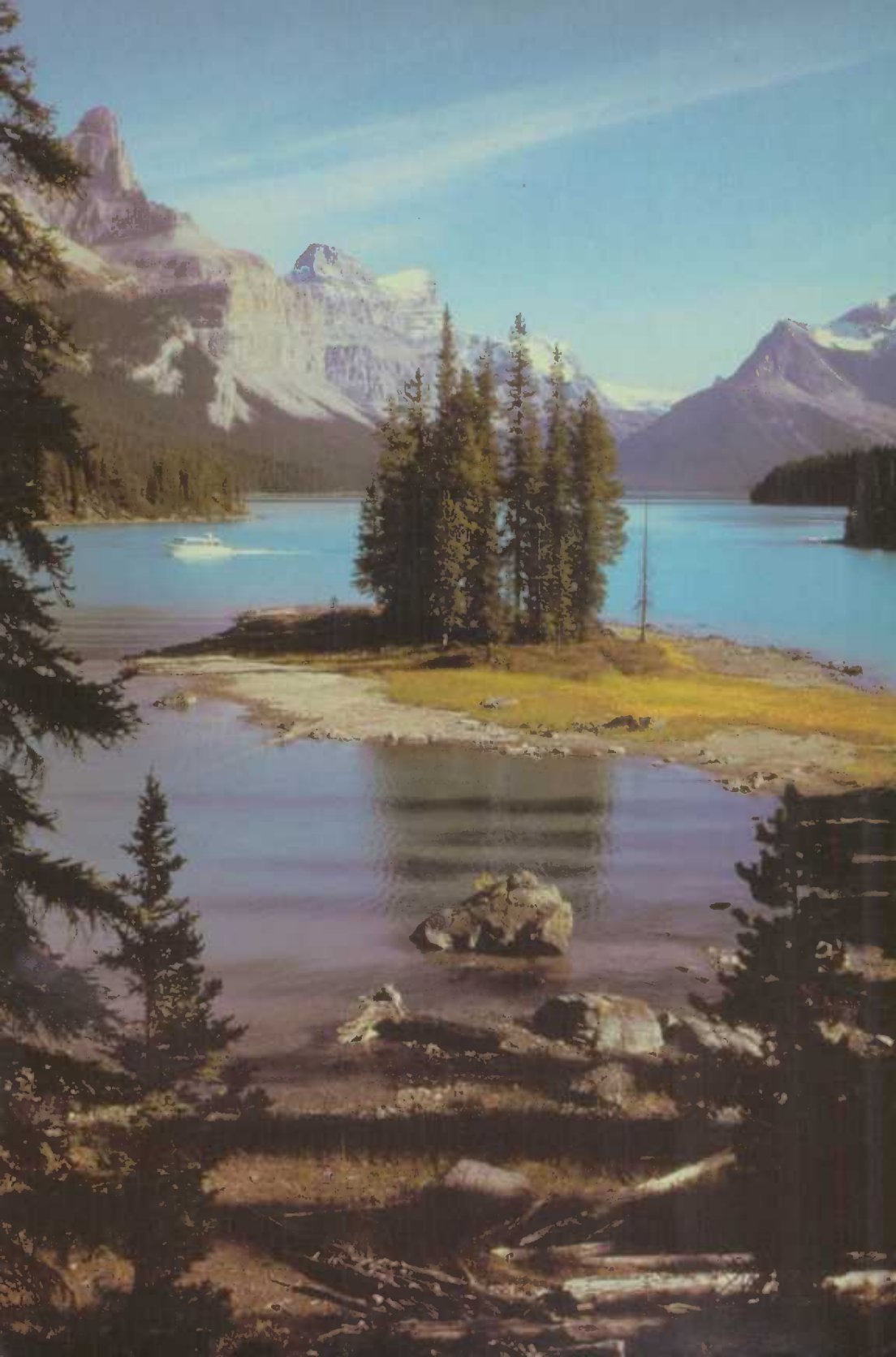
J. Lewis Robinson, *Geography*

Christopher Armstrong, *History*

V. Bruce Matthews, *Religion*

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Canada

A PORTRAIT

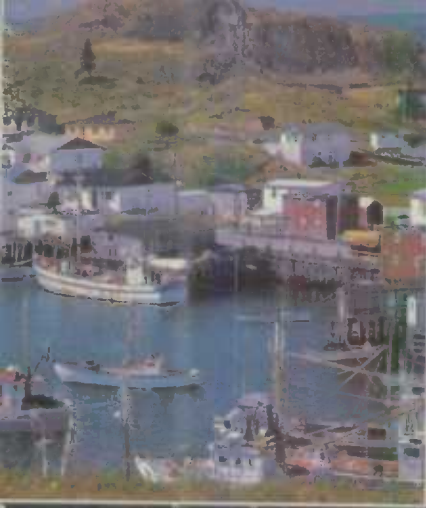
THE LAND AND ENVIRONMENT

GEOGRAPHY

Canada can be divided into six major regions to help comprehend the similarities and differences from place to place across its vast area. These regions are: the Atlantic Provinces, the Great Lakes-St. Lawrence Lowlands, the Canadian Shield, the Interior Plains, the Cordillera and the Northwest Territories. The criteria for defining these regions differ; some correspond to landform areas, whereas others are political units. Following are summaries of the characteristics and definitions of each region.

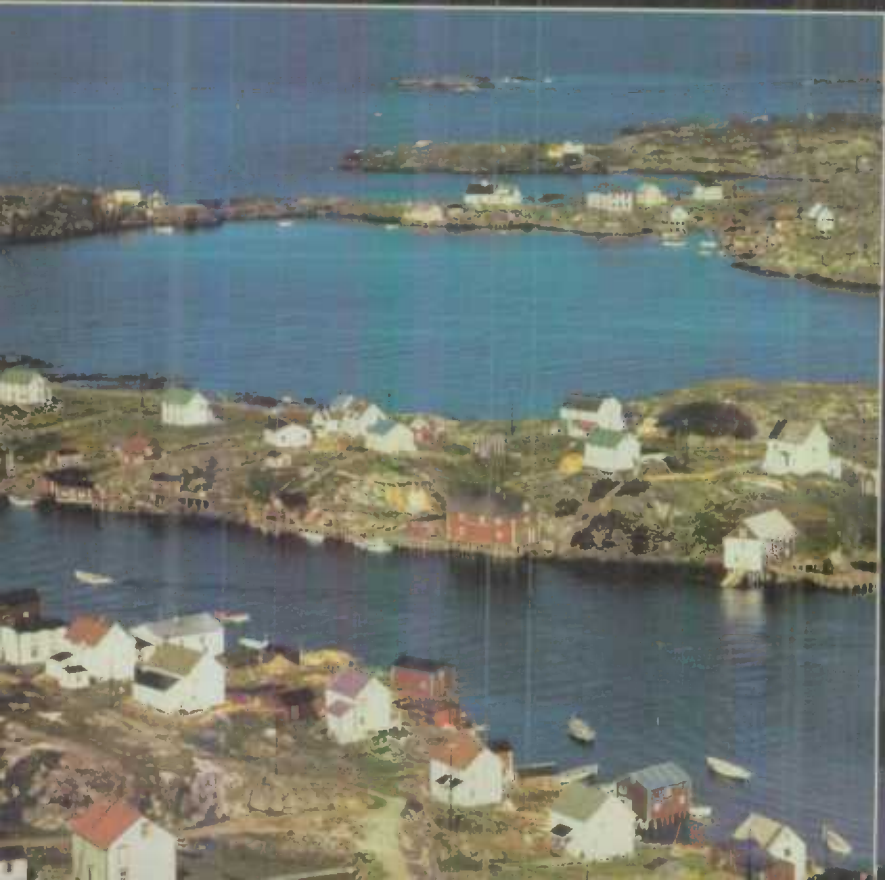
The Atlantic Provinces are mainly defined politically and include the three Maritime provinces — New Brunswick, Nova Scotia and Prince Edward Island — and the island of Newfoundland. Two of the distinctive characteristics of this region are a relatively fragmented economy and a dispersed population.





Ports of Newfoundland

1. Pouch Cove.
2. Notre Dame Bay.
3. Port de Grave.
4. Conception Bay.



The Atlantic provinces region differs from the rest of the country in several physical characteristics such as its low hills and mountains and its rugged, indented coastline. With the exception of Prince Edward Island, which is mainly agricultural land, each of the Atlantic provinces consists of a largely uninhabited centre with bands of continuous, dispersed settlement along the coasts and in major valleys. A resource base that is relatively dominant in sea, forest and mineral resources rather than agricultural resources has led to a pattern of dispersed settlement with relatively few large cities. This resource base has also resulted in the existence of a large number of single-industry towns, dispersed along the coastlines.

Distribution patterns are not static in any region; they change over time. The geography of agriculture and fishing in the Atlantic provinces illustrates these changing patterns. Most of the former part-time and subsistence farms, located on the poorer soils, on steeper slopes and away from main roads have been abandoned; the distribution of commercial farms is now much more closely associated with improved roads and access to the larger cities.

There have also been changes in the fishing industry, from dispersal to concentration. In Newfoundland mainly, and to a lesser extent in Nova Scotia, the small fishing "outports"

Rugged coastline of Prince Edward Island, Canada's smallest province.





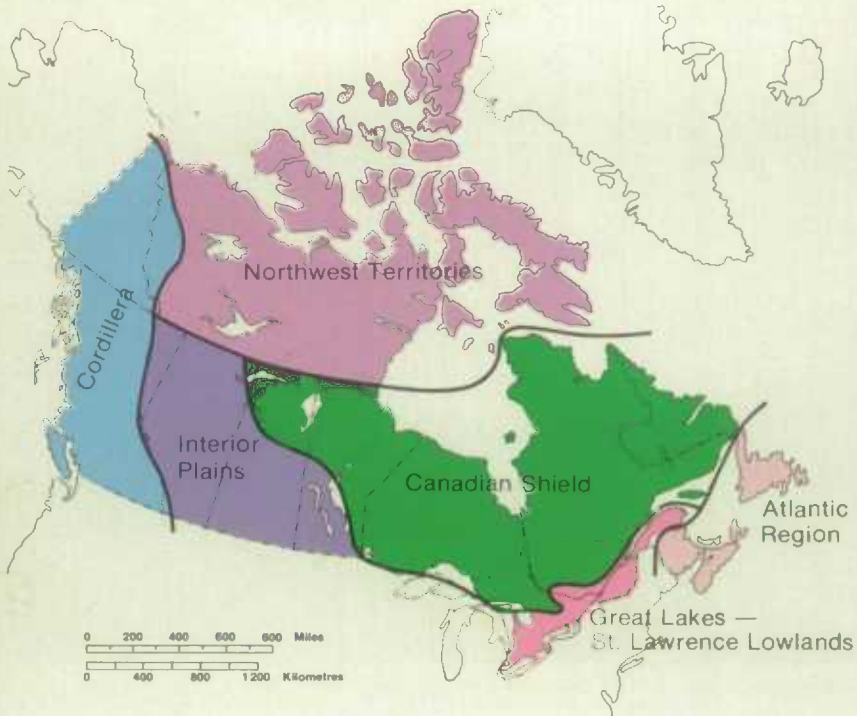
Winter blankets Peggy's Cove, NS. Storms are violent along the Atlantic Coast.

or villages were dispersed along the coast in sheltered bays, near headlands, or on islands. Fishermen are now tending to concentrate in larger towns near the processing or freezing plants where there are also more health, educational and social services.

The Great Lakes–St. Lawrence Lowlands region is clearly bounded — to the south by the Great Lakes, the St. Lawrence River and the international boundary, and to the north by the escarpment of the Canadian Shield. This northern boundary between the contrasting high intensity agricultural and urban pattern of the Lowlands, and the higher, forested and sparsely settled land of the Shield is often highly visible in the landscape.

The relatively small Lowlands region, which extends across southern Ontario and southern Quebec, holds more than half of Canada's population and produces about three-quarters of the value of its manufactured goods. Due to good soils, a mild climate and a large nearby market, intensive agriculture is another of its major characteristics. This most densely populated region of Canada has more large cities (population over 100,000) than any other part of the nation. Its two largest cities, Toronto and Montreal, each have a metropolitan area population of more than 3 million. Due to its concentration of population, industry and agriculture, this region is the "heartland" of Canada.

Geographical Regions of Canada



Although strong links of commerce and transportation have been in existence within this region, the settlement pattern reflects two distinct cultures. In Quebec, the St. Lawrence Valley was settled more than three centuries ago by French emigrants; the Ontario section was colonized, beginning in the 1780s, by mainly English-speaking people. The rural landscape of southern Quebec, with its long, narrow farms, is distinct within Canada, and contrasts with the rectangular farms and dispersed farmhouses of southern Ontario. The rural villages of Ontario, with their small, compact central business sections and rectangular street patterns contrast with the linear Quebec villages in which residential and commercial uses are often interspersed.

In addition to a prosperous intensive agriculture, a closely-linked urban system has evolved. The activities in industry, commerce, transport, service and recreation of more than 13 million people in the Lowlands are all closely interrelated.



Silhouette of a village at sunset, Ste. Lucie, Que.

The Canadian Shield is another landform region, defined on the basis of its exposed ancient Precambrian rock base. Its physical environmental characteristics of bare rocks, forests and lakes are quite distinct from the Lowlands. Because it is a huge area, there is environmental diversity within this region, but there are also large areas of similarity. The southern part of the Canadian Shield is known for its vast natural resources which are functionally linked to the heartland region. The northwestern part of the Shield has a different surface environment and different human use and is included as part of the Northwest Territories. Settlement in the northern region is generally in communities of aboriginal Canadians.

The enormous Shield occupies about half of the mainland of Canada. It is a region of forests, lakes and rocks; it is a region of few people, mainly living in communities. The southern Shield has a resource-based economy; its products — minerals, wood and water-power — are exported outside of the region or outside of Canada. Many of the raw materials of the Shield move to the Lowlands for processing or consumption; a reverse flow of people comes into the Shield for recreation or holidays.

The Interior Plains are sharply bounded on the west by the high wall of the Rocky Mountains, but on the east and north the geological and landform edge of the Shield is often hidden beneath former glacial lakebed deposits or by coniferous forest. The Plains are the largest area of nearly level land in Canada; human use of this region is characterized by large grain farms, and by ranching. Although all of the Prairie provinces (Manitoba, Saskatchewan and Alberta) might be discussed as a political region, corresponding to provincial boundaries, the environmental, economic and human characteristics of the Shield sections of northern Manitoba and northern Saskatchewan are very different from the Plains.

The words "flat, prairie, wheat and petroleum" might well characterize the environment and resources of the Interior Plains of Canada. Although these words accurately describe certain outstanding parts of the Plains' environment and economy, they do not tell of the variety found within the region. It is true that large areas of the Plains are very flat, but the landform regions include hills, escarpments, entrenched river valleys and even low mountains; although prairie grasslands of varying height once covered the southern Plains prior to cultivation, now more than half of the region is forested; although wheat became a staple crop for export after the land was subdivided for settlement, other grains were also grown and several new crops now occupy significant acreages; although petroleum was important in diversifying the Plains' economy after 1947, other fuels and minerals have become significant in particular parts.

One of the geographical characteristics of the Interior Plains is the geometric spacing of its villages, towns and cities. The size and function of Prairie villages and towns are related to the number of farmers in the surrounding area needing certain urban goods and services. Other specialized items and services, needed less frequently, tend to be located in larger cities where they can serve more people locally and also be available to people from a larger surrounding rural area.

Farmstead in Saskatchewan. Agriculture is the leading industry of the province, with wheat and other grains the major components.





The Beauty of Winter in Kootenay National Park, BC

The Cordillera is a mountainous region which coincides closely, but not entirely with the political limits of British Columbia and Yukon. The level section of northeastern British Columbia is part of the Interior Plains. The geography of the Cordillera is characterized by great contrasts within small areas in the physical environment and in population densities. Only a small part of the land in this region is settled; agriculture is entirely lacking over large areas or is confined to certain narrow valleys or flood plains. The urban population is concentrated in a small area of southwestern British Columbia where 75 per cent of the population lives. Most settlements throughout the remainder of the Cordillera are based on exploitation of a natural resource or on providing services to the agricultural and resource sectors. In its strong dependence on resources, the economy and to an extent the settlement pattern are similar to those of the Canadian Shield and the Atlantic provinces region.

The original commercial forestry developed in the southwest, on Vancouver Island and adjacent areas along the Strait of Georgia, and the wood-processing industry is still concentrated there. However, after 1950, growing world demand, plus increased rail and road access to the little used forest reserves of the interior permitted a more widespread pattern of forestry activity in British Columbia.

The West Coast fishery has different areal patterns than those on the Atlantic Coast. The western industry has adapted to the natural habits and migrations of the five main species of salmon. Fish canneries were established at or near the mouths of most rivers all along the coast early in this century, but the greatest concentrations were at the mouths of the Fraser and Skeena rivers since these rivers had the largest drainage basins and thus the most fish production. Fishing technology gradually improved so that larger and faster fishing vessels, with better gear, could harvest a larger area away from the river mouths;

thus the need for many small dispersed canneries decreased, and the processing industry concentrated into large canneries near the mouths of the Fraser and Skeena rivers. The relative lack of coastal fishing settlements contrasts with the type of fishery settlement in Eastern Canada.

Through more than a century of mining the geographical patterns of development have been consistent. At the turn of this century southeastern British Columbia was one of the important mining areas of Canada while the rest of the province was struggling to create a viable economy. This region is still a major mining and smelting area, but these activities have become important in other parts of British Columbia, with coal in the southeast and northeast, and non-ferrous metals in other parts of the province. Mineralization is widespread throughout the Yukon Territory, but the relatively few mines are found only in its southern part or in areas where the high cost of new road access has been justified by the size of the operation.

The Cordilleran region is known for its spectacular mountain landforms — the only other comparable mountainous area of Canada is the northeastern Arctic. Although the Cordilleran mountains seem to be a jumbled mass of peaks when viewed locally, and stretch endlessly to the horizon when seen from the air, they have specific patterns and can be classified into smaller sub-regional landform units. The Rocky Mountains, for example, are a specific line of mountain ranges extending from Montana along part of the Alberta-British Columbia border to the broad plain of the Liard River in northeastern British Columbia. The Rockies are bounded by the Interior Plains to the east and by the Rocky Mountain Trench to the west. The trench is one of the world's longest continuous valleys, extending from Montana to southern Yukon.

The Northwest Territories are defined by political boundaries and lack the uniformity of certain physical or economic criteria used to describe other regions of Canada. This region is characterized by diversity of its natural environments, a comparative lack of developed resources and scanty population. Within the huge area of the Territories there are two sub-regions: the subarctic Mackenzie River Valley in the west and the arctic area of islands and north-central mainland.

The agricultural and forestry uses of this enormous area are minor in the subarctic and entirely lacking in the arctic sections. Not only are summers too cool in the arctic part but its landscape is characterized by bare, glacially-scoured rock without agricultural soils. More favourable summer conditions in the Mackenzie Valley would permit the possibility of some types of agriculture, but the lack of large local markets discourages agriculture as an occupation.

This is the only region of Canada in which undomesticated animal resources are a significant element in the local economy. Game resources are still significant to some Mackenzie Valley Indians and for many Inuit the sea remains an important source of food. For both groups, however, animals constitute a decreasing percentage of their food intake.

Mineral resources are a major contributor to the economic base of the Northwest Territories. However, development of some resources has been hampered by difficulties of water transport in seas that are ice-covered for nine to 12 months of the year.

As in other regions of sparse population in Canada, the total natural environment, or scenery, may attract short-term visitors. The vague "lure of the North", and the chance to see a different environment and different people may yet be one of the most valuable elements in the arctic resource base.



Ice-coated trees frame the Horseshoe Falls at Niagara Falls, Ont.

THE CLIMATE

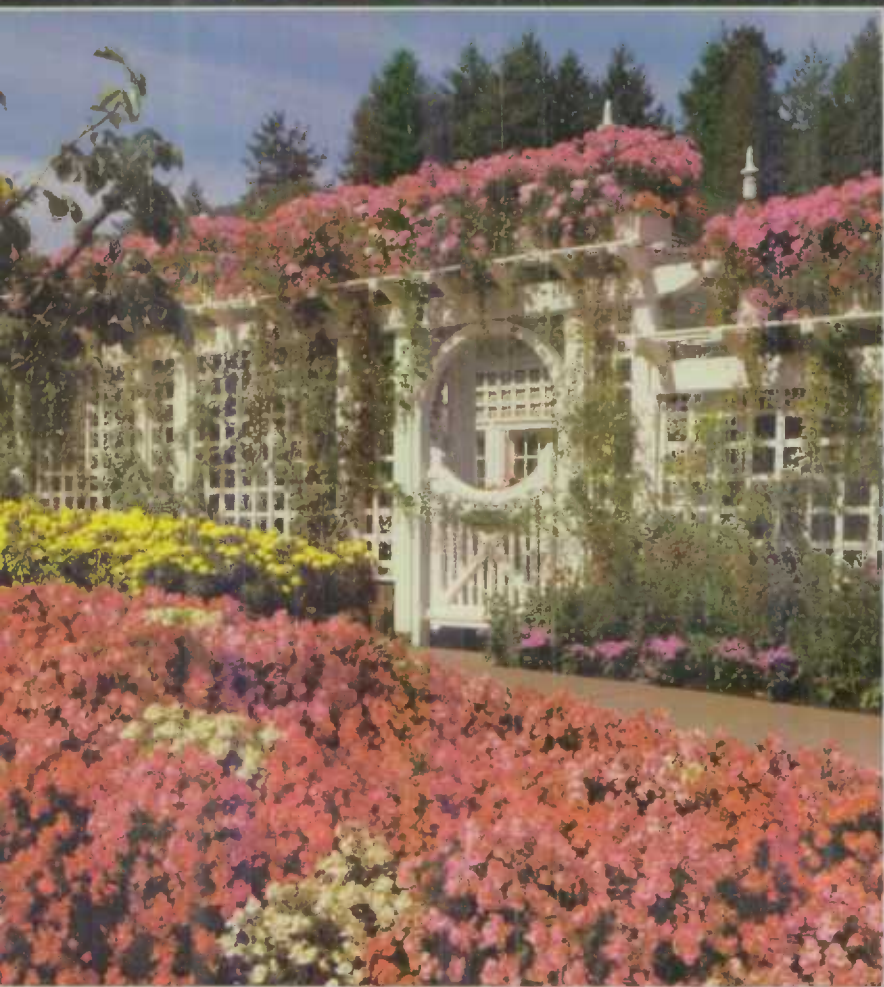
Climate is both a resource and a liability. As a resource, it provides the heat and moisture that are essential for life; it is a basis for agriculture, it provides warm lakes for swimmers and snow for skiers, and it drives ocean currents. Drought, floods and hurricanes are among its hazards; they can destroy life, damage property and inconvenience people, often disrupting normal social and economic activities within a community. Changes in climate, over long periods of time, can drastically alter regional economies by modifying the ecosystems that are fundamental to their way of life.

The heat, cold, precipitation and wind of Canadian weather are exploitable resources. Definition of the nature of climatic resources has been a major occupation over the past century — in the planning of land use (particularly for agriculture), in the development of water supplies and in the development of drainage and irrigation systems. The trend to increased productivity through fuller exploitation of climatic energy, light and moisture sources is increasing as natural resource supplies diminish.





1. **Conservatory at Niagara Falls, Ont.**
2. **Queen Elizabeth Park, Vancouver, BC.**
3. **Royal Botanical Gardens, Hamilton, Ont.**
4. **Butchart Gardens, Victoria, BC.**



Renewable resources are the basis of much of Canada's industry; they provide the necessities of life — food, drink and shelter — and earn about one-half of our export dollars. These resources depend primarily on climate. Resource management and use must therefore be based on an understanding of climate, and the use of weather and climate forecasts for improved productivity.

The extraction and use of other resources are also highly climate-dependent. Oil and gas, for example, are used to offset cold, snow and heat. Climate-dependent ice fields and weather control the economics of arctic development. Much of our industrial energy is generated from climate-dependent water resources and water is used extensively in processing — for example, up to 22 m³ (cubic metres) to refine one cubic metre of petroleum and 3 000 m³ to make one tonne of synthetic rubber.

On the other hand, the impact of industry, cities and people on the atmospheric environment places an upper limit on certain types of economic endeavour. Economic activity must therefore be tailored by an understanding of the environment, man's influence thereon and the capacity of the atmosphere to safely disperse industrial effluents. The interactions of weather, ecology and economy require understanding.

Climatic hazards stand out in our memory because of their great impact on society and their resulting newsworthiness. Canada, like most countries in temperate and polar regions, has a fluctuating climate that has caused crises from the times of early settlement. Direct economic losses have been caused by various notable weather events in Canada. A number of these events are recognized historically as major disasters.

Agriculture and forestry are among the activities that are particularly vulnerable to weather extremes. Weather forecasts and planning information are therefore essential in coping with major hazards, such as drought, frost, hail, excessive rainfall, flood, wind, snow and winterkill, as well as climatically influenced diseases, epidemics and insect infestations. Forest fire costs average about \$23 million per year and have been as high as \$184 million.

Precipitation is the primary source of surface water supplies and evaporation is the major consumer. Planning, public and political conviction and economic decisions as to the viability of a hydrologic system are therefore frequently dependent on climatology. The magnitude and reliability of supplies is dictated by rainfall and snowfall characteristics. Flood prevention, irrigation, urban water demands, storm-sewer capacity and culvert size are all dependent on climate. The operation of water containment systems for flood control and conservation of water in times of drought is contingent on reliable weather and climate forecasts.

Development of Canada's resources poses major environmental problems in which climatology must play a significant role. For example, sulphur dioxide and other gaseous emissions from industrial processes such as refining and smelting are returned to earth as acidic precipitation and as such are destroying vegetation over vast land areas. The capacity of the atmosphere to disperse contaminants is of increasing concern. Safety and security from natural hazards are major factors to be considered in offshore drilling, pipelining, the transmission of electrical energy and the operation of nuclear generating stations.

Environmental impact assessments are an essential defence against undesirable environmental effects of man's activities, both deliberate and inadvertent. In preparing an assessment, developers are forced to consider the side effects of their proposals over the short, medium and long terms, and of possible alternatives, one of which is not to proceed. The decision process can generate much public discussion and possible program change. Subsequent climate monitoring and impact studies are important.



Canada geese at St. Lawrence parks conservation area, Upper Canada Village, Ont.

Environment

Environment Canada has a mandate to foster harmony between society and the environment for the economic, social and cultural benefits of present and future generations of Canadians.

Environmental Research

Conservation and Protection, a service of Environment Canada, is concerned with the management and development of Canada's water and land resources, migratory birds management and other national and international wildlife issues. Additional concerns are the prevention, reduction or elimination of adverse environmental threats from new developments; releases of pollutants; and the use of hazardous chemicals. Conservation and Protection provides advice for cleaning up harmful substances that have been spilled and makes major contributions to the research and monitoring of the impacts of toxic substances and acid rain on the environment. This service consists of three decentralized sectors (Inland Waters Conservation, Wildlife Conservation and Environmental Protection).

The Inland Waters Conservation Sector is involved in planning, implementing and participating in federal-provincial and international water management policies and



A monitoring instrument, installed by Ontario Hydro, determines the dry deposition rates of acid gases in an acid rain research program.

programs. The sector collects, analyzes, archives and distributes data; provides information and advice to users on the quantity and quality of Canada's inland water resources; carries out research; and provides information on nationally significant water management problems.

A water quantity monitoring system has been in operation in Canada since 1909. Water level and flow data are collected from over 3,500 locations across Canada under cost-shared agreements with all the provinces and the Northwest Territories. An integrated water quality monitoring network is being established to provide comprehensive chemical and microbiological data on water supplies across Canada. Analysis and interpretation of the collected water quantity and quality data, and basic and applied research influence decisions governing the expenditure of billions of dollars at all levels of government and private industry on sewage and drinking water treatment, health costs, tourism and recreation, fisheries, hydro power, agriculture and industrial use.

The Wildlife Conservation Sector (Canadian Wildlife Service) conducts programs to maintain or enhance migratory bird and other wildlife populations and their habitats. It surveys and regulates waterfowl hunting in Canada and works to conserve "non-game" bird populations such as seabirds, shorebirds and songbirds. To protect migratory bird habitat, 44 national wildlife areas and 99 migratory bird sanctuaries have been established across Canada. This sector conducts research and conservation programs on endangered species and other wildlife of national and international interest; conserves critical wildlife habitat; and assists the provinces and territories with their wildlife conservation efforts. It also promotes the environmentally sound use and management of Canada's land resources in keeping with federal responsibilities and national objectives.

The Environmental Protection Sector ensures that polluters comply with federally-set standards and environmental quality objectives. This sector is responsible for controlling

the amounts of pollutants introduced into the environment and for reducing environmental losses from inappropriate or willful releases of toxic chemicals. It contains or restricts the use of hazardous substances and ensures that spills and waste sites which cause environmental damage are cleaned-up. This sector is the primary contact point on environmental protection matters with other federal departments, industry, international, provincial and municipal governments and agencies, and the general public.

The Atmospheric Environment Service (AES) provides weather warnings, forecasts and climate information for the safety and economic well-being of all Canadians. Research scientists also study the chemistry of the atmosphere, probing such key phenomena as climate change, acid rain, depletion of the ozone layer and the transport of toxic pollutants. AES has nine state-of-the-art weather centres, 62 weather offices, 14 weather radar sites and 32 upper-air stations. The service is also responsible for ice reconnaissance and ice research to aid shipping in the Arctic, off the Atlantic Coast and in inland waters.

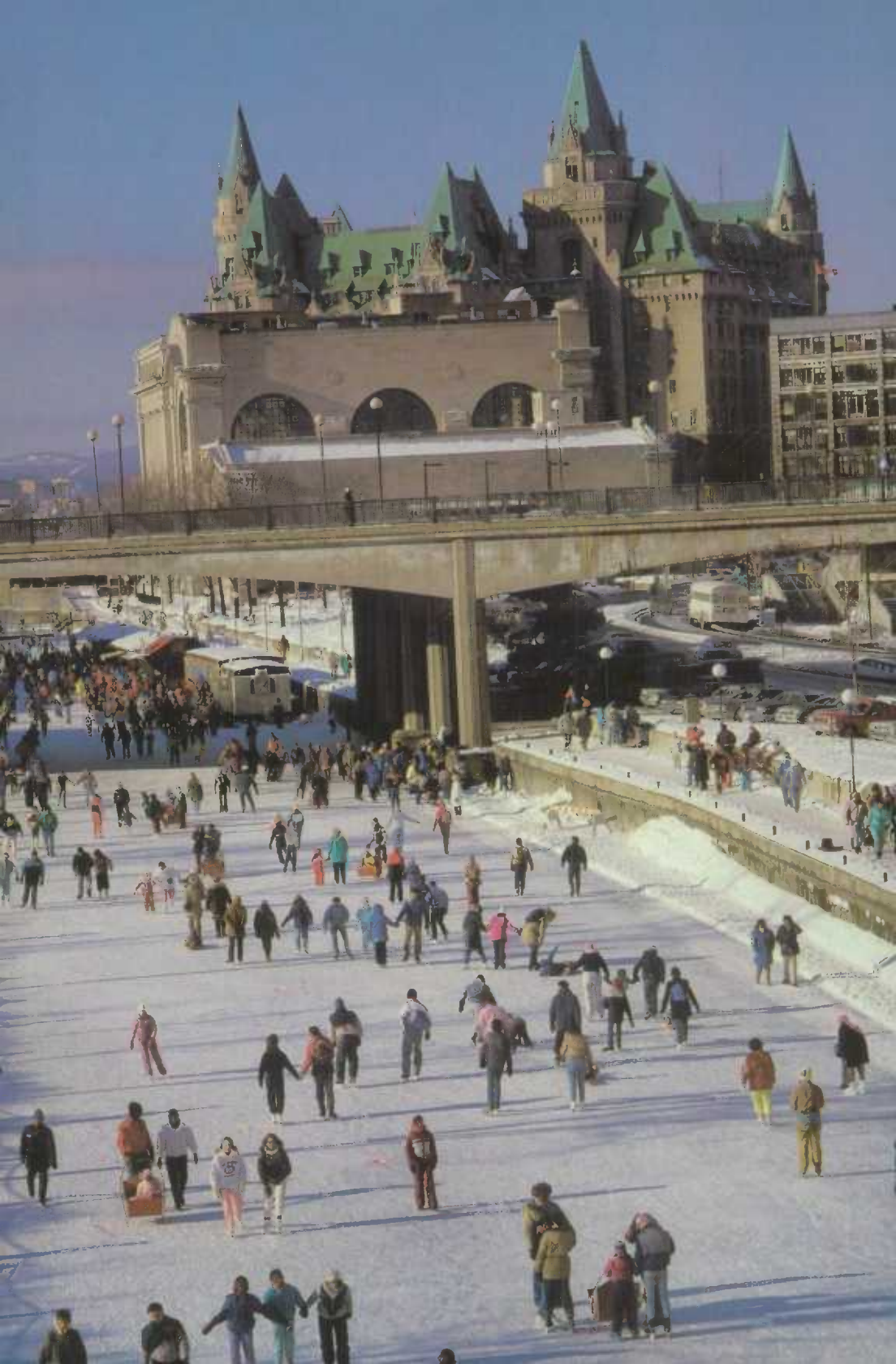
The Environmental Assessment and Review Process determines potential environmental and directly related social impacts of all proposals to be undertaken by the federal government or in which the government is involved. This is done early in planning before irrevocable decisions are taken. The process applies to any federal department, board, or agency, and to any regulatory body or Crown corporation where legislation permits.

Northern Research. Canada has long recognized the contribution research makes to the socio-economic development of the North. Moreover, the Canadian North has some unique characteristics that are of particular interest to the scientific community.

The Department of Indian Affairs and Northern Development has designed certain long-term measures to encourage and support northern research. The training of graduate students is assisted by special grants administered by the department. In addition, substantial programs of applied problem-oriented research have been organized, such as: the Arctic Land Use Research program; the environmental-social program; the Eastern Arctic Marine Environmental Studies; the Beaufort Sea project; oil-spill studies; waste disposal studies; and regional socio-economic studies.

Travel in the harsh frigid climate of the Northwest Territories.





Canada

A PORTRAIT

THE PEOPLE AND THEIR HERITAGE

HISTORY

Canada's history has been shaped by two factors: the perennial debate about the proper relationship between anglophones and francophones and the evolution of Canada's links with both Great Britain and the United States. Since the late 18th century there has been conflict about the degree of recognition which our institutions should provide to francophones in an endeavour to promote and maintain their existence. As the country has developed out of a group of wholly dependent British colonies into a separate nation-state, much attention has focused upon the growing

← *Skating on the Rideau Canal in Ottawa. Built over 155 years ago, in 1832, the Rideau Canal completed a connecting waterway from Ottawa to Kingston.*



L'Anse aux Meadows, Nfld., a Norse settlement believed occupied about 1 000 A.D. Viking explorers from Iceland and Greenland made voyages to Labrador and the Island of Newfoundland.

ties which have been forged with the vastly more powerful United States. At times of crisis in the Canadian past, such as the 1830s, the era of Confederation and World War I, these problems have become intertwined with one another as changes in the international situation have affected the relations between the two great linguistic groups.

Early exploration began on the coast of the easternmost part of Canada. Viking explorers from Iceland and Greenland made voyages to Labrador and the Island of Newfoundland. A Norse settlement, l'Anse aux Meadows, Nfld. was believed occupied about 1 000 A.D.

The Europeans' search for natural products, fish and later furs led French traders to establish the first permanent settlement at Quebec in 1608. By the 1670s French explorers had penetrated as far west as the Mississippi River.

Rivalry for dominance over Canadian territory had begun as the English penetrated Hudson Bay, chartering the trading company which bore its name in 1670. Thus commenced decades of struggle as the French sought to expand to the west and north while the English endeavoured to monopolize trade in the vast watershed of the Bay. Pressure upon New France came also from English settlements to the south and east. Acadia, on the Atlantic Coast, became a zone of contention where the two empires collided with one another. As a result

New France was drawn into an almost continuous series of wars with the English in the 17th and 18th centuries; the Indians allying with one or another of them.

In this contest New France seemed outmatched. In 1663, the French Crown took over control of the colony from the private traders. Although no more than 10,000 immigrants came to settle there throughout the entire history of New France, the population had grown to about 60,000 by 1760.

It was British seapower that cut the tenuous links between the colony and the mother country. In 1759 the major fortress of Quebec fell at the Battle of the Plains of Abraham, and the remaining French forces capitulated at Montreal a year later. The new imperial rulers found themselves facing the difficult problem of ruling a population of Europeans who differed in language and religion. In Britain, Catholics lacked certain civil rights, and if this were to be extended to Canada the colony would be ruled exclusively by imperial officials and a small number of immigrants from the British Isles. Eventually Governor Sir Guy Carleton concluded that civil and religious rights must be conceded to the francophones, whose numbers were rapidly rising through natural increase, doubling in size each generation. The Quebec Act of 1774 granted legal status to the Roman Catholic church, to the seigneurial system of landholding and to French civil law.

When the 13 colonies in North America exploded into revolution against Britain in the mid-1770s, Quebec was expected to join the uprising but the people of Quebec neither joined the uprising nor rallied to the British cause as their clerical and seigneurial leaders wished. When peace was restored in 1783 Canada remained in British hands, but the American

Kings Landing Historical Settlement, near Fredericton, NB.



Revolution had a dramatic effect. Thousands of Loyalists moved northward. More than 30,000 people entered the Atlantic colonies which then contained only a few thousand people engaged in fishing and farming. As a result of the influx, a new colony, named New Brunswick, was hived off from Nova Scotia for the Loyalists in 1784. Another 7,000 refugees moved northward to Montreal and were settled along the north shore of the St. Lawrence and Lake Ontario.

These Americans had been used to representative institutions. While Nova Scotia had been granted an elected assembly in 1758, Quebec still had none. The Loyalists also chafed under the seigneurial tenure and the French civil law, and in 1791 Britain decided to create two colonies, Upper and Lower Canada. Both were to have assemblies, but the institutions retained from the French regime survived only in the lower province. In addition, for fear of the spread of revolution, the British governors were to retain sweeping powers to rule their colonies.

After years of friction, war between Britain and the United States broke out in 1812. A small force of British regulars aided by the Indians was able to hold off the Americans until peace was restored in 1814. When peace returned the imperial government in an effort to strengthen the colonies, undertook steps to assist immigrants to come to British America. Many others went of their own accord, and between 1815 and 1855 one million Britons landed at Halifax, Saint John and Quebec. Though a substantial number of these moved on to the United States, those who remained permanently altered the ethnic composition and rendered the francophones a minority of the whole colonial population.

In Lower Canada francophones remained a majority. Difficulties caused by rapid population increase, a shortage of available land and declining agricultural productivity were translated by the Parti Patriote into an agitation for wider self-government. Serious uprisings occurred in the colony in 1837 and 1838 (with fainter echoes in Upper Canada). Militarily suppressed, the Rebellion of 1837 brought to the colonies Lord Durham, who recommended that the Canadas be joined into a single United Province where an anglophone majority might rule. This tactic failed. French Canadian nationalism, born in the turmoil of rebellion, survived and even prospered under the new regime.

Britain's adoption of free trade, in the 1840s, and the colonies' self-government in local matters prompted the colonials to forge an agreement on reciprocal free trade in natural products with the United States in 1854. Closer ties to the continental economy were also forged by the construction of a network of railways during the 1850s. By 1860 British North America was moving perceptibly out of the imperial orbit toward closer relations with the United States.

The outbreak of the American Civil War in 1861, however, presented serious problems. Britain's decision to remain neutral offended the North, and when it became clear that the South would be defeated many British North Americans were apprehensive that the victorious armies would be unleashed upon them to annex them to the United States. Colonial politicians began, therefore, to consider closer inter-colonial ties, though previously the Canadas had little to do with Newfoundland, Nova Scotia, New Brunswick and Prince Edward Island. In 1864 George Brown, John A. Macdonald and George-Étienne Cartier formed an unexpected coalition to seek a federal union of all the colonies, and at the Charlottetown and Quebec conferences that autumn hammered out an agreement with representatives from the Atlantic colonies. Ultimately popular antagonism to the new arrangement led Newfoundland and Prince Edward Island to remain aloof (although the latter relented in 1873 owing to financial hardship). In Nova Scotia and New Brunswick



Guards fire non-a-day salute as historic Signal Hill, St. John's, Nfld.

there was also widespread opposition but the political skills of Charles Tupper and Leonard Tilley, backed by unswerving pressure from Britain, brought those colonies into the federation with Quebec and Ontario. The British North America Act was passed in London and became law on July 1, 1867.

When the Dominion of Canada purchased the vast western territories controlled by the Hudson Bay Company in 1869, the Métis of Manitoba, a people created by the intermingling of French and Indians in the fur trade, feared that their rights might be ignored. Led by Louis Riel, they forced the federal government to grant provincial status to Manitoba in 1870.

Sir John A. Macdonald, the first Prime Minister, then extended Canadian territory all the way to the Pacific by securing the entry of the colony of British Columbia in 1871 with the promise of a railway to the Pacific within 10 years. In 1885, when the Canadian Pacific Railway was almost complete, a second Métis rising broke out, again led by Louis Riel. The railway was used to rush a large force of soldiers to the scene who quickly suppressed the revolt.

Confederation had been intended to reduce ethnic and religious conflict, but it could not eliminate them. Many Quebecois saw the execution of Louis Riel for his part in the 1885 rising as the symbol of a campaign to restrict French and Catholic rights outside Quebec, a conviction reinforced by restrictive legislation in Manitoba in 1890. The election of Liberal Wilfrid Laurier as the first francophone Prime Minister in 1896 came about because he convinced voters he could achieve a compromise on this issue. Yet the question of educational rights for Catholics and francophones outside Quebec plagued Laurier throughout his term of office, particularly when the new provinces of Alberta and Saskatchewan were created in 1905.

Laurier had the good fortune, however, to hold power in an era of rapid growth. Beginning in 1897 Canada attracted large numbers of immigrants from Europe and the US, who filled up the cities and cultivated millions of acres of new land on the western prairies. Favourable world circumstances created excellent markets for Canada's wheat, forest products and minerals. Nonetheless, there remained discontent with some of Laurier's policies. Not only did some francophones think him too weak in defending their rights outside Quebec, but serious disagreements arose between anglophones and francophones over Canada's proper relationship to the British Empire. When Laurier's government negotiated an agreement with the United States to permit reciprocal free trade in natural products in 1911, he was ousted from office by English Canadian voters who saw it as a move away from close ties with Britain toward annexation by the Americans, while French Canadians were displeased that he had failed to stand up more strongly against the imperialists.

The greatest challenge which faced Laurier's Conservative successor, Robert Borden, was to manage Canada's participation in World War I. In 1917 Borden bowed to pressure to reinforce the volunteer army through conscription despite the opposition of Laurier and most other French Canadian leaders. Borden persuaded those English Canadian Liberals who supported his policies to join him in a coalition. But the discontent of many farmers, immigrant groups and trade unionists with the government's management of the war effort, contributed to the gradual disintegration of Borden's coalition and the return to power of the Liberals in 1921.

Calgary's Heritage Park, often used as a setting for period movies.





Champlain monument at Orillia, Ont.

Through a combination of guile and skill, the new Prime Minister, Mackenzie King, dealt with the 65 MPs of the Progressive Party, elected by disgruntled farmers and by the mid-1920s the Progressives gradually disappeared as a significant force. Although the new prosperity was unevenly distributed between the regions, the late 1920s were a time of increasing Canadian wealth as new resources and products found expanding markets at home and abroad. Branch plants of American firms (encouraged to locate in Canada by the protective tariff which had originated with Macdonald's National Policy in 1879) were more and more familiar as another stage was reached in the integration of the country into a continental economic system dominated by its southern neighbour.

Governments at all levels had no idea how to cope with the dramatic collapse of the Canadian economy during the 1930s. By 1933, with one-fifth of the labour force unemployed, the federal government was forced to spend large sums of money on relief. The depression convinced many Canadians that their constitution needed an overhaul, for problems like unemployment were provincial responsibilities while only the national government had the means to deal with them. By the 1940s, war-induced prosperity had begun to cure the country's problems and constitutional change lost its priority.

The government of Mackenzie King concentrated upon mobilizing the economy for war and avoiding the deep divisions between anglophones and francophones over conscription which had developed during World War I. King's efforts to resist the imposition of conscription for overseas service until late 1944 did not go unnoticed in Quebec. That province remained loyal to the Liberal party in the 1945 election, while the actions of the Conservatives in 1917 continued to deny them any real success in Quebec. Wartime growth made Canada, if only temporarily, one of the world's leading military and industrial powers, and King made efforts to ensure that individual workers benefited from this by adopting new fiscal policies designed to maximize employment.

The 20 years after 1945 were marked by a gradual extension of welfare state policies in Canada to meet the needs of its highly urbanized and industrialized society, although fishing, farming and natural resource production obviously retained a vital significance in certain regions of the country. Despite provincial responsibility for such areas of jurisdiction, federal funds were spent on programs of pensions, hospital and medical insurance and aid to the unemployed and handicapped. Such programs were a factor in persuading Newfoundlanders to become citizens of Canada's tenth province in 1949. Only the province of Quebec and

Farming, near Montreal, Que. The rural landscape of southern Quebec, with its long narrow farms, is distinct within Canada, and contrasts with the rectangular farms of southern Ontario.





Quebec City, Que.

to a lesser extent Ontario expressed reservations about the centralization of authority over such matters. The “have-not” provinces also were favoured by the introduction of formal equalization payments in the late 1950s, which were intended to reduce regional disparities.

The landslide victory of the Conservatives under John Diefenbaker in 1958 (in which the party even won 50 seats in Quebec) appeared to mark the opening of a new era in Canadian politics. In fact, Diefenbaker did not utilize his opportunity and was defeated in 1963, opening the way for the Liberals to return to power. Except for the brief Conservative span in 1979-80, they retained power until the Conservatives won their landslide majority of 211 seats in September 1984. The transformation of the Co-operative Commonwealth Federation into the New Democratic Party (NDP) in 1961 has not led it to the major party status, although its core of support has guaranteed it about a score of MPs at subsequent elections. Canadian politics since the 1960s has been marked by a noticeable regionalization of party support: the NDP has no firm backing east of Ontario while the Liberals have gradually been excluded from Western Canada, making them more dependent upon Quebec, although even Quebec capitulated to the 1984 Conservative victory, awarding that party 58 seats.

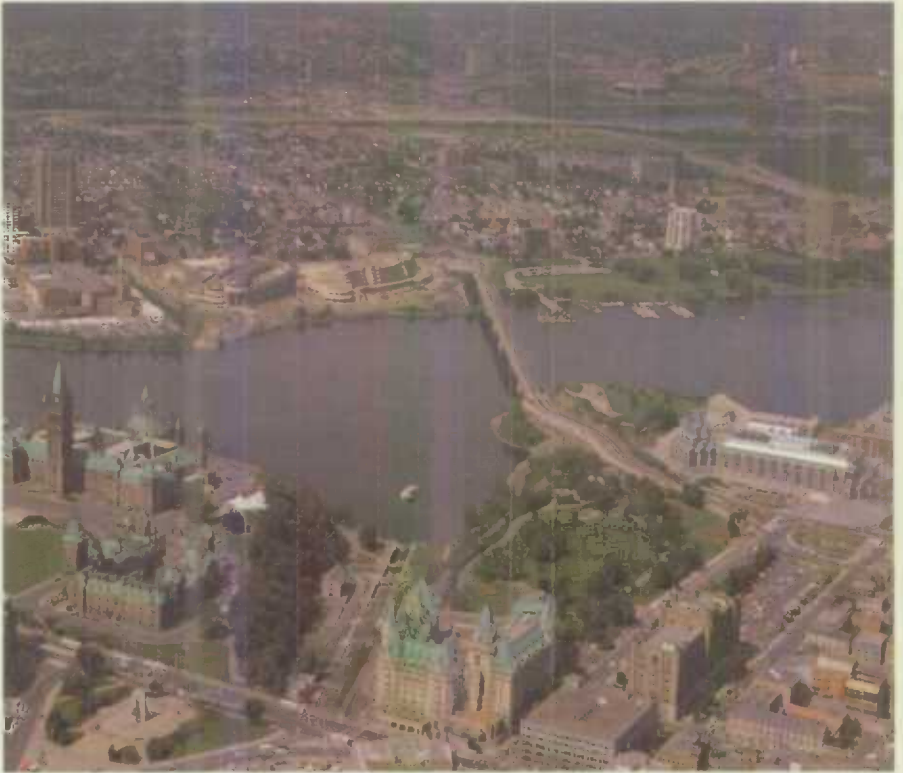
Like every Canadian Prime Minister before or since, Diefenbaker found himself confronted with knotty problems in dealing with the US. His reluctance to arm our forces with American nuclear weapons during the cold war paved the way for his defeat. During his prime ministership widespread concern was first expressed over the level of American investment in Canada and its effect upon our sovereign independence. How to cope with this problem or whether to ignore it altogether have become important political issues in the succeeding two decades. It was the retirement of Pierre Trudeau and overwhelming victory of the Conservative Party under another Quebecer, Brian Mulroney, in 1984, which signalled a new phase in both the relations between anglophones and francophones and between Canada and the United States.

At the time of the centennial of Confederation in 1967 attention began to be focused upon the long-dormant issue of constitutional change. Following a revival of Quebecois nationalism during the 1960s, Quebec was chafing at the restrictions imposed by the existing federal system, despite the efforts of Lester Pearson's government to reach accommodations. The selection of Pierre Trudeau as Prime Minister in 1968 came about largely because of his reputation as a constitutional expert and as a Quebecois who favoured a strong central government. Quebec's failure to agree to the Victoria Charter in 1971, however, temporarily ended the negotiations.

In the 1970s, attention shifted to economic issues. Rapidly rising petroleum prices slowed growth and added to inflationary pressures, while the flow of income to the oil and gas producing provinces in the west reduced the traditional preponderance of central Canada. The national energy program, designed to secure energy self-sufficiency for Canada and encourage Canadian ownership of the oil and gas industry, has spawned intense criticism among those who oppose its goals or its methods. By 1982, the rate of unemployment had reached 1930s levels and the Gross National Product was shrinking in real terms.

The aggressive Quebecois nationalism of the 1960s seemed to have been checked by the October Crisis of 1970 when the government imposed the War Measures Act and sent 10,000 troops into the province in response to the terrorist activities of the *Front de Libération du Québec*. The vast majority of Canadians approved of this response though doubts later surfaced about the veracity of the "real or apprehended insurrection" which provoked it. Yet the election of *Parti Québécois* in 1976 demonstrated that dissatisfaction among francophones remained significant. Although the government of René Lévesque failed to win a mandate to negotiate Quebec's "sovereignty-association" with the rest of Canada in the provincial referendum of May 1980, his victory in the subsequent general election indicated that separatism had not lost its appeal for many Quebecois.

The election of this government in Quebec helped to revive the lagging constitutional negotiations. In the referendum campaign the anti-separatist forces under Pierre Trudeau promised the people of Quebec a "renewed federalism", and when the provincial premiers failed to reach any agreement on changes the Prime Minister announced his intention to proceed unilaterally to patriate the constitution and include an amending formula and a charter of rights. Momentarily checked by the Supreme Court decision that such a course of action would be unconstitutional without substantial provincial consent, the Prime Minister nonetheless persevered. The outcome was the surprising agreement on constitutional changes reached on November 5, 1981 with only Quebec's Lévesque registering a vigorous protest. On April 17, 1982 the Canada Act formally came into effect with a ceremonial proclamation by the Queen on Parliament Hill in Ottawa.



Ottawa, Canada's capital with the Parliament Buildings (foreground), the new National Gallery of Canada (right) and the Canadian Museum of Civilization (top left).

Government

Although Canada became a fully sovereign state in principle in 1926, it was not until April 17, 1982, with the proclamation of the Constitution Act, 1982 that the last formal vestige of Canada's former colonial status was finally removed.

The Constitution Act and its amendments provide only a skeleton framework of government, which is filled out by judicial interpretation, by various Acts of Parliament and of the legislatures and, most of all, by custom or "convention". The powers of the Crown are exercised, as the Fathers of Confederation put it, "according to the well understood principles of the British Constitution" — that is, according to the usages and understandings that gradually transformed the British monarchy into a parliamentary democracy. Canada has inherited and elaborated on these conventions to suit our own needs.

The BNA Act, now renamed the Constitution Act, 1867, gives the Canadian Parliament power to "make laws for the peace, order and good government of Canada in relation to all matters . . . not . . . assigned exclusively to the Legislatures of the provinces". The Act added

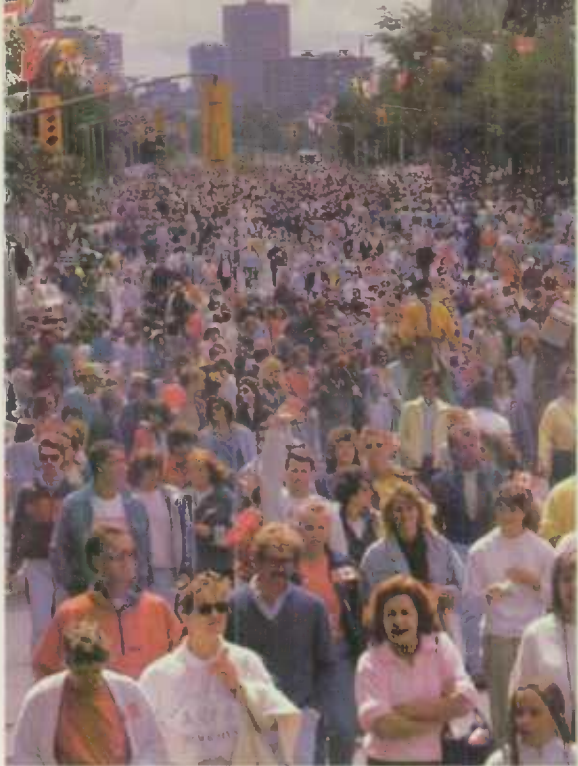
a list of examples of this general power, which includes legislating with respect to: defence; raising money by any kind of taxation; regulation of trade and commerce; navigation and shipping; fisheries; currency and banking; bankruptcy and insolvency; interest; patents and copyrights; marriage and divorce; criminal law and criminal procedure; penitentiaries; inter-provincial and international steamships, ferries, railways, canals and telegraphs; and any "works" situated within a province that are declared by Parliament to be "for the general advantage of Canada". An amendment in 1940 added unemployment insurance to the federal jurisdiction.

The Act of 1867 gave Parliament and the provincial legislatures concurrent power over agriculture and immigration, with the federal law prevailing over the provincial in case of conflict. Amendments have since provided for concurrent jurisdiction over pensions, but with provincial law prevailing in case of conflict.

The Constitution Act, 1982 established the equality of status of English and French in all the institutions of the Parliament and Government of Canada and of the legislature and government of New Brunswick. English and French may be used in the debates of the legislatures and in any pleading or process of the courts of Quebec and Manitoba and must be used in keeping the records and journals of the legislatures of those provinces. In addition to these language rights, the Constitution of Canada also provides for language of education rights for the linguistic minority, whether anglophone or francophone, in each province or territory, sets out certain educational rights for some denominational groups, and affirms and recognizes the rights of Canada's aboriginal peoples. Furthermore, the Canadian Charter of Rights and Freedoms contained in the Constitution protects the fundamental freedoms, the democratic rights, the mobility rights, legal rights and equality rights of all Canadians.

Each provincial legislature has exclusive power over: the amendment of the provincial Constitution (except as regards the office of Lieutenant Governor, the legal head of the provincial executive); natural resources; direct taxation for provincial purposes; prisons; hospitals; asylums and charities; municipal institutions; licences for provincial or municipal revenue; local works and undertakings; incorporation of provincial companies; solemnization of marriage; property and civil rights; administration of justice; matters of a merely local or private nature; and education, subject to certain safeguards for denominational schools in Newfoundland and Protestant or Roman Catholic schools in the other provinces. Judicial decisions have given "property and civil rights" a very wide scope, including most labour legislation and much of social security.

The unanimous consent of Parliament and the legislatures of all the provinces is required for certain amendments to the Constitution respecting matters such as the office of the Queen, the Governor General or the Lieutenant Governor of a province, and the composition of the Supreme Court. For other constitutional amendments of general application, the consent of Parliament and of seven provinces representing at least 50 per cent of the population is required. However, where an amendment derogates from the legislative powers, the proprietary rights or any other right or privilege of the legislature or government of a province, the legislative assembly of a province can express its dissent and the amendment will not have effect in that province. In such a case, if the amendment is one that transfers legislative powers to Parliament relating to education or other cultural matters, Canada shall provide reasonable compensation to any province to which the amendment does not apply.



Canada Day, Ottawa.

POPULATION

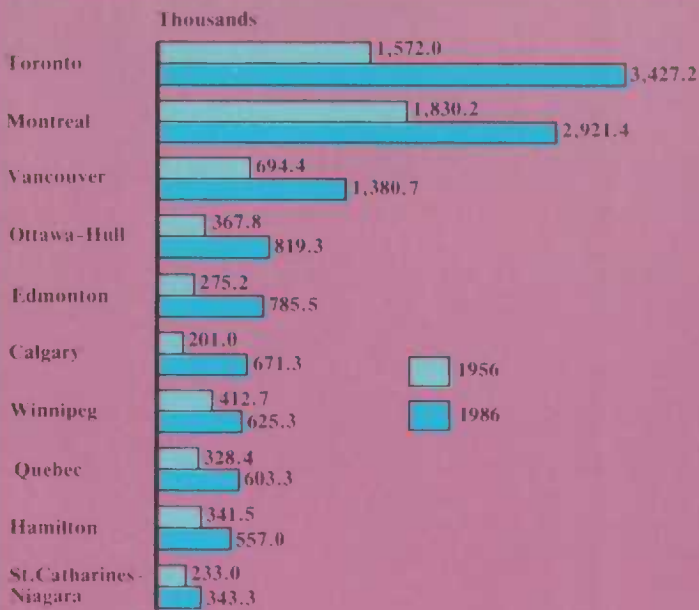
Canada is the second largest country in the world in terms of land area, but it ranks only 31st in population. Canada's population reached 25,354,064 in June 1986, according to results from the 1986 Census. The population increased by 1,010,883 people (4.2 per cent) since the 1981 Census. This represents the lowest five-year growth rate recorded by the Census in the last 25 years.

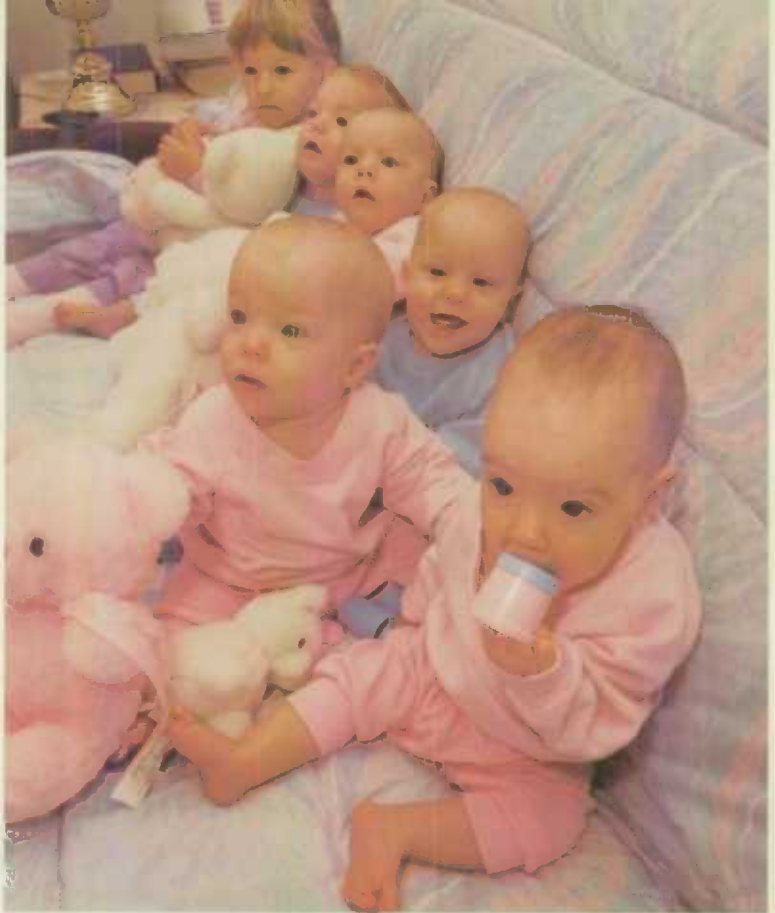
Canada's population is concentrated in a more or less unbroken band along the United States border, with 61 per cent of its population living in two provinces — Ontario and Quebec. However, the relative size of each province has changed over the past 25 years. When compared to the 1961 Census figures, the 1986 population counts reveal that three provinces (Ontario, Alberta and British Columbia) and the Northwest Territories have increased their share of the population while six provinces have shown declines in their share of the population.

Natural Increase

At present, natural increase accounts for approximately 75 per cent of Canada's population growth. Its annual rate (approximately eight per 1,000 population), though one of the highest in the industrialized world, is the lowest in Canadian history. The number

Population of Major Metropolitan Areas





The Forge quintuplets, with their three-year-old sister, celebrated their first birthday Sept. 22, 1988 — Canada's first set of quintuplets since the Dionne sisters in 1934.

The population distribution of Canada, 1961 and 1986

Province or territory	1961		1986	
	Population No.	%	Population No.	%
Newfoundland	457,853	2.5	568,349	2.2
Prince Edward Island	104,629	0.6	126,646	0.5
Nova Scotia	737,007	4.0	873,199	3.4
New Brunswick	597,936	3.3	710,422	2.8
Quebec	5,259,211	28.8	6,540,276	25.8
Ontario	6,236,092	34.2	9,113,515	36.0
Manitoba	921,686	5.1	1,071,232	4.2
Saskatchewan	925,181	5.1	1,010,198	4.0
Alberta	1,331,944	7.3	2,375,278	9.4
British Columbia	1,629,082	8.9	2,889,207	11.4
Yukon	14,628	0.1	23,504	0.1
Northwest Territories	22,998	0.1	52,238	0.2
Canada	18,238,247	100.0	25,354,064	100.0

of births has risen slightly over the last 13 years, but the birth rate (15 per 1,000) continues to fall. If this rate persists, depopulation will begin early in the next century. There are some indications, however, of a slight recovery in the near future.

Although the number of deaths is also climbing, because of the growth and aging of the population, the death rate has stood at a record low of about seven per 1,000 for the past five years. Life expectancy at birth, or length of life, continues to rise; in 1985, it was 73 years for males and almost 80 for females. This increase in longevity is chiefly due to recent breakthroughs in the fight against cardiovascular disease, the leading cause of death. The battle against cancer, the second leading killer, is less encouraging at the moment; some types are being controlled, but others are claiming increasing numbers of victims.

Immigration

Historically, immigration has been a key factor in the growth of Canada's population. In 1986, Canada's immigrants represented 15.6 per cent of the country's population. Immigration has always been cyclical and directly or indirectly related to economic conditions; periods of prosperity have largely coincided with the influx of large numbers of immigrants. As a result of the economic slump that recently affected the entire western world, the Canadian government cut immigration levels to less than 100,000 in 1983 and 1984.

Since 1984, the new policy direction has been one of moderate, controlled increases in annual immigrant admissions. This reflects improved economic opportunities, the need to address demographic questions, the commitment to refugees and the importance of family reunification. In 1987, 146,994 immigrants were admitted to Canada, compared to 1984 admissions of 88,239 immigrants.

There has been significant growth in the number of independent immigrants admitted because of their labour market skills. The policy direction was maintained for 1988; approximately 130,000 immigrants were admitted.

Traditionally, the majority of immigrants came from Europe, especially England. In the past 10 years, however, there has been much greater diversity in the countries of origin of those who come to settle in Canada. In particular, there has been a sharp increase in the number of Asian immigrants. Regardless of the economic situation, Canada has always admitted refugees from anywhere in the world when circumstances so dictated. Mostly after World War II, but also in the early 1980s, many Eastern Europeans took refuge in Canada; in the mid-1970s there were large numbers of West Indians and Africans, and in the late 1970s, Southeast Asians. In the 1980s, an increasing number of refugees from Latin America have settled in Canada.

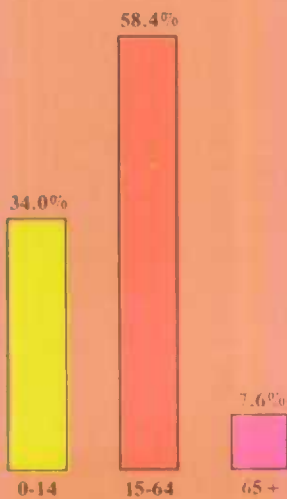
In 1986, over half of Canada's immigrant population resided in Ontario, where immigrants represented almost one-quarter of the provincial population. As in Ontario, in British Columbia, immigrants represented almost one-quarter of the population, well above the national average of 15.6 per cent. While less than one-third of the total population of Canada lived in the three largest metropolitan areas (Toronto, Montreal and Vancouver) in 1986, over half of the immigrant population lived in these urban centres.

The Canada Employment and Immigration Commission is responsible for Canada's immigration policy and related matters, although the Department of External Affairs handles immigration services abroad. Under the Constitution, immigration is a joint responsibility, and the federal program is administered in co-operation with the provinces which are especially active in welcoming immigrants and helping them adjust.

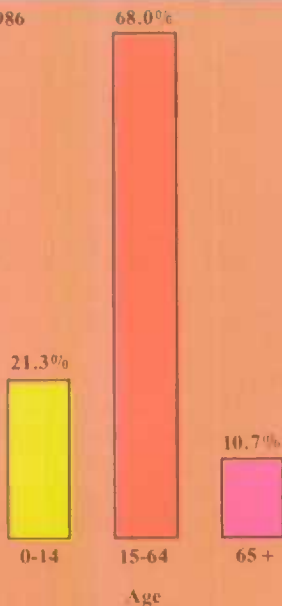


Population by Age Groups, 1961 and 1986

1961



1986



Population Characteristics

Data from the 1986 Census reveal a continuation of major shifts in the age structure of Canada's population. Among the factors contributing to the change in the age structure are the impact of varying birth rates in earlier years, in particular, the "baby boom" of the 1950s and early 1960s, followed by the "baby bust" of the late 1960s and 1970s, and the substantial gain in life expectancy.

Canada is still a young country, but it is aging rapidly. The proportion of Canada's total population in the under-15 age group dropped from 34 per cent in 1961 to 21 per cent in 1986 and is expected to be approximately 16 per cent in 2011. The percentage of persons aged 65 and over increased from 8 per cent in 1961 to 11 per cent in 1986 and will probably reach about 16 per cent by 2011. During the 1970s and the 1980s the elderly population has grown more rapidly than any other age group. The high growth rate of the elderly population is expected to continue well into the next century.

The older segments of the population are also characterized by an imbalance in the number of females and males. The 1986 Census figures show that there were 138 women aged 65 and over for every 100 men. This is largely due to differences in longevity, with women outliving men an average of seven years.

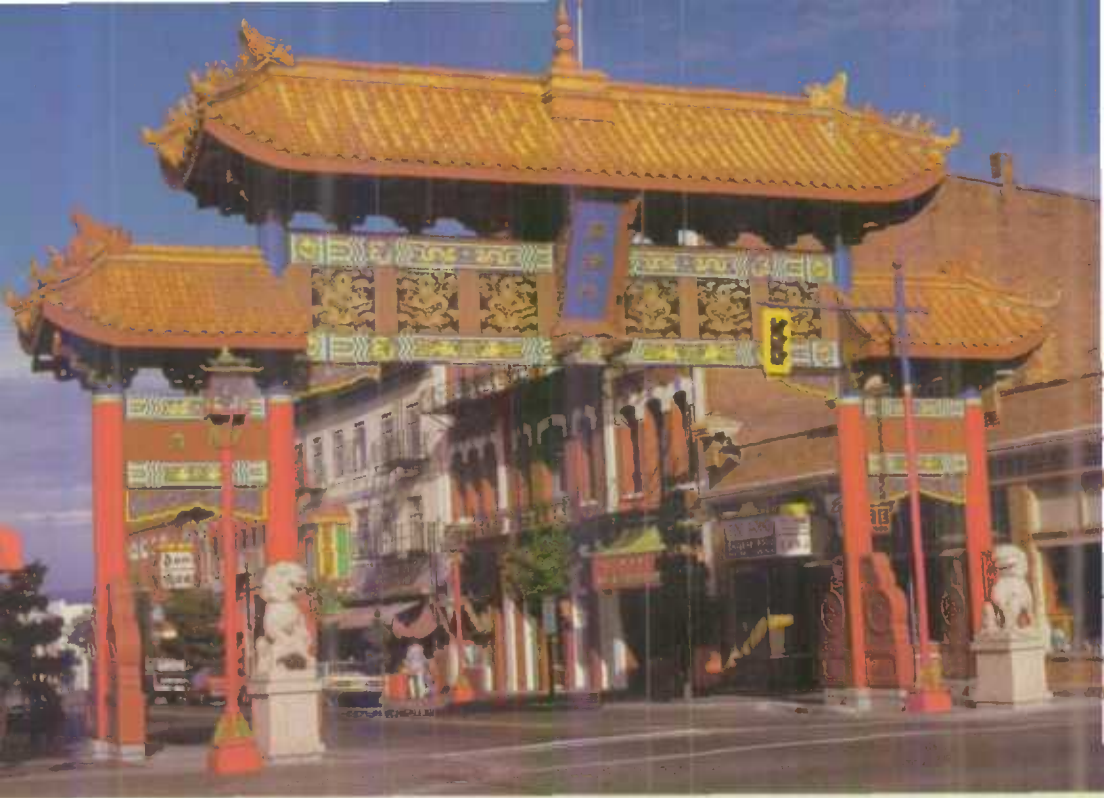
Factors of population change, 1961-86

	Total increase	Natural increase	Residual net migration	Ratio of migration to total increase
	'000	'000	'000	%
1961-66	1,777	1,518	259	14.6
1966-71	1,553	1,090	463	29.8
1971-76	1,424	934	489	34.4
1976-81	1,288	978	310	24.1
1981-86	1,011	988	23	2.3

The family structure of Canadians is also changing in many aspects. Today young adults are tending to marry at a later age. As a result, the proportion of single persons aged 20-34 continued to increase between 1981 and 1986. For example, 60 per cent of females, 20 to 24 years of age, were single in 1986, compared to 51 per cent in 1981 and 40 per cent in 1961. Similar patterns have been observed for females in the 25 to 34 age group and for males in these age groups.

More and more Canadians are now living as husband and wife outside the bounds of formal marriage. In 1986, one in 12 couples lived in a common-law union. In 1986, 8 per cent of all couples, about 487,000 families, reported that their union was common-law which represented an increase of 38 per cent since 1981.

While the number of families in Canada continues to increase, the typical family is now smaller. Average family size has declined from 3.9 persons in 1961 to 3.1 persons in 1986.



China Town, Vancouver, BC.

THE ETHNIC MOSAIC

Nation of Immigrants

Jacques Cartier's landing at Quebec City in the 16th century is the first recorded non-aboriginal settlement in Canada. For the next 200 years, until 1760, most settlers came from France; then, the pattern was altered by the flood of immigrants from the United Kingdom (English, Irish and Scottish) who arrived either by way of the United States (the Loyalists) or as new immigrants from Europe. In the 20th century the pattern again changed dramatically as the bulk of Canada's immigrants arrived on her shores from Continental Europe and, later in the century, from other continents.

In 1986, 72 per cent of Canada's population reported just one ethnic origin. Of this group, just over one-third was of British origin and one-third was French.

Regional differences were reflected in ethnic reporting in the 1986 Census. Newfoundland had the highest proportion of the population with a common ethnic background: 80 per cent of Newfoundlanders reported a single British response. In Quebec, 78 per cent of respondents gave French as their only ethnic origin.

The western provinces, notably Manitoba and Saskatchewan, showed greater ethnic diversity. British single responses represented the single largest group, comprising just over 21 per cent and 22 per cent, respectively, of all ethnic origins in these provinces. The next largest group, German single response, was 9 per cent and 13 per cent respectively.

The Northwest Territories was the only area of the country where neither British nor French was the largest group. Aboriginal peoples were in the majority and 52 per cent of the population of the Northwest Territories reported a single aboriginal response.

In 1986, 25 per cent of all Canadians reported ethnic origins other than British or French. This included those who gave a single ethnic origin other than British or French as well as those who gave a multiple response that did not include British or French.

Of all Canadians who reported having neither British nor French origins, 63 per cent were of European background, 10 per cent Asian, 6 per cent South or West Asian (Middle Eastern), 6 per cent Aboriginal, 3 per cent Black, 2 per cent Other, and 10 per cent gave a multiple response that did not include British or French.

There was considerable regional variation in the non-British and non-French population. For example, the Northwest Territories had the highest level (64 per cent) due largely to its substantial aboriginal population, while Newfoundland (2 per cent) showed the lowest. Both Manitoba and Saskatchewan had levels of non-British and non-French origins which were higher than 40 per cent.

There were also regional differences in the distribution of various groups. Asians were more likely to live in Ontario and British Columbia, than in the Maritime provinces or Newfoundland. Eighty-five per cent of Blacks lived in Ontario and Quebec and those of European ethnic background were predominant in all provinces.

The Canadian cultural mosaic is recognized by government through support for programs aimed at promoting, preserving and sharing cultural heritages and mutual appreciation and understanding among all Canadians. The multiculturalism sector of the Department of the Secretary of State provides grants or funds to groups for activities that further cultural pluralism, resource development, intercultural communications, and the participation of new citizens in society.

In 1947 Canada became the first country in the Commonwealth to adopt a distinct national citizenship. A new Citizenship Act was proclaimed in Parliament on February 15, 1977, with the intention, among others, of eliminating distinctions among applicants based on age, sex, marital status or country of previous citizenship.

The Department of the Secretary of State is responsible for the administration and interpretation of the Citizenship Act including the provision of a national service for the granting of Canadian Citizenship and for issuing certificates of proof of Canadian citizenship. To qualify for citizenship an adult alien (18 years of age or older) must have been admitted to Canada for permanent residence and have accumulated three years of residence in Canada within the four years immediately preceding application. Applicants for citizenship must also be able to speak either of the official languages, English or French, have a knowledge of Canada and of the responsibilities and privileges of citizenship, take the Oath of Citizenship, and not be subject to the specific prohibitions set out in the Citizenship Act. To become a Canadian citizen a person must apply for citizenship, appear before a Citizenship Judge for a hearing, and take the Oath of Citizenship at a court ceremony. Requests for detailed information should be made to the nearest Citizenship Court or mailed to the Department of the Secretary of State, Citizenship Registration and Promotion, Box 7000, Sydney, Nova Scotia B1P 6V6.



Michael Wood, a member of Toronto's Bilava Dance Theatre, a Ukrainian Cossack ensemble, performing during Cultures Canada 88 festivities — a tribute to Canada's ethnic diversity.



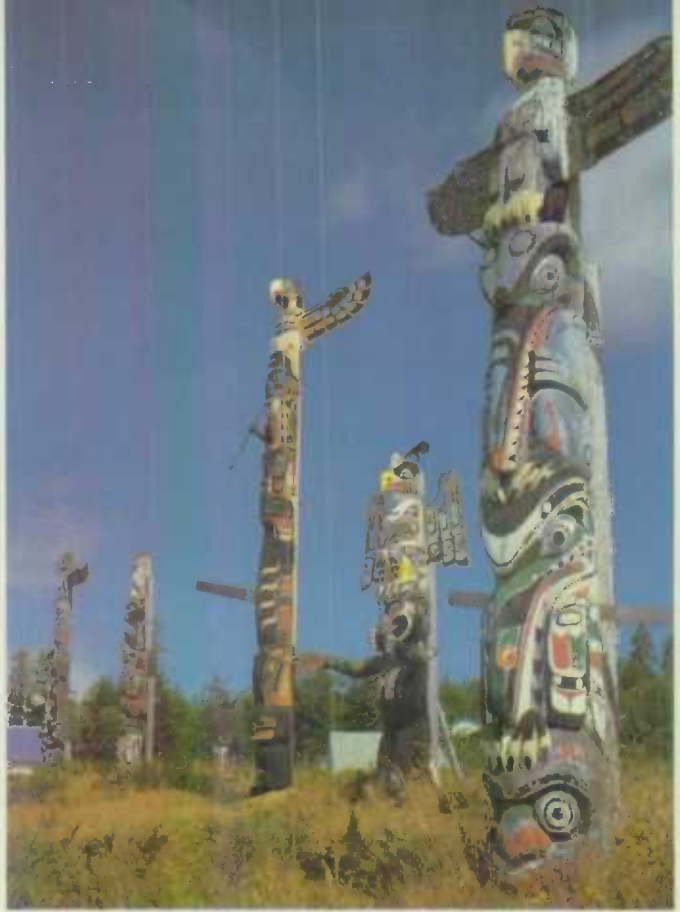
Caribana Festival at Tobago, *Trinidad*.

Population by selected ethnic origins¹

Ethnic group	Total	
	<i>No.</i>	<i>%</i>
Single origins	18,035,665	72.1
French	6,087,310	24.3
English	4,742,040	18.9
Scottish	865,450	3.5
Irish	699,685	2.8
German	896,715	3.6
Italian	709,585	2.8
Ukrainian	420,210	1.7
North American Indian	286,230	1.1
Dutch	351,765	1.4
Chinese	360,320	1.4
Scandinavian	159,335	0.6
Jewish	245,860	1.0
Polish	222,260	0.9
Multiple origins ²	6,986,345	27.9
Total population	25,022,005	100.0

¹ 1986 Census.

² Includes persons who report more than one origin.



Totem poles at Alert Bay, BC.

Native Peoples

In 1986, 711,720 persons, representing 3 per cent of the total population of Canada, reported at least one aboriginal origin. In the 1986 Census, 286,230 gave a single North American Indian origin, 59,745 a single Métis origin and 27,290 reported a single Inuit origin.

Approximately 332,500 or 47 per cent of respondents reported both aboriginal and non-aboriginal origins. Another 5,960 or 1 per cent of respondents gave a multiple response that included only aboriginal origins.

Most of Canada's aboriginal population live in the Northwest Territories and in the western provinces. For example, 59 per cent or 30,530 of the Northwest Territories respondents said they were of aboriginal origin. In the Yukon, 21 per cent or 4,990 gave aboriginal origins and 8 per cent of the total population of Manitoba (85,235) and Saskatchewan (77,645) reported at least one aboriginal origin. By contrast, just 1 per cent or 1,290 persons from Prince Edward Island indicated aboriginal origins.



People of the North





Drawing pictures in a day care centre.

Indians

The number of persons of Indian ancestry who are not entitled to be registered under the provisions of the Indian Act is unknown. Included among these people are persons who do not possess sufficient Indian ancestry to qualify for registration and the descendants of persons who received land or money-scrip.

There are over 50 different Indian languages or dialects in Canada, belonging to 10 major linguistic groups: Algonquian, Iroquoian, Siouan, Athapaskan, Kootenayan, Salishan, Wakashan, Tsimshian, Haida and Tlingit.

Education. The provision of education services to Indians living on reserves is the responsibility of the federal government through Indian and Northern Affairs, which provides or funds a complete range of educational services from kindergarten to senior matriculation. In addition, educational assistance is provided to eligible Indian students in university, professional, technological and trades training.

Since the acceptance by the federal government of the principle of local control contained in the National Indian Brotherhood paper "Indian Control of Indian Education" in 1973, more Indian bands have been assuming control of their schools and other educational programs. Out of a total of 384 federal and band schools, 243 are managed by Indian educational authorities. The majority of the 141 federal schools operated by the department offer culturally enriched programs.

Several provinces and universities offer special teacher-training courses to encourage Indian people to enter the teaching profession. Paraprofessional courses are also conducted to train Indian teacher aides and social counsellors for federal, provincial and band-operated

schools. Vocational training, vocational counselling and employment placement programs have been supported by Indian and Northern Affairs Canada in co-operation with Employment and Immigration Canada. The department has also assumed responsibility for training of elected and appointed officials of Indian bands and Inuit hamlet councils that is specifically related to their official duties.

Self Government. The community self-government negotiations process was established by the federal government in 1986. It is designed to respond to proposals from Indian and Inuit communities which seek to establish self-government arrangements beyond the limits of the Indian Act. The federal government does not intend to impose self-government models on communities, and communities which do not feel ready to move toward legislative change are under no obligation to do so. New self-government arrangements must conform with the established principles, jurisdictions and institutions of government in Canada.

Economic Development. Technical and financial support for planning, institutional development, business and employment development and socio-economic development activities is provided to enable Indian people to achieve enhanced economic self-sufficiency by helping them develop their resources and obtain permanent productive employment. The overall design and management of such activities will be progressively devolved to Indian people.

Inuit (Eskimos)

There are about 100,000 Inuit in the world. Canada's Inuit number around 25,000; their language is called Inuktitut. They live in small communities on the Mackenzie Delta, the Arctic islands and the mainland coast of the Northwest Territories, on the Quebec shores of Hudson and Ungava bays, and in Labrador. Their communities are situated for the most part on bays, river mouths, inlets or fiords, reflecting a culture that was, and to a considerable extent still is, tied largely to marine harvesting — fishing, gathering and hunting.

Video store, Baffin Island, NWT. Movies are popular in northern communities.



Today, while the hunter's life and the special relationship it implies with the land remains central to Inuit identity and self-perception, traditional hunting pursuits are not as important economically as they were in the past. The southern world has invaded northern communities with all its comforts and complications; electricity, oil-fired furnaces and stoves, snowmobiles and trucks, schools, hospitals, films and television have all combined to change northern life. The problems of southern society have moved north as well, often to be amplified in the conducive atmosphere of rapid social change.

The question of Inuit origins has been a subject of considerable speculation among archaeologists for many years. Archaeological evidence points to a beginning somewhere in Northeast Asia near the Bering Sea — probably between 15 000 and 10 000 B.C. — and a succession of ancient arctic cultures extending from eastern Siberia across Alaska and Northern Canada to Greenland has been identified and described by students of Eskimo prehistory. While there is not always consensus on the dating of these cultures and their inter-relationships, there is agreement that a number of distinct arctic cultural phases can be identified; the best known of these are the Dorset (700 B.C. to 1 300 A.D.) and Thule (1 200 A.D. to the time of the first European contacts).

Life was hard, the climate brutal, and the hunt was the key to survival. When the game disappeared the people starved, or froze to death as animal oil for the lamp (usually the only source of heat) ran out. The hunt was all-important; the sea provided whales, walrus and seal, while the land supplied caribou and musk oxen. Hunting skills were passed down from father to son.

Early accounts and archaeological research indicate that the Canadian Inuit once ranged farther south than they do now, particularly on the Atlantic seaboard. Generally, they were a coastal people and fish and sea mammals were their sources of food, fuel and clothing. Some groups, however, settled in the interior, where they lived on the caribou herds and fish from the inland lakes, made fires from shrubs instead of blubber and rarely visited the sea.

With the arrival of the whaling ships and the fur traders early in the 19th century, traditional Inuit life began to change as economic emphasis shifted from hunting and fishing to fur trapping.

With World War II came a rapid development in air travel, and the building of defence installations and of meteorological and radio stations. Through Canada's communications satellites, telephone, radio and television programs (some in Inuktitut) are now beamed into Inuit households. The kayak and sled dogs, once essential to the Inuit hunting and trapping lifestyle, have largely been replaced by the motorized toboggan and canoe. Few communities are without airstrips and modern aircraft technology has considerably shrunk the vast spaces of the Inuit domain.

The general health of the Inuit has improved remarkably in recent years and life expectancy is far greater than it was only two decades ago. Medical help is now available throughout the North and charter aircraft serve as an air ambulance system for isolated communities.

Various government programs in areas such as education, social affairs, local government and economic development have also contributed to the dramatic change in the Inuit way of life. Schools in every viable Inuit community provide education services up to Grades VIII and IX in most locations. Students attend pre-vocational and senior secondary schools elsewhere in the Arctic. A generous postsecondary financial assistance plan is available from the Northwest Territories government to those students attending university and vocational/technical institutes elsewhere.



Arctic char at Cambridge Bay, NWT.

The majority of Inuit communities have become incorporated hamlets or villages, managing their own affairs through elected councils. The Council of the Northwest Territories, a provincial-style body, has eight Inuit elected members. An Inuk also represents the Eastern Northwest Territories in the House of Commons and two Inuit sit in the Senate.

The Inuit Tapirisat of Canada (The Eskimo Brotherhood) is a national organization formed in 1971 to enable the Inuit to conduct and govern their own affairs and foster growth and development of their culture. Its Board of Directors is elected at the annual general assembly attended by delegates from all Inuit communities in Canada and, in addition to the national organization, there are seven regional Inuit associations that speak for their own specific areas. Co-operative federations such as the Inuit Development Corporations (IDC) and the Hunters and Trappers Associations (HTA) speak for Inuit interests in discussions and negotiations with industry and with provincial, territorial and federal governments. With their special agencies, they are increasingly concerned with land claims negotiations and the preservation of the Inuit lifestyle in the face of resource development. Financial assistance in the form of grants, contributions and interest-free loans are provided by both Indian and Northern Affairs Canada and Secretary of State.

With the increased demand, and thus intensified exploration, for oil, gas and minerals in the Arctic, Indian and Northern Affairs Canada and the Government of the Northwest Territories are involved in creating and making available opportunities for employment of Inuit in the non-renewable resource industries and related support industries. The Inuit Tapirisat of Canada and the various regional associations have been involved in representing Inuit concerns about the impact of development on the northern environment and the Inuit way of life.



Rankin Inlet, NWT.

Native Claims

Since 1973 the federal government and the concerned native peoples have been attempting to resolve two broad categories of native claims through a process of direct negotiations. The Comprehensive Claims Branch and the Specific Claims Branch of Indian and Northern Affairs Canada represent the federal government in this process.

“Specific” claims are based on grievances that Indian people might have about the fulfilment of Indian treaties or the actual administration of lands and other assets under the Indian Act or formal agreements. Each claim is judged on its own facts and merits, taking into account all relevant historic evidence. The goal of such claims settlements is to compensate the claimant band or bands for losses incurred and damages suffered, based on legal principles and established criteria.

“Comprehensive” claims are based on continued traditional native use and occupancy of land and waters. Such claims arise in those parts of Canada where the native title has not been previously dealt with by treaty or other means. They normally involve a group of bands or native communities within a geographic area and are comprehensive in their scope, including such elements as land tenure, specified hunting, fishing and trapping rights, financial compensation, participation in management structures regarding land use, environmental assessment and review of wildlife and other benefits.

The thrust of comprehensive claims policy is to exchange undefined aboriginal land rights for concrete rights and benefits. Settlements are intended to protect and promote the native peoples’ sense of identity while providing for meaningful participation in contemporary society and economic development on native lands.

Language

According to the 1986 Census, 15.3 million persons, or 61 per cent of the population of Canada, reported English as their only mother tongue; 6.2 million, or 24 per cent of the population, reported French as their only mother tongue; and 2.9 million, or 11 per cent of the population, reported a language other than English or French as their only mother tongue. (First language learned and still understood.) Of the 2.9 million persons who reported having a single mother tongue other than English or French, 2.1 million indicated a language of European origin, 634,000 a language of Asian or Middle Eastern origin, 138,000 an aboriginal language and 13,000 a language of another origin. (Origin means the geographical region where a language came into being. Persons who report that language may actually come from another region.)

In 1986, nine out of the 10 Canadians whose only mother tongue was French lived in the province of Quebec where 81 per cent of the population reported that French was their only mother tongue. Francophones accounted for a third of the population in New Brunswick. In other provinces, French minorities accounted for 5 per cent or less of residents, including Ontario with 425,000 persons whose only mother tongue is French, the largest number of francophones outside Quebec.

Most of the 2.9 million persons with a single mother tongue other than English or French, spoke European languages (2.1 million persons) but since the 1960s, Asian and Middle Eastern languages — mainly Chinese, Vietnamese, Punjabi, Hindi and Urdu — have grown considerably. Approximately 138,000 people in Canada had a single aboriginal language as mother tongue, mainly Cree, Ojibway and Inuktitut. Languages other than English or French are more prevalent in Ontario and the western provinces, than in Quebec and the Atlantic provinces.

The latest Census results also show that trends observed during the 1970s in the linguistic make-up of the country have continued into the 1980s. The proportion of anglophones outside Quebec has continued to grow while in Quebec there has been an increase in the proportion of francophones.

Some Canadians speak a language most often in their home that is other than their mother tongue. These language shifts are a major factor in determining the mother tongue of following generations and contribute to the growth of the language spoken. Most Quebec residents who first learned a language other than English or French as mother tongue and who made a language shift, adopted English as their dominant home language; the French-speaking community in Quebec neither gained nor lost population through language shifts but a loss was recorded for the francophone population living outside Quebec.

In 1986, more than 4 million Canadians reported they could conduct a conversation in both English and French. Bilingual persons represented 16 per cent of the population, up from 15 per cent in 1981 and 13 per cent in 1971. Quebec and New Brunswick recorded the highest rates of bilingualism at 35 per cent and 29 per cent, respectively. Slightly over half of Canada's bilingual population lived in Quebec. The 1.8 million who lived outside Quebec resided mainly in Ontario (1,058,000), New Brunswick (204,000), British Columbia (176,000) and Alberta (150,000).

As an officially bilingual country, Canada enjoys a number of policies and programs which serve to ensure, support and encourage the use of both official languages.

The Official Languages Act which came into force in September 1969, stipulates, among other things, that "the English and French languages are the official languages of Canada".

The basic principles of the Official Languages Act are now guaranteed in the Canadian Charter of Rights and Freedoms in the Constitution Act, 1982. The Charter confirms that English and French have equality of status and equal rights and privileges as to their use in all institutions of the Parliament and Government of Canada. It also stipulates that the Canadian public has the right to communicate with, and to receive available services from, any head or central office of an institution of the Parliament or Government of Canada in English or French. The public also has the same right with respect to any other office of any such institution where there is a significant demand for communications with and services from that office in English or French, or where the nature of the office so justifies. The Charter also gives significant guarantees of minority language education rights.

These Acts, and indeed the federal official languages policy as a whole, aim not to make all Canadians "bilingual", but to ensure respect for English and French as the official languages of Canada, and that federal services are provided to those who speak English and those who speak French, in their own language.

Population by mother tongue and home language¹

	Mother tongue		Home language	
	No.	%	No.	%
Single responses ²	24,354,390	96.2	23,862,330	95.4
English	15,334,085	60.6	16,595,535	66.3
French	6,159,740	24.3	5,798,470	23.2
Non-official languages	2,860,565	11.3	1,468,325	5.9
Italian	455,820	1.8	271,835	1.1
German	438,675	1.7	112,550	0.4
Ukrainian	208,410	0.8	46,150	0.2
Chinese	266,560	1.1	230,480	0.9
Aboriginal languages ³	138,060	0.5	97,280	0.4
Other languages	1,353,040	5.3	710,030	2.8
Multiple responses ²	954,940	3.8	1,159,670	4.6
English and French	332,610	1.3	351,900	1.4
Other multiple responses	622,330	2.5	807,770	3.2
Total	25,309,330 ⁴	100.0	25,022,000 ⁴	100.0

¹ 1986 Census.

² For the first time in the 1986 Census, Canadians could indicate more than one language. Consequently, care must be exercised when comparing the 1986 data with previous censuses.

³ Census enumerators were refused entry to 136 Indian reserves and Indian settlements. The population missed has been estimated at just under 45,000 persons, that is, approximately 8 per cent of the total aboriginal population.

⁴ The question on mother tongue was asked of all Canadians in the 1986 Census. The question on the language spoken most often at home was to be answered by a sample of one-in-five households, which excluded persons in institutions such as prisons and nursing homes.

Religion

Before the arrival of Christianity to the new world, native religions flourished among Canada's Indian population. From the 17th century on, these indigenous religious expressions declined in the face of French and British missionary and cultural pressures.

Unlike the United States, Canada was not initially a melting pot of cultures, but a facsimile of its European parents. This applied to its religious temperament as well. In the mid-19th century, however, the addition of new French Roman Catholic orders in Quebec and non-conformist Protestant denominations in Anglophone Canada precluded a unified church-state relationship. However, all Christian denominations continued to seek the fulfilment of their own social and national visions in some kind of political dimension. In Quebec, the Roman Catholic church dominated most aspects of politics and society until recent times, and elsewhere Protestantism pressed hard to develop what is considered to be an appropriate definition of Canadian identity.

This may have sustained traditional religious and ethical values, but it also led the churches away from innovations that would make their role more suitable to Canada's changing needs. Between 1880-1945, a once predominantly rural and conservative Canadian society was massively challenged by industrialization, urbanization, improved communications and, above all, immigration. Many newcomers were from eastern or southern Europe. Among them were such diverse groups as Mennonites, Hutterites and Doukhobors. They did not share the religious world-view of the old French and British churches. Attempts to assimilate these fragments into a monocultural French or English hegemony failed, and by 1945 Canada had truly entered into an age of religious pluralism.

Selected religious statistics, 1985

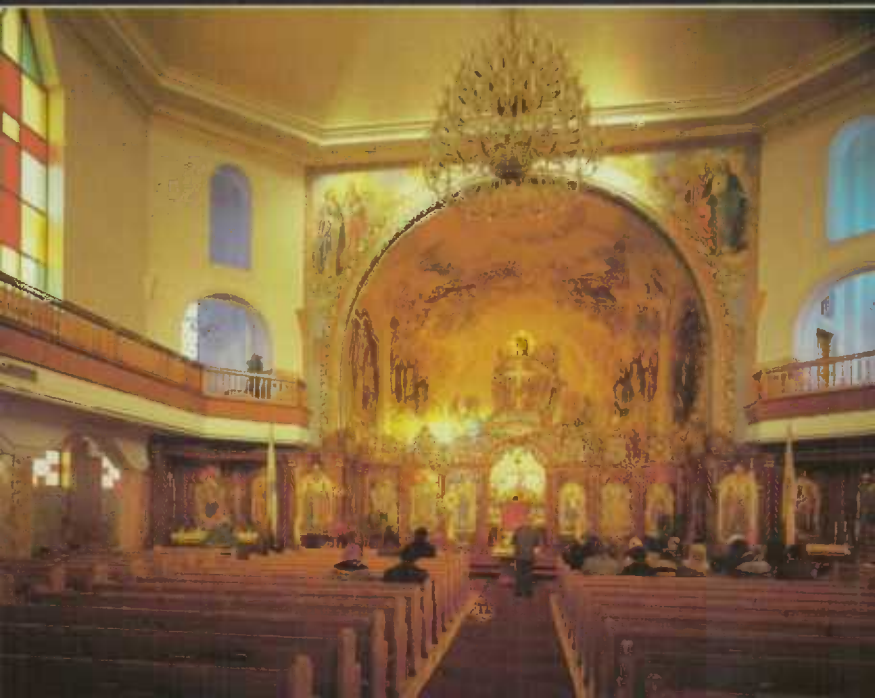
Religious body	Churches	Clergy	Inclusive membership
	No.	No.	No.
Roman Catholic Church	5,976	11,591	10,881,950
United Church of Canada	4,204	3,845	2,199,968
Anglican Church of Canada	3,210	3,100	855,796
Jewish ¹	112	...	296,425
Greek Orthodox Diocese of Toronto ²	58	49	230,000
Presbyterian Church in Canada	1,035	1,053	215,911
Pentecostal Assemblies of Canada	1,036	...	178,743
Canadian Baptist Federation	1,125	1,189	133,352
Lutheran Church in America-Canada			
Section	341	407	125,700
Lutheran Church-Canada	360	332	94,627

¹ 1981 data.

² 1984 data.

... Not applicable.

Source: *Yearbook of American and Canadian Churches, 1987.*



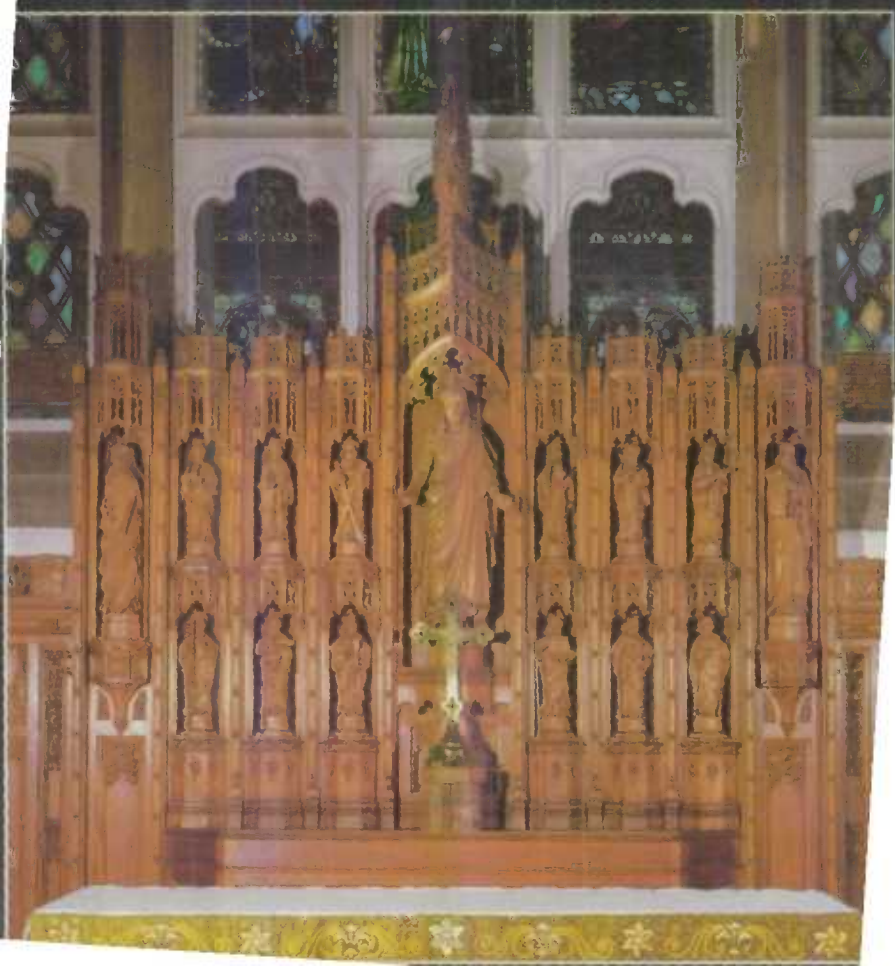
1. Notre-Dame Cathedral



2. St. Mary's Ukrainian Roman Catholic Church, Toronto, Ont.

3. Window in a Jewish Synagogue, Ottawa, Ont.

4. Christ Church Cathedral, Ottawa, Ont.





Lutheran choir singing a hymn with sign language for the hearing impaired at Winthrop, Mass. in May 1988 — celebrating the signing of a constitution of their new Lutheran Church Canada, after 123 years under the auspices of the American parent church.

The three dominant Christian denominations are Roman Catholic, United Church of Canada and Anglican. Medium-sized denominations include Presbyterians, Lutherans and Baptists. Smaller Christian denominations, notably the Adventists, Jehovah's Witnesses, Mennonites, Mormons, Pentecostals, Christian Reformed, Orthodox, Ukrainian Catholic and Salvation Army are also part of Canada's religious community. Through their good work, such as their combined outreach to Canada's north and to needy parts of the world, all these churches exert a responsible social and political influence.

All provinces except Quebec and New Brunswick have a Protestant majority, and nearly half (49 per cent) of all Catholics live in Quebec. Apart from Christianity, however, many other religions flourish in contemporary Canada.

The Canadian Indian religions appear to be making a modest recovery to recognition. Their reality was never totally lost sight of, but because many of their tenets have been absorbed into native Christian practice, it is difficult to declare their precise number of adherents.

Elsewhere, especially in the larger cities, Canada has long had a distinguished Jewish population, with substantial communities in Quebec, Ontario and Manitoba. To the old established Japanese Buddhist presence in the West has been added a recent influx of Southeast Asian (Theravada) Buddhists, particularly in the city of Toronto. Hindus of various schools, as well as Sikhs and Zoroastrians, are also now much in evidence in the larger metropolitan areas. These add greatly to the richness and diversity of Canada's religious mosaic.

There are, finally, a number of contemporary para-religious movements whose presence is noteworthy. Groups such as Dharmadatu, ISKCON (Hare Krishna), Transcendental Meditation and Sri Chinmoy Followers, to name a few, continue to attract adherents. Most of these movements do not have organized religious rites, clergy or definitive moral codes. Consequently, many devotees remain in some sense practitioners of other mainstream religions. These groups primarily seek individual awareness, and have little organized cultural outreach or social philosophy. But although only nominally a part of the Canadian religious fabric, they add their own colour and meaning to an increasingly complex and cosmopolitan society.



Memorials at West Abertree, Ont.

Young Hutterites near Rockyford, Alta.





Canada

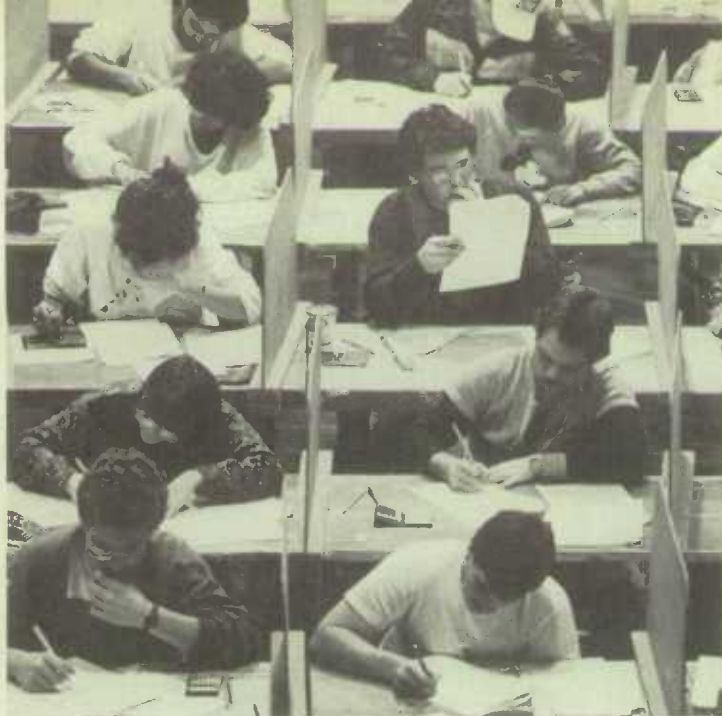
A PORTRAIT

THE

SOCIETY

EDUCATION

Education in Canada is one of the country's largest activities. Spending on education represents about 7 per cent of Canada's Gross Domestic Product (GDP), 8 per cent of personal income, \$1,340 per capita of population, and \$2,700 per capita of labour force. Most education revenue comes from government sources with provincial and municipal governments providing the major share. Education is second only to social welfare as a consumer of government budgets.



First-year students at the University of Manitoba writing a chemistry exam.

Recent Trends

Until the end of the 1960s, education in Canada was one of continuous, sometimes dramatic, growth. As the population grew and the economy was buoyant, educational facilities were built: new elementary and secondary schools to accommodate an increasing student population and networks of community colleges to provide an alternative to university studies. Universities were experiencing unprecedented growth, constructing new and expanding old facilities and introducing new programs of study to meet growing student demand.

In the early 1970s, the first signs of an end to the period of growth appeared when elementary enrolment started to drop as a result of a declining birth rate. This started a ripple effect which was to be felt at all levels of education. By the mid-70s secondary enrolment was decreasing and the rate of increase in postsecondary education was moderating. Demographic trends combined with an economic slowdown have meant that the 1980s have been a period of restraint for education in Canada.

Historical Perspectives

When the four original provinces of Canada were united in 1867, responsibility for education was vested in provincial legislatures rather than the federal government. Constitutional jurisdiction over education was given to other territories as they achieved provincial status.



Laval University, Quebec City, Que.

While the constitution recognizes no federal presence in education, the federal government has assumed direct responsibility for the education of those outside provincial jurisdiction — native peoples, armed forces personnel and their dependents in Canada and abroad, and inmates of federal penal institutions. More significantly, as education has expanded, indirect federal participation in the form of financial transfers to provincial governments has expanded for the support of postsecondary education, direct financing of manpower training programs, and support for bilingualism in education.

Provincial Administration

Because each province and territory is responsible for the organization and administration of education within its jurisdiction, no uniform system exists. Provincial autonomy has resulted in distinctive education systems reflecting historical and cultural traditions and socio-economic conditions.

Local Administration

While provincial legislatures and education departments provide the legal framework, most of the actual operation of public schools is delegated to local boards of education composed of elected and/or appointed trustees whose duties are specified in provincial legislation and departmental regulations. Responsibilities of boards vary but they generally include school construction, pupil transportation, hiring of teachers and determination of tax rates for local support.



Kindergarten children in Winnipeg, Man., singing for their parents at school, in June 1988, are potential college students of the next century, as indicated on their T-shirts, Grad 2000.

Elementary-Secondary Education

Elementary education is general and basic, but in the junior high school years there is usually some opportunity for students to select courses to suit their individual needs. At the secondary level students have a choice of several programs and, within provincial requirements, they may build a secondary program by selecting from a number of subject-matter areas.

At one time secondary schools were predominantly academic, designed to prepare students for university; vocational schools were separate institutions, primarily for those who would not proceed to postsecondary education. Today, while some technical and commercial high schools still exist, most secondary schools are composite, providing integrated programs for all types of students.

Independent Schools

In all provinces some elementary-secondary schools operate outside the public school system. These private or independent schools have been established as alternatives to the public system — alternatives based on religion, language, or social or academic status. Provincial policies on private schools vary considerably — from the provision of direct grants per pupil to minimum provincial involvement in financing and inspection. Private kindergartens and nursery schools also exist for children of pre-elementary age.

Separate Schools

Five provinces make some legal provision for schools with religious affiliation within the publicly supported system.

Newfoundland's public school organization has traditionally been based on church affiliation. Roman Catholic schools serve the largest single religious group in the province and are organized into school districts. In the mid-1960s the major Protestant denominations



Primary schools: students learning to use computers.

(Anglican, United Church and Salvation Army) amalgamated their schools and boards. Two other denominations (Pentecostal and Seventh Day Adventist) also operate schools.

Quebec has a dual education system — one for Roman Catholic students, the other for non-Catholics. During the 1970s the distinction on the basis of religion gave way, to some extent, to a distinction based on language of instruction. Both school systems receive public support.

Legislation in Ontario, Saskatchewan and Alberta permits establishment of separate schools. In all three provinces, Roman Catholic separate school districts operate a large number of schools, while a few Protestant separate school districts also exist.

Postsecondary Education

The 1960s and 1970s were marked by extraordinary growth in programs and facilities for education beyond high school. In prior years, universities offered almost the only form of postsecondary education. Now, every province has networks of public community colleges and institutions of technology.

Degree-Granting Institutions

There are several types of degree-granting institutions in Canada: institutions that have, as a minimum, degree programs in arts and science; large institutions that offer degrees up to the doctorate level in a variety of fields and disciplines; smaller institutions with undergraduate degree programs only in arts; independent institutions granting degrees in religion and theology only; and institutions offering degree programs in a single field such as engineering, art or education.

The Department of National Defence finances and operates three tuition-free institutions that provide university-level instruction; Royal Military College in Kingston, Ont., Royal Roads in Victoria, BC, and Collège militaire royal in Saint-Jean, Que., which is affiliated with the Université de Sherbrooke.

Admission to university usually requires high school graduation with specific courses and standing. Most universities, however, provide for the admission of "mature students" who do not have all the usual prerequisites.

Depending on the province, a pass bachelor's degree in arts or science takes three or four years of study. Most universities offer both pass and honours bachelor's degrees; an extra year of study is usually necessary for the latter. Admission to some professional faculties such as law, medicine, dentistry and engineering normally requires completion of part or all of the requirements for a bachelor's degree.

Admission to a master's degree program is usually contingent upon completion of an honours bachelor's degree or equivalent. Most master's programs entail an additional year or two of study plus a thesis. Entrants to doctoral programs must have a master's degree or equivalent in the same field.

University tuition fees vary among and within provinces. Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario and Alberta have differential fees for foreign students.

Community Colleges

As an alternative to university education, all provinces have established public community colleges — regional colleges in British Columbia, institutes of technology and other public colleges in Alberta, institutes of applied arts and science in Saskatchewan, colleges of applied arts and technology (CAATs) and colleges of agricultural technology (CATs) in Ontario, and collèges d'enseignement général et professionnel (CEGEPs) in Quebec. Other institutions also exist for training in specialized fields such as fisheries, marine technologies and para-medical technologies. Most provinces now provide nurses' training programs in community colleges rather than in hospital schools of nursing which were common in the past.

Admission to public community colleges usually requires secondary school graduation but "mature student" status allows otherwise ineligible applicants to enrol. Upgrading programs are also available in some institutions to applicants whose high school standing does not meet regular admission standards.

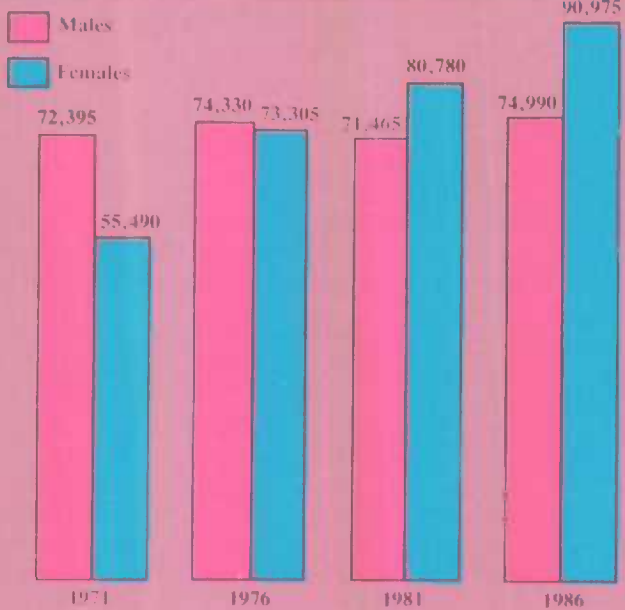
Technical and Trades Training

Technical and trades training varies from province to province and often within a province. In addition to the vocational and technical programs provided in secondary schools, students may continue this type of education in public and private trade and business schools, trade divisions of community colleges and related institutions. Trades training is also available through training-in-industry and apprenticeship programs.

Adult Education

For the past decade, educational programs for out-of-school adults have been the most rapidly growing sector of Canadian education. Departments of education, school boards, community colleges and universities offer extensive part-time programs for adults to acquire

Population 15-24 Years with University Degrees
by Sex, Canada, 1971-86





Summer students performing reclamation operations at an open-pit coal mine in southern British Columbia.

accreditation at various education levels or advance their personal interests. Programs are also provided by professional associations, unions, community organizations, churches, public libraries, government departments, business and industry. Correspondence courses are also available.

Statistical Highlights

In 1985-86 education was the primary activity of 6,044,000 Canadians, or about 24 per cent of the total population. There were 5,718,000 full-time students being taught by 326,000 full-time teachers in 15,900 educational institutions. Expenditures on education for 1985-86 reached \$33.9 billion, or 7.1 per cent of Canada's Gross Domestic Product (GDP).

Lower birth rates in recent years and lower levels of immigration have produced an enrolment decline in elementary-secondary schools that has persisted since the early 1970s. At the postsecondary level, however, increased participation rates have more than offset the decline in size of the primary source population group.

Elementary-secondary enrolment in 1985-86 was 4,927,800, a decline of 0.4 per cent from 1984-85 and of 16 per cent from the all-time high of 5,888,000 recorded in 1970-71. Elementary enrolment dropped 22 per cent from the 1968 high of 3,844,000 to 2,989,000 in 1985-86. Secondary enrolment patterns resemble those of the elementary level, but they are delayed seven or eight years. Recent increases in participation of the post compulsory school-age group have moderated declines and could indicate small increases before the end of the 1980s.

Full-time postsecondary enrolment in 1985-86 was 789,900, a 0.9 per cent increase from 1984-85. University enrolment made up 59 per cent of the total, but the rate of increase over the past decade was lower than that of the community college sector, where full-time enrolment increased by 94 per cent, from 166,100 in 1970-71 to 322,600 in 1985-86. Meanwhile, full-time university enrolment went from 309,500 to 467,300, an increase of 51 per cent.

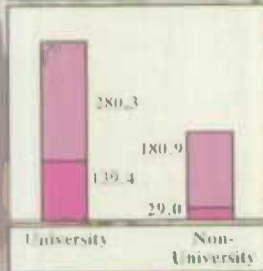
Major Fields of Study of University Graduates and of Trades and Other Non-University Certificate Holders, 1986

In thousands

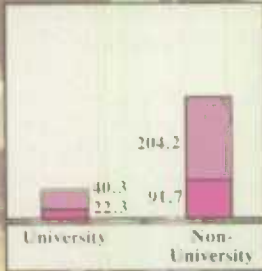
■ Males

■ Females

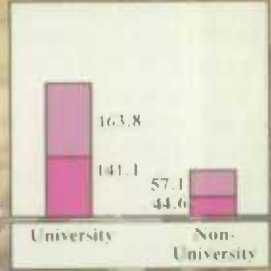
Educ., Rec. & Counselling Serv.



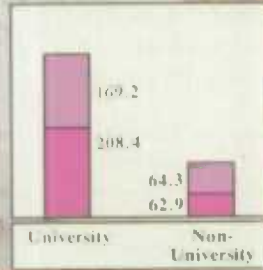
Fine & Applied Arts



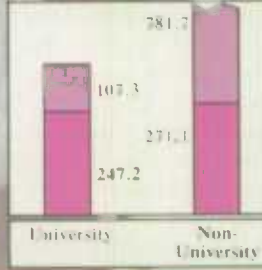
Humanities & Related Fields



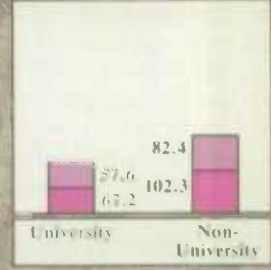
Social Sciences & Related Fields



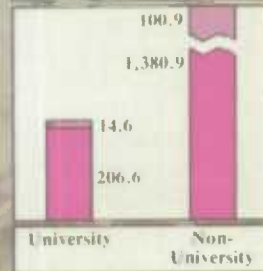
Commerce, Mgmt. & Business Admin.



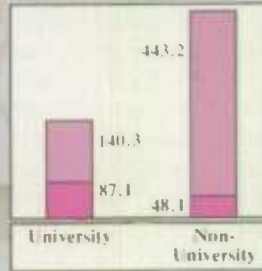
Agric. & Biological Sciences/Tech.



Engineering & Applied Sciences



Health Professions, Sciences & Tech.



Mathematical & Physical Sciences



In 1985, 278,400 students graduated from secondary schools, a 4.0 per cent decrease from the previous year. About 50 per cent of high school graduates normally enter a post-secondary institution.

Universities conferred 97,600 bachelor's and first professional degrees, 15,200 master's degrees and 2,000 earned doctorates in 1985. Community colleges awarded 84,500 diplomas.

Expenditures for education from kindergarten through graduate studies reached \$33.9 billion in 1985-86. Elementary-secondary education consumed about \$22 billion of the 1985-86 total, universities \$7 billion, community colleges \$2.6 billion and vocational training \$2.4 billion.

Education spending per capita of population soared from \$315 in 1969 to \$1,340 in 1985; the increase per capita of labour force was from \$808 to \$2,700. Nevertheless, other indicators point to a relative decline in education spending. In 1970, when full-time enrolment reached record levels, expenditures on education were equivalent to 8.6 per cent of GDP. By 1980 education's share had decreased to 7.2 per cent of GDP. Recently, education expenditures, as a proportion of GDP, have been in the 7.5 to 7.6 per cent range.

1986 Census Statistics. One of the most significant changes for 1986, according to Census figures, was in the number of Canadians holding university degrees. This group represented 9.6 per cent of all Canadians aged 15 or over, a percentage twice as high as that recorded in 1971. The number of university graduates grew by 26 per cent from 1981 to 1986. Over the same period, the number of Canadians with master's degrees rose by 32 per cent, and those with earned doctorates by 20 per cent.

Among persons 15 years of age or older, 43 per cent had achieved levels of schooling between grades nine and 13 by 1986. About one-sixth of this group was aged 15-to-19, and, generally, still in school. The same is true of the 30 per cent who had received some post-secondary education. This percentage includes up to 800,000 full-time students enrolled at Canadian colleges and universities in 1985-86.

In 1986, 18 per cent of the population aged 15 years or over had achieved less than a Grade 9 level of schooling. This was down from 32 per cent in 1971. Three-quarters of Canadians with less than Grade 9 were 45 years of age or older, though this age group represented only 37 per cent of the total population 15 and over.

Among recent university graduates, women outnumbered men, accounting for 55 per cent of all graduates under the age of 25. In contrast, in the 45-to-64 age group, male university graduates outnumbered females, representing 67 per cent of all graduates.

Variations in education across the country. A measure of the successful completion of formal education is the highest degree or certificate obtained. This measure shows significant regional variations.

Alberta (13 per cent) and Ontario (12 per cent) had the highest proportion of their populations holding university degrees or certificates, while Newfoundland (7 per cent) and New Brunswick (9 per cent) had the lowest.

If all postsecondary degrees, diplomas and certificates are considered, including trades and other non-university certificates, the Yukon (39 per cent) had the highest proportion of postsecondary graduates, followed by Alberta (35 per cent). The lowest proportions were in Newfoundland (26 per cent) and New Brunswick (27 per cent).

British Columbia (54 per cent) and the Yukon (57 per cent) had the largest proportion of population holding secondary or postsecondary degrees, diplomas or certificates, while Newfoundland (39 per cent) and the Northwest Territories (40 per cent) had the smallest.



The Sleeping Beauty, a National Ballet of Canada production, with Cynthia Lucas and David Roxander in foreground.

ARTS AND CULTURE

To a large extent, the character of a nation is defined by the nature and the vigour of its cultural life. As arts and culture thrive, a sense of national identity and pride in the cultural achievements of Canadians thrives.

Cultural activities wield considerable economic influence. Our cultural sector is a major employer, providing approximately 200,000 jobs. It contributes as much to the Gross Domestic Product as textile, aircraft or chemical industries. The enjoyment and participation in cultural activities occupy much of our leisure time and our demand for cultural products continues to increase.

Governments and Cultural Policy

Through its policies and programs, the federal government promotes cultural activity by addressing the needs of performing and visual artists, writers, libraries, museums, archives and galleries, as well as the cultural industries — book and periodical publishing, broadcasting, film and sound recording.

Subsequent to the Federal Cultural Policy Review Committee's report in 1982, the government has approved a number of significant initiatives for culture, notably in the areas of broadcasting and film, book publishing and sound recording.



David MacGillivray in Apollo, a Ballet British Columbia production.

The government actively seeks to achieve its cultural goal through its partnership of effort with the private sector and other levels of government. Governments fund creativity, regulate and encourage cultural activities or even operate certain cultural institutions. A task force, established in June 1985, has reported on methods for more effective funding of the arts in Canada. It recommended greater private sector involvement in promoting creativity and in producing a wide range of cultural activities. It is the individual creators and audiences whose preferences ultimately give shape to our cultural expressions.

A number of programs within the Department of Communications are designed to promote cultural activities across the country.

Among the boards and agencies that the government has established and funds are Canada Council, Telefilm Canada, Canadian Broadcasting Corporation, Canadian Radio-television and Telecommunications Commission, National Arts Centre, National Film Board, National Library of Canada, National Archives of Canada and National Museums of Canada. All these agencies function independently from the government, thereby ensuring a high degree of artistic and cultural freedom while providing the variety of programs our diverse cultural community requires.

The Canada Council

The Canada Council, created by Parliament in 1957, provides financial assistance to professional artists and arts organizations in dance, music, theatre, writing and publishing, visual arts and media arts. Currently, the Council supports the following programs with grants:

Individual Artists. Grants are available to professional artists for activities in the fields of architecture, art criticism and curatorial work, writing (fiction, poetry, drama, children's literature and non-fiction), dance, film, multidisciplinary work and performance art, music, photography, theatre, video and visual arts. Individual grants range from \$32,000 (available only to senior artists) to smaller sums for living expenses, project costs and related travel. In 1987-88 professional artists such as Carol Anderson in Toronto (dance), David Askevold in Halifax (video), Robert Bourdeau in Ottawa (photography), Guy Dufresne in Frelighsburg, Que. (theatre), Paterson Ewen in London, Ont. (visual arts), Jacques Lacombe in Cap-de-la-Madeleine, Que. (music), and Daphne Marlatt in Vancouver (writing) received grants.

Dance. Grants are available to professional companies and schools, independent choreographers, small-scale presenters and service organizations in the form of operating or project support. In 1987-88, groups that received funding included: Les Grands Ballets canadiens in Montreal (\$990,000), Desrosiers Dance Theatre in Toronto (\$200,000), Contemporary Dancers in Winnipeg (\$200,000), Ballet British Columbia in Vancouver (\$125,000), and Dansepartout in Quebec City (\$70,000).

Theatre. Grants are available to professional theatre companies in Canada. Schools offering professional training programs and some national service organizations also may be eligible for funding. Over 190 organizations are supported each year. In 1987-88, groups that received funding included the Arts Club Theatre in Vancouver (\$220,000), Théâtre populaire d'Acadie in Caraquet, NB (\$100,000), Magnus Theatre Company North-West in Thunder Bay (\$100,000), Théâtre Petit à Petit in Montreal (\$62,000), Phoenix Theatre Society

School for Wives, a Magnus Theatre production. — left to right, Brian Turge, Liza Caron, Peter Meunier and Diane Sijrijak.



in Edmonton (\$60,000), Mulgrave Road Co-op Theatre in Guysborough, NS (\$57,000) and Aubergine de la Macédoine in Quebec City (\$28,000).

Music. The Canada Council awards the major portion of its budget in this area to professional orchestras, opera companies, the commissioning of Canadian compositions program, chamber music groups, professional choral groups and other music organizations. In 1987-88, the commissioning of Canadian compositions program awarded a total of \$500,000 for the composition of new Canadian music. Other funding in 1987-88 included the Orchestre symphonique de Montréal (\$1,330,000), Edmonton Opera Association (\$305,000), Association of Canadian Orchestras in Toronto (\$105,000), Symphony Nova Scotia in Halifax (\$100,000), Vancouver Chamber Choir (\$98,000), and Regina Symphony Orchestra (\$78,000).

Writing and Publishing. The Canada Council's programs of assistance to writers and publishers are based on a commitment to literary excellence in the fields of poetry, drama, fiction, children's literature and non-fiction. A broad range of programs covers all facets of activity in the literary community, from the writer, to the publisher, through promotion and distribution, to the reader. In 1987-88, for example, book and periodical publishers that received funding included Parachute, Montreal (\$106,000), McClelland and Stewart, Toronto (\$100,908), Boréal Express, Montreal (\$95,120), Vanguard, Vancouver (\$92,000), NeWest Publishers, Edmonton (\$41,160), Ragweed Press, Charlottetown (\$36,360), Fiddlehead, Fredericton (\$20,000), and Dandelion, Calgary (\$7,000). The Council also has

Top Girls, a Globe Theatre production — left to right, Kristina Nicoll, Diana Leblanc, Karen Barker and Pamela Boyd.





Le Malade Imaginaire presented by La Troupe Populaire d'Acadie.

supported promotion projects undertaken by the Société de promotion du livre in Montreal (\$22,000) and the Canadian Children's Book Centre in Toronto (\$140,000). To increase public awareness of Canadian books and authors, the Council disbursed \$707,000 in 1987-88 for the National Book Festival and has funded over 2,000 public readings across Canada by Canadian authors. The Council also administers the Governor General's Literary Awards, several international prizes, international writers' exchanges, and national and international translation grants.

Visual Arts. Grants are available to public art galleries and museums, artist-run centres and print workshops. Partial assistance is offered toward non-recurring special projects, such as symposia and publications, in all areas of visual arts. A visiting artists program enables local communities of professional artists to invite Canadian professional artists from other regions to discuss their work and exchange ideas.

Media Arts. The media arts section provides support for the direct, creative use of conventional and new technologies and related media by independent, professional artists and non-profit organizations. The section administers three major programs: film and holography, video and audio, and computer integrated media (computer processing, audio and video imaging or system control, computer telecommunications, laser techniques, videodisc and optical storage media).

Touring. The Canada Council's touring office aims to ensure access by the widest possible audience to Canadian performers and to develop Canadian expertise in the promotion and management of tours by performing artists. Grants are offered to Canadian artists and organizations to develop and strengthen regional touring circuits. For example, the Toronto Symphony toured northern Ontario, Western Canada and the Far North in September and October 1987.



Isabelle Vincent in Fantômes, Concert-Fantôme presented by Théâtre Petit à Petit.

Robert Desrosiers in Incognito, a production of Desrosiers Dance Theatre.



Explorations. Explorations is a multi-faceted and wide-reaching program that assists new artists and encourages fresh ideas. Grants are offered on a competitive basis to individuals, groups and non-profit organizations for innovative projects in any artistic discipline or combination of disciplines which may introduce new approaches to creative expression or fulfill specific needs in the development of the arts.

The National Arts Centre

Performing artists and audiences alike have benefited immeasurably since the National Arts Centre (NAC) first opened its doors in Ottawa in 1969. The NAC Corporation was created not only to operate a performing arts complex in Ottawa, but to foster the development of the performing arts both in the National Capital Region and (in co-operation with the Canada Council) throughout Canada.

The NAC has a unique dual function. It is a showcase for performances by visiting Canadian artists, as well as for touring productions from around the world. All the performing arts — music, theatre, dance and variety — are widely represented in the NAC's programming, from the classic to the contemporary.

*Sarah Sjöpper and Andree Lesein in *Belong Pas De Deux*, a Royal Winnipeg Ballet production.*





He Shoots, He Scores recounts the dreams, loves, ambitions and disappointments of a 20-year-old hockey star. Telefilm Canada participated in 300 projects in 1987-88.

In an effort to make its talent accessible to as many Canadians as possible, the NAC strongly supports touring, broadcasting and recording. The world-renowned NAC Orchestra, for example, has toured over 100 Canadian communities in its first 19 years. The orchestra has also toured in the United States, Europe, Great Britain and Central America. Approximately 260 attractions are offered every year at the NAC in both official languages to audiences which total approximately 700,000.

Telefilm Canada

Through Telefilm Canada, a Crown corporation, the Government of Canada provides support, as a partner, to the private sector for the production of film and broadcast material, either in investment funds or resources. Meeting diverse needs, through a wide range of funds, Telefilm Canada participated in 300 projects in 1987-88. Support is available at all stages of the process, from screenplay development to final production and marketing of the finished product in Canada and abroad.

Telefilm Canada's goal is to strengthen the competitive position of Canadian films, television programs and videos, to raise the export profile of Canadian companies, and to assist in developing marketing and promotion strategies.



Emergency, a recent IMAX film of the National Film Board of Canada.

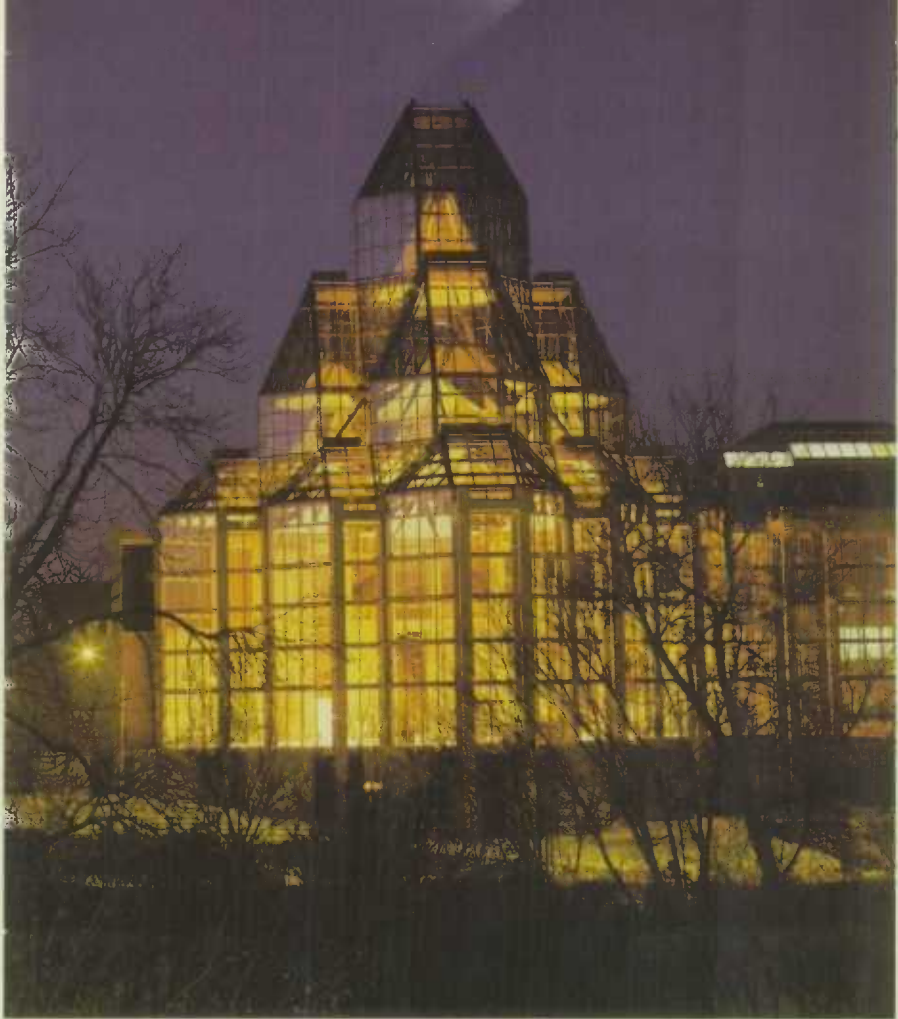
In addition, Telefilm Canada is responsible for managing the co-production agreements for film or television programs signed by Canada with the following foreign countries: Algeria, Belgium, People's Republic of China, Czechoslovakia, the Federal Republic of Germany, France, Hungary, Israel, Italy, Morocco, New Zealand, Spain, Switzerland, the United Kingdom and Yugoslavia.

National Film Board of Canada

The National Film Board (NFB) has been producing and distributing outstanding Canadian films on a wide variety of subjects since it was formed in 1939. Every year, the NFB distributes thousands of films and other audio-visual materials for screening on television, in theatres and classrooms and at home. Its films are increasingly available at video rental outlets. The NFB's many subsidiary services include lectures on the art of filmmaking, and workshops with renowned filmmakers.

Through research and development, the NFB serves to advance the art and technology of audio-visual communication. The Board also furthers Canadian filmmaking by offering assistance in various ways such as assisting Canadian producers and new filmmakers, and participating in many Canadian film festivals.

The excellent quality of the NFB's films has been recognized by audiences around the world.



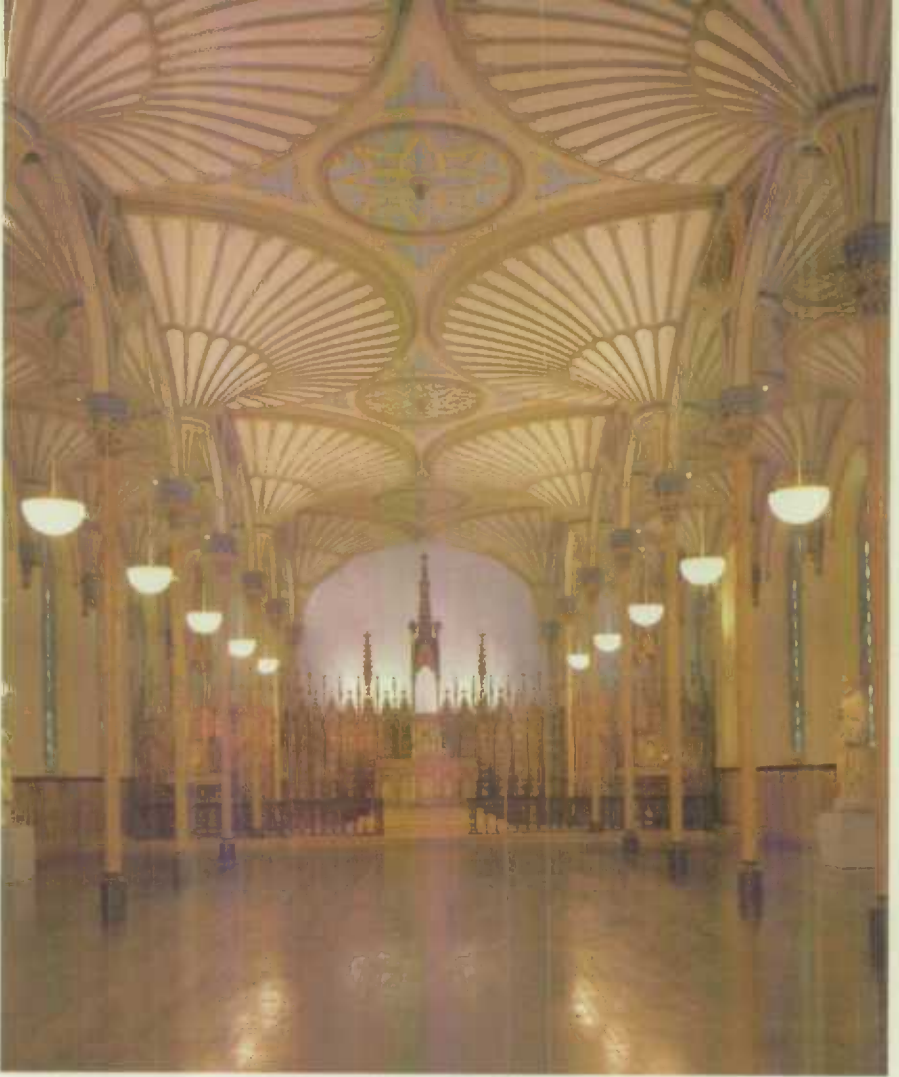
The new National Gallery of Canada, opened in Ottawa in May 1988.

Museums and Galleries

Over the past decade, Canada has witnessed a dramatic increase in museum activity. There are now about 1,000 museums and art galleries in operation across the country, with a combined annual attendance of over 21 million visitors, indicating strong public interest in the preservation of Canada's historic and artistic heritage. Museums in Toronto and Montreal reported over 5 million visitors. The number of museum workers has also increased enormously and training programs in museology have expanded.

The National Museums of Canada

The four national museums of Canada are the National Gallery of Canada, the Canadian Museum of Civilization (including the Canadian War Museum), the National Museum of Natural Sciences and the National Museum of Science and Technology (including the



The Rideau Convent Chapel, a 100-year-old chapel, rebuilt within the new National Gallery of Canada in Ottawa.

National Aviation Museum and the Agricultural Museum). The national museum policy emphasizes access by all Canadians to their national heritage and its preservation.

Other key features of the policy include the establishment of a nationwide network of 25 associate museums, including the four national museums in Ottawa, supplemented by a network of exhibition centres in communities not served by major museums.

The National Gallery of Canada. The new National Gallery opened in Ottawa, May 1988 — a cathedral of art collections — featuring a multitude of galleries including Canadian Galleries; European and American Galleries; Inuit Art; Asian Art; Contemporary Art; Prints, Drawings and Photographs; and the Rideau Convent Chapel, a 100-year-old chapel, rebuilt within the National Gallery. The function of this gallery since its foundation in 1880 has been to foster public awareness of the visual arts and to promote an interest in art



Polar bear silhouette of the Mammals in Canada Gallery in the National Museum of Natural Sciences.

throughout Canada and abroad. The gallery has increased its collections and developed into an art institution worthy of international recognition.

There are more than 40,000 works of art in the National Gallery including paintings, sculptures, prints, drawings, photographs, decorative arts, video and film. The historical collections have been built along national and international lines to give Canadians an understanding of the origins and development of their cultural history as expressed through the visual arts. The collection of Canadian art is the most extensive and important collection in existence and is continually being augmented. In addition, there are many Old Masters from the principal European schools from the 14th to the 20th century and growing collections of Asian and modern art.

Visitors to the gallery are offered an active program of exhibitions, lectures, films and guided tours. The reference library, which contains more than 90,000 volumes and periodicals on the history of art and related subjects, is open to the public.

The interests of the country as a whole are served by circulating exhibitions, lecture tours, publications, reproductions and films. The gallery promotes interest in Canadian art abroad by participating in international exhibitions; it also brings important exhibitions to be shown in Canada.

The Canadian Museum of Civilization. The Canadian Museum of Civilization collects, preserves and displays artifacts that are part of Canada's cultural heritage. Its informative exhibits trace the major stages in North American history, from the first civilizations to the cultural mosaic of present-day Canada. A source of wonder and fascination, the museum makes use of the most up-to-date communication techniques to exhibit Canada's creative genius and multicultural riches. Other features of the new Canadian Museum of Civilization, scheduled to open in July 1989, include the IMAX/OMNIMAX Theatre with



The new Canadian Museum of Civilization in Hull, Que. — features include the IMAX/OMNIMAX Theatre with state-of-the-art film technology that allows viewers to be right in the centre of the action.

state-of-the-art film technology that allows viewers to be right in the centre of the action; the Children's Museum, one of the few in Canada; and an area reserved for special exhibits.

The Canadian War Museum, an associate museum of the Canadian Museum of Civilization, is responsible for research, exhibits and publications on military history and houses an extensive collection of memorabilia, ranging from war art to tanks.

The National Museum of Natural Sciences. This museum is engaged in many major research projects undertaken by its staff members or associated scientists from universities and other outside organizations. More than five million scientific specimens are maintained in the museum's collections and are available to scientists from all parts of the world. The museum also publishes scientific papers on subjects related to its collections.

Audio-visual presentations, visitor-operated displays, drawings, models and thousands of specimens from the museum's collections are used in six permanent exhibit galleries entitled "The Earth", "Life Through the Ages", "Birds in Canada", "Mammals in Canada", "Animals in Nature", and "Plant Life". Temporary exhibits produced by the museum or on loan from other museums and institutions are exhibited in special galleries.

Public lectures, film presentations and special interpretive programs offered by the museum have become increasingly popular with school classes and the general public. Popular publications, a school loans service of educational resource materials and a program of travelling exhibits make our national heritage more accessible to Canadians across the country.

The National Museum of Science and Technology. This museum challenges three-quarters of a million visitors each year to climb, push, pull or just view the lively displays built around its collections and temporary exhibits. An additional 200,000 people annually visit the National Aviation Museum at Rockcliffe Airport.

The museum's exhibit halls feature displays of ship models, clocks, communications equipment, a computer exhibit, a chick hatchery, old and new agriculture machinery, and printing presses. There are numerous examples of milestones in the history of ground transportation, from antique cars to giant steam locomotives. The Physics Hall, with its skill-testing experiments and "seeing puzzles", delights young and old alike. The museum's observatory houses Canada's largest refracting telescope, which is used for star-gazing in evening educational programs.

Educational programs on general or topic oriented subjects for all age groups are conducted by a staff of educators. The museum's work also includes the designing and building of exhibits that are occasionally sent on tour throughout Canada. Artifacts are exchanged with museums in Canada and abroad.

The National Aviation Museum collection was moved to a new uniquely designed building in June 1988. More than 100 aircraft illustrate the progress of aviation from its early days to present times and the importance of the flying machine in the discovery and development of Canada.

The Agricultural Museum, located on the upper floor of the dairy barn at the central experimental farm in Ottawa, features two exhibitions: one is called "Haying in Canada" and the other one "A Barn of the 1920s".

Exhibits at the new National Aviation Museum in Ottawa.





Library at Dalhousie, on the north shore of New Brunswick. The majority of Canadians have access to library service.

Libraries and Archives

Libraries

Libraries have existed in Canada since the early 18th century. Legal, theological and university libraries existed before 1850; after 1850 business and industrial libraries appeared; in 1882 Ontario's Free Libraries Act signalled the arrival of tax-supported public libraries. The greatest growth among all types of libraries occurred after 1950 and now the majority of Canadians have access to library service.

In general, the two main purposes of libraries are to transmit and to preserve the intellectual heritage; the purpose emphasized varies with the needs of a library's users.

The 10,000 or more school libraries in Canada are mainly concerned with transmitting knowledge and making materials for learning available to students. Emphasis has shifted from the use of printed materials alone to use of a wider range of information sources, such as films, recordings, tapes, slides and kits. As a result, school libraries have become multimedia "resource centres".

College libraries are also mainly concerned with materials for learning. Audio-visual materials are often integrated into their collections and innovative measures are taken to

serve a clientele ranging in age from the high school graduate to the senior citizen, and ranging in interests from automotive technology to horsemanship.

In addition to providing students and faculty with the materials for learning and research, university libraries also have a major responsibility for helping to preserve our heritage of manuscript and print, therefore they tend to have the largest holdings and specialized collections, such as literary manuscripts or rare Canadiana. Lack of space to house collections and lack of funds to meet rising prices and to maintain staff are continuing problems. Solutions have included use of microforms for space saving and preservation; automation of library procedures, especially cataloguing, to cope with workloads; development of networks to exchange bibliographic data; and co-operation in resource sharing.

Special libraries, such as those serving companies, government and associations number about 1,500; they provide their own specialized subject materials, data banks or experts. Special libraries are usually small except for the provincial legislative libraries, which often hold important collections of government documents.

Academic and special libraries generally limit their full range of services to members of the specific institutions which they serve. Canadian public libraries, however, are sources of print and non-print materials for the pleasure, information or education of members of the whole community and frequently preserve local history materials that would otherwise be lost. They offer a wide range of programs and services in addition to lending and reference services; many provide community information. A growing number are finding ways to take public library services to those who cannot come to libraries: senior citizens, shut-ins and prisoners. Others provide foreign-language materials for those whose mother tongue is neither English nor French and many also offer special reading materials for the physically handicapped.

Because libraries fall under provincial jurisdiction Canada does not have a unified national system of libraries. Special libraries are maintained by the organizations they serve; academic libraries by a combination of local, provincial and, to some extent, federal or endowment funds. Public library systems, except in the territories, are supported by local and provincial funds and co-ordinated by provincial library agencies.

At the national level two federally supported libraries have a mandate to serve the whole country. Scientific, technical and health sciences information for research and industry is the responsibility of the Canada Institute for Scientific and Technical Information (CISTI). Computer-based services offered include on-line access to worldwide scientific and technical literature (CAN/OLE), to critically evaluated scientific numeric data (CAN/SND) and a personalized information system (CAN/SDI). These are backed up by a lending and photocopying service from CISTI's excellent collection.

The National Library of Canada, established in 1953, promotes the development of library information resources and services; facilitates access to these resources and services; and ensures the acquisition, preservation of and access to the published heritage of Canada to support Canadian studies for the benefit of all Canadians. It offers reference, information and advisory services; administers the legal deposit regulations; publishes the national bibliography, *Canadiana*; and maintains union catalogues which enable libraries and researchers to discover where in Canada specific titles are held. Using advanced technology, it promotes national bibliographic networks to facilitate the sharing of library resources. It also co-operates in international programs which promote the interchange between countries of national publications and information.



Items from the collections of the National Archives of Canada.

In Canada, librarians are trained at the universities. Seven postgraduate schools offer master's degrees in library science and two also offer doctoral programs. Library technicians receive training through postsecondary courses at community colleges in many parts of the country.

Archives

The role of the National Archives of Canada is to acquire, preserve and make available to the public all documents that reflect the various aspects of Canadian life and the development of the country.

At one time, manuscripts were virtually the only objects of interest to researchers. Today, equal importance is given to documents of every kind as authentic sources of information. In addition to its own library, the National Archives now includes separate collections of manuscripts, maps and plans, pictures, federal documents, prints and drawings, photographs, films, television and sound recordings, and machine-readable archives.

The department has equally important responsibilities in the management of government records. The Government Records Branch aids federal government departments and agencies in establishing and administering effective programs for the management and disposal of records. Microfilms and computer records have important roles in both records and archives.

The National Archives has also initiated a comprehensive exhibitions program and national advertising campaign to make the many collections and services of the department better known.

The Canadian Broadcasting Corporation (CBC)

The CBC, created in 1936, is a publicly owned corporation established by the Broadcasting Act to provide the national broadcasting service in Canada. It is financed mainly by public funds voted annually by Parliament; these are supplemented by revenues from commercial advertising on CBC television. CBC radio is commercial free.



Degrassi Jr. High, a CBC-TV production.

The corporation's facilities extend from Atlantic to Pacific and into the Arctic Circle, and include both French and English networks in television and in AM and FM stereo radio. A special northern radio service broadcasts in English, French, and eight native languages including Inuktitut, the language of the Inuit; northern television broadcasts on more than 100 northern television transmitters on two satellite channels across four time zones. Northern Service television produces programs in English, Inuktitut, Slavey, Dogrib, Chipewyan, Loucheux and Cree.

In both radio and television, CBC networks are made up of some stations owned and operated by the corporation, which carry the full national service, and some privately owned affiliated stations, which carry an agreed amount of CBC programming. In many small or isolated locations there are relay or rebroadcast transmitters that carry the national service but have no staff or studios to produce local programs. CBC transmission methods include leased channels on Canadian communications satellites.

Radio Canada International, the CBC's shortwave service, broadcasts daily in 12 languages and distributes recorded programs free of charge for use by broadcasters throughout the world.

CBC schedules are varied, with information, enlightenment and entertainment for people of different ages, interests and tastes. Program content is largely Canadian: about 76 per cent in television and more than 80 per cent in radio.

CBC gives continuing support to Canadian artists and performers through the broadcast of Canadian music, drama and poetry, the commissioning of special works, the sponsorship of talent competitions and the presentation of Canadian films. Selected program material is made available for educational use after broadcast in the form of books, recordings, audiotapes and films through CBC Enterprises.



Balloon festival at Gatineau Point, Que.

LEISURE

Industrialization and technological progress in Canada have led to shorter workweeks, longer paid vacations, earlier retirement and hence has provided more time for leisure and recreation.

Definitions of leisure are numerous and reflect a variety of views. Leisure can be simply defined as those groups of activities undertaken in “non-work” time; it has also been described as that group of activities in which a person may indulge as desired — to rest, to amuse, to add to knowledge or skills, to enhance personal, physical and mental health through sports and cultural activities, or to carry out unpaid community work. However, many definitions of leisure exclude activities such as sleeping, eating, commuting to and from work, household duties and personal care. Formal programs of continuing education may be regarded as personal improvement or maintenance just as much as sleeping or eating and therefore may also be excluded from leisure activity.

Despite the fact that there is no precise agreement on what constitutes leisure, there is agreement on a core of activities that offer recreation or give pleasure to the participants. Examples would be playing tennis or listening to records. There are activities that may be regarded as undesired household tasks in some circumstances, yet pleasurable recreational activities in others, such as mowing the lawn, cooking, dressmaking or house painting. Thus, recreation and leisure are valued differently according to personal tastes and inclinations. These may vary not only between persons but in different circumstances for the same person.

There is a reciprocal relationship between work and leisure. Longer working hours mean less time for leisure. Additional work time normally provides additional income, while additional leisure time typically leads to increased expenditures. The distribution of time between work and leisure is theoretically a matter of choice, but in practice most employed persons have only limited freedom in determining how long they work. Working hours and holidays in Canada are normally fixed, either by employers or as a result of collective bargaining, according to current legislation and accepted norms. As a result Canadian workers are typically committed to working a fixed number of hours a day and days a week.

The normal workweek in Canada is from 35 to 40 hours spread over five working days. Most employees receive at least 10 paid holidays annually and a two-week annual vacation, which is usually extended to three, four or more weeks after several years of service with the same employer. Allowing for weekends, paid holidays and annual vacations, most employed persons in Canada have at least 124 days free from work each year. The amount of non-work time available to Canadians depends also on the proportion of the population studying full time or in the labour force and whether the latter are employed or seeking employment. Those outside this group have more free time. Typical of these are persons who have retired early or are elderly.

Events and Attractions

Every year, in all parts of Canada, annual events and attractions draw large numbers of vacationers and travellers seeking diversion, excitement and relaxation. Events such as the Quebec Winter Carnival and the Calgary Stampede are organized to promote or celebrate historical, social or cultural occasions. On the other hand, attractions can be either natural or man-made physical features of a permanent nature that provide facilities for displaying distinctive architectural or geographic qualities or for recreational or cultural activities. In this category are museums, parks, mountains and city nightlife; specific examples would be a natural phenomenon like Niagara Falls or a man-made attraction such as Lower Fort Garry in Selkirk, Man.

Outstanding events take place in each province and territory. One of the oldest sporting events in North America is Newfoundland's annual regatta, held in St. John's. Prince Edward Island's capital city, Charlottetown, features Country Days and Old Home Week, with musical entertainment, agricultural and handicraft displays, harness racing and parades. Nova Scotia events include Highland Games in the centres of Cape Breton, while in New Brunswick there are a variety of festivities related to the province's fishing resources, such as the Shediac Lobster Festival and the Campbellton Salmon Festival.

An attraction in Quebec is *Man and his World*, Montreal's permanent cultural and ethnic exhibition. Drama festivals in Stratford and Niagara-on-the-Lake are examples of happenings in Ontario.

Western Canada's events reflect its cultural diversity and pioneering heritage. Examples include the National Ukrainian Festival in Dauphin, Man., Oktoberfest in Vancouver, BC, the Stampede in Calgary, Alta. and Pioneer Days festivities in Saskatoon, Sask.

Special events are held each summer in the North. In Yellowknife, NWT, a Midnight Golf Tournament is held each year late in June. In Dawson City, Yukon, the discovery of gold in 1896 is celebrated on Discovery Day in August by raft races on the Klondike River and by dances, sports and entertainment relating to the period.



Nakiska Lodge at the Olympic site in Alberta.

Nakiska at Mount Allan, site of the 1988 alpine events in the XV Winter Olympic Games in Alberta.



Recreation

The types of leisure activities undertaken vary widely according to the age, sex, income and occupation of the individual. Popular sports or physical recreational activities include swimming, ice skating, tennis, golf and ice hockey. In recent years cross-country skiing has become increasingly popular with a participation rate of 16.9 per 100 Canadians, up from a rate of 7.7 five years previously.



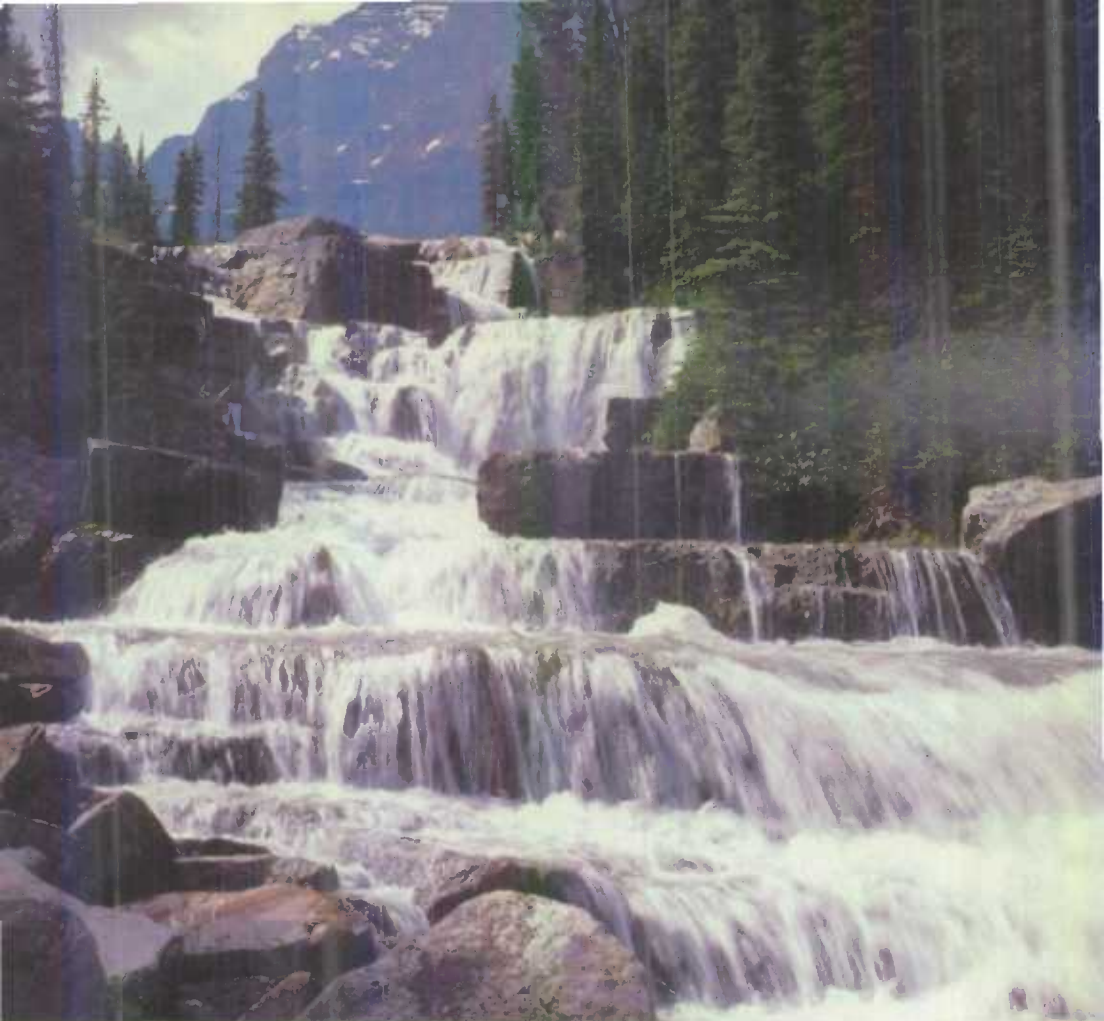
Victoria, BC.

Popular activities in Canada include watching television, listening to radio, reading newspapers, listening to records or tapes and reading magazines. Visits to bookstores, movies, sports events and public libraries are also popular.

Government Programs

All levels of government play an active role in enriching the leisure time of Canadians and several federal agencies have major programs related to leisure. Among these is Fitness and Amateur Sport Canada, which is mainly responsible for recreation and physical fitness programs and which carries out a number of programs aimed at encouraging citizens of all ages to take part in physical fitness activities; it provides financial and consultative assistance to recreational agencies such as the YMCA, boys' and girls' clubs, Scouts, Guides and youth hostels. It also assists Canada's native people in increasing their participation in sports and recreation.

For the area in and around Ottawa-Hull, the National Capital Commission plays an important role in conserving and developing space for outdoor recreation. The facilities it provides include Gatineau Park, an area of 357 km² (square kilometres) similar to a national or provincial park, a system of scenic driveways and bicycle paths and a greenbelt of land forming a semi-circle of recreational land to the south of Ottawa; it also maintains the longest outdoor skating rink in the world on the Rideau Canal during the winter and rents out garden plots in the greenbelt during the summer.



Banff National Park, Alta., established in 1885. Canada's national parks system, encompassing more than 180 000 km², is one of the largest in the world.

Canadian Parks Service

National Parks

Canada's national parks system began with a 26 km² reservation of land around the mineral hot springs in what is now Banff National Park. From this nucleus the system has grown to include 33 national parks that preserve more than 180 000 km² of Canada's natural areas. The Canadian Parks Service has divided Canada into 68 natural regions; 39 of the regions are terrestrial and 29 are marine. At present 21 terrestrial regions are represented by one or more national parks. The marine parks program began in 1986; one marine park has been established in Georgian Bay, Ont.

Canada's national parks reflect the amazing diversity of the land. The program now extends from coast-to-coast, from Terra Nova National Park, on the rugged eastern coast of Newfoundland, to Pacific Rim National Park, where breakers pound magnificent Long Beach on the west coast of Vancouver Island, and from Point Pelee, Canada's most southerly mainland point, to Ellesmere Island National Park Reserve, only 750 km from the North Pole.

The magnificent scenery and numerous recreational possibilities of the national parks attract visitors year-round, whether to camp, sightsee, hike, mountain-climb, swim, fish, ski or snowshoe. Interpretive programs include guided walks, displays, films and brochures that explain the natural history of the park regions.

National Historic Parks and Sites

To preserve Canada's past the National Historic Parks and Sites Branch of Canadian Parks Service commemorates persons, places and events that played important parts in the development of Canada. Since 1917, when Fort Anne in Nova Scotia became the first national historic park, 73 major parks and sites and over 900 plaques and monuments have been established at significant sites.

Sites are selected on the basis of their cultural, social, political, economic, military or architectural importance and include major archaeological discoveries. Two finds in Newfoundland are the ancient Indian burial ground at Port au Choix and the Norse settlement at L'Anse aux Meadows believed occupied about 1000 A.D. L'Anse aux Meadows National Park was proclaimed a World Heritage Site in 1980.

Sand dunes in Prince Edward Island National Park, established in 1937.





Fortress of Louisbourg on Cape Breton Island, NS.

Many historic parks and sites recall the early exploration of Canada and struggles for its possession. Cartier-Brébeuf Park in Quebec City marks Jacques Cartier's first wintering spot in the New World and is, in addition, the site of the Jesuit order's first residence in Canada.

The pursuit of furs led to extensive exploration of Canada and construction of many posts and forts to expand and protect the fur trade. Such posts include Port Royal, the earliest French settlement north of Florida, Fort Témiscamingue, a strategic trading post in the upper Ottawa Valley, and Prince of Wales Fort, the most northerly stone fort in North America. Lower Fort Garry, near Winnipeg, has been restored to recreate a 19th century Hudson's Bay Company post; here one can see women baking bread and spinning and weaving fabric at the "Big House", a blacksmith at work in his shop and furs, once the mainstay of Canada's economy, hanging in the loft above the well stocked sales shop — the hub of fort activity.

Military fortifications that have been protected as national historic sites range from the massive Fortress of Louisbourg on Cape Breton Island, built by the French in the 18th century to protect their dwindling colonial possessions, through a series of French and English posts along the Richelieu and St. Lawrence rivers, to Fort Rodd Hill on Vancouver Island, site of three late 19th century British coastal defences.

The fur-trading posts of Rocky Mountain House in Alberta, Fort St. James in northern British Columbia and Fort Langley in southern British Columbia, where the province's salmon export industry also began, recall the expansion of trade and settlement in the West. The orderly development of Western Canada was due in large part to the North West Mounted Police, who are commemorated at Fort Walsh, Sask., first headquarters of the force. Motherwell Homestead near Abernethy, Sask. portrays pioneer days on the Prairies.

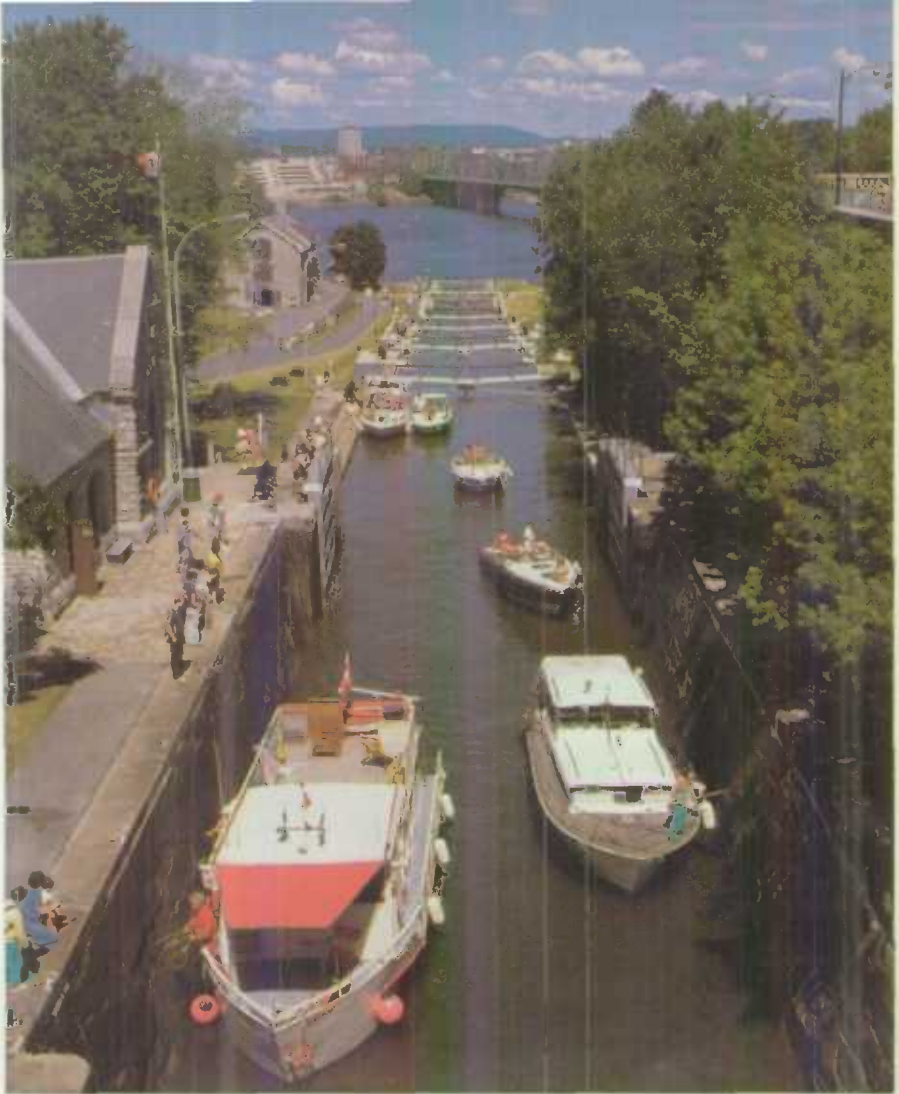
The major route to the Klondike Gold Rush is being marked and protected by the Klondike Gold Rush International Historic Park. In Dawson City, the boom town of 1898, the Palace Grand Theatre, the Robert Service Cabin and the paddlewheeler *S.S. Keno* have been restored, while other historic buildings are in the process of restoration or stabilization.

Heritage Canals. The canals of Canada were initially constructed as defence or commercial trading routes to serve a new country. At Confederation, canals came under the jurisdiction of the federal government because of their importance to the nation's transportation system.

Certain of these canals, with roles as commercial routes diminished, are now the responsibility of Canadian Parks Service. The canals are operated and maintained as examples of land and water adapted by man to suit his needs for transportation and communication. In addition, the canals provide outstanding opportunities for recreational use.

Prince Albert National Park in Saskatchewan, established in 1927.





Rideau Canal pleasure day locks in Ottawa.

The Rideau Canal, now a scenic waterway, was built over 150 years ago, in 1832, completing a connecting waterway from Ottawa to Kingston. Several places of interest are located along this waterway, such as the blockhouse at Kingston Mills, the blacksmith shop at Jones Falls and the foundry building at Merrickville. Boaters enjoy heritage canals in Ontario, Quebec and Nova Scotia.

Heritage Rivers. Our country has an abundance of free flowing rivers which are an important part of the natural and the cultural heritage. In order to protect some of the best examples of this heritage, Canadian Parks Service, the provinces and the territories have established the Canadian heritage rivers system.

Provincial Parks

All provincial governments have established parks within their boundaries. Some are wilderness areas set aside so that portions of the country might be retained in their natural state. Most of them, however, are smaller areas of scenic interest, easily accessible and equipped or slated for future development as recreational parks with camping and picnic facilities.

Some of the oldest parks in Canada were created by the provinces. In 1895 the Quebec government's concern for the conservation of the caribou led to the establishment of Laurentide Park, one boundary of which is only 48 km north of Quebec City. In Ontario the first park was Algonquin, created in 1897, which covers an area of 7 540 km² and extends to within 240 km of the city limits of both Toronto and Ottawa; this park, like many of the others in Ontario and the other provinces, features camping, canoeing and sport fishing.

Algonquin Provincial Park, created in 1897, covers an area of 7 540 km².





Quebec City, Que. Canada's tourism businesses include almost 300,000 hotel and motel rooms, nearly 40,000 restaurants and food-service facilities, and about 4,500 travel agencies.

Tourism

Tourism is a major earner of foreign exchange for Canada. At the same time tourism is a significant generator of domestic spending. It has a considerable impact on consumption, investment and employment and is a source of substantial tax revenue for governments; it also spreads its benefits widely across Canada, playing a prominent role in helping to alleviate regional socio-economic disparities.

Tourism affects the lives of all Canadians. It has an impact on our lifestyle and provides a change of pace from contemporary social pressures. It also contributes to national unity by increasing understanding among people of the different regions which form the country.

In the world context, Canada ranked ninth in 1986 in terms of international travel receipts and seventh in terms of international travel spending by its residents. Tourism was a business worth approximately \$20 billion to Canada as a whole in 1986, an amount equivalent to 4.4 per cent of the Gross National Product. The spending of Canadians travelling within Canada amounted to \$13.4 billion. The balance of \$6.3 billion was earned from spending in Canada by visitors from other countries — our third largest source of foreign exchange in 1986 after autos and auto parts.

In 1987, visitors from the United States numbered 12.7 million, down 6.4 per cent from 1986. Non-resident travellers from countries other than the US numbered 2.3 million, an increase of 12.0 per cent from 1986. Of this number 1,346,150 came from Europe and arrivals from the United Kingdom, the largest source of tourists after the US, totalled 446,399. Visitors from other major tourist-producing countries included 239,532 from the Federal Republic of Germany, 252,786 from Japan, 189,013 from France, 79,149 from the Netherlands, 80,790 from Australia and 79,137 from Italy.

The value of tourism spending in Canada should not, however, be measured solely in terms of the \$20 billion direct travel expenditure. Subsequent rounds of spending spread throughout the economy and create additional business.



Marina at Point-du-Cône, 1988

For example, when a traveller rents a hotel room he contributes to the gross margin of the hotel owner. Part of this margin will be paid to employees in the form of wages. These wages will subsequently be spent to the benefit of the owner of a corner store, for example. The money will then pass to the wholesaler who supplied the goods purchased and then to the manufacturer, who in turn probably purchases his raw materials from another Canadian firm, and so on. Counting this "multiplier" effect, the \$20 billion generated in 1986 could have amounted to approximately \$35.4 billion.

Tourism also generated the equivalent of 600,000 jobs across Canada in 1986. It involved governments at every level and more than 60,000 individual private enterprises of diverse kinds, such as transportation companies, accommodation operators, restaurateurs, tour wholesalers and operators, travel agents, operators of activities and events, and trade associations.

Another important feature of travel consumption in Canada is the low import content of the products consumed. As travel is predominantly service-oriented, travel spending is on goods and services with a relatively high domestic labour content. Furthermore, the goods purchased by tourists are usually home-produced — food and drink by Canadian farmers and processors and souvenirs by Canadian craftsmen, for example.

Canada possesses many basic tourism assets. It has an enviable location at the crossroads of the northern hemisphere and adjacent to the world's most affluent travel market. It has an abundance of open space, for which world demand is sure to intensify. Its northern territories constitute one of the world's few remaining tourist frontiers. It possesses immense supplies of a most precious recreational resource — water — and of a most promising one — snow. Canada's scenic, cultural and ethnic diversity add to its travel appeal, as do its heritage buildings and the developing attractions of its major cities.



Olympus, scheduled for launching in 1989, is one of the world's largest and most powerful accelerators. Canada has been involved with Olympus since 1980, through a partnership with the European Space Agency.

COMMUNICATIONS

Communications play a central role in the lives of Canadians. In the past, communications helped overcome barriers of vast distance and rugged terrain in order to develop rich natural resources in Canada. Today, Canadians rely increasingly on the creation and communication of information as a source of jobs, wealth and social progress.

In 1986, information workers (those engaged in processing, analyzing and distributing information) accounted for nearly half of Canada's total employment — evidence that Canada is being transformed into an information-based society. This shift is of comparable historical significance to our earlier transition from an agricultural to an industrial society.

Communications services are changing, as a result of technological advances. Telecommunications and computer technologies are now converging into the new field of information technology. The unified system of computers and communications that is being created is like a network of electronic highways transporting the information on which we depend.

The benefits of information technology are familiar to many Canadians. For example, at more than 5,000 automated teller machines across the country, Canadians can make bank deposits, withdraw cash and pay bills at any hour of day or night. Many retail stores have cash registers connected to computer systems that automatically update inventory records at the end of every business day.

Taxis can now be dispatched by computer messages appearing on the screen of small mobile data terminals similar to those used by police forces. Librarians search electronically for bibliographic references, and airline agents consult flight schedules and make reservations using computer communication systems.

Private companies and public institutions are also making increasing use of information technology. Office workers are now using electronic workstations to perform a variety of tasks such as word processing, financial analysis, storing and retrieving information, consulting remote data bases, and communicating text, numbers and graphics.

In assembly-line plants, computer-controlled robots help to manufacture cars and industrial machinery. The forest-products industry relies on computer systems to direct the sizing and cutting of logs for maximum economy.

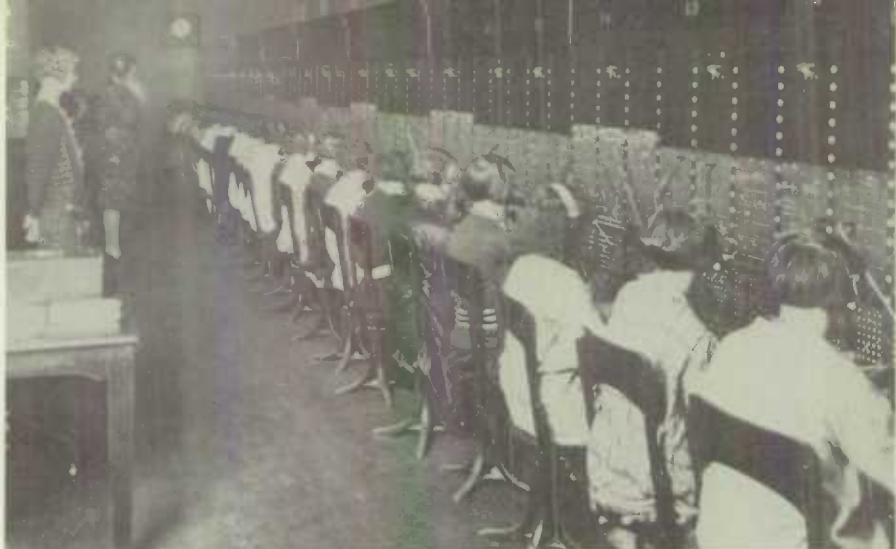
Hydro networks monitor their transmission grids using information automatically collected at checkpoints throughout the system and fed back along communications lines to major control centres.

Canada has become a world leader in information technology in the fields of health care and education. Long-distance medical examinations and the remote diagnosing of health problems are available in certain parts of Canada. Much of the pioneering work was performed at Memorial University of Newfoundland, which has been extensively involved in the development of satellite-based health care delivery systems. This Canadian technology is being shared with countries in Africa and the Caribbean.

Pioneering work in educational broadcasting and other forms of tele-education has included using communications to deliver computer-aided courses or to permit consultation between teachers and students in different locations. In recognition of Canada's expertise in this area, both the Commonwealth and La Francophonie have requested that Canada take the lead in developing distance learning centres and television program services for the benefit of their member nations.

In 1986, 10 per cent of Canadian households had home computers (not counting computers used exclusively for business or games). The number of home computers is growing every year. Word processing and spreadsheet programs are the most popular applications, but as more Canadians buy computers, new opportunities are opening up for exchanging information and conducting business transactions.

In 1988, two commercial services tailored to the market for interactive consumer services were introduced in the Montreal area. Bell Canada's system, called ALEX, is based on computer graphics technology developed in the 1970s by the Department of Communications' researchers under the name Telidon. The competing MINITEL system uses French technology. Both systems feature easy-to-operate terminals about the size of a small TV set. Bell expects that 16,000 customers will rent terminals while another 4,000 subscribers will



Telecommunications technology has changed rapidly. Telephone operators in Halifax, NS previously worked at a switchboard (above). The computerized system of Maritime Telegraph & Telephone Co. Ltd. now offers customers quicker, more efficient service at the touch of a few buttons. (below)



adapt their own personal computers to the system. Telidon is already serving a variety of applications in countries around the world, from answering tourist inquiries to analyzing the stock market and providing weather briefings for pilots.

In 1986, the computer and telecommunications industries spent about \$1 billion on R&D — about 30 per cent of total industrial R&D spending in Canada. Almost one-quarter of this work was performed by Bell Canada Enterprises, the balance carried out by other companies, universities and government laboratories.



SHARP (Stationary High Altitude Relay Platform) — the world's first microwave-powered aircraft capable of uninter-rupted flight. A current focus of research efforts is on designing a small pilot-less microwave-powered aircraft to serve as an inexpensive alternative to a satellite.

Communications Canada, a department of the federal government, operates Canada's largest program devoted to long-term applied research in communications and information technology. Over the years, the department's laboratories have achieved many significant advances in satellite and fibre-optic communications as well as major improvements in radio technology. A current focus of research efforts is on designing a small pilot-less microwave-powered aircraft to serve as an inexpensive alternative to a satellite. The Stationary High Altitude Relay Platform (SHARP), successfully demonstrated in 1987, would retransmit radio signals over large areas and could bring greater communications coverage to countries or businesses unable to afford satellites.

Complementing R&D programs in Canada are tests and trials to encourage people to explore ways they can use both new and established technologies.

Communications planners are now laying the groundwork for development of our networks to bring the information age within the reach of all Canadians. The Canadian communications system is already largely digital. In digital communications, signals are transmitted in pulses (the language of computers) instead of the earlier mode of continuous

waves, as used in analogue transmission. Digital communications can carry much larger amounts of information for longer distances with less distortion. The goal is a system that will permit end-to-end digital communication of voice, data and video. Instead of using one network for telephone, another for high-speed data and a third for broadcasting, Canadians will, in future, be able to access all telecommunications services through a single outlet similar to a telephone jack.

The Integrated Services Digital Network (ISDN) of the future is not a separate new communications system. It is a concept that will unify existing networks through the application of international standards which Canada is helping to develop. The first phase of ISDN is based on using the copper wires that now connect the individual subscribers to the networks. This would permit a customer, for example, to simultaneously place a telephone call and establish a high-speed data communications link. The real impact will be felt in the second phase, with the installation of optical fibres. Instead of the electromagnetic waves or pulses used in copper wires, optical fibres use light to carry information. They are capable of carrying amounts of information so much greater than either telephone lines or coaxial cables that a customer could plug in a television set, a burglar alarm, a computer and a telephone all at the same time on the same communications line.

Computers and computer-based office equipment can exchange information and share processing functions, regardless of manufacturer or country of origin. A general world model was agreed upon in the early 1980s and is already being tested in Canada for the communication of bibliographic and banking information.

Developments in communications and information technology are now shaping the information age of the future. The changes in our economic and social life, which this new age will bring, will profoundly affect the way we live, the way we work, how we are educated, how we use our leisure time and how we interact with others in our communities, across the country and throughout the world.

Regulation of Broadcasting and Telecommunications

Under the terms of the Broadcasting Act, the Canadian Radio-television and Telecommunications Commission (CRTC) regulates and supervises the Canadian broadcasting system: radio, television and cable TV as well as specialty and pay television channels. The Commission issues broadcasting licences and holds public hearings to consider applications relating to broadcasting undertakings, policy and regulatory matters. At these hearings, members of the public may comment or intervene on specific applications or issues.

Canada's telecommunications services are subject to legislation, policies and regulations set by federal, provincial and municipal governments. Seven telecommunications companies are regulated by the CRTC, which is a federal agency: Bell Canada, British Columbia Telephone Company, CNCP Telecommunications, Teleglobe Canada, Telesat Canada, NorthwTel and Terra Nova Tel. The other major telecommunications companies are provincially regulated; and a number of telephone companies come under municipal jurisdiction.

Regulation of Radiocommunications

Radiocommunications use that part of the electromagnetic spectrum that lies between audible sound and infrared light. Effective management of this limited resource is essential to ensure that as many people as possible have interference-free access to

radiocommunications for their business and personal affairs. In Canada, this is the responsibility of a department of the federal government, Communications Canada. Under the Radio Act, this department regulates all radiocommunication facilities in Canada, issuing technical certificates for stations that are part of a broadcasting undertaking and licensing the use of radio for other applications, mainly communications.

Statistics on Communications

Telecommunications Carriers. Canada's telecommunications carriers operate a vast telecommunications network carrying information in the form of voice, data and images. The bulk of the communications traffic is handled by the coast-to-coast integrated network of Telecom Canada, whose 10 members include nine telephone companies and Telesat Canada, the corporation that owns and operates Canada's commercial satellite system. Incorporated in 1969, Telesat established the world's first domestic commercial communications satellite system in 1973. At the end of 1986, Telesat had four commercial satellites in operation serving a network of more than 230 earth stations.

Public message (telegram) service is provided by CNCP Telecommunications on a monopoly basis. CNCP competes with the telephone companies in providing a wide range of voice and data business communications services. In addition to these major carriers, there are dozens of smaller provincial and municipal telephone companies. In 1986, Canada had a total of 75 telephone companies.

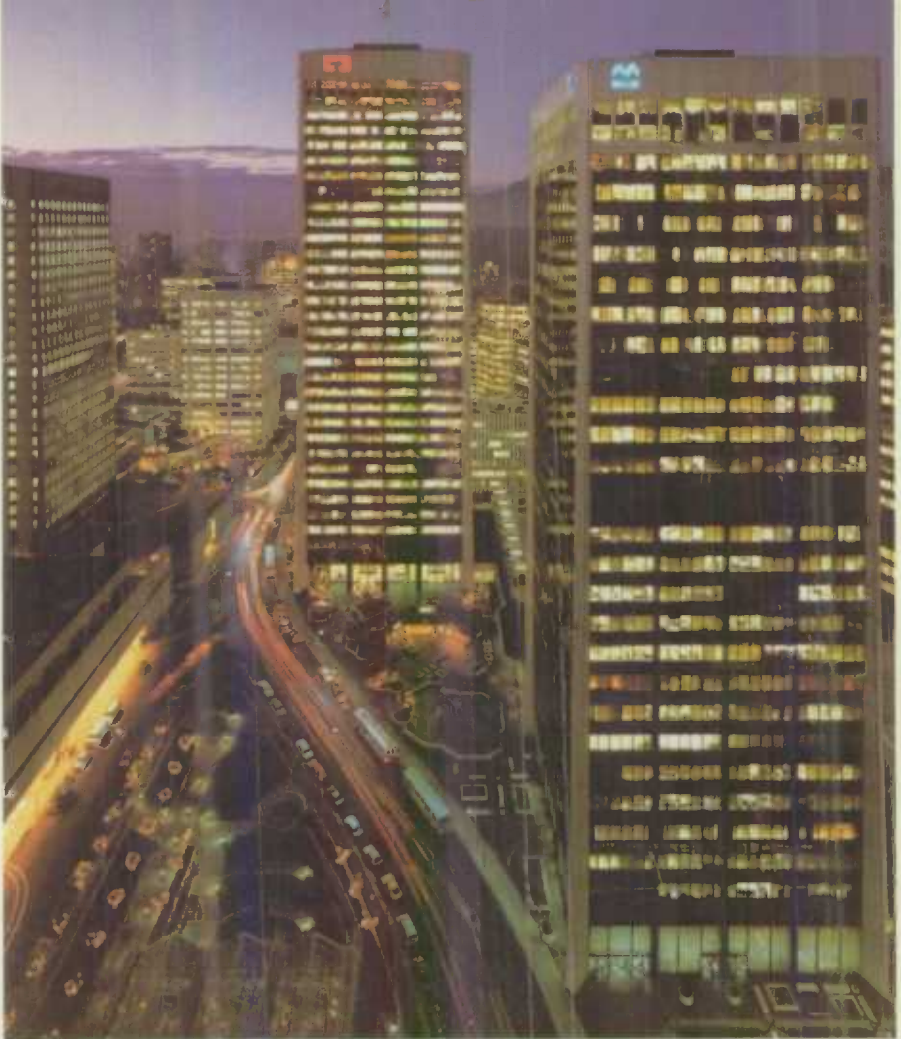
Overseas telecommunication services are provided by Teleglobe Canada through a combination of undersea cable and satellite facilities. A former Crown corporation, Teleglobe was sold to private enterprise by the federal government in 1987.

Operating revenues of the telecommunications carriers, estimated at \$19.9 billion in 1986, increased approximately 9 per cent over the previous five years. Approximately 600 radio common carriers, also part of the telecommunications industry, offer mainly paging, cellular and mobile telephone services to over 500,000 subscribers.

Telephones. Most Canadians now have the option of buying or renting telephones from either the telephone companies or independent vendors, but all telephones must meet prescribed standards. The total number of telephones acquired from the telephone companies in November 1987 was 15.4 million, with more than 70 per cent being acquired for residential service. To connect with the public switched network, telephone subscribers must lease a network access line from the telephone company. In 1987, Canada had a total of 13.2 million network access lines, 85 per cent providing single-party access and 6 per cent providing two-party or multi-party access.

Canadians made 34.7 billion local calls in 1986 and 2 billion long-distance calls, averaging 1,423 calls per person. Telephone company operating revenues amounted to \$10.6 billion. Local calls generated \$3.9 billion of total revenues while long-distance revenues came to \$5.9 billion. Value of telephone company plant in 1986 was \$19.5 billion. In 1986, the major telephone companies had 99,054 full-time employees.

Radiocommunications. At the end of February 1988, there were 1,102,414 radio station licences in effect: 306,804 General Radio Service (GRS) or citizen's band (CB) radio licences; 43,205 licences for maritime mobile radio, used on ships; 103,940 base stations; 23,920 amateur radio licences; and 624,545 licences for mobile stations, including 16,620 for aircraft. Radio licences are issued for stations operated by federal, provincial and municipal agencies,



Recent technology has enabled BC Tel to provide direct light guide links to a number of office buildings. Some of these office towers in downtown Vancouver, BC are now linked to BC Tel's facilities by light guide transmission systems. By the end of the decade it is expected that about 50 major buildings will enjoy the benefits of this new technology.

stations on ships and aircraft registered in Canada, stations in land vehicles operated for public and private use, and GRS stations.

Broadcasting. Canadians are heavy users of radio and television. An estimated 98.8 per cent of Canadians had a radio in their homes in May 1987, while 95.6 per cent had an FM radio set. Almost 98.5 per cent had at least one television set in their homes; 47.4 per cent had more than one set; 94.4 per cent had colour-TV; and 27.7 per cent had more than one colour set in their homes. In 1987, 67 per cent of Canadian households received cable services, and 38 per cent of Canadian homes had cable converters giving them access to between 12 and 35 TV channels. Nearly 17 per cent of Canadian homes subscribed to discretionary TV services (pay TV and specialty TV) delivered over cable systems.

More than 80 per cent of Canadians watch TV at least once every day. In fall 1986, the average Canadian watched 24.2 hours of TV and listened to 19 hours of radio broadcasting in one week. In 1987, Canadians listened to broadcasting originated by 422 licensed AM radio stations, 276 FM radio stations and 132 television stations, and to programming carried by 1,205 cable television systems. Coverage was extended by 328 AM, 524 FM and 1,350 TV rebroadcasting stations.

The CBC operates coast-to-coast AM radio networks in both French and English, as well as FM radio networks in both languages that approach national distribution. Seventeen private commercial stations are affiliated with the CBC's English or French networks. A national English-language network commercially operated by CKO provides news and information 24 hours a day. In Quebec, there are three private French-language AM radio networks: Télémedia, Radio-Mutuel and Réseau des Appalaches.

The CBC operates two nationwide television networks, one in English and one in French. There are four commercially operated networks: the CTV Network provides an English-language program service from coast-to-coast; TVA and the Réseau de télévision Quatre Saisons offer French-language programming across Quebec; and the privately-owned Global Communications Ltd. network serves parts of Ontario in English. The provincial governments of Ontario, Quebec, Alberta and British Columbia operate their own educational TV networks.

Radio Canada International (RCI) is the shortwave service of the CBC. Its production studios and main office are in Montreal; its transmitters are located at Sackville, NB. RCI broadcasts daily in 12 languages to the USSR and Central Europe, Asia, Latin America, the Caribbean, the Middle East, Africa, Western Europe and the United States. Audience research indicates it has more than 16 million regular listeners each week. RCI's primary purpose is to reflect Canada to the world — to produce programs that tell listeners what is happening in Canada, and how Canadians feel about what is happening in the rest of the world. RCI also produces and distributes recordings for foreign AM and FM radio stations to use in their own programming. Between 1986 and 1987 it sent discs, tapes and cassettes to approximately 500 stations; these recordings represented a total of 10,000 program hours of spoken-word material (topical items about Canada) and 25,000 program hours of Canadian music (classical/serious, jazz, folk and pop).

Postal Service

The Canada Post Corporation was incorporated by the Canada Post Corporation Act passed by Parliament in 1981. The transition from a government department to a Crown corporation placed Canada's postal services on a similar, legal footing to that of other Crown corporations which also have a business mandate.

The objectives of Canada Post, as stated in the Canada Post Corporation Act, are to establish and to operate a postal service within Canada and between Canada and other postal administrations.

With a workforce of approximately 74,000 employees; a network of 29 major, mechanized mail processing plants; 5,700 corporately-operated and over 8,000 privately-operated postal outlets; and with a fleet of 4,700 vehicles, Canada Post collects and processes almost 8 billion hard copy messages and parcels and delivers them to more than 10 million addresses in every part of urban and rural Canada each year.



Family visiting their new-born baby.

HEALTH AND WELFARE

Social Context

Canada's health and welfare programs continue to evolve in the context of our changing population and lifestyles. In this climate of social change, the Department of National Health and Welfare strives to promote and preserve the health, social security and social welfare of the people of Canada.

Canadians are healthier and living longer than ever before. Nonetheless, in 1986, the two leading causes of death continued to be circulatory diseases (235.5 per 100,000) and cancers (149.8 per 100,000). These were followed by accidents/poisonings/violence, chronic obstructive lung disease and pneumonia.

Preliminary data indicate that, during 1986-87, there were 1,218 hospitals operating in Canada; 85 per cent of these were public. Canadian public hospitals admitted over 3.7 million patients in 1986-87 and provided over 2,100 patient days of care per 1,000 population. The average length of hospital stay per person was slightly more than 14 days. Overall, public hospital expenditures were \$16.2 billion. In 1985, there was one doctor for every 577 Canadians and one nurse for every 95 persons.

Total health expenditures in 1985 were \$39.8 billion, or 8.6 per cent of the Gross National Product (GNP). Government expenditures on health amounted to 6.6 per cent of GNP and accounted for 75.9 per cent of total health expenditures.

Changing demographics have had a significant impact on programs to enhance the health and welfare of Canadians. The population is experiencing reduced birth and death rates and is aging at a relatively rapid pace. Currently, 11 per cent of the population is over age 65. There are now three times as many seniors as there were 45 years ago, and this number is expected to triple again in the next 45 years.

While our standard of living continues to increase, approximately 15 per cent of Canadians continue to struggle with low incomes. Single parents and families with three or more children account for the greatest proportion of the low-income population. At least one in 10 Canadians is a disabled person; approximately 6 per cent of children and 13 per cent of adults report one or more disabilities.

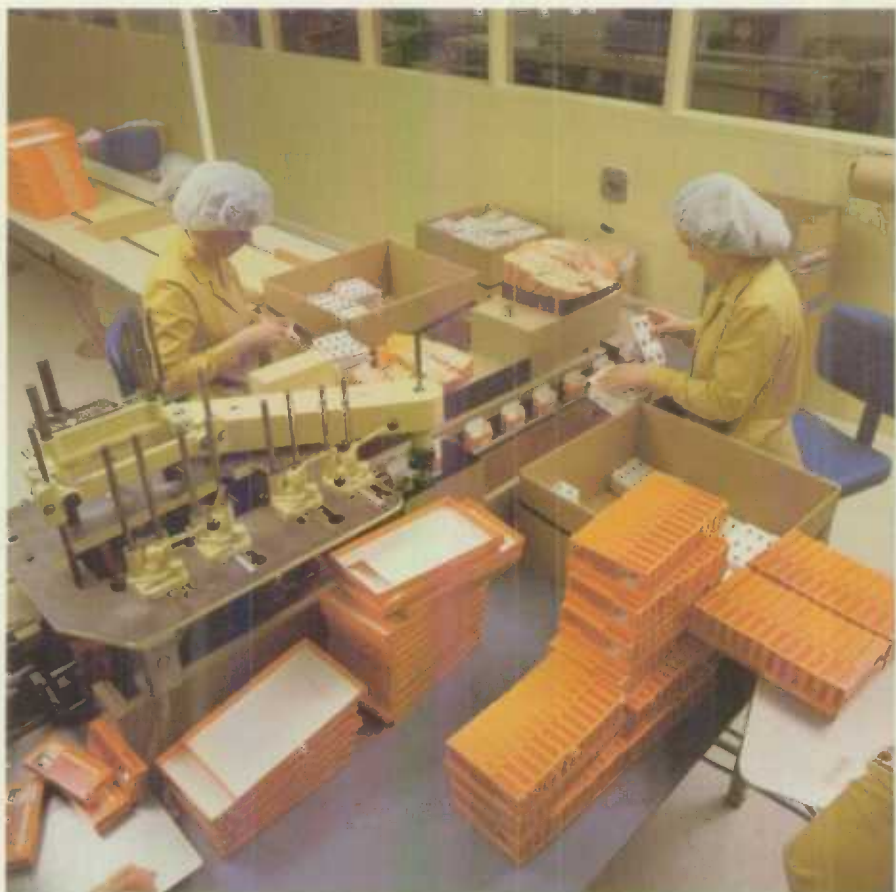
These groups — the sick, aged persons, the low-income population and persons with disabilities — tend to be the focus of Canada's health and welfare system. Other programs provide benefits to families in recognition of their additional responsibilities.

In 1984-85, governments spent \$49.1 billion on a wide range of welfare programs. Of this amount, federal expenditures accounted for \$36.7 billion, while provincial government spending was about \$11.8 billion. The remaining \$0.6 billion consisted of local government expenditures.

The Department of National Health and Welfare is the principal federal ministry responsible for both health and welfare programs. The department works in close co-operation with other federal departments, provincial and local governments and voluntary organizations on social issues.

Technician and patient about to undergo x-ray scan, used in diagnosing Alzheimer's.





Packaging drug capsules at a pharmaceutical manufacturing plant at Mississauga, Ont.

Federal Health Programs

The Department of National Health and Welfare has four branches to administer health-related programs.

The Health Protection Branch protects Canadians by ensuring the safety and quality of foods, drugs, and medical devices and controlling the availability of dangerous drugs. The branch also monitors trends in diseases and environmental hazards.

Ensuring access to health care, facilitating health research and promoting healthy lifestyles for Canadians is the function of the Health Services and Promotion Branch. With respect to nationally insured health care services, the federal government provides contributions to the provinces and territories in the form of cash and tax transfers. In 1986-87, total federal contributions in support of provincial health programs amounted to some \$12.5 billion.

Other programs contribute to improvements in community health, mental health and other institutional and professional health services, as well as in the promotion of self care, mutual aid and healthy environments.

The Fitness and Amateur Sport Branch encourages increased participation in physical activity and supports the development of Canadian sport at the national and international level. A recent highlight of programming in this area was the support provided by the department in the successful staging of the XV Olympic Winter Games.

The Medical Services Branch provides services in response to the health needs of such varied groups of clients as the Indian and Inuit peoples, public servants, certain groups of immigrants and refugees, residents of the Northwest Territories and Yukon and others.

Provincial Health Programs

Responsibility for the administration of hospital and medical insurance plans and/or the direct provision of other general health services rests with the provincial and territorial governments. Public insurance plans cover standard hospital care, all medically necessary

During Rick Hansen's two-year Man-In-Motion tour, which ended in May 1987, he travelled 40 000 kilometres through many countries and across Canada in his wheelchair and raised more than \$10 million for spinal-cord research, rehabilitation and wheelchair access.





A sign language demonstration at the centre for preschool hearing children of the deaf. North America's first preschool for hearing children of deaf parents opened in Winnipeg, Man. in June 1988.

physicians' services, as well as necessary drugs, supplies and diagnostic tests. In many cases, other health-related institutional and ambulatory care services are also provided by the provincial ministries responsible for health. Increased attention is being placed on preventive services. For example, programs which address health problems such as AIDS, alcoholism and drug addiction, sexually transmitted diseases, and food poisoning have been undertaken often in co-operation with voluntary associations.

Federal Welfare Programs

A high level of income security is provided in Canada through a variety of federal programs.

The Canada Pension Plan (CPP) (Quebec Pension Plan (QPP) in the province of Quebec) is a contributory income security program providing workers with a basic level of income in the event of retirement, disability or death. Both plans are financed from compulsory contributions by employers and employees and interest on funds invested. During 1986-87, CPP and QPP provided a total of \$7.8 billion to 2.6 million beneficiaries.

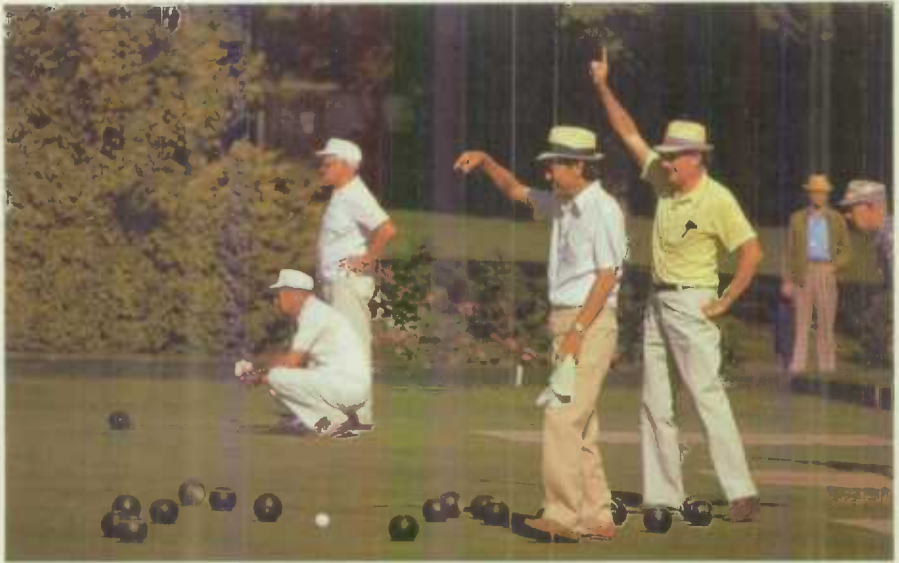
The Old Age Security (OAS), Guaranteed Income Supplement (GIS) and Spouse's Allowance (SPA) programs provide additional income security benefits to Canada's seniors. Under the OAS program, persons aged 65 years and over who meet the residence requirements receive a monthly pension. In 1986-87, \$9.5 billion in OAS pensions were paid to about 2.7 million persons. OAS pensioners with little or no other income may qualify for GIS benefits, provided they meet residence requirements. Approximately 1.3 million persons received a total of \$3.5 billion through the Guaranteed Income Supplement program in 1986-87. In addition, the Spouse's Allowance program provides benefits for low-income persons aged 60 to 64 who are either spouses of OAS pensioners, or widows or widowers. In 1986-87, \$473 million were paid to about 140,200 beneficiaries.

Family Allowances (FA) are paid monthly on behalf of children under the age of 18 whose parents/guardians meet certain residence requirements. A Special Allowance is payable on behalf of a child under 18 years of age who is maintained by a welfare agency, a government department or an institution. Provinces may vary the rate of the regular Family Allowances, subject to certain conditions; Quebec and Alberta have chosen to do this. In 1986-87, \$2.5 billion were paid to roughly 6.6 million children in 3.7 million families.

The federal Child Tax Credit program, administered by Revenue Canada Taxation, provides additional benefits to low- and middle-income families. Payments are made through the income tax system to eligible families on behalf of children in respect of whom FA is payable. In 1985, Child Tax Credits totalling approximately \$1.5 billion were paid on behalf of 4.9 million children in 2.4 million families.

Wild watching at Egan's Pines National Park, Ont. — a popular recreation with seniors.





Lawn bowling at Stanley Park in Vancouver, BC.

The Department of National Health and Welfare also administers, through its Social Service Programs Branch, the Canada Assistance Plan (CAP) and the Vocational Rehabilitation of Disabled Persons Program (VRDP). Under CAP, the federal government shares 50 per cent of costs incurred by the provincial and territorial governments in providing direct financial assistance and social services to persons in need. Social services include day care, homemakers and home support, counselling, adoption and vocational rehabilitation services. VRDP shares in 50 per cent of the costs of comprehensive vocational rehabilitation services. In March 1987, nearly 1.9 million Canadians received direct financial assistance from provincial programs shared under CAP. Total payments to the provinces for financial assistance, social services and vocational rehabilitation for the 1986-87 fiscal year were \$5.3 billion.

Other programs support the development of social services in Canada, the prevention of family violence, international adoptions and the provision of meaningful activities for elderly Canadians.

Provincial Welfare Programs

Each province and territory administers its own financial assistance program to provide income for basic requirements when all other resources have been exhausted. Benefits include direct payments for basic needs, special needs and medical care expenses. To complement

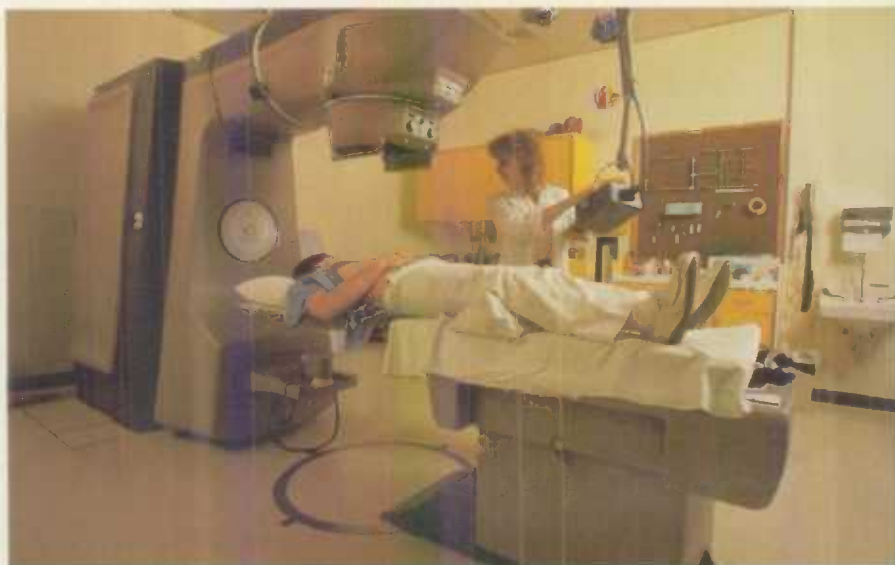
these benefits, most provinces also offer employment and training initiatives to help integrate these clients back into the work force and ensure their self-sufficiency.

The provinces also provide a wide range of social services for financial assistance clients, families, the aged and others in need of support. Services include homemakers, day care, counselling, vocational rehabilitation, community development and the care, protection and placement of children. Many of these are contracted to, or supplemented by programs through voluntary organizations. Financial assistance, as well as related employment and social services are cost-shared with the federal government through the Canada Assistance Plan.

Most provinces also operate income supplementation and tax grant/credit programs for low-income and/or elderly residents. Many of the income supplements are provided to low-income seniors already in receipt of federal GIS benefits. Other programs provide a range of benefits to assist eligible individuals and families with meeting the costs of property and/or school taxes, rental costs and general costs of living.

in northern communities, a flying dentist visits schools to provide dental care.





Technician maneuvering a Cat-Scan machine over a patient.

Health and Welfare Research

Health and welfare research in Canada consists of a wide range of activities undertaken by federal and provincial governments, non-governmental organizations, universities, hospitals and individuals and is strongly supported by an extensive research program within the Department of National Health and Welfare.

Health research includes such areas as the exploration of new approaches for applying technologies and scientific discoveries to the health system, basic medical research in human biology and health sciences, as well as research on the prevention and diagnosis of diseases.

Research is also ongoing on matters such as disability, nutrition, demography, elder abuse, shelter needs, adoption, family violence and family services.

Overall, the services and benefits being provided to Canada's health and welfare sector are well complemented by continuing research efforts.

International Health and Welfare

Canada actively participates in international health and welfare matters including the work of the World Health Organization, the Pan American Health Organization, the United Nations Commission on Narcotic Drugs, the International Labour Organization, the International Social Security Association, the Organization for Economic Co-operation and Development, the United Nations and many others. In addition, Canada has signed reciprocal Social Security agreements with several countries to ensure benefits under CPP and OAS/GIS/SPA.

International Medical Applications of Radioisotopes

Nordion International, formerly the Radiochemical Company, which originated as a division of Atomic Energy of Canada Limited (AECL), with headquarters near Ottawa, produces over half of the world's gamma radiation processing equipment and supplies 80 per cent of the world's cobalt-60. Radiation processing's major application is the sterilization of disposable medical goods such as needles, syringes, swabs, bandages and rubber gloves. Cobalt-60 is the radioactive element used in the cobalt machines which treat cancer.

In addition, Nordion International provides approximately two-thirds of the world's supply of the bulk reactor produced isotopes used primarily in nuclear medicine. Reactor produced isotopes, for example molybdenum-99, and cyclotron produced isotopes, such as iodine-123, are used extensively in hospitals for diagnostic testing and occasionally in therapy. Diagnostic applications include brain, thyroid, cardiovascular and kidney studies.

In 1986, AECL celebrated 40 years of Canadian involvement with nuclear medicine.

Storing cobalt-60 at Nordion. Cobalt-60 is the radioactive element used in the cobalt machines which treat cancer.



Veterans Affairs

The Department of Veterans Affairs provides support for the economic, social, mental and physical well-being of veterans, certain civilians, and their dependents. Services, including pensions and war veterans' allowances, medical treatment, counselling, and educational assistance to children of the war dead, are provided by Veterans Affairs and the three agencies associated with it — the Canadian Pension Commission, the Veterans Appeal Board, and the Bureau of Pensions Advocates. The department is also committed to ensure, through commemoration activities, that the achievements and sacrifice made by Canadians for their country in time of war are not forgotten.

Veterans Affairs Program

Federal legislation provides benefits to veterans (and certain civilians), their dependents and survivors. These benefits include: medical and dental services; prosthetic appliances; income support programs; emergency financial assistance; counselling services for veterans, their dependents and survivors; educational assistance for veterans and orphans; and burial grants for veterans. The new Veterans Independence program, introduced in 1981, aims to maintain or improve the level of independence and self-sufficiency of an aging veteran population. Benefits for eligible veterans include, nursing, personal care, housekeeping, groundskeeping and transportation costs. Where direct assistance is not possible, a referral service to other sources of aid is provided.

Remembrance Day ceremony in Ottawa.



Pensions Program

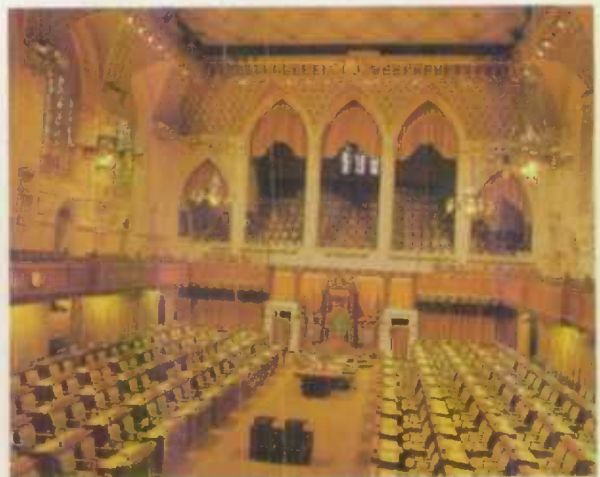
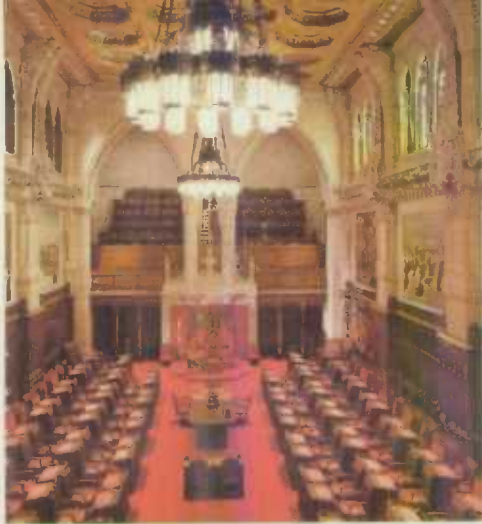
The Canadian Pension Commission administers the Pension Act, the legislation under which pensions are awarded as compensation for disability or death related to military service. This Act also provides for the payment of pensions for surviving dependents. War veterans' pensions (disability and death benefits) totalling \$750 million were paid in 1986-87. Social and income support accounted for another \$430 million.

The Veterans Appeal Board serves as a final court of appeal for veterans, ex-servicemen and their dependents in all matters concerning disability pensions and the interpretation of the Pension Act, the War Veterans Allowance Act and Part XI of the Civilian War Pensions and Allowances Act.

The Bureau of Pensions Advocates provides a legal aid service for persons seeking to establish claims, relating to military service, under the Pension Act and allied statutes and orders. The relationship between the bureau and applicant or pensioner is that of solicitor and client. Its service is highly decentralized, with advocates and support staff located in 19 cities across Canada.

Veterans pay homage after laying a wreath at their regiment's monument, in April 1988, on their pilgrimage to Korea at the 35th Anniversary of the cease-fire in Korea.





Senate Chamber (top) and House of Commons (bottom), in the Parliament Buildings, Ottawa.

GOVERNMENT AND LEGAL SYSTEM

Government

The Executive. Canada is a constitutional monarchy. The executive government "is vested in the Queen" of Canada, who is also Queen of the United Kingdom and more than a dozen other Commonwealth countries. In strict law the powers of the Crown are very great. In fact they are exercised on the advice of a Cabinet responsible to and having the confidence of the House of Commons, which is elected by the people. The powers of the Crown are

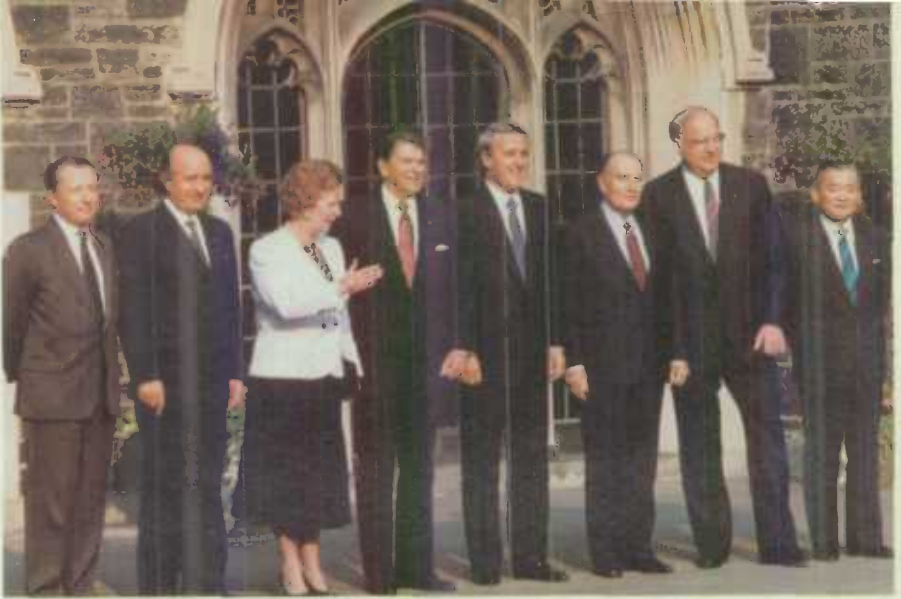
normally exercised in the Queen's name by the Governor General, now always a Canadian, whom she appoints on the advice of the Prime Minister of Canada.

Except in extraordinary circumstances, the Governor General or the Queen must act on the advice of ministers. On the advice of the Prime Minister, the Governor General appoints the ministers and the members of the Senate. The Prime Minister decides when Parliament shall meet and normally decides when a Parliament shall be dissolved for a general election, although one must be held at least once every five years. The Governor General in Council (that is, the Governor General acting on the advice of Cabinet), appoints judges of the superior, district and county courts, the Lieutenant Governors of the provinces, deputy ministers of government departments and other senior officials.

The Cabinet and the Prime Minister derive their powers from the conventions rather than the law of the Constitution. The Constitution Act, 1867 provides only for a "Queen's Privy Council for Canada" appointed by the Governor General. Membership in the Privy Council is for life; it consists of all Cabinet ministers, all former ministers and various distinguished individuals appointed as a mark of honour. It is to some extent an honorific body, its practical importance being that membership in it is an essential requirement for holding ministerial office, and that only Privy Councillors currently holding ministerial office may offer binding advice to the Governor General.

The Duchess of York with her two-week-old daughter, Beatrice Elizabeth Mary, born August 8, 1988.





World leaders, Delors, DeMasi, Thauscher, Kougan, Mulroney, Mitterrand, Kohl and Nakashima, at the Toronto Economic Summit in June 1988.

The Cabinet is presided over by the Prime Minister. By convention all ministers must be members of Parliament and most ministers are members of the House of Commons. It is customary, insofar as representation in Parliament permits, for the Cabinet to include at least one minister from every province, with the more populous provinces receiving greater representation.

The members of the Cabinet must speak as one on all questions of government policy; a minister who cannot support that policy must resign. Each minister of a department is answerable to the House of Commons for that department and the Cabinet as a whole is answerable to the House for government policy and administration generally.

If the government is defeated in the House on a motion of want of confidence, it must either resign office, at which point the Governor General calls on the Leader of the Opposition to form a new government, or seek dissolution of Parliament, which leads to a general election; the latter procedure is generally followed nowadays. Defeat of a major government bill is ordinarily considered a vote of want of confidence, leading to the same consequences, but the government can choose to consider any such defeat not decisive. The House then has the option of voting on a formal motion of want of confidence.

Only the government can introduce bills to raise or spend public funds. Members of the House of Commons other than ministers may move to reduce proposed taxes or expenditures, but not to raise them. The rules of the House allot most of the time for debate of government business and nearly all legislation now comes from the government. If the parties fail to agree on a timetable for dealing with the various stages of a bill, the government has the power to move closure, so as to cut off debate. Twenty-five days of each parliamentary year are specifically allotted to the Opposition to debate any subject it chooses and on six of these days it can move want of confidence.

The Legislature. Parliament consists of the Queen, the Senate and the House of Commons. The Senate and the House of Commons have identical legislative duties and powers, with the exception that financial bills must originate in the Commons. The Senate has 104 seats: 24 from Ontario, 24 from Quebec, 10 each from Nova Scotia and New Brunswick, 4 from Prince Edward Island, 6 from Newfoundland, 6 from each of the four western provinces, 1 from Yukon and 1 from the Northwest Territories. Senators are appointed by the Governor General on the advice of the Prime Minister. They must retire at age 75.

The House of Commons has 295 seats: 7 from Newfoundland, 11 from Nova Scotia, 10 from New Brunswick, 4 from Prince Edward Island, 75 from Quebec, 99 from Ontario, 14 each from Manitoba and Saskatchewan, 26 from Alberta, 32 from British Columbia, 1 from Yukon and 2 from the Northwest Territories. Members are elected by obtaining a plurality of votes in single-member constituencies. Every adult Canadian citizen, with some exceptions, (such as people in jail) may vote. The number of constituencies allotted to each province is computed according to the democratic principle of representation by population, on the basis of a complex formula contained in the Constitution Act, and is readjusted after each decennial census. No province can have fewer members in the House of Commons than in the Senate. The Chief Electoral Officer is responsible for the representation process.

Prime Minister Brian Mulroney signing the free-trade agreement in Ottawa, January 1988. The Senate passed enabling legislation for the free-trade agreement on Dec. 30, 1988 and Supreme Court Justice Antonio Lamer gave the bill royal assent on behalf of Governor-General Jeanne Sauvé.



In the House of Commons, all bills pass through three stages known as "readings". The first, at which time the bill is tabled, is purely formal. On the second, the House gives the bill consideration in principle and, if satisfied, refers it to a committee, where it is dealt with clause by clause. The committee then reports the bill to the House, with or without amendments, and at this stage any member may propose amendments, which are debatable. Third reading then follows. If the bill passes this last stage, it is sent to the Senate, where it goes through a similar procedure, following which it receives Royal Assent, thereby completing the process by which legislation is enacted.

The Canadian Constitution would be unworkable without political parties. Yet parties are almost unknown to Canadian law (an exception being the Election Expenses Act), a notable example of the conventions of the Constitution. Political parties and party discipline make possible a stable government, capable of carrying its policies into effect, and provide for continuous organized criticism of that government. They also make possible an orderly

Prime Minister Mulroney and provincial premiers, in June 1987, at the Meech Lake Accord conference in Quebec.



transfer of power from one government to another. They help to educate the electorate on public affairs and reconcile the country's divergent elements and interests.

The Progressive Conservative Party goes back to a coalition of moderate Conservatives and moderate Reformers in the province of Canada in 1854, six years after responsible government had been won. It was broadened into a national party in 1867 when Sir John A. Macdonald, the first Prime Minister of the Canadian federation, formed a Cabinet of eight Conservatives and five Liberals or Reformers, whose followers soon came to be known as "Liberal-Conservatives"; the present name was adopted in 1942. The Liberal Party has its roots in the pre-Confederation Reform parties that struggled for the establishment of parliamentary responsible government in the 1840s. The New Democratic Party dates from 1961 when the major trade union federation (the Canadian Labour Congress) and the Co-operative Commonwealth Federation (CCF) joined forces to launch a new party; the CCF had been founded in 1932 by a group of farmer and labour parties in the western provinces.

Provincial and Territorial Government

In each province the machinery of government is substantially the same as that of the central government, except that no province has an upper house. The Crown is represented by a Lieutenant Governor.

The two territories, Yukon and the Northwest Territories, come directly under the Government and Parliament of Canada but enjoy a growing degree of self-government.

The Government of Yukon includes a federally appointed Commissioner who functions like a Lieutenant Governor, an Executive Council which corresponds to a provincial cabinet, and a 16-member elected Legislative Assembly. The Executive Council consists of the Government Leader, who is the leader of the majority party in the Assembly, and three other members of the majority party in the House who are assigned portfolio responsibilities. The jurisdiction of the Legislature, or Commissioner in Council, is subject to federal legislation. The Legislature can enact laws relating to most subjects of a provincial nature other than natural resources.

The Northwest Territories is administered by a Commissioner, appointed by the Government of Canada, and an elected Legislative Assembly of 24, with an Executive Council composed of the Commissioner and eight members of the Assembly. The Commissioner in Council has substantially the same powers as in Yukon.

Municipal Government

Municipal government, being a matter of provincial jurisdiction, varies considerably. All municipalities (cities, towns, villages and rural municipalities) are governed by elected councils. In Ontario and Quebec there are also counties, which group smaller municipal units for certain purposes, and both these provinces have set up regional municipalities for metropolitan areas.

In general, the municipalities are responsible for police and fire protection, local jails, roads and hospitals, water supply and sanitation, and schools (often administered by distinct boards elected for the purpose). They get their revenues mainly from taxes on real estate, fees for permits and licences and grants from the provinces.



Canada Day — Girl Guides, Boy Scouts, Scouts and Cadets in front of the Supreme Court in Ottawa.

The Legal System

The Law and Law-making. The law in Canada consists of statutes and judicial decisions. There is also a large body of case law that comes mainly from English common law and consists of legal principles evolved by the decisions of the superior courts over a period of centuries. The English common law came to Canada with the early English settlers and is the basis of much of the federal, provincial and territorial law. The province of Quebec, however, was originally settled by French inhabitants who brought with them civil law derived from French sources. Thus civil law principles govern such matters as personal, family and property relations in Quebec; the province has developed its own Civil Code and Code of Civil Procedure governing these and other matters and has, in effect, adapted the French civil law to meet Quebec's needs.

A vast body of subordinate legislation contained in regulations adopted by appropriate authorities and in bylaws made by municipalities is issued under authority conferred by either Parliament or the provincial legislatures.

Statutes enacted by the federal Parliament apply throughout the country; those enacted by provincial legislatures apply only within the territorial limits of the provinces. Hence, variations may exist from province to province in the legal rules regulating an activity governed by provincial law.

The main body of Canadian criminal law, being federal, is uniform throughout the country. Although Parliament has exclusive authority under the Constitution Act, 1867 to enact criminal law, the provincial legislatures have the power to impose fines or punishments for breaches of provincial laws.

Most Canadian criminal law is contained in the Criminal Code, which is derived almost exclusively from English sources. Other federal statutes provide for the punishment of offences committed thereunder by fine or imprisonment or both. In any event, whether an offence be serious or minor, it is a fundamental principle of Canadian criminal law that no person may be convicted unless it has been proved beyond all reasonable doubt to the satisfaction of either a judge or a jury that he or she is guilty of the offence.

Law Reform. Many of the provinces now have law reform commissions that inquire into matters relating to law reform and make recommendations. At the federal level, the Law Reform Commission of Canada studies and reviews federal law with a view to making recommendations that reflect society's changing needs and standards.

Computer terminals in police cruiser cars in Winnipeg, Man. allow quick access to local and national records. Winnipeg is the 10th major Canadian city to use mobile computers for communication.





The nine members of the Supreme Court of Canada, October 1988. The Supreme Court, established in 1875, is the highest appeal court of Canada in civil and criminal matters.

The Courts and the Judiciary

Courts play a key role in the process of government. Acting through an independent judiciary, the courts declare what the law is and apply it to resolve conflicting claims between individuals, between individuals and the state and between the constituent parts of the Canadian federation.

The Judiciary. Because of the special function performed by judges in Canada the Constitution Act, 1867 guarantees the independence of the judiciary of superior courts. This means that judges are not answerable to Parliament or to the executive branch of the government for decisions rendered. A federally appointed judge holds office during good behaviour but is removable from office by the Governor-in-Council on the address of the Senate and House of Commons; in any event, he or she ceases to hold office at age 75. The tenure of judges appointed by provinces to inferior courts is determined by the applicable provincial laws. No judge, whether federally or provincially appointed, may be subjected to legal proceedings for any acts done or words spoken in a judicial capacity in a court of justice.

The Courts. In Canada, the power to create courts is divided. Some courts are created by Parliament (for example, the Supreme Court of Canada) and others by provincial legislatures (for example, superior courts, county courts and many lesser provincial courts). However, the Supreme Court of Canada and the provincial courts are part of an integrated

whole; thus, appeals may be made from the highest courts of the provinces to the Supreme Court. Generally speaking, federal and provincial courts are not necessarily given separate mandates as to the laws that they administer. For instance, although criminal law is made by the Parliament of Canada, it is administered mainly in provincial courts.

Federal Courts. Federal courts in Canada include the Supreme Court of Canada, the Federal Court of Canada and various specialized tribunals such as the Tax Court of Canada, the Court Martial Appeal Court and the Immigration Appeal Board. These courts and tribunals are created by Parliament.

The Supreme Court, established in 1875, is the highest appeal court of Canada in civil and criminal matters. At least three of its nine judges must come from Quebec, a requirement added because of the special character of Quebec civil law. Under conditions determined by the statute law of Parliament, the Supreme Court entertains appeals from the provincial courts of appeal and from the Federal Court. It also gives advisory opinions to the federal government when asked under a special reference procedure.

City Hall at Yellowknife, NWT.





Victoria, BC

The Federal Court of Canada, created in its present form in 1970, deals with: taxation cases; claims involving the federal government (for instance, claims against the federal government for damage caused by its employees); cases involving trademarks, copyrights and patents; admiralty law cases; and aeronautics cases. It has two divisions, a Trial Division and an Appeal Division; the Appeal Division hears appeals from decisions rendered by the Trial Division and by many federal boards and agencies.

Provincial Courts. Provincial courts are established by provincial legislation and their names vary from province to province; nevertheless, their structures are roughly the same. Each province has inferior courts, such as family courts, juvenile courts, magistrates' courts and small debts courts; these deal with minor civil and criminal matters and the great majority of cases originate and are decided in them. With the exception of the province of Quebec all provinces also have systems of county or district courts. These courts have intermediate jurisdiction and decide cases involving claims beyond the jurisdiction of the small debts courts. Although they do not have unlimited monetary jurisdiction, they also

hear all but the most serious criminal cases, and have a limited jurisdiction to hear appeals from decisions of magistrates' courts. The highest courts in a province are its superior courts, which hear civil cases involving large sums of money and criminal cases involving serious offences.

The Legal Profession

In common law jurisdictions in Canada, practising lawyers are both called as barristers and admitted as solicitors. In Quebec the legal profession is divided into the separate branches of advocate and notary. In all cases admission to practice is a provincial matter.

Legal Aid. In recent years all provincial governments have established publicly funded legal aid programs to assist persons of limited means in obtaining legal assistance in a number of civil and criminal matters, either at no cost or at a modest cost, depending on the individual's financial circumstances. These programs vary from province to province but all are intended to ensure that economically disadvantaged Canadians have access to justice.

The Police

The Constitution Act, 1867 assigns to the provinces the responsibility for judicial administration within their boundaries, but police forces have nevertheless been created by federal, provincial and municipal governments.

Ontario and Quebec have created provincial forces that police areas of the province not served by municipal forces. Provincial police duties include providing police and traffic control over provincial highways, and assisting municipal police in the investigation of serious crimes.

The federal government maintains the Royal Canadian Mounted Police (RCMP). This civil force was originally created in 1873 as the North West Mounted Police. Today the RCMP is the sole police force in the Yukon and the Northwest Territories and is employed by eight provinces and over 190 municipalities to carry out provincial and municipal responsibilities within their borders.

The RCMP enforces many federal statutes such as the Narcotic Control Act and Immigration Act with the greatest emphasis on the Criminal Code by virtue of its provincial and municipal contracts. Through the Canadian Police Information Centre (CPIC) the RCMP provides a central information service to all recognized Canadian police agencies about such matters as stolen property, missing persons, fingerprints and criminal records. The RCMP is responsible for the protection of government property and the safekeeping of visiting dignitaries and it represents Canada in the International Criminal Police Organization, which Canada joined in 1949.

The Correctional Service of Canada

The Correctional Service of Canada, under the authority of the Penitentiary Act, is responsible for administering sentences of two years or more and for preparing offenders for their satisfactory reintegration into society. Under the direction of the Solicitor General, the Correctional Service of Canada is managed and controlled by the Commissioner of Corrections.



An RCMP officer making notes at the scene of a crime.

At the operational level, the Correctional Service manages 42 major institutions and 15 parole districts which collectively are responsible for approximately 12,500 inmates and 7,500 parolees.

The National Parole Board

The National Parole Board (NPB), under the provisions of the Parole Act, has the authority to grant, deny, terminate or revoke full and day parole for both federal and provincial offenders except in British Columbia, Ontario and Quebec, where provincial boards have jurisdiction over inmates serving a definite sentence in provincial prisons. In cases in which it has not delegated authority to the wardens of institutions, the NPB also decides whether or not offenders should be granted temporary absences. Offenders released into society as a result of earned remission are subjected to mandatory supervision. Although release on mandatory supervision is automatic the NPB may also revoke this latter type of release should the conditions of supervision be violated.

The NPB headquarters is located in Ottawa with regional offices in Moncton, Montreal, Kingston, Saskatoon and Burnaby. At present the board has 29 full-time members appointed by the Governor in Council to hold office for periods up to 10 years. In addition temporary board members are appointed for periods up to three years to assist with fluctuations in workload in the various regions. All may be reappointed.

On the recommendation of the chairman of the NPB, the Solicitor General of Canada may designate citizens to participate on regional panels as community board members. Their duty is to vote, when the board reviews, for the purpose of granting parole to individuals serving life sentences as a minimum or an indeterminate sentence as dangerous sexual or habitual or dangerous offenders.

An appeal division, located in Ottawa, has been established to ensure that offenders have a method of redress through a formal appeal process. Appeal division board members may affirm, or modify an appealed conditional release decision, or may order a new hearing.

EXTERNAL RELATIONS AND DEFENCE

External Affairs

The Department of External Affairs has three primary functions: to advise the government on foreign policy, foreign trade and international defence and economic matters, co-ordinate implementation of the government's policies and programs in these areas, represent Canada in other countries and in international organizations, and negotiate international agreements; to provide consular assistance to Canadians travelling or living abroad and to provide immigration services to persons intending to come to Canada; and to promote Canada and its interests abroad.

The department headquarters is in Ottawa. In 1986, there were 121 diplomatic and consular posts in 82 countries; many of these posts are accredited to two or more governments, thus permitting Canada to maintain diplomatic relations with an additional 85 countries. Canada also had 24 honorary consulates. In addition, in 1986, there were 99 resident diplomatic missions in Ottawa and 41 non-resident accreditations.

A Canadian diplomatic mission in a Commonwealth country is designated as a high commission rather than an embassy. Consular posts, which attend primarily to Canada's trade relations or consular responsibilities, are headed by consuls-general or consuls.

Canada also has 12 permanent and separate missions accredited to a number of international organizations, including: the United Nations (UN) in New York and Geneva; the European Communities (EC) and the North Atlantic Treaty Organization (NATO) in Brussels; the Organization for Economic Co-operation and Development (OECD) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) in Paris and the Organization of American States (OAS) in Washington. Canada is also a member of the Commonwealth and of La Francophonie with headquarters in London and Paris respectively.

The department works actively in international trade, a large and rapidly growing component of Canada's national income, affecting nearly every sector or region of Canada. Potential and present Canadian exporters, when travelling abroad, can benefit from the services of trade commissioners who are active in more than 90 posts around the world.

The annual report of the department sets out the particular goals and achievements of Canadian foreign policy from country to country, from region to region and in the fields of international law, disarmament and arms control, energy, trade and international economic affairs, social and humanitarian affairs, international security and other issues.

Services to Canadians

Consular assistance is one of the primary functions of Canada's embassies and other missions abroad and involves helping Canadians travelling or residing outside the country. In 1986, consular personnel handled close to 628,000 cases ranging from the issuance of passports (approximately 60,000) to special services in the event of death abroad (1,789), hospitalization (1,590), financial difficulties (4,266) and imprisonment due to drug-related or other offences (1,102).

Passports. In 1986, approximately 980,000 passports were issued under the authority of the Department of External Affairs. Passports, certificates of identity, and refugee convention travel documents are issued through regional passport offices across Canada.



The Department of External Affairs building in Ottawa.

Assistance in International Legal Matters. Requests for assistance in international legal matters, such as, pressing claims against or involving foreign governments are dealt with by the department's bureau of legal affairs. In the area of private international law, the bureau offers a variety of services to facilitate legal proceedings involving Canadian and foreign jurisdictions on the basis of conventions or by arranged procedures.

Canadian International Development Agency (CIDA)

CIDA administers most of Canada's official development assistance program which amounted to \$2.52 billion in 1986-87. Canada provides assistance to over 100 developing countries, with most concentrated efforts in approximately 30. The broad objective of the program is to help Third World countries meet the basic needs of their people and move toward self-reliance.

Assistance is provided through four main channels. In 1986-87, \$967.0 million was disbursed in bilateral assistance under agreements between Canada and the recipient countries for the financing of development projects. The funds, provided as grants, are used for various projects including infrastructure projects, rural and agricultural development, food aid, lines of credit and technical assistance. In 1986-87, the funds were disbursed as follows: Asia \$376.6 million;



A CIDA project in Guinea. CIDA supports many projects of direct benefit to women.

anglophone Africa \$218.1 million; francophone Africa approximately \$199.0 million; and the Americas \$153.0 million. Included in this assistance was approximately \$211.0 million in food aid.

Through multilateral programs (\$953.1 million in 1986-87), Canada supports the development efforts of some 85 international organizations, including United Nations agencies, development banks, humanitarian institutions and other international groups seeking solutions to the problems of world development.

Special programs support the initiatives of Canadian non-governmental organizations and institutions, playing an active role in international development. In 1986-87, \$248.8 million was provided to over 400 organizations and institutions (including churches, service clubs, co-operatives, unions and universities) in support of some 3,500 projects.

The business co-operation program encourages Canadian firms to create joint ventures with Third World business and to transfer technology to developing countries. In 1986-87, \$32.3 million was used to support more than 700 projects in progress by 450 firms.

Canadian Executive Service Organization (CESO)

CESO is a private, non-profit, Canadian corporation, founded in 1967 by Canadian public and private sectors. A board of directors determines the policy of the corporation. With over 2,000 qualified, experienced Canadian men and women, CESO aims to supply professional and technical knowledge to governmental, industrial or other organizations.

CESO operations include two major programs: the overseas program within developing countries of the world and the Canadian native program throughout Canada, in response to requests received. CESO volunteer consultants receive no salary but all travel and living

expenses are covered. Overseas projects average two to three months in length while projects for the Canadian native program average one to two days to two weeks. Most native projects are within commuting distance of the volunteer consultant's home.

CESO is funded by the Canadian International Development Agency (CIDA), Indian and Northern Affairs Canada (INAC), provincial/territorial governments, over 350 Canadian corporations and several hundred individuals.

CUSO

CUSO recruits Canadians experienced in trades, agriculture, fisheries, forestry, education, health, business and technology to pass on their skills in the Third World and in return learn about a different culture and lifestyle. Since 1961, CUSO has placed more than 9,000 volunteers of all ages on two-year contracts in developing countries. The overseas governments or agencies requesting assistance pay the worker's salary at local rates. CUSO, an independent, non-profit organization, pays travel, medical/dental/life insurance, orientation, and language training costs.

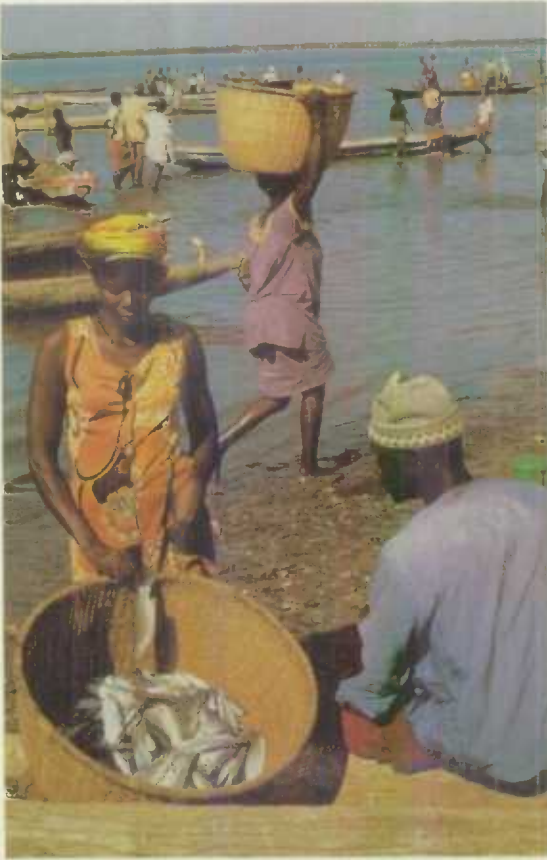
CUSO workers are involved in village development programs in Asia.



CUSO is also involved in funding an increasing number of self-help projects overseas and in development education at home. A substantial part of the organization's finances comes from the Canadian International Development Agency (CIDA), the balance being contributed by individuals, corporations, foundations, community groups and provincial governments.

Legume research programs in Mali, an IDRC funded project.





Small scale and industrial fishing operations are important to Senegal's economy. Under an IDRC funded project, researchers are involved in collecting, processing and distributing documentation on fisheries generated in Senegal and abroad.

International Development Research Centre (IDRC)

IDRC is a public corporation created by an Act of Parliament in 1970. Although IDRC is funded entirely by Parliament, to which it reports annually, its operations are guided by a Board of Governors.

The centre supports scientific research projects in developing countries. IDRC also promotes co-operation between researchers in developing countries and their counterparts in Canada — whether academic, governmental or private. Financial and professional support are offered by IDRC in fields such as agriculture, health, social sciences, information sciences, earth and engineering sciences, training, and implementation of research results.

IDRC's headquarters is in Ottawa. The centre also has six regional offices located in Bogota, Cairo, Dakar, Nairobi, New Delhi and Singapore.

National Defence

To ensure that Canada remains secure and independent, Canadian forces are committed to collective security and defence arrangements with Canada's allies in the North Atlantic Treaty Organization (NATO), with the United States under a series of bilateral agreements including the North American Aerospace Defence Command (NORAD) agreement, to the United Nations in various peacekeeping and observer roles and to the maintenance of Canada's ability to function as a sovereign state within its own territory and the contiguous water areas under Canada's jurisdictional authority.

Because the main military threat to Canada lies in the possibility, however remote, of a nuclear exchange involving the United States and the Soviet Union, a major policy thrust is to deter such an event. This involves two primary theatres, Europe and North America.

Canada's principal contribution in Europe includes a contingent of land forces which, in a crisis or war, would be assigned to the Central Army Group Commander's tactical reserve. Its current strength is approximately 4,100 but in crisis, would be augmented by

Canadian soldiers in an armoured personnel carrier in a West German village during a NATO exercise.





Canadian soldiers of the United Nations peacekeeping force in Cyprus patrol along the "Green Line" in Nicosia. UN peacekeeping forces, in which Canada has contributed more than 80,000 soldiers over the past 40 years, were awarded the Nobel Peace Prize in September 1988 for voluntarily taking on "demanding and hazardous service" in flash points around the globe.

1,400 soldiers transported by air from Canada. The air formation in Europe, 1 Canadian Air Group, is also a major component and would perform conventional air-to-ground and air defence roles in time of crisis.

Co-operation with United States forces, under a renewed NORAD agreement signed in March 1985, is a vital feature of the defence of North America. The agreement includes the North American air defence modernization program which will significantly improve our capability to identify and intercept aircraft and cruise missiles around the periphery of North America.

In addition to providing surveillance and control of the sea approaches of the three oceans bordering Canada, the maritime forces also provide combat ready ships in support of Canada's commitment to NATO and continental defence in co-operation with US forces.

Canadian peacekeeping commitments are according to an established policy whereby up to 2,000 Canadian forces members can be called on for peacekeeping duties at any time. Canada currently has military personnel serving in the Golan Heights between Syria and Israel, in Cyprus, and with the truce supervisory organization operated by the United Nations in the Middle East. Members of the Canadian forces also participate in the multinational force and observers organization in the Sinai Peninsula to help monitor the terms of the 1979 peace treaty between Egypt and Israel.

Protection of Canada as a sovereign state imposes two main roles on the Canadian Armed Forces. One concern is the possibility of challenges to Canada's right to exercise jurisdiction over Canadian territory and adjacent waters. A second concern is the possibility of the forces being called to the aid of the civil power in the event of a serious civil disorder. While no armed forces are maintained for this specific purpose, forces performing other tasks are trained to provide such assistance.



Canada

A PORTRAIT

THE ECONOMY

ECONOMY IN THE '80s

The Canadian economy continued to expand in 1987. This marked the fifth consecutive year of growth, following the sharp contraction experienced in the 1981-82 recession. Price inflation remained moderate, compared to the double-digit rates recorded early in the decade, while unemployment remained above pre-recession levels.

The 1981-82 recession was most evident in a sharp contraction of domestic demand. Consumer spending declined as incomes weakened and as the personal savings rate jumped from 13.3 per cent to 17.8 per cent in 1982, a post-war record. Business investment contracted severely, as demand for housing,

business inventories and plant and equipment all declined rapidly. Exports continued to grow slowly; together with the sharp drop in domestic demand for imports, this led to an increase in the surplus in the current account.

Recovery in 1983 was led by export and household demand and a cessation of the steep drop in business inventories. The volume of domestic demand, however, did not recover to its pre-recession level until 1984. The slow growth of domestic demand and incomes contributed to a continuing high level of federal government deficits.

Economic events in 1986 were marked by the sharp drop in commodity prices, particularly for crude petroleum and wheat. While the drop in commodity prices was a boon to the manufacturing industries in Central Canada, they also led to another severe cutback in incomes and business investment in Western Canada. Unemployment remained above recession levels in most areas of Western Canada, while declining rapidly in Ontario.

A more even distribution of growth by province and by industry was evident in 1987. Business investment became the prime source of growth, and by year end recovered to its pre-recession level. Spending on housing also surged ahead in the year, particularly in Ontario. Employment rose in all provinces, sufficiently to lower the unemployment rate to near 8 per cent at year end. The acceleration of revenue growth also contributed to a further reduction in the federal government deficit. The rapid pace of growth in Canada relative to its major trading partners, however, led to a decline in the current account balance as import growth exceeded exports. This deficit was financed by rising capital inflows, particularly from Japanese investors in the bond market.

Industrial distribution of employment, Canada, selected years, 1971-87

Industry	1971	1976	1981	1987
	%	%	%	%
Agriculture	6.3	5.0	4.4	4.0
Other primary industries	2.7	2.5	2.9	3.4
Manufacturing industries	21.8	20.3	19.3	17.0
Construction	6.0	6.7	5.9	5.2
Transportation, communications and other utilities	8.7	8.7	8.3	7.6
Trade	16.5	17.3	17.1	17.6
Finance, insurance and real estate	4.9	5.2	5.4	5.8
Community, business and personal services	26.3	27.1	29.7	32.7
Public administration	6.7	7.2	7.0	6.7
Total	100.0	100.0	100.0	100.0



Frenzied trading on the floor of the Toronto Stock Exchange, Oct. 30, 1987, the day after "Black Monday". The convulsion in world stock markets in mid-October, 1987, was reflected in a record decline in Canadian stock markets.

The convulsion in world stock markets in mid-October, 1987, was reflected in a record decline in Canadian stock markets. While the sources of the crash were unclear, there was little evidence of the drop leading to weakness in the real economy. In particular, real output grew by 1.5 per cent in the final quarter of the year. Business investment plans for 1988 accelerated to an 18 per cent increase. Employment continued to grow rapidly early in 1988, reducing the unemployment rate to below 8 per cent.

Industrial Growth and Change

Gross Domestic Product (GDP) grew 8.6 per cent in 1987 to \$554 billion. GDP in constant 1981 dollars rose 3.9 per cent and the GDP implicit price index increased 4.6 per cent. Economic activity began to pick up early in the year, following a period of no growth in the second half of 1986. The expansion continued at a strong pace through the entire year. In the fourth quarter real GDP increased 1.5 per cent, bringing the volume of economic activity to a level 5.7 per cent above that in the fourth quarter of 1986.

Final domestic demand and exports both recorded large volume increases in 1987. New housing construction and business outlays for capital equipment rose at a strong pace. Consumer spending also recorded a substantial advance. Government expenditure grew less rapidly than the other major components of demand.

Viewed from an industry perspective, growth was strongest in wholesale and retail trade, construction, manufacturing and communication. Finance, insurance and real estate, forestry and utilities also recorded large increases. Output grew 4.5 per cent in the business sector, which accounts for about four-fifths of the total economy. The increase in the non-business sector was 1.3 per cent.

Components of Demand

The residential construction upswing under way since 1983 continued in 1987, with a further real increase of 14.9 per cent. New housing construction rose 21.6 per cent and spending on alterations and improvements to existing dwellings rose 11.0 per cent. The housing boom continued through the third quarter and levelled off in the fourth.

Business investment in plant and equipment also rose substantially. Outlays on machinery and equipment surged ahead 14.8 per cent, while a small increase of 1.6 per cent was recorded in business non-residential construction investment. Demand for machinery and equipment was influenced by lower prices for these goods. The advance in non-residential construction outlays was partly a response to the rebound of natural resource prices in 1987 from the low levels of 1986.

Real personal expenditure advanced 4.5 per cent. The increase reflected further gains in disposable income and a decrease in saving by the personal sector. Personal disposable income grew 6.5 per cent while the implicit price index for personal expenditure rose 4.3 per cent. The personal savings rate declined from 11.5 per cent in 1986 to 9.3 per cent in 1987. Within the goods component of consumption, spending rose most rapidly in the automotive products, furniture and appliances and other durable goods categories. Within the services component, net travel abroad recorded a large increase. This represented a return to more normal international travel patterns by Canadians following Expo 86. The Canadian dollar appreciated 4.8 per cent vis-à-vis the United States dollar in 1987, making it more attractive to vacation in the United States.

Total government expenditure rose more slowly than other major demand components, 2.1 per cent in volume terms, reflecting budgetary restraint at all levels of government.

For 1987 as a whole, business non-farm inventories accumulated at a rate similar to 1986. However the pattern within the year was quite different. In the first and third quarters moderate accumulations occurred and in the second quarter inventories remained unchanged. In the fourth quarter an exceptionally large build-up was observed. There was a small reduction in stocks at the retail level, related to strong consumer demand. Inventories were built up at the wholesale level, partly the result of a large inflow of imports toward the end of the year. Wholesale lumber stocks also accumulated in the fourth quarter as the construction boom levelled off and the demand for construction materials stabilized. Total stock levels also increased at the manufacturing level, as goods-in-process inventories grew in line with higher rates of production. The level of finished goods inventories in manufacturing industries contracted, reflecting strong demand throughout the year. Stock levels decreased in some primary industries, largely as a result of higher export sales of metals and lumber.

Farm inventories and grain in commercial channels, which increased sharply in volume terms in 1986, rose further in the first three quarters of 1987 and then declined in the fourth quarter. They ended the year with little overall change. The volume of grain exports was stronger and the crop value was smaller than in 1986.

With continued moderate expansion in the Organization for Economic Co-operation and Development (OECD) economies, real exports increased 5.6 per cent. Exports of merchandise rose 6.4 per cent in volume following a 4.3 per cent increase in 1986. Wheat, forest products, natural gas and chemical product exports led the overall increase. Export sales to Japan and Europe increased very substantially, partly reflecting the steep depreciation of the Canadian dollar vis-à-vis the currencies of those countries over the past two years. Exports of services fell in 1987 due to lower tourist receipts and weak demand for business services. Imports of goods recorded strong growth in 1987, 9.1 per cent in real terms, in line with strong final demand. Particularly large increases occurred in the second half of 1987, reflecting higher purchases of machinery and equipment, motor vehicle products and crude petroleum. Imports of services were up sharply due to increased travelling by Canadians abroad. Goods and services from the United States were more competitive in the Canadian market as a result of the appreciation of the Canadian dollar vis-à-vis the United States dollar. The overall balance of payments deficit was \$ 9.6 billion in 1987, a level comparable to that of 1986.

West Edmonton Mall, located at Edmonton, Alta., the world's largest retail and entertainment complex.



Price Indexes

Inflation increased in 1987, as the GDP implicit price index rose 4.6 per cent. The average increase in the previous three years was 3.2 per cent. The inflation rate reflected increases of 9.1 per cent for the residential construction index and 4 per cent to 4.5 per cent for the personal expenditure, government current expenditure and business non-residential construction indexes. The appreciation of the Canadian dollar vis-à-vis the United States dollar contributed to a drop in import prices. Largely because of its high import content, the business machinery and equipment investment price index dropped 3.6 per cent. As import prices fell more than export prices, there was a rise in the overall terms of trade following three years of decline.

Components of Income

Labour income rose 6.7 per cent in 1987 as employment grew 2.9 per cent (using the Labour Force Survey paid workers indicator) and average compensation per employee rose 3.7 per cent. Real output per employee grew 0.9 per cent, implying an increase in unit labour costs of 2.8 per cent. Personal income grew 7.3 per cent in the year. Increased income taxes restrained the growth in personal disposable income to 6.5 per cent.

Corporate profits before taxes were 25.3 per cent higher in 1987 than in 1986. Gains were broadly based across a large number of industries and reflected strong domestic and foreign demand and improved operating margins. Manufacturing recorded the largest increase. The petroleum industry also recorded a particularly strong rebound in profits, after a sharp decline in 1986.

The total government sector deficit declined from \$27.9 billion in 1986 to \$25.5 billion in 1987. The federal government accounted for \$1.5 billion of the decline. Total expenditures rose 6.8 per cent while total revenues grew 8.9 per cent.

Coils of aluminium sheet emerging from a mill at a plant in Kingston, Ont.





Refinery in the Oakville area along Lake Ontario.

THE LABOUR SCENE

Labour Force

In 1987 the Canadian labour force averaged 13,121,000 persons, or 66.2 per cent of the total population 15 years of age and over. The labour force was composed of 11,955,000 employed and 1,167,000 unemployed persons. In the fifth year of recovery from the recession of 1981-82, the number of persons in the labour force grew by 2 per cent while the number employed rose 2.8 per cent. As a result, the unemployment rate declined to 8.9 per cent, down significantly from the rate of 11.9 per cent recorded in 1983.

The entry of women into the labour force continued to be the most important factor contributing to its overall growth. During the decade which preceded the recession, the number of women who entered the labour market averaged over 4 per cent each year. While this rate of growth was reduced to only 1.5 per cent during 1981-82, it has averaged more than 3 per cent since then. This remains substantially above the rate of growth of the male labour force, which averaged gains of just over one per cent during the same period.

Table 1. Employment by age and sex, and employment/population ratio by age, 1981-87

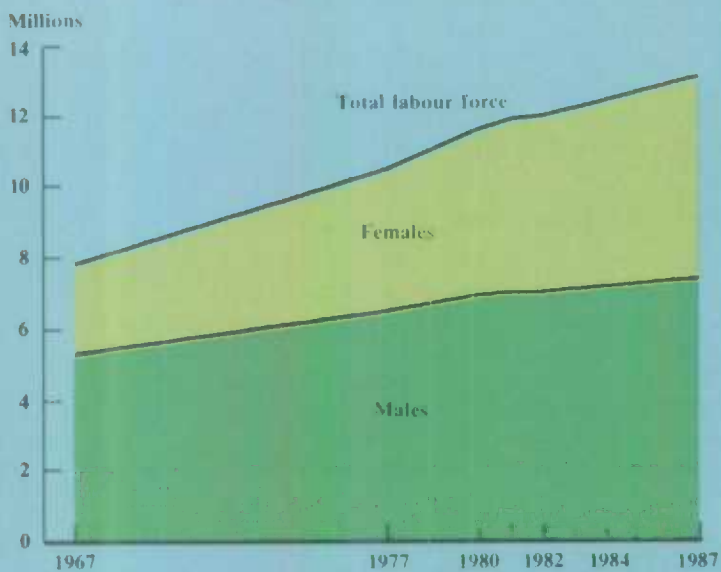
Age and sex	1981	1982	1983	1984	1985	1986	1987
	'000	'000	'000	'000	'000	'000	'000
Total employed	11,006	10,644	10,734	11,000	11,311	11,634	11,955
Men	6,559	6,254	6,240	6,367	6,508	6,657	6,793
Women	4,447	4,390	4,495	4,633	4,804	4,977	5,161
Employed aged 15-24	2,668	2,398	2,337	2,374	2,389	2,417	2,423
Men	1,416	1,235	1,196	1,232	1,232	1,258	1,265
Women	1,251	1,164	1,141	1,142	1,157	1,159	1,158
Employed aged 25+	8,338	8,245	8,397	8,626	8,923	9,217	9,532
Men	5,142	5,019	5,044	5,135	5,276	5,399	5,528
Women	3,196	3,226	3,354	3,492	3,647	3,818	4,003
Employment/Population Ratio							
	%	%	%	%	%	%	%
Total	59.9	57.0	56.7	57.4	58.4	59.4	60.3
Persons aged 15-24 ..	58.8	53.4	52.9	54.8	56.3	58.2	59.7
Persons aged 25+ ..	60.3	58.2	57.9	58.2	59.0	59.7	60.5

Table 2. Unemployment by age and sex and by province, 1981, 1983 and 1987

Age and sex	Unemployed			Province	Unemployment rate		
	1981	1983	1987		1981	1983	1987
	'000	'000	'000		%	%	%
Total unemployed	898	1,448	1,167	Nfld.	13.9	18.8	18.6
Men	494	859	634	PEI	11.2	12.2	13.3
Women	404	590	533	NS	10.2	13.2	12.5
Unemployed aged 15-24 ..	407	579	386	NB	11.5	14.8	13.2
Men	233	345	220	Que.	10.3	13.9	10.3
Women	175	234	165	Ont.	6.6	10.4	6.1
Unemployed aged 25+ ..	491	869	781	Man.	5.9	9.4	7.4
Men	262	514	414	Sask.	4.7	7.4	7.3
Women	229	355	367	Alta.	3.8	10.8	9.6
				BC	6.7	13.8	12.0
				Canada	7.5	11.9	8.9

Labour Force Trends, 1967-87

(Seasonally adjusted)



NO LEFT TURN



Even though most of the major characteristics of the labour market had returned to, or even surpassed, their pre-recession levels by 1987, there remained a number of factors indicating the impact which this downturn had on the economy. In addition to the unemployment rate, which remained above the 7.5 per cent figure posted in 1981, the number of persons unemployed continued well above the levels of the late 1970s. Unemployment among men aged 25 and over was almost 60 per cent higher than in 1981 even though their participation rate had declined almost 3 percentage points. The average duration of unemployment was five weeks longer in 1987 than in 1981, and more than 11 weeks longer for men aged 45 and over. The employment/population ratio, the per cent of the population with jobs, returned to the 1981 level in 1987. Ontario and Quebec were the only provinces with unemployment rates similar to those experienced in the early 1980s. Other provinces, such as Alberta and British Columbia, continued to post rates significantly above those of the pre-recession era.

Unemployment Insurance

The unemployment insurance program is administered by Employment and Immigration Canada. Covering approximately 95 per cent of the Canadian work force, the program provides financial assistance to workers who experience an interruption of earnings because of layoff, short hours, illness, retirement, pregnancy or adoption.

In 1987, benefit payments to persons claiming unemployment insurance benefits amounted to \$10.44 billion, marginally down from the preceding year. Continuing growth of the economy throughout 1987 resulted in corresponding increases in employment and reductions in the number of claims for unemployment insurance benefits. The number of claims decreased from 3.92 million in 1982 to 3.22 million in 1987.

Table 3. Unemployment insurance, 1979-87

Year	Benefits paid \$'000,000	Number of initial and renewal claims received '000	Estimated average number of beneficiaries '000
1979	4,008	2,600	713 [†]
1980	4,393	2,762	703 [†]
1981	4,828	2,947	720 [†]
1982	8,575	3,919	1,138 [†]
1983	10,169	3,434	1,248 [†]
1984	9,986	3,492	1,194 [†]
1985	10,227	3,312	1,145
1986	10,514	3,353	1,095
1987	10,440	3,221	1,031

[†] Revised.

The maximum weekly benefit in 1988 was \$339, representing 60 per cent of the beneficiary's average insured weekly earnings. The employee's contribution rate remained unchanged at 2.35 per cent since 1985. With maximum weekly insurable earnings of \$565, workers contributed up to \$13.28 per week in 1988. Generally, employers pay 1.4 times the amount contributed by employees.

Employment and Immigration Canada also carries out activities in more than 480 Canada Employment Centres. More than 100 Canada Employment Centres serve students on university campuses and 299 outreach projects provide additional services to clients.

Help-wanted Index

The Help-wanted Index serves as an indicator of labour market conditions by measuring the space devoted to help-wanted advertisements published in 18 major metropolitan area newspapers. Since the need to advertise job openings occurs early in the business cycle, an index measuring changes in the level of job ads can be considered an early indicator of general economic activity.

The index (1981=100) is quite sensitive to changes in the level of economic activity. Mirroring the recession of the early 1980s, the average annual index fell from 100 in 1981 to 43 in 1983. The index has advanced every year since 1983 and reached a level of 121 in 1987.

A growing segment of the work force is involved in computer technology. In 1986, the computer and telecommunications industries spent about \$1 billion on R&D — about 30 per cent of total business R&D spending in Canada.



Work Injuries Statistics

Over one million Canadians are injured every year in work-related accidents. About half of these injuries are sufficiently severe that employees need to take time off work to recuperate. In 1986, there were 586,718 work-related injuries in Canada for which time-loss or permanent disability claims were accepted by provincial workers' compensation boards. Data on these injuries are supplied by the boards as part of the national work injuries statistics program.

In 1986, most injuries involved the back (27 per cent); followed by the wrist, hand or finger (22 per cent); and the ankle, foot or toe (10 per cent). The most frequent types of accidents were overexertion (30 per cent), struck by an object (19 per cent), and falls (16 per cent). In terms of physical characteristics, or their nature, 48 per cent of the injuries involved sprains and strains, and 17 per cent resulted from contusions, crushing or bruising.

Wages and Salaries

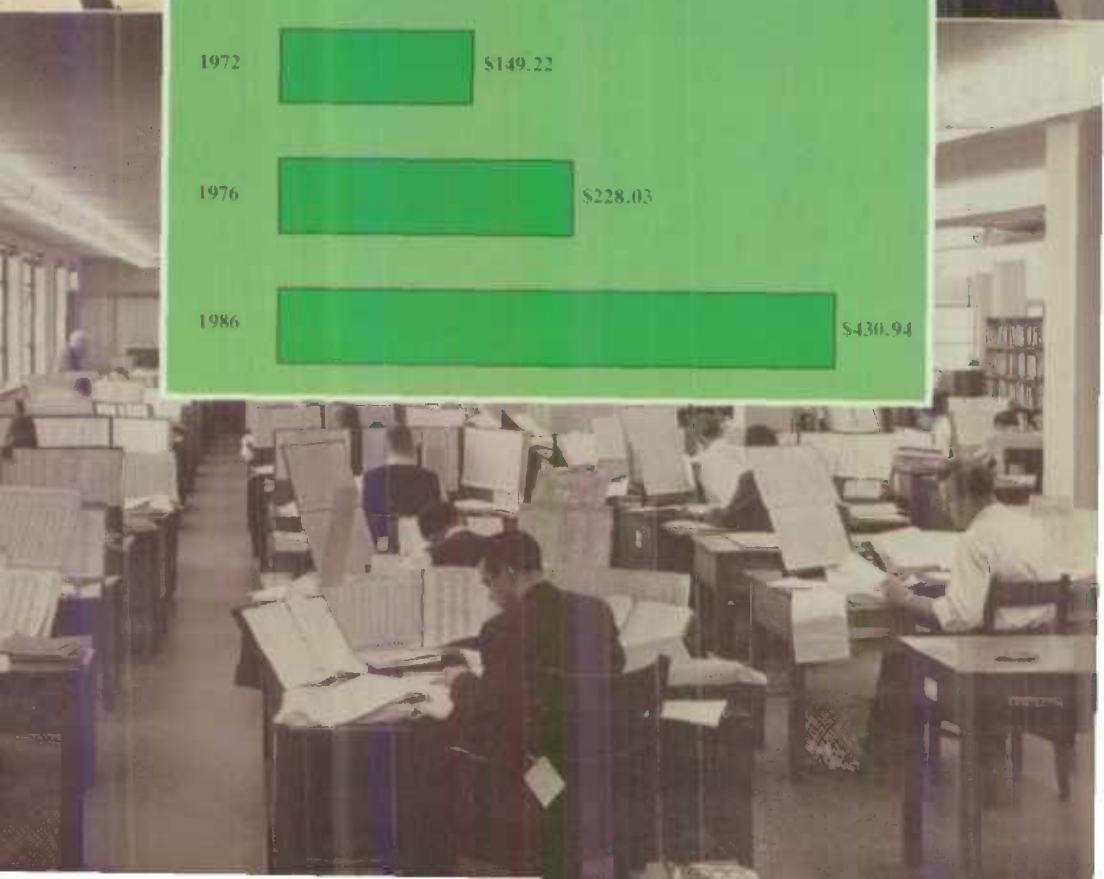
Statistics Canada's survey of employment, payrolls and hours estimated that there were 9,177,800 paid employees in Canadian firms, institutions and organizations in 1986. More than 66 per cent were employed in Canada's industrial heartland, Ontario and Quebec. Another 20 per cent worked in Alberta and British Columbia. In highest average weekly earnings however, Ontario and Quebec ranked 5th and 6th, respectively, of all the provinces and territories, while Alberta and British Columbia ranked 3rd and 4th, respectively. The highest average weekly earnings were paid in the Northwest Territories and the Yukon where a combined total of 26,900 people, or 0.3 per cent of paid Canadian workers, were employed in 1986. The lowest average earnings were recorded in Prince Edward Island.

Table 4. Employment and average weekly earnings, 1986

Province or territory	Number employed	Average weekly earnings
	'000	\$
Newfoundland	127.2	408.11
Prince Edward Island	31.0	348.30
Nova Scotia	258.9	390.30
New Brunswick	195.0	399.93
Quebec	2,274.7	420.25
Ontario	3,801.7	439.79
Manitoba	365.9	402.16
Saskatchewan	278.4	402.16
Alberta	861.4	448.99
British Columbia	956.7	443.84
Yukon	8.7	507.30
Northwest Territories	18.2	581.65
Canada	9,177.8	430.94



Average Weekly Earnings, Selected Years, 1939-86





Cutting room at a St. Boniface, Man. meat-packing plant.

By industry, the highest average earnings were paid by the two with the lowest employment levels, the mining and oil wells industry and the forestry industry. Industries with the lowest average earnings, and the only two to pay below the industrial aggregate average, were the services and trade industries. They were the 1st and 3rd largest employers respectively, and between them accounted for 52 per cent of all employees. In manufacturing, the 2nd largest employer, with 19 per cent of all industrial workers, the 1986 average weekly hours worked was 38.7 hours and the average hourly earnings were \$11.95.

Labour Organizations

Membership in labour organizations active in Canada totalled 3,781,000 in 1987. This figure was 11.3 per cent higher than in 1980. About 58.5 per cent of the members were in unions affiliated with the Canadian Labour Congress (CLC); 19 per cent were in unions affiliated with other federations; and the remaining 22.5 per cent were members of unaffiliated national and international unions and independent local organizations. Of all union members, 35 per cent belonged to international unions with headquarters in the United States.



The Canadian labour force averaged 12,171,000 persons in 1987, or 66.2 per cent of the total population 25 years of age and over.

Fourteen unions reported memberships of 50,000 or more in 1987. The five largest unions were the Canadian Union of Public Employees (330,000); the National Union of Provincial Government Employees (278,500); the Public Service Alliance of Canada (179,900); the United Steelworkers of America (160,000); and the United Food and Commercial Workers (160,000).

Labour Relations

Employer-employee relations in all sections of Canadian business and industry are regulated and fostered by the federal and provincial departments of labour, each within its area of jurisdiction; however, Labour Canada's direct concern is with enterprises and their employees, numbering approximately 600,000, within the federal jurisdiction.

Labour Canada has four major goals: to promote and sustain stable industrial relations, a fair return for work, and a working environment favouring the physical and social well-being of Canadians; to protect the rights and interests of all involved in the world of work; to promote equitable access to work opportunities for all Canadians; and to foster a climate for improved consultation and communication among government, labour and management.

THE SERVICE INDUSTRIES

Transportation

Transportation has played an important role in the history of Canada and in the shaping of its economic fabric. Over the years, the form of transport has evolved from the voyageur's canoe, to the dominance of rail and presently to an increasing dependence on air and motor vehicle transport. Correspondingly, dramatic changes in the for-hire carriage of goods have occurred in the span of two generations. In 1930, railways earned an estimated 85 per cent of Canada's freight revenue; by 1960, their share had dropped to less than 50 per cent. For-hire trucks accounted for 2 per cent of the total freight revenue in 1930 and 30 per cent in 1960. By the mid 1980s, the percentage distribution between the different modes had shifted to 49 per cent for-hire trucking, 39 per cent rail, 8 per cent marine and 4 per cent air.

The Angus MacDonald bridge at Halifax, NS.





Pearson International Airport at Toronto, Ont., had more scheduled traffic than any other Canadian airport in 1986.

Air Transport

In 1986, the 61 airports with Transport Canada air traffic control towers handled 5.2 million landings and take-offs. Of these, 3.1 million were itinerant movements (landings or take-offs by aircraft that enter or leave the tower control zone), an increase of 3.6 per cent over 1985. Half of these movements were performed by piston aircraft, but their share had dropped from 60 per cent in 1980 to 50 per cent in 1986. Second were jets, with a 29 per cent share in 1986, up from 25 per cent in 1980. Turbo-props also showed an increase, moving up from 9 per cent of itinerant movements in 1980 to 16 per cent in 1986. The remaining movements were by helicopters, with a 5 per cent share. As of September 30, 1987, there were 27,268 civil aircraft registered in Canada of which 16,896 had valid certificates of airworthiness.

In 1986, Toronto International Airport, now Pearson International, had more scheduled traffic than any other Canadian airport. Toronto, the centre of regional and transcontinental air travel, is included in seven of the top 10 city pairs for domestic scheduled air passenger travel. (City pairs include the city of origin and the city of destination.) Patterns of passenger travel flow east and west from Toronto. Regionally, Montreal, Ottawa and Toronto predominate in the East, and Calgary, Edmonton and Vancouver in Western Canada.

Table 1. Passengers, mail and cargo, top 10 Canadian airports scheduled services, 1986

Rank ¹	Airport	Flights	Passen- gers ²	Mail ²	Cargo ²
		No.	'000	'000 kg	'000 kg
1.....	Toronto International	170,872	15,154	49 646	206 799
2.....	Vancouver International	76,832	7,247	18 135	87 547
3.....	Montreal International	74,713	5,440	13 841	29 210
4.....	Calgary International	62,054	3,814	8 990	25 860
5.....	Winnipeg International	35,637	2,177	10 127	15 701
6.....	Edmonton International	32,109	1,964	7 638	28 900
7.....	Ottawa International	32,488	1,936	7 052	4 659
8.....	Halifax International	30,546	1,710	7 834	18 361
9.....	Mirabel International	18,960	1,393	4 363	75 375
10.....	Edmonton Municipal	11,668	692	14	1 432

¹ Airports are ranked according to total deplaned and enplaned passengers.

² Figures are total deplaned and enplaned passengers, mail and cargo.

Table 2. Commercial air transport services selected financial and operational statistics, 1984 and 1986

		Major air carriers ¹		All other air carriers		All air carriers	
		1984	1986	1984	1986	1984	1986
Number of carriers	No.	7	7	573	676	580	683
Operations							
Passengers	'000	24,745	25,496	2,956	5,323	27,701	30,819
Passenger-kilometres ²	'000 000	34 105	39 004	537	1 031	34 642	40 035
Goods tonne-kilometres ² ...	'000 000	1 105	1 157	16	46	1 121	1 203
Flight departures ²	'000	340	346	311	423	651	769
Hours flown	'000	608	688	1,145	1,260	1,753	1,948
Revenues and expenses							
Total operating revenues ...	\$'000,000	4,215	4,870	813	1,111	5,028	5,981
Total operating expenses ...	\$'000,000	4,105	4,659	768	1,079	4,873	5,738
Fuel consumption³							
Turbine fuel	'000 000 L	3 213	3 546	251	421	3 464	3 967
Gasoline	'000 000 L	—	—	46	65	46	65

¹ In 1984 and 1986, Canadian major carriers included Air Canada, CP Air, Eastern Provincial Airways, Nordair, Pacific Western Airlines, Quebecair and Wardair.

² Unit toll services only.

³ Excludes carriers having less than \$500,000 annual revenues from licensed services.

— Nil or zero.

Canada's top 10 airports registered 72 per cent of all flight take-offs and landings in scheduled services, 85 per cent of all passenger travel, 81 per cent of all mail transport and 91 per cent of all cargo movement. Among these, the Pearson International, Vancouver International and Montreal International airports accounted for 40 per cent of flights, 53 per cent of passengers, 50 per cent of mail and 57 per cent of cargo; Mirabel International contributed another 14 per cent to the cargo volume.

The scheduled international routes of the two largest Canadian air carriers — Air Canada and Canadian Airlines International Ltd. (formed in 1987) — form a vast network connecting Canada to every major continent. Canadian airlines also fly charters to destinations around the world.

From 1984 to 1986, Canada's major air carriers reported increases of 3 per cent in the number of passengers carried and 14 per cent in passenger-kilometres. However, major growth was experienced by all other air carriers as passengers carried increased by 80 per cent over the same period and for these carriers passenger-kilometres increased by 92 per cent. Hours flown increased 13 per cent for the major carriers and 10 per cent for all others. Employment for all carriers earning more than \$500,000 annually was an average 45,489 in 1986, up 8 per cent from 1984. Total salaries and wages rose 14 per cent during the same period.

In 1984 and 1986, the major carriers showed net operating profits of \$110 million and \$211 million respectively. However, despite the large increase in traffic, operating profits for all other carriers dropped from \$45 million in 1984 to \$32 million in 1986.

Railways

Historically, railways have played a central role in the political integration, settlement and economic development of Canada. In 1850 there were 106 km (kilometres) of railway in all of British North America; 80 years later Canada had 91 065 km of track in operation.

Prairie wheat enroute for export from Vancouver BC, passing through Jasper, Alta.





Lumber and wood products enroute east from Vancouver, BC.

From 1930, growth was slow, reaching 96 958 km by 1974; by 1986, length of track in use had decreased to 93 544 km. Two continent-wide railways, Canadian National and Canadian Pacific, spanned 7 000 km from Atlantic to Pacific over vast stretches of rock and muskeg, flat prairie and mountain ranges to make possible the settlement of Western Canada. Today, these railways offer multi-modal transportation services, with emphasis on quick, cheap and efficient long-distance movement of bulk commodities and containers. Intercity passenger services are provided by VIA Rail Canada. Provincially operated railways including the British Columbia Railway, British Columbia Hydro's railway, Ontario Northland, GO Transit, and a number of other railways, complete Canada's rail system.

In 1986, 279 million metric tonnes of revenue freight were carried by rail, up 16 per cent from the 1982 low. The number of passengers carried reached 23.0 million in 1986, slightly above the 1985 figure. The number of employees was down to 84,848, a 7 per cent drop from the 1985 figure and a 24 per cent drop from the 1979 peak of 112,307 employees.

Table 3. Railways operating in Canada selected financial and operational statistics, 1985 and 1986

		Transcontinental railways ¹		Other railways and companies reporting under the Railway Act		All railways and companies	
		1985	1986	1985	1986	1985	1986
Number of companies	<i>No.</i>	3	3	28	26	31	29
Operating revenues	<i>\$'000,000</i>	7,000	6,897	668	673	7,668	7,570
Freight revenues	<i>\$'000,000</i>	5,579	5,654	559	562	6,138	6,217
Passenger revenues	<i>\$'000,000</i>	203	205	42	45	245	250
Operating expenses	<i>\$'000,000</i>	6,279	6,237	567	550	6,845	6,787
Revenue freight carried	<i>'000 t</i>	188 384	190 178	90 539	89 174	278 923	279 353
Revenue passengers carried	<i>'000</i>	7,034	6,286	15,904	16,705	22,937	22,991
Revenue per tonne-kilometre of freight	<i>\$</i>	2.56	2.56	2.28	2.35	2.54	2.54
Average length of haul	<i>km</i>	1 155	1 161	270	269	868	876
Average passenger journey	<i>km</i>	353	360	35	34	133	123

¹ Transcontinental railways include Canadian National Railways, Canadian Pacific Limited and VIA Rail Canada Inc.

Motor Vehicle Transportation

The principal means of passenger transportation remains the motor vehicle. Registrations of all road motor vehicles for 1986 totalled 15.2 million, up 4 per cent since 1983. Passenger automobile registrations, at 11.5 million, predominated with 76 per cent of the total. Trucks and buses consisted of 21 per cent of the total. Motorcycles were less than a half million in total, and accounted for 3 per cent in 1986.

The annual survey of motor carriers of freight and household goods movers covers establishments reporting annual operating revenues of \$100,000 or more in the previous year. The number of carriers reporting increased from 4,583 in 1983 to 6,211 in 1986. In 1986, operating revenues stood at \$8.6 billion compared to \$6.1 billion in 1983. The corresponding expenses were \$8.2 billion in 1986 and \$5.8 billion in 1983. The net operating revenues have increased steadily from \$242 million in 1983 to \$419 million in 1986. During the same period the average number of employees working increased by 19,000 and pieces of revenue equipment operated increased by 26,000.



Highway interchanges near Toronto, Ont. Registrations of all road motor vehicles in Canada, in 1986, totalled 18.2 million, up 4 per cent since 1983.

Motor carriers providing passenger services are classified into three basic categories according to principal service, although a variety of services may be offered by a single operator. Of 960 motor carriers providing passenger services in 1986, 80 per cent were school bus operators. Urban transit operators accounted for only 7 per cent in number yet earned 67 per cent of the \$3,413 million in total operating revenues. The operating revenues of urban transit operators earning more than \$100,000 annually were \$2,283 million, those of inter-city and other passenger bus service were \$336 million and \$794 million respectively. The passenger bus industry offered employment to 4,000 more employees in 1986 compared to 1983. Pieces of revenue equipment operated remained unchanged at 48,000.

Table 4. Motor carrier industry¹, 1986

		Motor carriers freight and household goods movers	Urban transit	Intercity passenger bus	Other passenger bus service ²
Establishments reporting	No.	6,211	70	34	856
Operating revenues	\$'000,000	8,628	2,283	336	794
Operating expenses	\$'000,000	8,209	2,058	316	697
Average number of employees including working owners	'000	100	36	5	27
Pieces of revenue equipment operated	'000	159	13	1	24

¹ Excluding establishments reporting gross annual revenues of less than \$100,000 for the previous year.

² Establishments engaged in limousine service to airports or stations, sightseeing, charter, tour and school bus service.

Water Transport

During 1985, water transportation activities for 312 Canadian marine carriers generated operating revenues of \$2.1 billion. This figure was virtually the same as in 1983 when 331 carriers were surveyed. During both years, the transportation of commodities accounted for close to 60 per cent of the total while towing activities represented about 13 per cent. Charter revenues accounted for a slightly larger share in 1985 than in 1983; at 13 per cent and 11 per cent, respectively.

The for-hire carriers contributed roughly 60 per cent of the total revenues during both 1985 and 1983. In 1985, 236 for-hire carriers reported \$1.2 billion in revenues. The transportation of commodities accounted for 55 per cent of total for-hire revenues in 1985; charter revenues generated \$247 million (21 per cent); and towing activities by for-hire carriers represented about 19 per cent of the total.

Water transportation revenues for private and government carriers totalled \$912 million in 1985, for 76 carriers, about \$61 million more than the revenues reported by 79 such carriers in 1983. In 1985, transportation of commodities registered the largest share of the total, 62 per cent; transportation of passengers generated \$63 million, and represented about 7 per cent of the total revenue for government and private carriers.

During 1986, 327.6 million tonnes of cargo were handled at Canadian ports in domestic and international shipping, compared to 326.6 million tonnes registered in 1985. The international sector accounted for more than 62 per cent of this total during both years. Almost 207 million tonnes were loaded and unloaded internationally in 1986, a 19 per cent recovery

Table 5. Water transportation selected financial and operational statistics, 1983 and 1985

	Water transport industry ¹ (for-hire and sightseeing)		Other marine carriers (private and government)		Total water transportation	
	1983	1985	1983	1985	1983	1985
Number of carriers.....	252	236	79	76	331	312
Number of vessels.....	1,762	1,643	1,085	1,189	2,847	2,832
Operating revenues \$'000,000						
Transport of commodities.....	797	647	494	569	1,291	1,216
Transport of passengers.....	22	26	59	63	81	89
Towing.....	238	226	43	39	281	265
Charter revenues.....	207	247	32	31	239	278
Other vessel revenues ²	32	33	223	210	255	243
Total water transportation revenues..	1,296	1,179	851	912	2,147	2,091
Other operating revenues.....	170	173	65	80	235	253
Total operating revenues.....	1,466	1,352	916	992	2,382	2,344
Operating expenses \$'000,000						
Vessel operating costs.....	1,053	951	884	968	1,937	1,919
Other operating costs.....	362	382	426	513	788	895
Total operating costs.....	1,415	1,333	1,310	1,481	2,725	2,814

¹ Excludes carriers reporting less than \$100,000 in operating revenues for the previous year.

² Includes subsidies.

from the 1982 level, but still 3 per cent below the 213.6 million tonnes handled in 1981. In the domestic sector, about 60.5 million tonnes of freight were transported between Canadian ports during 1986; 2 per cent less than the 1985 total and the lowest activity level since 1981, with over 71 million tonnes shipped.

Vancouver is Canada's most active port, due largely to the level of international shipping operations. The port loads coal, wheat, sulphur, potash and numerous other commodities bound for Japan, the USSR, and a number of other countries in every continent but Antarctica. In 1986, 49.8 million tonnes of freight were shipped internationally.

Sept-Îles (including Pointe Noire) was Canada's second most active port in terms of the tonnage handled during 1986, with a total of 22.6 million tonnes, including both domestic and international shipping. Iron ore and concentrates constitute the principal cargo shipped from Sept-Îles. During 1986, Sept-Îles shipped 17.4 million tonnes of iron ore to foreign countries.

In contrast, Montreal (including Contrecoeur) handles a wide variety of commodities and contributes significantly to the total cargo tonnage handled in both sectors. It is the leading container port in Canada, in terms of tonnage handled. In 1986, Montreal ranked third overall, and handled 21.3 million tonnes of freight, almost 24 per cent of this freight was containerized.



Harbour at St. John's, Nfld. During 1986, 327.6 million tonnes of cargo were handled at Canadian ports in domestic and international shipping.

Table 6. Cargo handled, top 10 Canadian ports, 1986
(thousand tonnes)

	International shipping		Domestic shipping		Total
	Cargo loaded	Cargo unloaded	Cargo loaded	Cargo unloaded	
Vancouver, BC	49 826	2 938	2 183	2 268	57 215
Sept-Îles, Que. ¹	17 658	868	3 412	656	22 594
Montreal, Que. ²	6 451	8 226	1 387	5 210	21 274
Port-Cartier, Que.	14 569	723	1 515	2 531	19 338
Thunder Bay, Ont.	2 913	89	14 317	368	17 687
Halifax, NS	4 432	5 728	2 592	733	13 485
Quebec, Que. ³	2 586	4 918	1 964	2 584	12 052
Saint John, NB	4 795	5 696	1 123	326	11 940
Prince Rupert, BC	9 973	9	336	260	10 578
Hamilton, Ont.	545	5 175	98	4 595	10 413

¹ Includes Pointe-Noire.

² Includes Contrecoeur.

³ Includes Lévis.



Market at Waterloo, Ont. Farm cash receipts for fruits and vegetables in Canada amounted to almost one billion dollars in 1987.

Domestic Trade

Retail and Consumer Services

Among the leading sectors of the Canadian economy, the retail trade industry is one of the most important in terms of its contribution to the nation's total production. Since the beginning of the present decade, the retail sector has been subject to major changes and notable transformation. The introduction of new technologies aimed at increasing store productivity, the tremendous expansion of credit facilities to consumers, the employment of more aggressive marketing strategies such as the warehouse stores concept, no-name brand product sales, subsidized financing sales programs and a wide range of other measures intended to foster consumer spending, have contributed to create a new type of retail environment.

These incentives, along with relatively low interest rates and a moderation in the rate of inflation, as well as a decline in unemployment, provided the necessary elements to restore consumer confidence and generate a recovery in the retail industry following the recession of 1981-82.

The peak year of growth in the five-year period, 1982-86, was reached in 1985, when, led by record sales in the automotive sector, the volume of retail trade rose by 8 per cent and the total value by nearly 12 per cent over the previous year. In 1986, retail volume increased by a more moderate 4 per cent and the total value by 8 per cent over the levels reached in 1985, largely due to a deceleration of growth in the automotive component. The total value of all retail trade amounted to \$140 billion in 1986, compared with \$129 billion in 1985.

Because of its demographic predominance, Ontario remained the largest market in Canada in 1986 with 38 per cent of total retail sales, followed by Quebec, with 25 per cent, and British Columbia, with 11 per cent.

Retail trade activity is dominated by three business groups: automotive, food and general merchandise. Respectively they accounted for 32 per cent, 26 per cent and 15 per cent of all retail sales over the past five years. The food and general merchandise groups, which include department stores, have displayed moderate and relatively stable rates of growth since 1983.

The more volatile automotive group was the most seriously affected by the recession of 1982, but also enjoyed the strongest recovery. Retail sales of motor vehicle dealers, the major

Modern facilities at a service station in Red Deer, Alta. Retail trade activity is dominated by three business groups: automotive, food and general merchandise. Respectively they accounted for 32 per cent, 26 per cent and 15 per cent of all retail sales over the past five years.



Retail trade, by kind of business, 1982-86

(million dollars)

Kind of business	1982	1983	1984	1985	1986
Food group	26,790	28,286	30,189	32,257	34,630
Groceries and meat stores	19,906	21,027	22,341	23,777	25,026
General merchandise group	15,258	16,282	16,878	17,987	18,931
Department stores	10,208	10,930	11,385	12,039	12,728
Automotive group	28,866 ¹	32,157	37,160	44,096	47,110
Motor vehicle dealers	14,413 ¹	17,198	20,847	26,027	28,688
Apparel and accessories group	6,150 ¹	6,864	7,393	8,345	9,211
Hardware and home furnishings group ..	5,487 ¹	6,584	7,253	8,012	9,267
Other stores group	15,089 ¹	16,070	17,206	18,748	20,800
Pharmacies, patent medicine and cosmetics stores	3,914	4,294	4,727	5,357	6,064
Alcoholic beverages stores	4,833 ¹	5,128	5,251	5,454	5,781
Total, all stores	97,639	106,243	116,080	129,446	140,009

¹ Estimate.*Cooked ham at a meat packing plant at Kitchener, Ont.*



The world's largest indoor water park is located at the West Edmonton Mall in Edmonton, Alta.

component of this group, had declined in value by 13 per cent in 1982, but rose 19 per cent in 1983, 21 per cent in 1984 and 25 per cent in 1985 before moderating to an increase of 10 per cent in 1986. Automotive manufacturers have continued their efforts to stimulate sales through innovative financing programs. A dramatic decline in the world price of oil was largely responsible for a 3 per cent decrease in sales of gasoline service stations in 1986, resulting in the annual growth of the automotive group as a whole at less than 7 per cent, compared with 19 per cent in 1985.

Unit sales of new motor vehicles which amounted to 1.5 million in 1986 were marginally down from the number of vehicles sold in 1985. Sales of passenger cars, at 1.1 million units, were 4 per cent below the level reached in 1985. Sales of North American-built automobiles have averaged about 71 per cent of passenger car sales since 1982. Sales of commercial vehicles, of which 90 per cent are of North American manufacture, have shown relatively strong growth in recent years. Sales in 1986 were 420,000 units, an increase of 7 per cent from 1985.

Each year, substantial volumes of goods are sold to consumers through channels other than retail stores, primarily by direct selling, vending machines and campus bookstores. In 1985, total sales of these non-store-retailing channels amounted to approximately \$3 billion. Of this total, the direct selling activities of manufacturers, mail-order agencies, book, newspaper and magazine publishers and other specialized agencies accounted for \$2.5 billion. Vending machine operators reported total sales of \$367 million and campus bookstores contributed an additional \$264 million during the 1985-86 academic year.



Indoor Byward Market in Ottawa.

Total consumer expenditures on goods reached an estimated \$159 billion in 1986, or 53 per cent of total consumer expenditures. The remaining 47 per cent (\$140 billion) was devoted to the purchase of services, including rent costs, the largest single service expenditure item (\$56 billion). Between 1983 and 1986, real (inflation adjusted) consumer expenditures on goods rose 16 per cent, compared to a 12 per cent real increase for expenditures on services. The value of expenditures on services offered by restaurants and hotels, the second largest service expenditure item, reached \$19 billion in 1986, a real growth of 13 per cent since 1983. The other major service expenditures were for recreational, educational and cultural services, for financial, legal and related services, and for transportation and communications services.

Numerous groups and organizations are active in the promotion and protection of consumer interests in the marketplace. In the 1987-88 fiscal year, Consumer and Corporate Affairs Canada provided \$1.8 million worth of financial support to a number of groups working in the consumer's interest. The principal role of Consumer and Corporate Affairs Canada is to promote the fair and efficient operation of the marketplace in Canada by: establishing and administering rules and guidelines for business conduct; making sure information is accurate so that consumers can make informed choices; maintaining and encouraging competition among businesses; establishing, administering and enforcing standards for trade in commodities and services; providing protection from product-related hazards; and encouraging the disclosure and diffusion of technological information.

Wholesale Trade

The total volume of trade of the wholesale trade sector amounted to \$231.8 billion in 1985, up 8 per cent from 1984 and 22 per cent from 1983. The value of wholesale sales has increased each year since 1982 reflecting a renewed demand by retailers, industrial and commercial users, and by foreign markets, for goods handled by Canadian wholesalers, although part of the annual increases has been attributed to price increases. The volume of trade per wholesale establishment rose to \$3.6 million in 1985 from \$3.4 million in each of the two previous years. Four kind-of-business groups accounted for over 60 per cent of the total wholesale activity: the machinery and equipment groups with 18 per cent, the food products group with 17 per cent, the fossil fuel products group with 15 per cent, and the farm products group with 11 per cent.

Wholesale merchants (establishments primarily engaged in buying merchandise for resale to domestic and foreign users, retailers and other wholesalers) accounted for 84 per cent of the volume of trade. In 1985, the volume of trade totalled \$195.1 billion, up 7 per cent from 1984 and 23 per cent from 1983. The value of their net sales and receipts, which represented over 90 per cent of their volume of trade, increased 7 per cent in 1985, compared

Plumbing supply wholesaler's modern showroom in Toronto, Ont.



with a rise of 15 per cent in 1984. The value of goods sold on commission increased 6 per cent in 1985, compared with an increase of 10 per cent in 1984.

Agents and brokers (businesses primarily engaged in buying and/or selling products owned by others on a commission basis) accounted for the remaining 16 per cent of the total volume of wholesale trade. These establishments reported a total volume of trade in 1985 of \$36.7 billion, up 9 per cent from 1984 and 18 per cent from 1983. The value of agents' and brokers' sales and receipts rose in 1985 to \$1.6 billion from \$1.5 billion in 1984; with the value of goods bought or sold on commission reported at \$35.0 billion in 1985, up from \$32.2 billion reported in 1984. The volume of trade per establishment was \$7.6 million in 1985, up slightly from 1984, and more than twice as high as the figure for wholesale merchants.

Wholesaling was a secondary activity for an estimated 14 per cent of all manufacturing establishments in 1985, particularly those with foreign affiliations. There were 5,069 manufacturing establishments engaged in wholesaling as a secondary activity in 1985 compared with 6,075 establishments in 1984. The average wholesale sales and receipts for these establishments in 1985 was \$5.5 million, up from \$4.1 million in 1984. Wholesaling, on average, contributed approximately 11 per cent of the manufacturers' total value of shipments and other revenue in 1985, up slightly from 1984.

Wholesale trade, selected statistics, 1981-85

	Number of establishments	Volume of trade ¹	Net sales and receipts	Goods bought or sold on commission
		\$ '000,000,000	\$ '000,000,000	\$ '000,000,000
Wholesale merchants				
1981	49,766	147.8	139.9	8.0
1982	49,306	145.3	135.8	9.5
1983	50,515 ²	158.9 ²	148.6 ²	10.3
1984	59,163	181.6	171.3	11.3
1985	59,248	195.1	183.1	12.0
Agents and brokers				
1981	5,268	29.2	1.1	28.1
1982	5,015	27.3	1.2	26.1
1983	4,805 ²	31.2 ²	1.3 ²	30.0
1984	4,472	33.7	1.5	32.2
1985	4,838	36.7	1.6	35.0
Wholesaling by manufacturers				
1981	6,172	21.0		
1982	6,186	18.8		
1983	6,126	21.4		
1984	6,075	25.1		
1985	5,069	27.8		

¹ In wholesaling by manufacturers, figures are the value of sales only.

² Revised.



Young shoppers in a northern grocery store.

Consumer Prices

The rate of increase in the Consumer Price Index (CPI) slowed from 4.4 per cent in 1984 to 4.0 per cent in 1985. This period brought to an end the declining trend in the rate of price increase noted since the record advance of 12.5 per cent observed in 1981. In 1986, the CPI rose by 4.1 per cent; in 1987 it accelerated slightly to 4.4 per cent.

The acceleration in the all-items index in 1987 was due principally to increases in the housing, clothing, transportation, health and personal care, and recreation, reading and education indexes. The rise in the food and tobacco products and alcoholic beverages indexes slowed noticeably and played a major role in dampening the 1987 increase. In 1984 and 1985 the rate of increase in the goods index of the CPI slowed sharply while the services index accelerated marginally. In 1986 and 1987 the role was reversed as the goods index advanced at accelerated rates while the services index increased at declining rates.

As prices rise, the purchasing power of money declines. The quantity of goods and services purchased with \$1.00 in 1987 could have been bought with 95.8 cents in 1986, 92.0 cents in 1985 and 88.5 cents in 1984.

Consumer price index and major components for Canada, percentage change between annual average indexes

	1981 1980	1982 1981	1983 1982	1984 1983	1985 1984	1986 1985	1987 1986
All-items	12.5	10.8	5.8	4.4	4.0	4.1	4.4
Food	11.4	7.2	3.7	5.6	2.9	5.0	4.4
All-items excluding food	12.8	11.8	6.4	4.0	4.2	4.0	4.3
Housing	12.4	12.5	6.8	3.7	3.4	3.0	4.1
Clothing	7.1	5.6	4.0	2.5	2.8	2.8	4.2
Transportation	18.3	14.1	5.0	4.2	4.8	3.2	3.6
Health and personal care	10.9	10.6	6.9	3.9	3.6	4.2	5.0
Recreation, reading and education	10.1	8.7	6.5	3.4	4.0	4.7	5.4
Tobacco and alcohol	12.9	15.5	12.6	8.2	9.5	11.9	6.7
Goods	13.1	9.4	5.4	4.7	3.9	3.3	4.1
Services	11.5	12.9	6.5	3.8	3.9	5.1	4.8

The acceleration in the all-items index, in 1987, was due principally to increases in the housing, clothing, transportation, health and personal care, and recreation, reading and education indexes.





All Canadian circulation coinage is produced at the Winnipeg, Man. plant of the Royal Canadian Mint.

Financial Institutions

Canada's financial community has witnessed profound changes in its environment over the past 10 years. While a large number of foreign banks and other financial concerns have become active in Canada, Canadian financial institutions, particularly the large banks, have significantly expanded their international activities. Increased competition during the last recession and since also have had a dramatic effect in a number of areas. A number of insurance companies and trust companies ceased operations; others merged or were purchased by individuals or corporations involved in other business areas. Two small Canadian banks suspended operations in September 1985, marking the first bank failures in 62 years; a third, ranked eighth in terms of assets, experienced a run on its deposits and merged with the sixth largest bank. These difficulties have occasioned a continuing examination of the financial system and the federal government has proposed a general strengthening of controls on banks and other federally-incorporated financial institutions; the provincial governments have also strengthened their control and examination of institutions within their jurisdictions.

Bank of Canada

The Bank of Canada is Canada's central bank and the agency directly responsible for monetary policy. It has the sole right to issue notes for circulation in Canada and these notes, together with the coinage produced by the Royal Canadian Mint, make up the currency in circulation and are the means of payment in cash transactions. This control over the level of currency in circulation and over the amount of cash reserves available to the banking system enables the Bank of Canada to influence the level of interest rates in Canada and the external value of the Canadian dollar and thereby affect the level of spending and the rate of inflation. Since the recession of 1981-82 the thrust of monetary policy has been to support the economic recovery in the context of further declines in the rate of inflation.

The principal technique used by the Bank of Canada to alter cash reserves involves changes in its holdings of Government of Canada securities and the transfer of government deposits between the central bank and the chartered banks. These allow the Bank of Canada to modify the amount of cash reserves each chartered bank is required to maintain — the stipulated minimum average amount is calculated as a percentage of deposit liabilities — and thus to influence the willingness of the chartered banks to purchase securities or make loans and to bid for new deposits, and in turn, to determine short-term interest rates and influence the public's desire to hold money.

Supplementary tools available to the Bank of Canada in the management of the cash reserves of the banking system include the power to require chartered banks to hold secondary reserves, the authority to make short-term advances to chartered banks and the

Foreign coinage is produced and packaged at the Winnipeg, Man. plant of the Royal Canadian Mint and shipped throughout the world.





Electrolysis is the process through which gold reaches its purest form. The resulting 9999 pure gold is then used to mint The Gold Maple Leaf, the most popular bullion investment coin in the world.

right to change the bank rate, the minimum rate at which it is prepared to make advances. On occasion, the Bank of Canada has been called upon to lend more actively to relieve problems of liquidity of some chartered banks. Such loans have been for larger amounts and for a more extended period than before, but all advances are made on security; the Bank of Canada does not supply capital to the chartered banks or attempt to regulate or manage their affairs.

In addition to its responsibility for monetary policy, the Bank of Canada acts as fiscal agent for the Government of Canada. In this role, it undertakes the management of the public debt for the government, operates a deposit account through which flow virtually all of the government's receipts and expenditures, handles foreign exchange transactions for the government and generally acts as an advisor on economic and financial matters.

Chartered Banks

The chartered banks are the largest deposit-taking institutions in Canada and a major source of short- to medium-term financing. They are major participants in the Canadian short-term money market and it is primarily through their response to the Bank of Canada's cash management that the influence of the central bank is transmitted to the money market

and to credit markets generally. In addition to their domestic activities, the chartered banks have an extensive foreign currency business and maintain offices and branches in major financial centres around the world.

Canada's chartered banks operate under the Bank Act which regulates certain internal aspects of bank operations such as the issuing of stock, the setting aside of reserves, etc. Under the revised Bank Act, enacted in December 1980, foreign banks are permitted to incorporate subsidiaries by letters patent. On October 31, 1987 the banking system consisted of nine operating Canadian-owned banks and 58 foreign banks. The assets controlled by these banks as of that date were valued at \$479.0 billion (\$282.5 billion in Canadian dollars and \$196.5 billion in foreign currency).

Canadian banks generally accept various types of deposits from the public including accounts payable on demand, both chequing and non-chequing notice deposits, and fixed-term deposits. In addition to holding a portfolio of securities, they typically make loans under a wide variety of conditions for commercial, industrial, and agricultural purposes, and they account for a major share of the consumer credit extended and a significant share of residential mortgages. While many loans are relatively short-term, the banks also provide term loans to businesses and farmers, and invest in non-residential mortgages. Under the current revision to the Bank Act, banks may also carry out certain types of leasing and factoring activities through subsidiaries. Banks also generally deal in foreign exchange, receive and pay out bank notes, provide safekeeping facilities and perform various other services.

Other Financial Institutions

In addition to the chartered banks, a wide range of other financial institutions serves the diverse needs of the community. The growth and development of such institutions has been particularly rapid during the past two or three decades, in large part reflecting the expansion of the Canadian economy and the increasing complexity of financial markets. While there is a degree of specialization in the different types of institutions, there is also considerable competition. Among the more important non-bank deposit-taking institutions are: trust and mortgage loan companies, credit unions and caisses populaires. Other major institutions include: sales finance and consumer loan companies, life insurance companies and various types of investment companies. Stockbrokers and investment dealers also play an important role in financial markets. A number of institutions, including government agencies, specialize in medium- to long-term financing for small businesses, farmers and exporters or in particular types of lending such as leasing.

There are currently about 120 deposit-taking trust and mortgage loan companies in Canada, most of which have branch networks. They compete with the chartered banks for deposits, mainly through the sale of fixed-term debentures and investment certificates, and hold a major share of their assets in the form of mortgages. In addition to their deposit-taking activities trust companies are also the only corporate entities which can offer fiduciary services. As such, they may act, for example, as executors, administrators or receivers of trusts of all types. They may also act as agents for stock and bond issues, as real estate agents and managers, investment managers, custodians, and administrators of pension plans. Trust and mortgage loan companies which are licensed and supervised either by the Office of the Superintendent of Financial Institutions Canada or by provincial authorities, held assets estimated at \$137.1 billion at the end of 1986.



Vancouver Stock Exchange.

Credit unions and caisses populaires, with assets totalling \$48.9 billion at the end of 1986, are also an important part of the financial system. Most of them are formed on the basis of a common bond, such as employment, or organized on community lines; they differ from other financial institutions in their co-operative nature and local character. Shares are sold to members, but most of the funds come from members' deposits and their assets are held largely in the form of mortgages and personal loans to members. Credit unions operate under provincial legislation; nearly all belong to central credit unions operating within their respective provinces.

Insurance

At the end of 1986, Canadians owned over \$836 billion worth of life insurance, with an average of \$86,400 in force per household.

The Canadian life insurance business consists of about 250 companies and fraternal benefit societies, over 75 per cent of which hold a federal certificate of registration. The latter group of companies writes more than 93 per cent of the total life insurance business of the industry and holds assets in Canada of over \$85 billion. In addition, most of these companies sell accident and sickness insurance policies that cover expenses resulting from illness and compensate policyholders for wages not received during illness.

About 330 companies, of which approximately 75 per cent hold a federal certificate of registration, sell property, automobile, liability and other casualty lines of insurance. The federally registered companies selling these lines of insurance have assets in Canada of over \$19 billion.



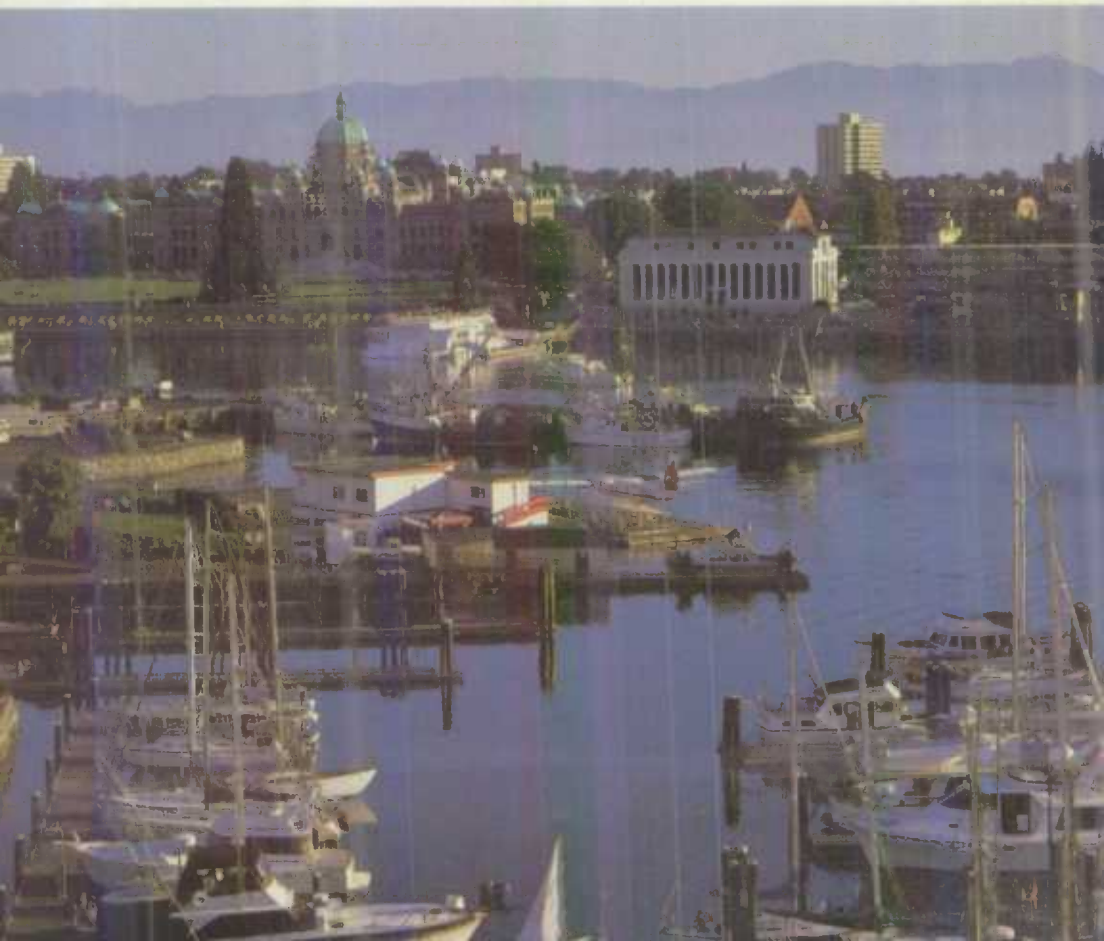
Ottawa, Ont.

Public Administration

Governments have a very significant role in our society and economy, through the laws they pass and enforce and in the studies and discussions which shape our social and economic future. In addition, governments are major employers, buyers of goods, providers of education, health, welfare and other services, and redistributors of wealth. In 1986, the three levels of government, excluding educational and health institutions and government enterprises, employed over 1.2 million Canadians, which represents 9 per cent of the total labour force in Canada. In that year, income received by the three levels of government through taxes, transfers and investment income accounted for 39 per cent of the Gross Domestic Product (GDP), their expenditures on goods and services, and interest on the public debt amounted to 22 and 8 per cent respectively of the GDP.

The data provided are cast in the Financial Management (FM) statistical framework which standardizes the presentation of governments' financial information. Since government accounting systems are designed to reflect unique circumstances, they are not uniform between governments and do not facilitate making intergovernmental comparisons. Financial information concerning governments has therefore been recast into Statistics Canada's national FM system in order to provide national aggregates which are comparable among governments and between levels of government. The tables in this section provide information on revenue and expenditure, and employment of the general government category for the various levels of government. The general government category includes government departments, ministries, boards, commissions, and most government institutions, but excludes government business enterprises. Financial information is presented as if government were integrated into a single consolidated unit, however, since there is a mixture of year ends, namely federal and provincial at March 31 and local governments for the most part December 31, the designation "closest to December" has been adopted for the government finance table.

Victoria, BC.



Federal, provincial and local government finance¹

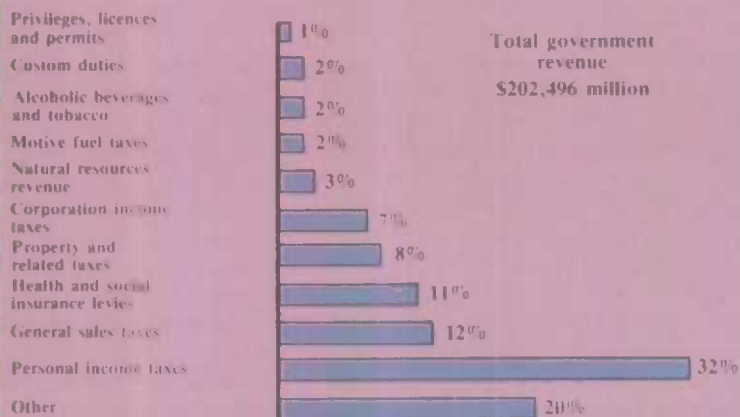
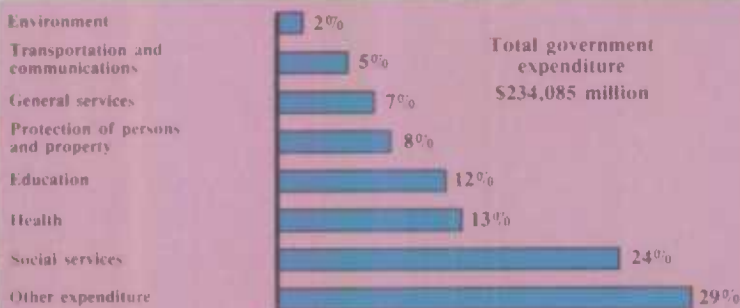
(million dollars)

Source or function	Federal government	Provincial governments	Local governments	Inter-government transactions	All governments consolidated
REVENUE BY SOURCE					
Income taxes:					
Personal	39,639	24,426	...	...	64,065
Corporation	9,885	4,024	...	...	13,909
On payments to non-residents	1,356	...	...	...	1,356
Sub-total — income taxes	50,880	28,450	...	...	79,330
Property and related taxes .....	...	1,109	15,738	...	16,847
Consumption taxes:					
General sales	11,987	13,038	15	...	25,040
Motive fuel	1,279	3,365	...	...	4,644
Alcoholic beverages and tobacco	2,616	2,009	...	...	4,625
Custom duties	4,188	...	...	...	4,188
Other	496	698	30	...	1,224
Sub-total — consumption taxes	20,566	19,110	45	...	39,721
Health and social insurance levies	13,916	8,761	...	...	22,677
Miscellaneous taxes	180	2,583	103	...	2,866
Natural resources revenue	659	4,643	...	...	5,302
Privileges, licences and permits	126	2,518	261	...	2,905
Other revenue from own sources	9,981	17,135	6,266	(534)	32,848
Transfers from other levels of government:					
For general purposes .....	...	6,386	2,300	(8,686)	...
For specific purposes .....	...	15,034	17,736	(32,770)	...
Total revenue	96,308	105,729	42,449	(41,990)	202,496
EXPENDITURE BY FUNCTION					
General services	6,212	6,621	2,524	(39)	15,318
Protection of persons and property	12,035	3,539	3,670	(465)	18,779
Transportation and communication	3,667	6,026	4,312	(1,870)	12,135
Health	7,356	28,271	2,629	(8,303)	29,953
Social services	41,850	18,599	1,644	(4,641)	57,452
Education	3,854	22,059	17,936	(15,100)	28,749
Environment	412	1,265	3,528	(711)	4,494
Other expenditure	37,715	24,156	7,851	(2,517)	67,205
Transfers to other levels of government:					
For general purposes	7,133	1,862	...	(8,995)	...
Total expenditure	120,234	112,398	44,094	(42,641)	234,085

¹ Fiscal year ended closest to December 1986.

... Not applicable.

Government Finance, All Governments Consolidated (Fiscal year ended closest to December 1986)



Employment of federal, provincial and local governments

(as at June 30, 1986)

Province	Federal government ¹		Provincial governments ²		Local governments ³		All governments
	Employees	Share of total	Employees	Share of total	Employees	Share of total	Employees
	No.	%	No.	%	No.	%	No.
Newfoundland and Labrador	8,490	2.2	23,004	4.5	3,254	1.0	34,748
Prince Edward Island	3,578	0.9	5,083	1.0	500	0.2	9,161
Nova Scotia	33,696	8.6	23,134	4.5	6,810	2.2	63,640
New Brunswick	13,800	3.5	32,736	6.4	4,570	1.5	51,106
Quebec	69,766	17.7	109,042	21.4	65,482	20.7	244,290
Ontario	148,933	37.9	130,919	25.7	146,249	46.3	426,101
Manitoba	19,182	4.9	20,558	4.0	11,416	3.6	51,156
Saskatchewan	10,966	2.8	24,420	4.8	12,419	3.9	47,805
Alberta	26,602	6.8	74,073	14.5	33,673	10.7	134,348
British Columbia	39,257	10.0	60,387	11.9	30,088	9.5	129,732
Yukon	1,274	0.3	2,320	0.5	244	0.1	3,838
Northwest Territories	2,562	0.7	4,231	0.8	1,088	0.3	7,881
Outside Canada	14,592	3.7	...	...	...	...	14,592
Total employees	392,698	100.0	509,907	100.0	315,793	100.0	1,218,398

¹ Includes members of the Canadian Armed Forces.

² New Brunswick includes employees of local school boards.

³ Employees of local school boards and hospitals are not included.

... Not applicable.

Federal Government

During 1986, the federal government derived revenues of \$96.3 billion and expenditures of \$120.2 billion, which resulted in a deficit of \$23.9 billion. Of the federal revenues, 41 per cent was obtained from personal income tax, 10 per cent from corporation income tax and 12 per cent from general sales tax; these three sources accounted for 63 per cent of the total federal government revenues. Social services and protection of persons and property (mainly national defence) accounted for 35 and 10 per cent respectively (45 per cent collectively) of the total federal expenditures.

The financial assets of the federal government amounted to \$113.5 billion and its liabilities to \$337.5 billion at the end of March 1987. Of its financial assets, 28 per cent were in the form of loans and advances and 59 per cent pertained to investments in securities; 43 per cent of its liabilities related to bonds and debentures and 23 per cent to treasury bills.

The total federal government employment at June 1986 was 393,000 employees, or 3 per cent of the total labour force, with a total annual payroll of \$11.4 billion. Although

Ontario and Quebec were the leading provinces in terms of federal employment, this employment represented only 3 and 2 per cent of their respective provincial labour forces compared to Prince Edward Island and Nova Scotia where it accounted for 6 and 8 per cent of their respective provincial labour forces. In 1986 federal payroll amounted to \$446 per capita and in terms of the provincial population distribution the per capita value ranged from a high in Yukon and Northwest Territories (\$1,528 and \$1,257) to a low in Quebec and Alberta (\$301 and \$309).

Provincial Governments

In the fiscal year 1986-87, the total revenues of all provincial governments amounted to \$105.7 billion and their expenditures totalled \$112.4 billion, leaving them with a deficit of \$6.7 billion. The levies on personal income, general sales, transport fuel and corporation income, combined with health insurance premiums, provided 23, 12, 3, 4 and 8 per cent respectively (50 per cent collectively) of total revenues. Provincial governments also received 20 per cent of their revenue in the form of transfers from other governments (mainly from the federal government) with the balance of their revenues arising from their own sources. Health, education and social service expenditures accounted for 25, 20 and 17 per cent respectively (62 per cent collectively) of the total provincial expenditures.

On March 31, 1987, the financial assets of provincial governments stood at \$106.5 billion and their liabilities at \$154.1 billion. Of their financial assets, 58 per cent were in the form of investments in securities and 22 per cent related to cash on hand or deposit, while 67 per cent of their liabilities were covered by bonds and debentures.

Total provincial and territorial government employment was 510,000 or 4 per cent of the total labour force in Canada with an annual payroll of \$12.9 billion. Ontario, Quebec and Alberta had the largest number of provincial government employees and this employment accounted for 3, 3 and 6 per cent of their respective provincial labour forces.

Local Governments

At year end 1986, local governments had revenues of \$42.4 billion and expenditures of \$44.1 billion thereby incurring a total deficit of \$1.6 billion. Real property taxes and transfers from other levels of government (mainly from provincial governments) produced 37 and 47 per cent respectively of total revenues. Education, transportation and communications, protection of persons and property, and environment accounted for 41, 10, 8, and 8 per cent respectively (67 per cent collectively) of total expenditures.

At the end of the fiscal year, the financial assets of local governments amounted to \$15.2 billion and liabilities to \$37.0 billion. Most of these financial assets were in the form of cash on hand or deposit and receivables (28 and 26 per cent respectively), while their liabilities related mostly to bonds and debentures (74 per cent of the total).

Total local government employment amounted to 316,000 employees or 2 per cent of the total labour force in Canada in June 1986 and they incurred an annual payroll of \$7.4 billion during that year. The eastern provinces demonstrated a high proportion of government employment with respect to their share of the total labour force, however, they had a relatively low proportion of employment at the local level. Ontario on the other hand had a comparatively large proportion of employment at the local level.



Harvest fields in the Winnipeg, Man. area. In the past six years, 47 per cent of every dollar earned by Canadian farmers was earned on the export market and agricultural products accounted for 9 per cent of all export sales during the 1981 to 1986 period.

GOODS-PRODUCING INDUSTRIES

Agriculture

A Changing Industry

The agriculture industry continues to change as the trend to larger and fewer farming units continues. The number of Census-farms peaked at 733,000 in 1941. By 1981, the number of farms had declined to 318,000, although the volume of agricultural production was about 175 per cent greater than in 1941. The number of farms has continued to decline to 293,000 Census-farms reported by the 1986 Census of Agriculture.

In 1931, the rural farm population represented over 31 per cent of Canada's total population. By 1986, the proportion had fallen to under 4 per cent. Despite fewer families living on farms, agriculture continues to consist almost entirely of family-controlled farming businesses. According to the 1986 Census of Agriculture, over 99 per cent of all Census-farms were family controlled, accounting for almost 95 per cent of total agricultural sales.

During the 1980s there has been a significant shift in the age distribution of farm operators. Between 1981 and 1986, the proportion of farmers under 35 years of age declined and the average age of farm operators increased in every province, reversing the trends of the 1970s.

Many of Canada's farms are now hobby or part-time farms, frequently with the farm operator also employed in another occupation. About 45 per cent of all Census-farms had sales under \$25,000 in 1985. The number of farms with sales above \$25,000 increased 7 per cent between 1980 and 1985, comprising over 50 per cent of all Census-farms. These farms produced 95 per cent of all farm sales; accounted for about 90 per cent of total expenses and hired labour; and represented about 80 per cent of the capital value of assets in agriculture.

Farm Income, Expenses and Investment

Agriculture plays a significant role in Canada's economy, and is an important source of foreign exchange. In the past six years, 47 per cent of every dollar earned by Canadian farmers was earned on the export market and agricultural products accounted for 9 per cent of all export sales during the 1981 to 1986 period. Agriculture is particularly significant in the

Farming in the Fredericton area of New Brunswick, along the Saint John River.



Prairie provinces where about half of Canada's total net farm income is earned. In 1986, net farm income was a record \$5.5 billion, up 26 per cent from 1985. This increase occurred despite a 22 per cent decline in grain prices.

Total farm cash receipts reached a record level of \$20.5 billion in 1986. This increase was due to higher receipts for most livestock and animal products and record direct program payments to producers of \$2.3 billion which more than offset a 5 per cent drop in crop receipts — a consequence of lower grain and oilseed prices resulting from abnormally high world stocks.

Farm operating expenses and depreciation charges were \$15.8 billion in 1986, down 3 per cent from 1985. Over 30 per cent of the decrease was due to higher direct rebates from federal and provincial government programs. Lower expenses for commercial feed, machinery fuel, fertilizer and interest charges were largely responsible for the remainder of the decrease, although increases were registered in wages, machinery repairs, insurance expenses and property taxes.

Larger farm size and mechanization raised the total capital investment in farming almost fivefold during the 1971 to 1986 period. Total capital investment, however, has been declining since 1982 largely as a consequence of declining farmland values. Outstanding farm debt, meanwhile, continued to climb and reached \$22.9 billion by the end of 1986. Chartered banks were the major lenders, financing 39 per cent of the debt, followed by the Farm Credit Corporation and other federal government agencies, financing 20 per cent.

Governments at both the federal and provincial levels offer support to agriculture through a number of programs administered either directly by Agriculture Canada or by various agencies. Both levels of government offer loans to individual farmers and to syndicates of farmers. They also administer programs that assist farmers by supporting the prices of certain agricultural products and by ensuring adequate supplies of various goods and fair returns to farmers through a number of marketing agencies which monitor prices and approve cost-of-production formulas. Some agencies also assist agricultural and food interests in Canada in their efforts to increase foreign demand for Canadian food products and services.

Governments are also active in agricultural and food research. Agriculture Canada employs more than 900 scientists who conduct over 50 per cent of this research. While research continues in the traditional areas of crop and animal production and protection, new emphasis is on biotechnology, food processing, energy use, reduction of soil erosion and loss of organic matter, protection of the environment and the loss of prime agricultural land to other uses. Through research, experimental models, legislation and educational and other programs, efforts are made to ensure better farm management planning and to formulate programs and policies to solve the economic problems.

Field Crops

Cereal grains, oilseeds and forage crops are the major field crops grown in Canada. In 1987, approximately 66 per cent or 22 million hectares of total cropland was sown to cereal grains, with a harvest of 52 million metric tonnes. About 4 million hectares were sown to oilseeds and produced 6 million tonnes. Forage crops such as tame hay and fodder corn were grown on 6 million hectares, or 18 per cent of cropland.

Approximately 4 million tonnes of cereal grains were processed during 1986-87 in domestic manufacturing and food processing industries; 16 million tonnes were fed to livestock; and 28 million tonnes were exported. Approximately 3 million tonnes of oilseeds were processed

domestically and 3 million tonnes were exported. Cereals and oilseeds represent the majority of all Canadian agricultural export earnings and are an important source of foreign exchange.

In terms of seeded area, tonnage, value of commodity and exports, wheat is the dominant crop. Canada is world renowned for its exports of high quality hard spring wheat, produced throughout the Prairie provinces. In the major wheat growing province, Saskatchewan, wheat accounts for more than 65 per cent of the province's farm cash receipts. In 1987, Canada harvested 26 million tonnes of wheat and exported 21 million tonnes or 80 per cent.

The production of feed grains, oats and barley on the Prairies and grain corn in Ontario and Quebec, is essential to the Canadian livestock industry. Prairie farmers normally produce more than 88 per cent of the national oats and barley crop while Ontario farmers harvest about 88 per cent of the total corn crop.

Canola, flaxseed, soybeans and sunflower seed are another major commodity group. These crops are crushed and processed to produce cooking oils, industrial oils and high protein meal for livestock feed. Production of canola, flaxseed and sunflower seed is concentrated on the Prairies while soybean production is located mainly in southwestern Ontario. Approximately 56 per cent of the canola and 67 per cent of the flaxseed crop were destined for foreign markets in the 1986-87 crop year.

The emphasis on livestock production in British Columbia, Ontario, Quebec and the Atlantic provinces has resulted in a larger proportion of cropland devoted to forages, particularly fodder corn and tame hay. In 1987, fodder corn production in Ontario and Quebec amounted to about 6 million tonnes and 2 million tonnes, respectively, and together they produced 14 million tonnes of tame hay or 46 per cent of Canadian production.

The Qu'Appelle Valley of Saskatchewan.



Table 1. Production and area of the major Canadian field crops, 1984-87

Item	Production				Area
	1984 [†]	1985	1986	1987	1987
	'000 t	'000 t	'000 t	'000 t	'000 ha
Winter wheat	1 291.3	1 772.9	1 981.4	1 216.2	536.1
Spring wheat	17 786.6	20 519.3	25 499.5	21 044.0	10 785.4
Durum wheat	2 110.0	1 960.0	3 897.0	4 082.0	2 186.0
All wheat	21 187.9	24 252.2	31 377.9	26 342.2	13 507.5
Oats for grain	2 576.1	2 735.7	3 251.1	2 995.2	1 262.8
Barley for grain	10 278.6	12 387.0	14 633.6	14 382.1	5 045.5
All rye	652.3	568.9	609.0	492.6	313.3
Corn for grain	6 777.5	6 969.9	5 911.5	7 014.8	999.3
Flaxseed	693.5	896.9	1 026.3	787.6	615.3
Canola/rapeseed	3 411.9	3 497.9	3 786.5	3 851.5	2 670.7
Soybeans	917.0	1 012.0	960.0	1 266.5	459.5
Mustard seed	112.4	125.3	226.8	132.4	113.4
Sunflower seed	84.8	61.7	36.3	52.4	34.4
Tame hay	25 362.6	23 428.8	30 204.3	30 840.0	5 752.2
Fodder corn	10 292.0	9 530.0	8 357.0	8 691.0	250.4

[†] Revised.

Winnipeg Commodity Exchange traders pause to commemorate the 100th anniversary of the Exchange in December 1987.



Horticultural Crops

A wide variety of fruits and vegetables are grown in Canada for domestic and export markets. Farm cash receipts for fruits and vegetables amounted to almost one billion dollars in 1987. The most important fruit crop is apples, with commercial apple orchards located in British Columbia, Ontario, Quebec and Nova Scotia. Other tender fruits grown in Canada include pears, peaches, cherries, plums and grapes, grown mainly in the Niagara region of southern Ontario and the Okanagan Valley of British Columbia.

Potatoes generate a significant proportion of farm receipts in certain regions of the country; the bulk of the crop originates in the Maritimes. In 1987, 3 million tonnes of potatoes were produced in Canada.

Harvesting potatoes in Prince Edward Island. In 1987, 3 million tonnes of potatoes were produced in Canada.





Harvesting onions, near St. John's, Que.

A computer controls the light, temperature and humidity in a greenhouse at Campbellvale, Ont.





Byward Market in Ottawa.

Mushrooms are cultivated in buildings under climate controlled conditions without light. The mushroom industry has expanded in recent years to meet increasing demand. In 1986, production exceeded 51 million kilograms, with farm sales of approximately \$136 million.

The greenhouse industry is a producer of horticulture products such as cut flowers and potted plants and vegetables. In 1986, 1,200 greenhouses reported farm sales of \$354 million, 86 per cent from sales of plants and 14 per cent from sales of vegetables. The most popular greenhouse products are tomatoes, cucumbers, bedding plants, cut flowers (roses, tulips, chrysanthemums), and potted plants.

Canada also has a thriving nursery industry supplying young trees, shrubs and sod. Sales in 1986 totalled over \$217 million, 23 per cent of which were receipts from the sale of sod. Other nursery products include fruit trees, hedging and shade trees. Nursery stock, which is grown out-of-doors, occupied almost 31 000 ha of land in 1986.

Approximately 75 per cent of the world's maple syrup is produced in Canada. Quebec accounts for approximately 90 per cent of the Canadian production; Ontario, New Brunswick and Nova Scotia are also involved in this industry. Maple syrup, including the quantity made into maple sugar, taffy and butter, earned Canadian farmers \$63 million in 1986; the largest export market was the United States where sales totalled over \$42 million.

Honey is produced commercially in all provinces, except Newfoundland; the Prairie provinces produce most of Canada's crop. In 1986, 34 000 tonnes of honey were produced, with a farm value of almost \$50 million.

Table 2. Inventory of selected classes of livestock on farms in Canada, January 1, 1981-88

(thousands)

Year	Total cattle	Milk cows and heifers	Beef cows and heifers	Total pigs	Total sheep
1981	12,165.9	2,465.5	4,541.7	10,189.7	529.9
1982 ^r	12,162.5	2,486.2	4,568.1	9,969.6	571.6
1983 ^r	11,860.8	2,422.4	4,447.2	9,889.6	565.5
1984 ^r	11,629.4	2,349.1	4,360.2	10,345.9	550.3
1985	11,329.5	2,281.1	4,258.0	10,572.6	513.5
1986	10,955.8	2,195.3	4,130.6	9,967.0	489.5
1987	10,802.4	2,155.9	4,146.8	9,996.0	481.1
1988	10,818.1	2,089.8	4,187.8	10,658.0	475.4

^r Revised.**Table 3. Estimated meat production and consumption, 1981-87**

Animal	Year	Animals slaughtered	Production	Imports	Exports	Domestic consumption
		'000	t	t	t	t
Beef	1981 ^r	3,691.3	978 149	78 702	79 232	989 294
	1982 ^r	3,788.1	986 493	86 306	82 772	992 442
	1983 ^r	3,708.8	992 745	90 650	82 375	996 623
	1984 ^r	3,565.9	948 414	113 624	104 526	959 498
	1985	3,603.0	985 250	113 643	116 492	980 505
	1986	3,530.4	990 482	109 848	102 326	1 002 412
	1987	3,261.6	932 143	133 589	88 873	978 570
	Veal	1981 ^r	561.7	35 514	1 876	21	37 687
1982 ^r		597.7	38 662	1 808	465	40 113
1983 ^r		618.8	39 711	833	303	39 804
1984 ^r		651.9	42 308	1 211	570	43 362
1985		631.8	43 539	1 201	615	43 969
1986		619.9	45 152	1 708	2 279	44 642
1987		563.2	44 652	1 204	3 547	42 696
Mutton & lamb		1981 ^r	359.9	6 450	10 018	396	17 155
	1982 ^r	415.1	7 773	10 475	117	18 047
	1983 ^r	454.2	8 464	13 792	197	19 652
	1984 ^r	467.5	8 902	9 834	39	21 568
	1985	418.7	8 205	11 719	98	19 042
	1986	396.9	7 972	16 210	53	23 365
	1987	382.0	7 571	15 048	56	23 116
	Pork	1981 ^r	13,691.9	840 991	19 751	128 998	734 082
1982 ^r		13,458.1	833 344	14 532	163 363	687 164
1983 ^r		13,702.5	852 962	19 418	157 552	713 821
1984 ^r		13,886.0	864 734	14 739	175 295	703 572
1985		14,452.0	901 747	17 038	196 457	724 407
1986		14,443.7	909 133	13 883	215 024	708 900
1987		14,855.4	937 045	17 341	237 584	716 576

^r Revised.



Spring cattle drive in southern Alberta.

Fall cattle drive in the Alberta foothills. In early November, the cattle are rounded up and driven back to the prairies to winter pasture or sent to market.





Farming in Quebec, along the St. Lawrence River.

Livestock and Dairy Products

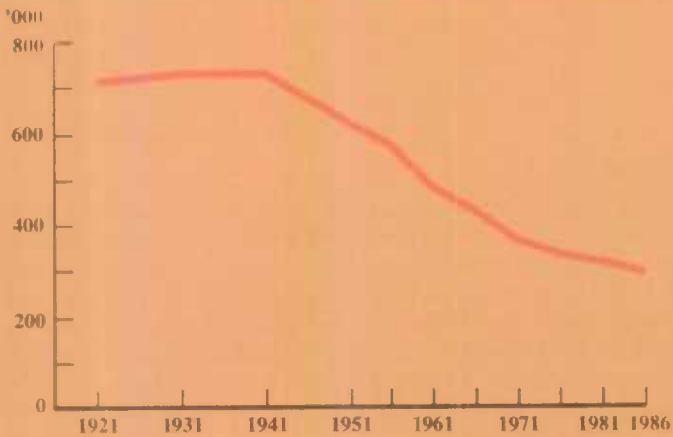
Commercial sales of livestock and poultry, important sources of income, are approximately equal to the sales from crops in an average year. In 1986, cattle and calves totalled 12 million head. Cattle slaughtered in federally inspected plants during that year totalled 3 million head, with an additional 157,000 head exported for slaughter in the United States.

In 1986, there were 10 million pigs on Canadian farms. A total of 13.5 million pigs were slaughtered in Canada amounting to almost one million tonnes of dressed pork; 25 per cent was exported.

Sheep and lambs numbered almost 700,000 head on July 1, 1986. Federally inspected slaughter of sheep and lambs decreased in 1986 to a total of about 175,000 head or almost 9 000 tonnes of dressed meat. In 1986, imports of mutton and lamb at 16 000 tonnes outstripped exports which totalled less than 53 tonnes or one per cent of total Canadian production.

Total farm sales of milk in 1986 amounted to 7.3 million kL (kilolitres). Approximately 63 per cent was sold as industrial milk for use in the production of butter, cheese, yogurt, ice cream and concentrated milk products; fluid milk sales accounted for the other 37 per cent. Canadian milk production is concentrated in Ontario and Quebec. In 1986, Quebec produced 47 per cent of total Canadian industrial milk; Ontario produced 37 per cent of the fluid milk. Farm value of milk produced in 1986 amounted to over \$3 billion. The 1986 Census of Agriculture reported 1.5 million dairy cows on 50,000 farms, down from the 1.8 million on 68,000 farms reported in the 1981 Census.

Number of Farms Still Declining



1921	711,090	1966	430,522
1931	728,623	1971	366,128
1941	732,832	1976	338,578
1951	623,091	1981	318,361
1956	575,015	1986	293,089
1961	480,903		

Table 4. Farm sales of milk and cream, Canada, 1984-87
(kilolitres)

Year	Fluid purposes	Delivered as milk	Delivered as cream	Total farm sales
1984 [†]	2 598 245	4 674 293	194 435	7 466 973
1985	2 612 187	4 461 176	190 150	7 263 513
1986	2 680 310	4 440 604	184 260	7 305 174
1987	2 719 544	4 468 620	177 315	7 365 479

[†] Revised.

Poultry and Eggs

The production of eggs, broiler chickens and turkeys is highly specialized and concentrated. The producers operate under supply-management programs operated by provincial producer marketing boards. Provincial level production activities are co-ordinated by national agencies — the Canadian Egg Marketing Agency, the Canadian Chicken Marketing Agency and the Canadian Turkey Marketing Agency, which operate under federal government charters.

Production of poultry has increased steadily in recent years while the production of eggs has remained fairly stable. Chicken is the major poultry product consumed by Canadians and the only product with significant growth in 1986. Ontario accounted for almost 34 per cent of chicken production, Quebec (31 per cent) and British Columbia (10 per cent). Turkey production is more heavily concentrated; 43 per cent of the production was in Ontario and 23 per cent in Quebec.

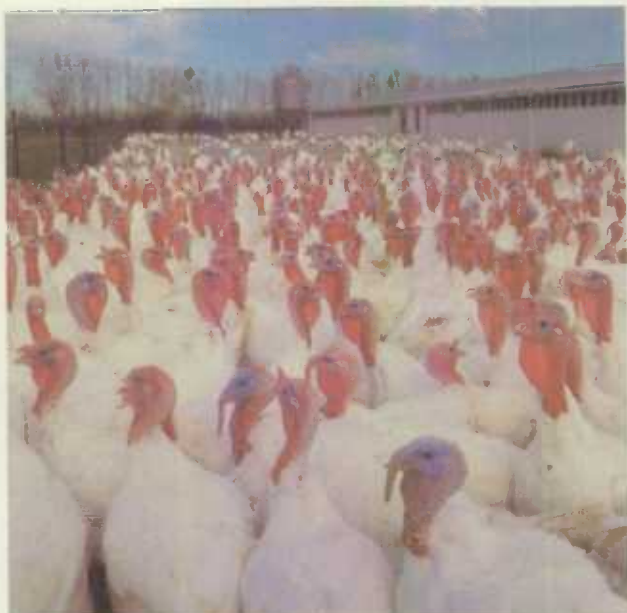
Ontario produced 40 per cent of eggs in Canada, followed by Quebec (16 per cent), British Columbia (12 per cent) and Manitoba (11 per cent). Per capita consumption of eggs decreased from 19.0 dozen in 1980, to 17.9 dozen in 1986.

Furs

With decreased demand and prices, the value of pelts from fur farms fell to \$50 million in 1985-86 and the value of wildlife pelts also fell to \$50 million. In 1981-82 wildlife fur production was valued at \$107 million.

Per Capita Food Consumption

Total Canadian consumption of fruit reached a high of 104 kg per person in 1984 but has since declined to 96 kg in 1986. Fresh fruits remain by far the most popular products led by apples and citrus fruits which accounted for almost half of Canadian fruit consumption.



The big farm at Beseke, Abuja. In 1986, per capita consumption of pork was nearly 28 kg with beef at 39 kg while per capita consumption of poultry climbed to 26 kg.

Table 5. Estimated poultry and egg production, 1984-87

	Year	Birds slaughtered	Weight	Value
		'000	t	\$'000
Chicken	1984	295,616	427 401	701,654
	1985	324,383	472 112	711,984
	1986	347,862	487 696	747,873
	1987	385,451	531 050	777,567
Turkey	1984	16,265	97 721	176,148
	1985	17,002	102 442	177,725
	1986	17,061	104 906	181,906
	1987	18,251	115 170	194,734
Stewing hen	1984	22,155	33 361	15,006
	1985	22,180	33 362	15,110
	1986	23,666	35 875	16,235
	1987	24,429	37 142	17,043
Eggs		Layers	Dozens of eggs	Value
		'000	'000	\$'000
	1984 [†]	22,931	477,529	510,354
	1985	22,754	472,152	503,184
	1986	22,582	472,262	494,183
1987	22,573	475,468	492,644	

[†] Revised.



Harvesting tomatoes in the Niagara area of Ontario.

Over recent years, total consumption of vegetables has gradually increased to the 1986 level of 68 kg per person. The recent growth in attention to nutrition is reflected in the consumption of fresh vegetables, which reached 60 kg per person in 1986. Per capita consumption of potatoes which varies from year to year, totalled 78 kg per person in 1986.

Per capita consumption of partly skimmed or 2% milk rose from 61 L in 1985 to 62 L in 1986, while consumption of homogenized whole milk (3.2% butter fat) dropped from 32 L to 30 L during the same period. A similar substitution from butter to margarine, occurred in the 1970s. By 1986, consumption of margarine was 6.1 kg per capita per year, compared to butter at 4 kg. The popularity of cheese continues to increase. In 1986 consumption of cheddar cheese reached 2.6 kg per capita and variety cheese 4.4 kg per capita, both the highest in history. Consumption of yogurt also reached a new high of 2.7 L per capita in 1986.

Meat continues to be consumed in significant quantities by Canadians, however, the proportion of beef, pork, poultry and fish tends to fluctuate, following production and price cycles. While this cyclical effect occurs traditionally as consumers switch between beef and pork — chicken and fish have become relatively important. In 1986, per capita disappearance of pork was nearly 28 kg with beef at 39 kg while per capita consumption of poultry climbed to 26 kg.

Consumption of coffee has remained relatively constant over the past 20 years, decreasing from a high of 4.8 kg per capita in 1981 to 4.3 kg in 1986. Shifts in consumption of alcoholic beverages are also apparent. Consumption of wine (9.6 L per person in 1983) has been increasing, and reached a high of 11.4 L per person in 1986 while in the same year, per capita consumption of beer (82.0 L per person in 1983) dropped to 79.4 L. Consumption of distilled spirits (7.1 L per person in 1983) also declined, to 6.3 L per person in 1986.



The Cabot Trail, Cape Breton Island, NS. Forest covers nearly one-half of Canada's land mass.

Forestry

Canada's forests are our most valuable natural resource; economic, social and environmental benefits are derived from this resource. The forest covers nearly one-half of Canada's land mass. Productive forests which supply timber for pulp, paper, plywood, lumber and other products occupy 2.2 million square kilometres.

The world's largest exporter of forest products, Canada accounts for 22 per cent of all forest products traded in world markets. The forest products industry is Canada's largest manufacturing industry in terms of value-added, employment and wages. The industry ships \$30 billion in goods per year and adds more to Canada's positive trade balance than any other industry. Regionally, the forest industry is the mainstay for some 300 single industry communities and employs approximately 300,000 Canadians. In addition, the forest resource is a major factor in the multibillion dollar tourist and outdoor recreation industry. The forest also moderates weather, regulates stream flow, minimizes soil erosion, and provides fish and wildlife habitat.

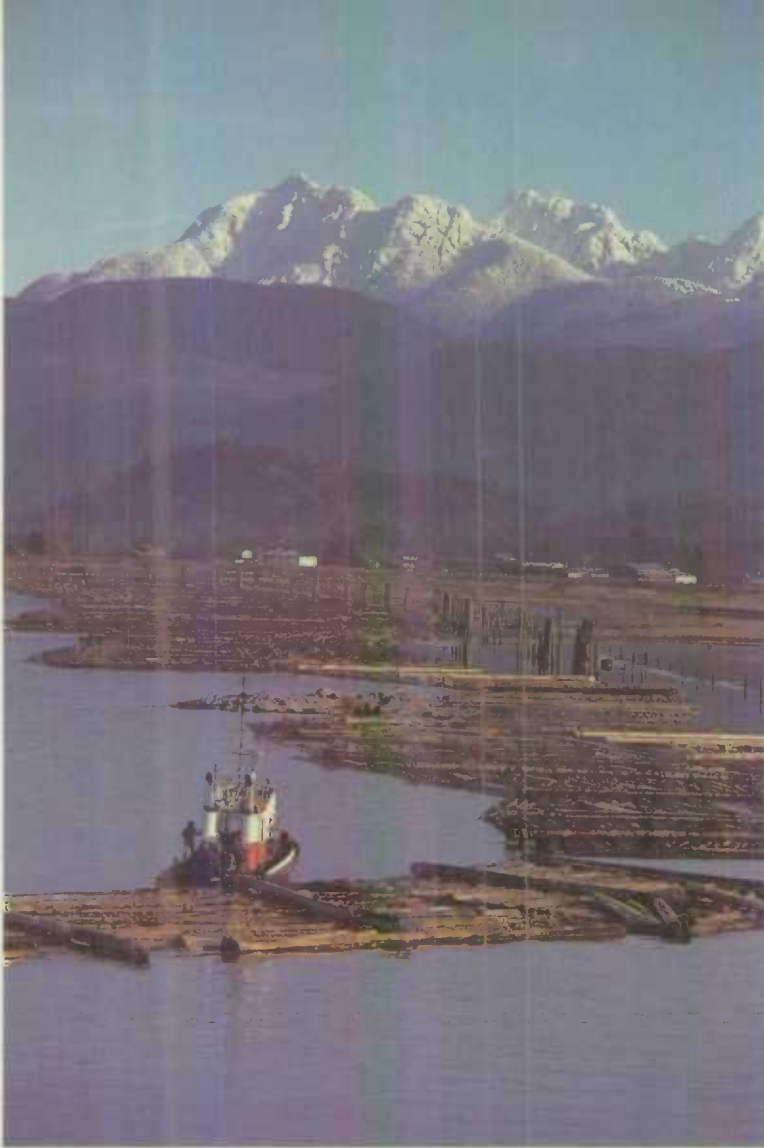
Average Annual Timber Harvest and Losses



Total annual harvest
151 million cubic metres



Total losses
143 million cubic metres



Log booms on the West Coast.

Eighty per cent of Canada's productive forests are under the jurisdiction of the provinces. Since the government of the Northwest Territories recently assumed responsibility for management of the forests within its boundaries, the area of the country's productive forest administered by the federal government has been reduced to less than 12 per cent. The total area of privately-owned forest land is only 8 per cent and most of it is located in Eastern Canada. There are over 400,000 private woodlot owners in Canada.



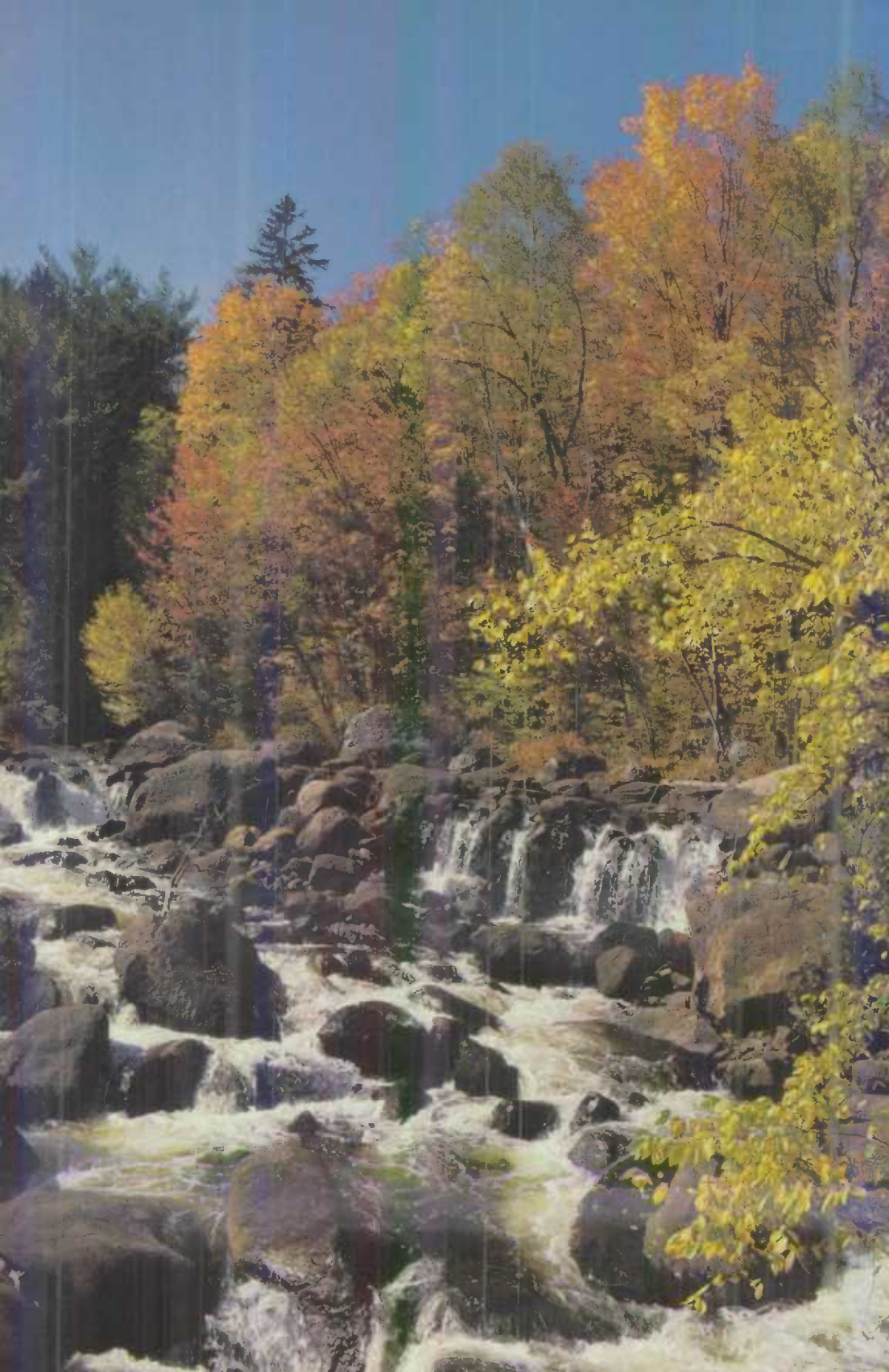
Trees are baled and shipped from Nova Scotia for the Christmas tree industry.

The provincial governments administer and protect the productive forest area and make it available to private industry through leases and other arrangements. Governments, industry and the public in Canada have been strongly challenged in recent years to improve the national forest base. The challenge has been twofold: the need to develop the new, intensively-managed forest to take the place of the existing forest within approximately 30 years and, at the same time, the need to keep today's mature and over-mature forests sufficiently productive and competitive to meet the requirements of industry into the next century.

Significant developments have occurred in Canada over the last decade concerning the need to improve the forests. New legislation has been adopted in most provinces, enabling industry and governments to jointly manage Crown-owned forests. Federal-provincial forestry agreements are now in place in every province and have significantly increased the financial support from the federal government for forestry. These initiatives from all parts of the forest sector indicate that Canadians recognize the importance of forest renewal to Canada's future.

Forest management is challenged to ensure that the older forest is protected and carefully utilized until the managed forest is mature. This is essential since fire, insects and disease exact a heavy toll on Canada's forest resource. In fact, as many trees are lost to fire, insects and disease as are harvested each year. Along with protection, high utilization standards are also in place to ensure extensive utilization of the old forest. In addition, new technology allows the use of species which were formerly unused by the industry.

Protection, increased utilization, and rapid regeneration by intensive management will ensure that the forest remains Canada's most important renewable resource.

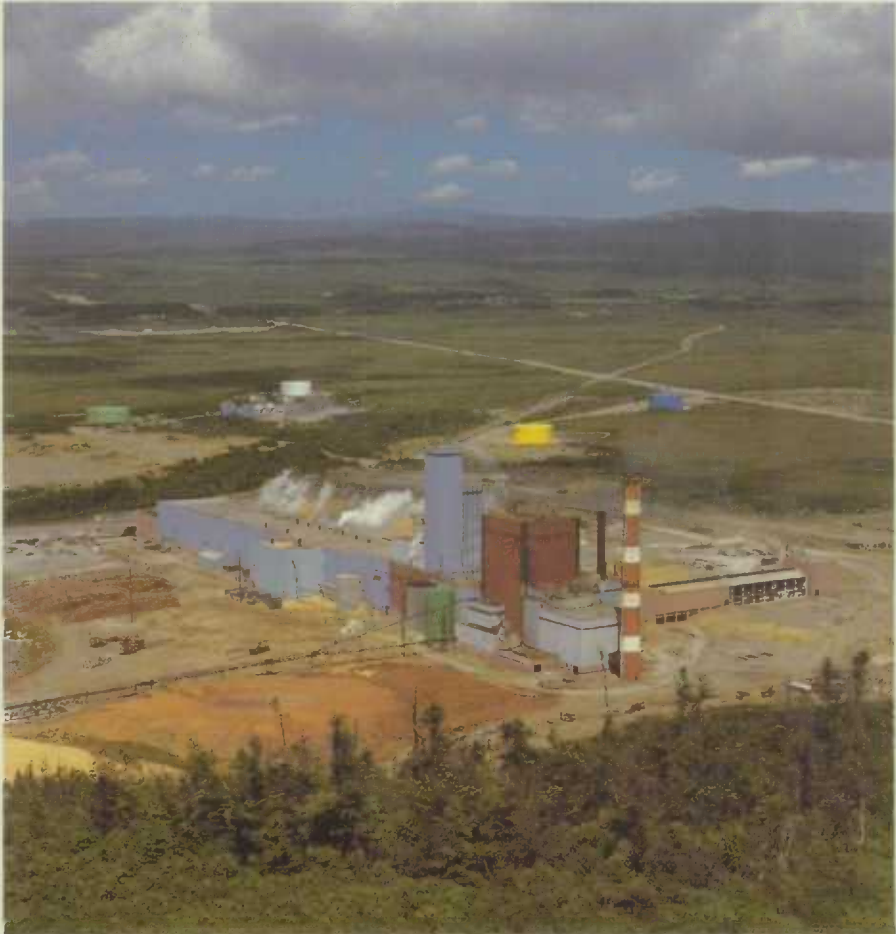


Forest Industries

The forest products group is composed of industries that produce and transform wood fibre. The group includes the logging industry, the wood products industries and the paper and allied products industries.

Canada has a very extensive forest area. This resource, through proper management, has become the basis for a world-scale industry. Canada is the world's largest producer of newsprint and the second largest producer of pulp.

Newsprint mill at Stephenville, Nfld. The forest industries represent an important sector of Canada's goods-producing industries; employment exceeded 267,700 persons in 1985.





Printing enter coating for corrugated containers at high-tech paper converting plant at Mississauga, Ont.

The forest industries represent an important sector of Canada's goods-producing industries; employment exceeded 267,700 persons in 1985. The value of shipments of forest products approached \$35 billion in 1985 and the value of exports was nearly \$16 billion. The industry plays a role in the economic activity of every province and territory. However, the major activities are concentrated in three provinces, British Columbia, Quebec and Ontario. These three together account for about 86 per cent of the output of the forest industry.

Table 6. Principal statistics — logging, wood industries, paper and allied industries, 1981-85

	Establishments	Employees	Salaries and wages	Value of shipments	Value added - manufacturing activity
	No.	No.	\$'000	\$'000	\$'000
Logging					
1981	3,276	48,402	1,191,864	4,429,667	1,883,000
1982	3,082	40,214	1,033,573	3,997,857	1,650,482
1983	3,508	45,943	1,218,763	4,909,135 ^r	2,158,803 ^r
1984	3,694	51,173	1,324,199	5,364,350	2,191,491
1985	3,739	45,962	1,294,408	5,461,527	2,184,255
Wood industries					
1981	3,394	112,570	2,286,414	8,441,830	3,447,224
1982	3,353	97,125	2,103,873	7,173,003	2,708,148
1983	3,453 ^r	101,965 ^r	2,426,579	9,405,902	3,992,695
1984	3,561	102,941	2,541,119	9,972,507	4,050,734
1985	3,476	107,560	2,739,592	11,121,616	4,687,787
Paper and allied industries					
1981	758	131,024	3,145,707	15,729,427	6,965,466
1982	773	122,763	3,282,476	14,783,955	6,079,544
1983	672	114,308	3,340,650	15,010,828	5,940,332
1984	678	115,799	3,515,663	17,471,867	7,491,653
1985	688	114,187	3,745,284	18,074,629	7,524,313

^r Revised.*Tree harvester transferring logs onto storage pile in the Mont Tremblant area of Quebec.*



Fishermen hauling story catches at Port de Grave, N.S. Fish plant in background.

Fisheries

Canada's commercial fishing industry is one of the largest in the world, with approximately 85,000 commercial fishermen (77,000 in marine fisheries and 8,000 in freshwater) and 35,000 vessels.

Canada protects its fisheries industry through participation on 10 international commissions and by means of regulatory measures and resource management programs within its 200-mile coastal limit.

It has been more than a decade since Canada took control over harvesting efforts within the 200-mile limit. Fish stocks have been significantly rebuilt through rigorous measures designed to conserve and enhance them. Management initiatives include: the application of Total Allowable Catches, increased surveillance and enforcement, fleet and gear sector quotas, regulations governing fishing effort, and limits on vessel size and numbers.

The landings for 1986 reached record highs — 1.53 million tonnes valued at \$1.35 billion, an increase from the 1.01 million tonnes and the \$390 million value in 1976 (prior to the 200-mile fisheries jurisdiction).



Hauling catch on the West Coast. Canada's commercial fishing industry is one of the largest in the world, with approximately 35,000 commercial fishermen and 35,000 vessels.

Eighty-two per cent of landings occurred in the Atlantic, 15 per cent in the Pacific and 3 per cent in the freshwater fishery. In Atlantic Canada, the inshore fisheries accounted for 65 per cent of the total landings and 80 per cent of the landed value for the region. The remaining 35 per cent of the landed weight and 20 per cent of landed value came from the large offshore trawlers. The total landings of approximately 1.25 million tonnes from the Atlantic region in 1986 was processed into an estimated \$3 billion worth of fish products, a record value of production from the Atlantic Coast.

A fish plant at Shelburne, NS.





Peggy's Cove, NS, enshrouded in fog.

On the Pacific Coast, landings in 1986 continued to rise in both volume and value. The largest increase in this region appeared in Pacific groundfish which rose by 39 per cent in weight and 43 per cent in value over the previous year. The total Pacific Coast landings amounted to 225 130 t — valued at \$391 million. Inland fisheries also showed increases in 1986, landed weight was up 5 per cent to 46 000 t and the landed value was up 20 per cent to \$78 million.

The volume of Canadian fish exports in 1986 reached 590 855 t — up 6 per cent from the 1985 levels. The value also increased 30 per cent over the previous year to \$2.4 billion. The United States received 59 per cent of the export volume. The other two major markets were Japan and the European Economic Community, each received 13 per cent.

Minerals and Energy

The value of production of Canadian minerals increased to \$36.0 billion in 1987, from \$32.4 billion in 1986. Led by crude petroleum and natural gas, mineral fuels accounted for 55 per cent of the total value of production. Crude petroleum is by far the leading Canadian mineral commodity; its production value reached nearly \$12.0 billion in 1987, up from \$9.6 billion in 1986. Revenues for crude oil in 1986 were down by nearly 50 per cent relative to 1985 as a result of the collapse of crude oil prices in 1986. Metallic minerals accounted for 30 per cent of the value of Canadian mineral production in 1987; non-metallic minerals and structural materials accounted for the other 15 per cent. The Department of Energy, Mines and Resources explores Canada's landmass, manages the research and development of energy- and mineral-related technology, and carries out policies and programs to ensure the equitable development and sound management of Canada's mineral and petroleum resources. Using both the new technology of remote sensing from aircraft and satellites and the traditional survey and mapping activities, the department assesses the magnitude of energy and mineral resources and compiles information on their nature and distribution; this information is vital to developing effective resource management and safeguarding the environment. The department's laboratories carry out research and studies aimed at safer, cleaner and more efficient extraction, processing and use of the country's mineral resources, as well as ensuring mining health and safety.

Gold mining at Hemlo, Ont., on the north shore of Lake Superior.





CW refinery tanks at Montreal, Que.

Minerals

During 1987, more than 40 projects to develop additional metal production capability were announced. These projects, most of which focused on gold, were expected, over the next few years, to inject more than \$700 million into the Canadian economy. Of the principal minerals, gold had the highest value of production in 1987, at \$2.2 billion, up \$500 million from 1986; 70 per cent of Canada's gold production came from Ontario and Quebec. Copper and zinc were valued at \$1.8 billion and \$1.7 billion, respectively. British Columbia and Ontario are the major copper-producing provinces; Ontario, New Brunswick and Northwest Territories are the major zinc-producing areas. Canada's nickel mines, located in the Sudbury region of Ontario and the Thompson region of Manitoba, yielded \$1.3 billion worth of that mineral during the year. The production of iron ore remained stable in 1987, and was valued at \$1.3 billion. Iron ore is mined mostly in western Labrador, northeastern Quebec and northern Ontario. Uranium, worth \$1.1 billion, came exclusively from Ontario and Saskatchewan.



Geologist selects ore sample underground at a mine in the Elsa area of Yukon.

Table 7. Mineral production, by class and province, 1984-87
(thousand dollars)

	1984	1985	1986	1987 ¹
Canada				
Metals	8,670,372	8,709,411	8,797,700	10,928,465
Non-metals	2,366,529	2,733,463	2,522,181	2,480,440
Fossil fuels	30,399,242	31,120,422	18,763,327	19,995,210
Structural materials ..	1,951,483	2,125,219	2,342,485	2,640,775
Total ²	43,789,031	44,729,629	32,447,308	36,038,609
Newfoundland	979,224	869,727	817,339	767,816
Prince Edward Island ...	1,914	1,917	1,754	1,917
Nova Scotia	303,841	321,468	366,718	390,095
New Brunswick	612,951	508,897	501,570	700,709
Quebec	2,167,177	2,243,274	2,190,538	2,527,761
Ontario	4,531,338	4,630,344	4,824,739	5,656,634
Manitoba	812,244	862,158	763,892	1,022,484
Saskatchewan	3,758,153	3,796,550	2,524,555	2,996,823
Alberta	26,429,325	27,029,638	16,330,475	17,148,092
British Columbia	3,345,590	3,540,930	3,161,338	3,428,963
Yukon	70,143	60,069	176,101	447,204
Northwest Territories ...	777,131	864,657	788,287	950,110

¹ Preliminary estimates.

² Totals may not agree with components due to the inclusion of confidential data, not published at the detail level or due to rounding.

Table 8. Selected mineral production, by kind, 1984-87

Mineral	Unit	1984 ¹	1985	1986	1987
		'000	'000	'000	'000
Metallics					
Antimony	kg	554	1 075	3 805	3 575
Bismuth	kg	166	201	153	178
Cadmium	kg	1 605	1 717	1 484	2 294
Cobalt	kg	2 123	2 067	2 297	2 877
Copper	kg	721 826	738 637	698 527	767 299
Gold	g	83 446	87 562	102 899	117 834
Iron ore	t	39 930	39 502	36 167	37 553
Lead	kg	264 301	268 292	334 342	390 503
Molybdenum	kg	11 557	7 852	11 251	11 581
Nickel	kg	173 725	169 971	163 251	187 805
Platinum group	g	10 369	10 534	12 190	13 489
Selenium	kg	463	361	354	496
Silver	kg	1 327	1 197	1 088	1 250
Tungsten	kg	4 196	4 031	2 470	—
Uranium	kg	10 272	10 441	11 502	13 202
Zinc	kg	1 062 701	1 049 275	988 173	1 329 408
Non-metallics					
Asbestos	t	837	750	662	665
Gypsum	t	7 775	7 761	8 803	8 811
Nepheline syenite	t	521	467	467	499
Peat	t	541	643	738	720
Potash	t	7 527	6 661	6 752	7 465
Quartz	t	2 659	2 669	2 640	2 560
Salt	t	10 235	10 085	10 332	10 294
Soapstone, talc, pyrophyllite	t	123	127	123	141
Sodium sulphate	t	389	366	371	340
Sulphur in smelter gas	t	844	822	758	803
Sulphur, elemental	t	8 353	8 102	6 966	6 888
Structural materials					
Cement	t	9 240	10 192	10 611	12 205
Lime	t	2 249	2 212	2 243	2 271
Sand and gravel	t	233 759	256 183	257 971	260 265
Stone	t	81 754	86 632	97 602	105 675
Mineral fuels					
Coal	t	57 402	60 436	57 811	59 790
Natural gas	m ³	78 266 000	84 344 000	71 896 000	71 962 000
Natural gas byproducts	m ³	19 640	19 682	19 127	20 879
Petroleum, crude	m ³	83 680	85 564	85 468	87 108

— Nil or zero.

¹ Revised.

Canada produced almost \$2.5 billion worth of non-metallic minerals in 1987. With the opening of a number of mines in Saskatchewan between 1962 and 1970, and more recently in New Brunswick, potash production grew to a value of \$705.8 million in 1987, from less than \$1 million in 1960. About 95 per cent of the world's potash is used as fertilizer. Canada's elemental sulphur production declined slightly to \$650.8 million in 1987; almost all elemental sulphur produced in Canada comes from natural gas, therefore its production is in direct proportion to natural gas production regardless of the price of sulphur. One-half of all sulphuric acid, the final product of nearly all sulphur, is used in the manufacture of fertilizers and other industrial chemicals. In 1987, declines in the production of asbestos stabilized; 77 per cent of Canada's asbestos production, valued at \$235.2 million, came from the province of Quebec, the remainder from British Columbia and Newfoundland. Canada produces approximately 20 per cent of the world's total supply of asbestos and is the world's second leading producer. Salt production in Canada totalled \$235.4 million in 1987; more than half is produced in Ontario.

Cement, with production valued at \$976.0 million in 1987, was the most important structural material produced in Canada; more than 65 per cent of the production came from Ontario and Quebec. Sand and gravel production, valued at \$729.1 million in 1987, was concentrated in Ontario, Alberta and British Columbia.

Coal mine at Sparwood, B.C.





Propane refrigeration compressor at Mikwan Gas Plant in Alberta. The compressed propane is used to produce refrigeration to remove liquid hydrocarbons from natural gas to make the gas suitable for home heating.

The Fossil Fuels: Petroleum, Natural Gas and Coal

Canada is fortunate to be endowed with significant reserves of most forms of energy, although the proven reserves of hydrocarbon energy now represent relatively few years of oil production. Therefore, the federal government, in collaboration with the provinces, has launched a number of programs to conserve energy and develop non-conventional energy sources. Efforts have focused on both a more rational utilization of fossil fuels and conversion from oil to relatively more abundant domestic sources, primarily electricity and natural gas. The search for new energy supplies has included emphasis on the development of oil sands and offshore resources as well as research in such areas as the upgrading of heavy oil, the fluidized-bed combustion of coal, and coal gasification and liquefaction.

In 1986 the petroleum industry extracted about \$20 billion worth of hydrocarbon products, and Alberta accounted for 81 per cent of the value of crude oil, natural gas and natural gas byproducts produced. In addition to conventional reserves Canada possesses significant volumes of bituminous tar sands. According to one estimate the ultimate recoverable reserves of synthetic crude oil from all Alberta's bituminous deposits amount to 47 billion cubic metres of which approximately 8.5 billion cubic metres is considered recoverable by methods similar to those now in use at the two plants operating near Fort McMurray. Other techniques will be needed to recover the remainder.



Mining coal to supply the billion-dollar power generating station at Suncor in southeast Alberta.

To find and develop new conventional reserves as production depletes present supplies, \$5.0 billion of capital expenditures were undertaken in 1986. Forty-eight per cent of the \$2.3 billion allocated for exploration drilling in 1986 was spent in the frontier areas of the Canadian North and offshore research. A further \$2.7 billion was spent on development, \$3.9 billion for operations and \$3.8 billion for royalties in the oil and gas industries.

Domestic demand of refined petroleum products totalled 82 417 000 m³ (cubic metres) in 1986, including 32 886 000 m³ of motor gasoline, 22 869 000 m³ of middle distillates, 7 172 000 m³ of heavy fuel oils and 19 490 000 m³ of other products.

Coal production in Canada increased from 57.4 million tonnes in 1984 to 57.8 million tonnes in 1986 and its value remained relatively stable at \$1.7 billion, compared to \$1.8 billion in 1984. Exports to 19 countries amounted to 25 943 000 t. Japan (68 per cent), South Korea (12 per cent) and Brazil (4 per cent) were the principal customers.

Electricity

Canada's total generating capacity increased from a modest 133 MW (megawatts) in 1900 to approximately 98 368 MW in 1986. These facilities produced 455 795 GWh (gigawatt hours) of electric energy in 1986, 67.5 per cent in hydroelectric stations. Energy exported to the US exceeded the energy imported by 33 978 GWh, bringing the total available to Canadian users to 421 817 GWh.

Although water power traditionally has been the main source of electrical energy in Canada, and still is, thermal sources are becoming more important and this trend is expected to continue. The choice between the development of a hydroelectric power site and the



Ile d'Orleans, Que.

construction of a thermal generating station must take into account a number of complex considerations, the most important of which are economic. The heavy capital costs involved in constructing a hydroelectric project are offset by maintenance and operating costs considerably lower than those for a thermal plant. The long life of a hydro plant and its dependability and flexibility in meeting varying loads are added advantages. Also important is the fact that water is a renewable resource. The thermal station, on the other hand, can be located close to areas where power is needed, with a consequent saving in transmission costs; however, pollution problems at these plants are an undesirable factor.

The marked trend toward the development of thermal stations that became apparent in the 1950s can be explained to some extent by the fact that, in many parts of Canada, most of the hydroelectric sites within economic transmission distance of load centres have been developed and planners have had to turn to other sources of electrical energy. Although recent advances in extra-high voltage transmission techniques have given impetus to the development of hydroelectric sites previously considered too remote, thermal stations will probably be the more important of the two sources in the long run.



Revelstoke Dam in British Columbia.

Substantial amounts of water power have been developed in all provinces except Prince Edward Island, where there are no large streams. Quebec, the richest province in water power resources, with over 40 per cent of the total for Canada, has the most developed capacity. Plans for the development of a number of rivers flowing into James Bay are becoming a reality.

Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Saskatchewan, Alberta and the Northwest Territories depend on thermal stations for most of their power requirements. Quebec's wealth of water power has so far limited the application of thermal power in that province to local use. Manitoba and British Columbia both have substantial amounts of thermal capacity, but hydroelectricity is still the focus of current development.

Development of commercial electric power generation in thermal plants using the heat generated by nuclear reactors is one of Canada's major contributions to energy resource technology. This development has centred around the CANDU reactor, developed by Atomic Energy of Canada Limited, which uses a natural uranium fuel with a heavy water moderator; heavy water as a moderator provides a high-energy yield and facilitates the handling of spent fuel. The first experimental reactor went into use in 1962 at Rolphton, Ont., with a capacity of 20 MW. Since then, six major nuclear projects have been undertaken. Nuclear plants are located at Point Lepreau, NB, Gentilly, Que. and Pickering and Bruce in Ontario. Another plant is under construction at Darlington in Ontario.

Table 9. Production of electricity, by province, 1986
(gigawatt hours)

Province or territory	Type of generating capacity			Total
	Hydro	Steam conventional	Steam nuclear	
Newfoundland	39 129	1 278	—	40 407
Prince Edward Island	—	12	—	12
Nova Scotia	1 001	6 400	—	7 401
New Brunswick	3 148	3 821	5 227	12 196
Quebec	144 328	140	3 793	148 261
Ontario	41 023	25 959	58 213	125 195
Manitoba	23 840	213	—	24 053
Saskatchewan	3 764	8 149	—	11 913
Alberta	1 800	32 919	—	34 719
British Columbia	48 924	1 834	—	50 758
Yukon	322	22	—	344
Northwest Territories	346	189	—	535
Total	307 625	80 936	67 233	455 794

— Nil or zero.

The National Research Council

With more than 3,000 employees and a budget of approximately \$400 million, the National Research Council's core of world-class laboratories, technology advisors and industrial assistance offices coast-to-coast support the efforts of all research and development (R&D) performers in the country, especially firms whose business depends upon the application of technology, universities and government laboratories.

Established by Parliament in 1916 to promote scientific and industrial research, the National Research Council (NRC) has evolved into Canada's leading national science and technology institution. NRC's priority is to help Canadian firms with the technology required to be competitive in Canadian and world markets.

As Canada's national science and technology institution NRC carries out fundamental and applied studies, creating new knowledge and new technologies; operates the Canada Institute for Scientific and Technical Information (CISTI) providing a national information

network for scientific and industrial researchers; operates the Industrial Research Assistance Program (IRAP) which assists thousands of Canadian firms in meeting their technology needs; and has laboratories and advisory facilities in all regions of the country and strong networking links to national and international scientific and R&D organizations.

A fibre-optic system recently developed at NRC was used in the world's first excimer laser coronary endarterectomy — an open-heart surgical procedure to clear coronary arteries. The technique uses an ultraviolet (UV) laser beam transmitted through a flexible quartz fibre which is threaded through the coronary arteries to reach the plaque deposits. Pulses of laser energy are aimed through the fibre to cut away the plaque. As a result of this successful procedure, NRC is working with an Ottawa-based laser manufacturer and the Heart Institute to refine the equipment so that ultimately it would eliminate the need for major surgery.

NRC's research in biotechnology reaches into areas such as pharmaceuticals, waste treatment and forestry. Canada's first full-scale biomass reactor for the treatment of municipal wastes, with technology developed by NRC, began operations in 1987 near Sackville, NS.

Among other projects in development is NRC Net, a high speed computer communications network to link universities, industry and government research centres across the country.

Development of extremely short, powerful flashes of laser light by researchers at the National Research Council are allowing new areas of science and technology to be studied.





Robotic arm lifts metal cylinder from heat treating furnace at an auto engine plant in Quebec.

Manufacturing

The manufacturing sector is the largest segment of Canada's goods-producing industries. Because of its importance to the growth of national productivity, its high demand for capital goods and its contribution to exports, it plays an important role in the economy.

Data from a census of manufacturing activity show that Canadian manufacturers shipped \$248 billion of their own products in 1985, an increase of 30.2 per cent over 1981. (By comparison, the selling prices of manufacturing industries increased 18.6 per cent over the same period and real Gross Domestic Product increased 12.7 per cent.)

An exact measure of exports of manufacturers is not routinely compiled, but if exports of fabricated materials and end products are accepted as roughly equivalent to manufactured products, Canadian manufacturers did some processing on about seven dollars out of every 10 of exports of Canadian products in 1985. Domestic exports of fabricated

Table 10. Manufacturing industries, selected years, 1920 to 1985

Year	Establishments	Employees	Salaries and wages	Value added by manufacture	Value of shipments of goods of own manufacture ¹
	No.	No.	\$'000	\$'000	\$'000
1920.....	22,532	598,893	717,494	1,621,273	3,706,545
1929.....	22,216	666,531	777,291	1,755,387	3,883,446
1933.....	23,780	468,858	436,248	919,671	1,954,076
1939.....	24,805	658,114	737,811	1,531,052	3,474,784
1944.....	28,483	1,222,882	2,029,621	4,015,776	9,073,893
1949.....	35,792	1,171,207	2,591,891	5,330,566	12,479,593
1954.....	38,028	1,267,966	3,896,688	7,902,124	17,554,528
1959.....	32,075	1,287,809	5,030,128	10,154,277	22,830,827
1964.....	33,630	1,491,257	7,080,939	13,535,991	30,856,099
1969.....	32,669	1,675,332	10,848,341	20,133,593	45,930,438
1974.....	31,535	1,785,977	17,556,982	35,084,752	82,455,109
1975.....	30,100	1,741,159	19,156,679	36,105,457	88,427,031
1976.....	29,053	1,743,047	21,799,733	39,921,910	98,280,777
1977.....	27,716	1,704,483	23,595,238	44,104,548	108,881,959
1978 ²	31,963	1,790,618	26,571,956	51,523,349	128,889,376
1979 ²	34,578	1,856,196	30,123,709	60,623,174	152,133,081
1980.....	35,495	1,850,436	33,133,061	65,851,774	168,058,662
1981.....	35,780	1,853,968	37,106,195	73,873,772	190,852,815
1982.....	34,121	1,702,303	37,624,733	68,988,161	187,710,349
1983 ³	35,287	1,671,140	39,609,111	76,895,569	203,313,746
1984.....	36,465	1,722,045	43,076,018	88,728,611	230,070,145
1985.....	36,854	1,766,763	46,208,030	95,875,259	248,492,634

¹ Before 1952, data represent gross value of production.

² Increase in number of establishments due to improved coverage.

³ Revised.

Teflon processing in a Grand Falls, NB plant.





Welding at an implement plant near Winnipeg, Man.

materials, excluding electricity, amounted to \$35.4 billion, approximately 13 times the 1961 total. However, exports of end products, valued at \$49.9 billion, roughly equivalent to highly manufactured goods, though including very small values of non-manufactured goods were about 99 times their 1961 value. This is a striking reflection of the growth of those sectors of Canadian manufacturing producing more highly fabricated goods.

Most manufacturing activity in Canada is highly mechanized and Canadian factories thus constitute a large market for equipment. This is partly because many types of natural resources processing are inherently capital-intensive; that is, they employ a great deal of machinery, equipment and buildings in proportion to employees. Industries producing highly manufactured goods — like machinery and automobiles — have become increasingly important. In addition, high living standards, reflected in high wages, create an incentive to economize in the use of workers and this often leads to increased mechanization.

In 1985, capital expenditures for manufacturing industries amounted to \$8.9 billion, approximately 27.6 per cent of all capital expenditures by business and government, for new machinery and equipment.

Increasing capital intensity of production has probably been a prime cause of the rise in productivity of each employee in the manufacturing industries. Output (per person-hour worked) in the manufacturing industries increased at an average rate of 3.4 per cent over the 1961-85 period.

Quality-control inspector at a paper plant in the Montreal area of Quebec.





Robotic arm loads and unloads hydraulic press that produces stainless steel kitchen sinks.

The leading manufacturing industry in Canada in 1985, measured by the value of shipments of its own products, was petroleum refining. With a total value of \$24.3 billion, this industry's shipments were \$1.1 billion (4.6 per cent) greater than in 1984, prices having increased by 5.0 per cent during the year. There has been a marked price deceleration in this industry in recent years.

The second-ranking industry in 1985 was motor vehicle manufacturers at \$23.7 billion, with an increase of \$2.9 billion in shipments from the previous year. The industry's real Gross Domestic Product rose 8.1 per cent in 1985, 87.6 per cent higher than its recession-reduced 1982 level. Prices have increased by 8.5 per cent over 1984. Pulp and paper mills had the third largest value of shipments at \$13.4 billion. This industry's real Gross Domestic Product rose 4.1 per cent from 1984, while prices rose 2.8 per cent over the same period.

Twelve other manufacturing industries, in descending order of magnitude, had shipments over \$3 billion in 1985: motor vehicle parts and accessories, \$12.9 billion; meat and meat products, \$8.2 billion; primary steel, \$7.7 billion; sawmills, planing mills and shingle mills, \$7.1 billion; industrial chemicals, \$6.9 billion; dairy products, \$6.4 billion; miscellaneous machinery and equipment, \$6.3 billion; commercial printing, \$4.5 billion; metal stamping, pressing and coating, \$4.4 billion; communication equipment, \$4.3 billion; miscellaneous food products, \$4.0 billion; and plastics products, \$3.8 billion.

Construction and Housing

Non-residential Construction

Since 1985, non-residential construction has begun to recover from losses of the 1981-82 economic recession. The value of construction projects performed was more than 10 per cent higher in 1985 than in 1984. However, in 1986, owing to a significant slowing in expenditures on engineering construction, this growth dropped to -2.3 per cent. The preliminary data for 1987 indicated a recovery at 4.9 per cent, with a level of expenditures at \$45 billion. An increase of nearly 10 per cent was anticipated for 1988 in the value of construction. Various types of construction have contributed to this recovery. During the 1983-88 period, repair expenditures rose from \$6.3 billion to \$8.5 billion, for an average annual increase of nearly 7 per cent.

Commercial-building construction, which suffered the least in the recession, has led the recovery in the past few years. Following a single year of decline in 1983, its volume has

Montreal, Que.

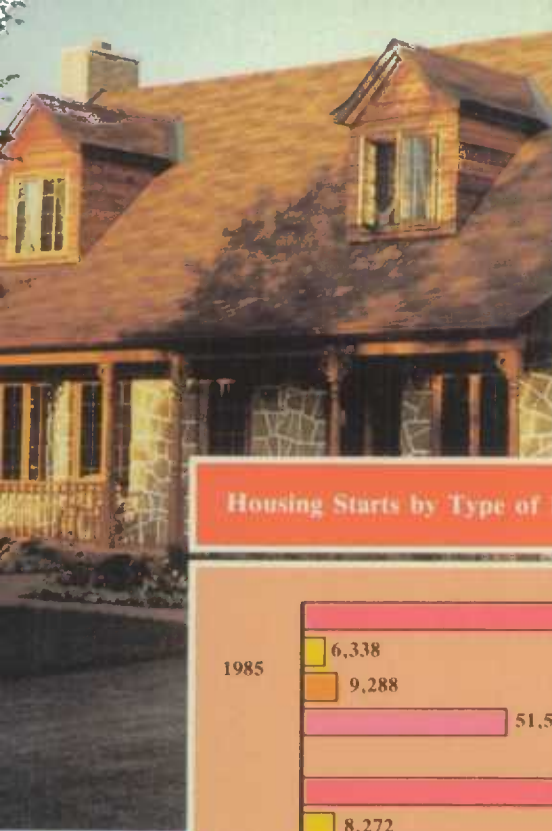




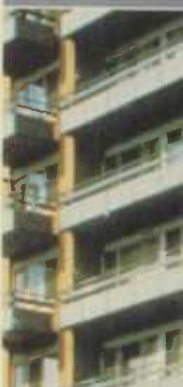
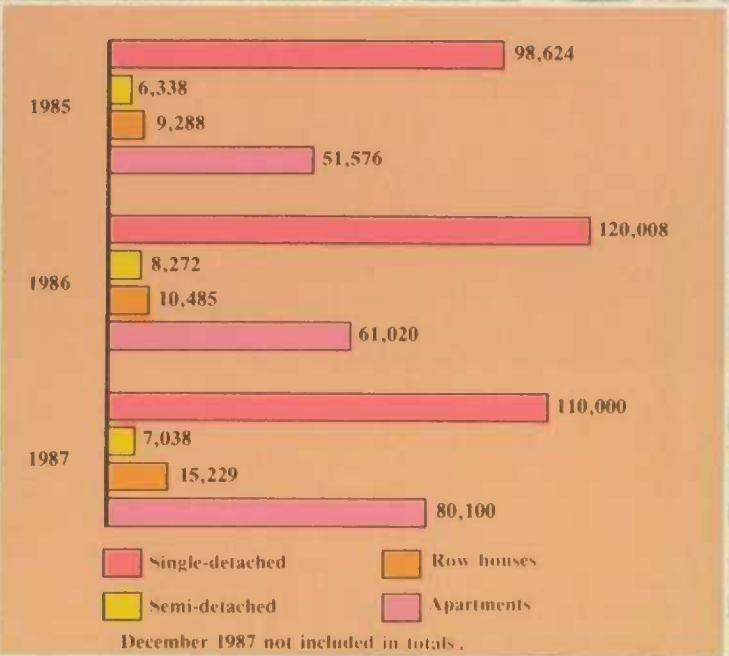
Monterey, CA

risen by more than 15 per cent per year on average since 1984. Activity was particularly strong in construction and renovation of office buildings and shopping centres. In 1988, activity in this sector was expected to continue rising, although some signs of a slowdown were appearing. The recovery in industrial-building construction and in institutional-building construction has been much slower. Following substantial increases in 1984 (10.5 per cent) and 1985 (28.1 per cent), the industrial sector declined slightly (-1.5 per cent) in 1986. However, the situation is improving: preliminary data indicated a rise of 6 per cent in 1987 and 1988.

Since 1985, recovery has been seen in institutional-building construction and is attributable to increased activity in school-building construction, however, this fragile recovery was not expected to continue in 1988; a decrease of 2 per cent was anticipated. Engineering construction has failed to climb to the pre-recession level of \$27 billion, however, expenditure intentions indicated a significant increase in 1988.



Housing Starts by Type of Dwelling, 1985-87





St. John's, Nfld.

Housing

Following the 1982 low, residential construction grew continuously until 1987. Investment grew 23 per cent on average per year, rising from \$15.2 billion in 1982 to \$32.8 billion in 1987, although a very slight decrease of one per cent was anticipated for 1988.

This performance was the result of steady production of housing, with the number of units rising from 125,860 in 1982 to 245,986 in 1987, a level comparable to that recorded during the very active period in the 1970s. The largest fluctuations were in construction of single-unit dwellings, with an increase from 54,456 units in 1982 to 140,139 units in 1987. Production of multiple-unit dwellings, which was slightly less sensitive to the effects of the recession, climbed from 71,403 to 105,847 units during the same period.

As with expenditures for new housing, during the 1982-87 period, expenditures for repairs and renovation grew significantly. Repair expenditures increased 6.6 per cent on average, while renovation expenditures posted an average annual growth rate of 13.8 per cent. These expenditures accounted for nearly 45 per cent of total spending on residential construction.

Nearly 30 per cent of the more than 3 million residential loans approved in Canada from 1980 to 1986 were insured by the Canada Mortgage and Housing Corporation (CMHC). Over the past four decades, CMHC has helped create more than one-quarter of Canada's 9 million housing units. At the end of 1986, \$39.3 billion of CMHC insured mortgages were in force. CMHC is also involved in a number of programs to encourage availability of quality housing across Canada.

FOREIGN ECONOMIC RELATIONS

Merchandise Trade

The merchandise trade surplus, the excess of exports over imports, was \$10.3 billion in 1987, on a balance-of-payments basis. The 1987 surplus was almost the same as the surplus of \$10.4 billion for 1986, but was much smaller than that of \$16.9 billion in 1985. In the period 1984-87, the value of exports increased, on average, 4.1 per cent each year, while imports increased at an average of 8.1 per cent yearly. The export price index decreased 1.9 per cent in 1987 to a level of 98.5, following a decline of 3.3 per cent in the preceding year. The corresponding import price index decreased 4.0 per cent in 1987 to 104.4, after a smaller decrease in the previous year. Both exports and imports recorded volume increases. The index of volume of exports (1981 = 100), on a balance-of-payments basis, rose 6.4 per cent in 1987 to 151.3. The index of volume of imports, on the same basis, increased at a faster rate, rising 9.1 per cent in 1987 to 143.3.

Table 1. Domestic exports¹ by leading countries, 1984-87²

(million dollars)

Country	1984	1985	1986	1987
United States.....	82,668	90,344	90,319	91,756
Japan.....	5,641	5,745	5,942	7,036
United Kingdom ³	2,439	2,313	2,566	2,850
Germany, Federal Republic of ³	1,191	1,189	1,255	1,515
China, People's Republic of.....	1,236	1,259	1,119	1,432
Korea, South.....	720	776	968	1,167
Belgium-Luxembourg ³	683	703	823	1,137
France ³	705	714	965	1,037
Netherlands ³	1,064	929	978	1,021
Italy.....	580	525	695	843
USSR.....	2,119	1,608	1,216	801
Taiwan.....	423	430	611	757
Australia.....	616	625	624	689
Sub-total.....	100,085	107,160	108,081	112,041
Total domestic exports.....	109,438	116,146	116,733	121,462

¹ Values are customs-based, reflecting values as shown on customs entries.

² Countries are ranked according to 1987 values.

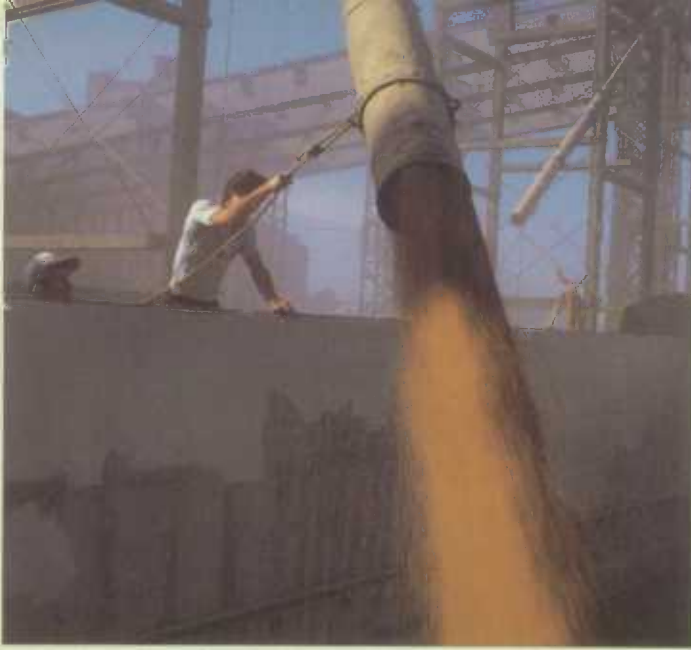
³ Due to trans-shipments via the Netherlands and Belgium-Luxembourg, exports to and imports from these countries tend to be overstated, whereas exports to and imports from Germany, France and some other European countries may be under-represented by these data.



Loading lumber for export at New Westminster, BC.

Exports

The United States is Canada's most important foreign customer; in 1987, it accounted for 75.5 per cent (or \$91,756 million) of domestic exports. Other leading export destinations were Japan (5.8 per cent) and the United Kingdom (2.3 per cent), followed by the Federal Republic of Germany, the People's Republic of China, South Korea and Belgium-Luxembourg, each with a one per cent share. France, the Netherlands, Italy, the Soviet Union, Taiwan and Australia each accounted for between 0.6 per cent and 0.8 per cent of domestic exports. Exports to Taiwan, Belgium-Luxembourg and South Korea showed marked increases, while those to the Soviet Union declined. The 13 leading destinations accounted for 92.2 per cent of domestic exports in 1987.



Loading the hold of a ship with prairie wheat at the Alberta wheat port terminals in Vancouver, BC.

Table 2. Exports by commodities, 1984-87
(million dollars)

Commodity	1984	1985	1986	1987
Wheat	4,725	3,779	2,836	3,224
Animals and other edible products	6,108	5,878	7,044	7,385
Metal ores and concentrates	3,672	3,536	3,492	3,920
Crude petroleum	4,404	5,972	3,775	4,855
Natural gas	3,923	4,011	2,524	2,527
Other crude materials	5,412	5,887	5,599	5,499
Lumber	4,257	4,595	4,981	5,859 ¹
Wood pulp	3,906	3,405	4,072	5,473
Newsprint	4,784	5,412	5,661	6,029
Fabricated metals	9,452	9,238	10,733	10,103
Other fabricated materials	13,628	14,194	12,996	14,357
Motor vehicles and parts (partial)	29,289	33,062	34,212	32,074
Other machinery and equipment .	12,414	13,251	14,524	15,498
Other domestic exports	3,464	3,926	4,284	4,659
Sub-total	109,438	116,146	116,733	121,462
Re-exports	2,947	3,329	3,937	3,624
Total exports	112,385	119,475	120,670	125,086

Values are customs-based, reflecting values as shown on customs entries.

¹ Included export tax in 1987.



Halifax, NS.

The value of exports of motor vehicles and parts decreased 6.2 per cent in 1987 to \$32,074 million, or 26.4 per cent of domestic exports. In the 1984-87 period, the value of exports of motor vehicles and parts ranged from a low of 26.4 per cent to a high of 29.3 per cent of total domestic exports. Exports of the forest products of lumber, wood pulp and newsprint paper accounted for 14.3 per cent of total domestic exports in 1987, compared with 11.8 per cent in 1984. The value of crude petroleum exports rose by 10.2 per cent in the 1984-87 period, largely as a result of increases in the volume exported. Natural gas exports were 35.6 per cent lower, compared with 1984, reflecting lower prices and soft demand for natural gas. Export of ferrous and non-ferrous metals, in ore and in fabricated form, contributed about 12.0 per cent to domestic exports. The value of exports of machinery and equipment, comprising industrial machinery, aircraft and telecommunication equipment, increased 24.8 per cent in the 1984-87 period, and its share of domestic exports increased to 12.8 per cent in 1987 from 11.3 per cent in 1984.

Table 3. Imports¹, by leading countries, 1984-87²
(million dollars)

Country ³	1984	1985	1986	1987
United States	68,166	73,816	77,004	78,895
Japan	5,712	6,115	7,632	7,550
United Kingdom	2,305	3,281	3,736	4,339
Germany, Federal Republic of	2,175	2,716	3,453	3,534
Taiwan	1,224	1,286	1,745	2,023
Korea, South	1,152	1,607	1,749	1,844
Italy	1,116	1,331	1,671	1,695
France	1,220	1,373	1,586	1,489
Mexico	1,438	1,331	1,177	1,170
Hong Kong	966	887	1,042	1,138
Sweden	582	683	788	884
Brazil	669	809	822	851
China, People's Republic of	334	403	566	771
Netherlands	545	623	695	750
Sub-total	87,604	96,261	103,666	106,933
Total imports	95,460	104,355	112,393	116,076

¹ Values are customs-based, reflecting values as shown on customs entries.

² Countries are ranked according to 1987 values.

³ The list of countries was developed to indicate trade figures; its scope does not reflect the views of the Government of Canada on international issues of recognition, sovereignty or jurisdiction.

Imports

The value of imports from the United States increased 15.7 per cent in the 1984-87 period, while imports from other countries in the same period rose 36.2 per cent. The United States' share of total imports decreased from 71.4 per cent in 1984 to 68.0 per cent in 1987. Motor vehicles and parts are an important component of imports from the United States. In 1987, they accounted for 34.5 per cent of imports from the United States, compared with 33.2 per cent in 1984. After the United States, Japan is the second ranking supplier of imports. In 1987, Japan's share was 6.5 per cent of total imports, followed by the United Kingdom (3.7 per cent) and the Federal Republic of Germany (3.0 per cent). Taiwan, South Korea, Italy, France and Mexico recorded import shares of between 1.0 per cent and 1.7 per cent each.

End products accounted for 69.8 per cent of total imports in 1987; fabricated materials, 18.0 per cent; crude materials, 6.4 per cent; and food, feed, beverages, tobacco and live animals, 5.9 per cent. The main components of end products are motor vehicles and parts and machinery and equipment, which together accounted for about 58.0 per cent of total imports, up from 56.0 per cent in 1984. The share represented by motor vehicles and parts rose to 28.5 per cent from 27.4 per cent in 1984; the share of machinery and equipment of total imports was 29.5 per cent, up from 28.6 per cent in 1984. The value of imports of motor vehicles and parts increased 26.5 per cent in the 1984-87 period. Imports of automobiles and trucks recorded a higher increase (57.6 per cent) than the increase of imports of parts (7.4 per cent) in the 1984-87 period. The value of imports of machinery and equipment increased 25.1 per cent in the 1984-87 period, with strong growth by industrial machinery of 45.8 per cent. Other machinery and equipment imports increased 19.6 per cent in the same period. Imports of agricultural machinery and tractors declined 6.3 per cent.

Table 4. Imports¹ by commodities, 1984-87
(million dollars)

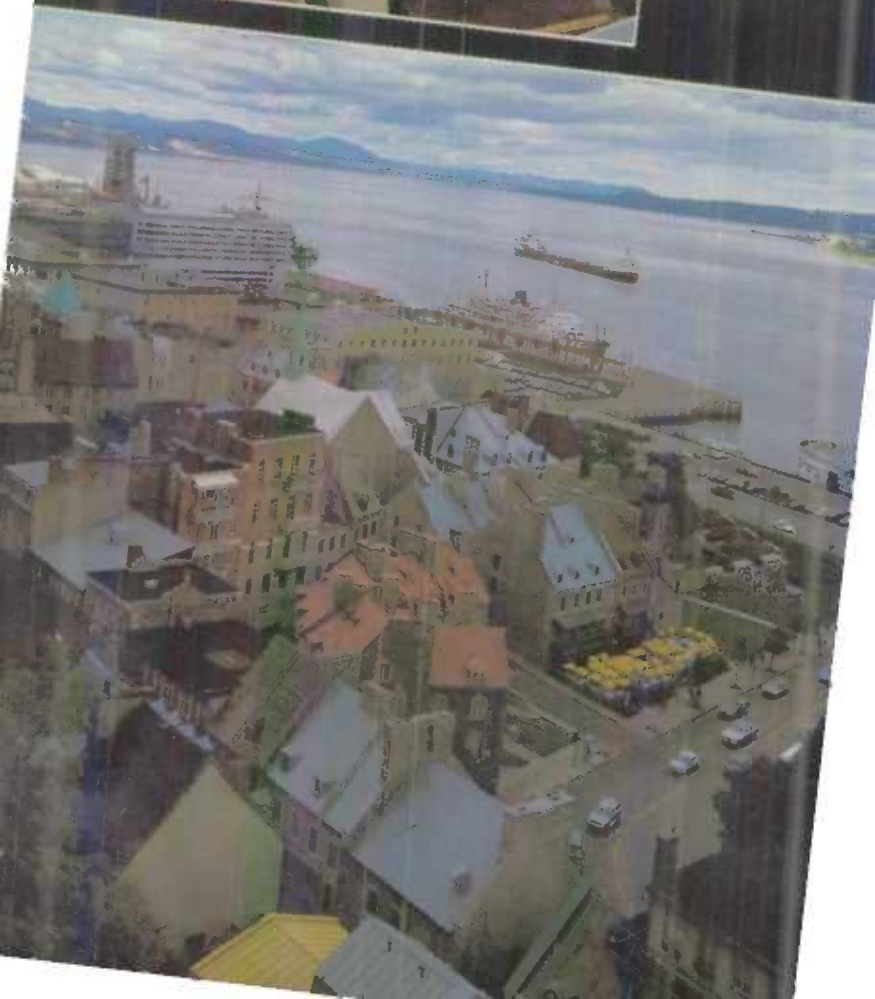
Commodity	1984	1985	1986	1987
Meat and fish	925	921	1,064	1,234
Fruits and vegetables	2,169	2,208	2,373	2,501
Animals and other edible products	2,812	2,780	3,265	3,056
Coal	1,094	887	744	725
Crude petroleum	3,376	3,695	2,885	3,179
Other crude materials	3,524	3,270	3,636	3,500
Textiles	1,734	1,886	2,105	2,261
Chemical products	5,212	5,443	5,841	6,228
Fabricated metals	3,899	4,609	4,914	4,562
Other fabricated materials	6,370	6,799	7,122	7,806
Motor vehicles and parts (partial)	26,136	31,501	33,441	33,051
Industrial machinery	6,605	7,927	9,184	9,628
Agricultural machinery	1,769	1,739	1,727	1,658
Aircraft, aircraft engines and parts	2,217	2,778	3,011	2,760
Electronic computers	4,149	3,937	4,194	5,093
Other machinery and equipment	12,586	12,766	14,085	15,051
Other imports	10,883	11,209	12,802	13,783
Total imports	95,460	104,355	112,393	116,076

¹ Values are customs-based, reflecting values as shown on customs entries.





1. St. John's, N
2. Lumber for e
Vancouver, B
3. Loading over
cargo at Toro
Ont. for export
South America.
4. Quebec City, Q



Common Conversion Factors from SI Metric to Canadian Imperial Units

Length

1 mm	=	0.03937 in.
1 cm	=	0.3937 in.
1 m	=	3.28084 ft.
1 km	=	0.62137 mi.

Area

1 km ²	=	0.3861 sq. mi.
1 ha	=	2.47105 acres
1 m ²	=	0.000247 acres

Mass (Weight)

1 kg	=	2.204622 lbs.
1 kg	=	0.0011023 tons (short)
1 kg	=	0.000984 tons (long)
1 kg	=	32.1507 troy ounces
1 g	=	0.0321507 troy ounces
1 t	=	1.102311 tons (short)
1 t	=	0.9842065 tons (long)

Volume and Capacity

1 m ³	=	220 gal.
1 m ³	=	35.31466 cu. ft.
1 m ³	=	423.78 board feet
1 dm ³	=	0.423776 board feet
1 m ³	=	6.28982 barrels
1 litre	=	0.219969 gal.
1 dm ³	=	0.027496 bushels
1 m ³	=	27.4962 bushels

Mass in SI Metric to Average Capacity in Canadian Imperial Units for Common Field Crops

Wheat, soybeans, potatoes, peas	1 t	=	36.74 bushels
Rye, flax, corn	1 t	=	39.37 bushels
Rapeseed, mustard seed	1 t	=	44.09 bushels
Barley, buckwheat	1 t	=	45.93 bushels
Mixed grains	1 t	=	48.99 bushels
Oats	1 t	=	64.84 bushels
Sunflower seed	1 t	=	91.86 bushels

Temperature

9/5 temperature in °C + 32 = temperature in °F

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Crowd scene and cattle drive.

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Assiniboine Provincial Park in British Columbia.

viii George Hunter/Miller Comstock

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Canada

Scale 1:20 000 000 or 1 centimetre represents 200 kilometres



CANADA - 1:20 000 000

- ⊙ Federal Capital
- Provincial Capital
- Other Populated Places

BOUNDARIES

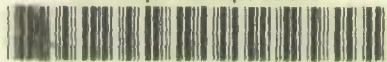
- International
- - - Provincial and Territorial
- ⋯ District
- ⋯ Unsurveyed
- ⋯ Dividing Line Canada and Greenland

TRANSPORTATION

- Trans-Canada Highway
- Principal Roads
- Ferry
- Railway

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