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THE CENSUS OF 1951*Introduction

Once every ten years since Confederation a census of the people of Canada has been taken. The first of these decennial censuses, as they are called, was taken in 1871: the ninth will be taken on June 1, 1951. It will be a project of the greatest magnitude, greater than ever before, since its organization will not only extend as in the last Census from the United States border to the most northerly settlements in the Arctic but for the first time from the east coast of Newfoundland to the islands off the coast of British Columbia. It will enumerate a population over a fifth larger than any previously recorded in Canada.

The coming Census will be a census of population, housing, agriculture, fisheries and distribution. Its value in determining the progress of Canada will be inestimable. More particularly the 1951 Census will be a yard stick in determining the progress that Canada has made in the first half of the twentieth century. Its uses are so varied that there is scarcely a phase of human activity that cannot be related to it. It is of aid to government, business, social welfare, justice and education and thus helps to make Canada a better place in which to live. With its information available to everyone, the census is democratic in its results.

Since the census is for the common good of all, the co-operation of every Canadian in making it as complete and successful as possible is only a part of good citizenship. To be sure, the law, enacted by the representatives of the people, requires everyone to answer the questions on the census schedules put to him by the enumerator. The success of the census does not rest on this legal requirement, however, but on a general appreciation of the purposes of the census and the willing co-operation of everyone in answering the questions as fully and accurately as he or she can. In short, the census will be only as good as the Canadian people make it.

Historical Background

The taking of a census is a very ancient idea dating back to the pre-Christian era: Besides the better known enumerations of certain classifications of people mentioned in the Old Testament at the time of the Exodus and in the days of King David censuses for one purpose or another were taken in Babylon (3,800 B.C.), China (3,000 B.C.), the Egypt of the Pharaohs (2,200 B.C.), Greece (600-500 B.C.) and Rome (500 B.C.).

* This Reference Paper comprises two releases issued by the Information Division of the Dominion Bureau of Statistics, Ottawa, Canada. Additional or more specialized information may be obtained from that office.

The Romans, indeed, were assiduous census-takers, both under the Republic and in the days of the Roman Empire.

In the Middle Ages the outstanding example of a census was the survey of England made in 1086 by William the Conqueror which we know as Domesday Book. The survey was made by commissioners who empanelled juries to state under oath the extent, value and nature of each estate, the names, number and social status of the inhabitants and the amounts due to the royal treasury. It was an unpopular procedure and, thereafter, no other such survey was made in England for several centuries. Indeed, as late as 1753, it was stated in Parliament that the taking of a census might be a prelude to "some great public misfortune or epidemical distemper".

Claims to have made the earliest census in the New World have been made for the Incas of Peru. Censuses were also taken by the Spaniards in 1548 in Peru, in 1576 in North America and again in Peru in 1606. Virginia had a census in 1635, New York in 1698 and there were 36 other colonial censuses in what is now the United States before the first American decennial census in 1790.

To Canada belongs the credit of taking the first census of modern times. This was the Census of the Colony of New France in 1666, which was continued periodically until 1754. The Census of 1666 was the first modern census on a name-by-name basis, taken for a fixed date by a personal canvass, showing age, sex, place of residence, occupation and conjugal condition of each person. The Census recorded a population of 3,215. When it is recalled that in Europe and America the first modern censuses date only from the eighteenth century, the taking of the census of the Colony of New France was a remarkable innovation.

During the French regime censuses were taken no fewer than 37 times, and, in addition, nine partial censuses were made. Some of these obtained information on areas under cultivation and pasture, the production of wheat, barley, oats, peas, corn, flax, hemp and tobacco, the numbers of horses, cattle, sheep and swine, and the numbers of public buildings, churches, grist-mills, saw-mills, fire-arms and swords.

After the British occupation there were censuses at various times but it was not until 1841 that the first Canadian Census Act was passed. Under the Act a census of Upper Canada was taken in 1842 and in the following year provision was made for a census of Lower Canada. A regular periodical census, to be taken every ten years, was initiated for the United Provinces in 1851 and, since censuses were taken at the same time in 1851 and 1861 in Nova Scotia and New Brunswick, respectively, the Act of 1851 may be regarded as originating the present decennial census.

Three years after Confederation an Act was passed providing for "the first Census in Canada to be taken in the year 1871". The census was to obtain, for the four provinces and each of the electoral districts and their divisions, statistics on population and population characteristics, housing, land, the valuation of real and personal property, agriculture, fisheries, lumbering,

mining, manufacturing and other industries, and municipal, educational, charitable and other institutions. The Census Act of 1905 made provision for the quinquennial census of the Prairie Provinces, a step confirmed by the Statistics Acts of 1918 and 1948. It was under the authority of the Statistics Act of 1918 that the decennial censuses of 1921, 1931 and 1941 and the quinquennial censuses of the Prairie Provinces of 1926, 1936 and 1946 were taken; the ninth decennial census is being taken under authority of the Statistics Act of 1948.

Objects and Uses of the Census

The objects of the censuses of the pre-Christian era and of the Middle Ages were very limited and would not meet with approval in modern times. Mainly they were used as a means of ascertaining what men could be called to the army and the amounts of money that could be wrung from individuals in taxation. This conception of the object of the census is so alien to the modern idea that it is expressly forbidden by law to use census data for any such purpose.

In Canada the fundamental legal reason for the taking of the census is to be found in the British North America Act of 1867 as amended in 1947. By this legislation, representation was assigned to each province on the basis of "dividing the total population of the provinces by two hundred and fifty four and by dividing the population of each province by the quotient so obtained". If the number of members thereby assigned to a province should be less than the number of senators for that province then the number of Members of Parliament for that province are increased to equal its number of senators. This is the case with Prince Edward Island. In addition Yukon was awarded one member and in 1949, on the entry of Newfoundland into Confederation, provision was made for seven members for the new province. Readjustments are to be made after each decennial census so that, should the population of any province have increased or decreased by the amount of the quotient mentioned in the Act, that province will have its representation in Parliament increased or decreased accordingly. The Canadian Census is taken primarily, therefore, to determine the representation of each of the provinces in the Federal House of Commons.

A second reason, of great importance from the provincial standpoint, is the fact that a number of the federal subsidies to the provinces are based on population. The original subsidies granted under the British North America Act are all based on population, namely, those respecting government and legislation, debt allowance and the general per capita subsidy. Subsequently, the tax agreements entered into with eight of the provinces are predicated, amongst other things, on population increases in relation to other factors.

The census, however, has a far wider application than the fixing of representation and federal subsidies. Periodically all businesses take inventory of what is on their shelves and in their store rooms, estimate the value of their plant and generally take stock of their financial position. The government equivalent of this procedure is

the taking of the census. The primary asset is the population itself, not merely the number of people but the various attributes that collectively make the Canadian people different from those of other countries. Data about sex, age, occupation, origin, language, years of schooling, etc., are facts in themselves of the greatest moment. They constitute the background against which almost all other facts must be projected if the latter are to have any real significance. The well-being of the state, physical, moral and economic, can be apprehended and interpreted only through the medium of population statistics.

In the allocation of grants by provincial authorities for educational, health and other purposes population figures for rural and urban divisions are required by provincial governments. Occupational statistics are useful to these same provincial authorities in setting up such things as public health services and arranging for provincial highway development. In many other ways the provincial authorities place reliance on census figures in the same way as the Federal Government does.

Thus the census supplies basic information necessary to assist government in directing the affairs of the Canadian people. By means of the census, government at all levels -- federal, provincial and municipal -- is enabled to work more effectively and economically in the interest of everyone in the country. Without the census, legislation would be passed and administration carried on in the dark. There would be no adequate means of knowing whether the country was on the road to success or disaster, or what constitutes the norm or standard of its progress in almost any particular.

The census also has its uses for the business man. It supplies him with information on the size of and potentialities of the home market. It helps him to decide on the advisability of expansion and in what areas expansion is justified. It helps him to determine quotas for his salesmen. It shows him where the occupational skills he needs are to be found. It supplies the investment broker, the banker and other financiers with a variety of information that they need for sound appraisal of business developments and projects and of investment conditions and opportunities.

Boards of trade, chambers of commerce and public utilities are enabled to advise and assist civic and municipal authorities in community planning, locating new schools, determining new bus routes, erecting new electric and other facilities, etc. They are also better prepared to point out to manufacturers and retailers the advantages of obtaining factory sites and sales outlets in their particular locality by being able to quote a disinterested authority on the labour market and the strength of local purchasing power.

Advertisers and radio broadcasting companies can present more cogently their case for patronage by prospective customers when they can produce figures on the population characteristics, such as language, origin and religion, in the areas in which they operate.

There is, as a matter of fact, scarcely a branch of business activity -- manufacturing, selling or financing -- that does not have specific uses for census figures. They are as important to business as they are to government.

Census figures are also useful to schools of social work, social agencies and societies interested in the improvement of social conditions generally. They learn which areas are less prosperous than others and where family income ranges and other factors are such that there is likely to be a greater need of their services.

Origin, language and religion figures are of value to church authorities in planning the location of new churches, church buildings and schools. Provincial and church authorities find schooling statistics useful in measuring the educational level of various parts of the country.

Teachers and students, authors and lecturers and many other private citizens write to the Bureau for population figures and the United Nations and its agencies reproduce in statistical publications census material supplied by the Bureau.

Last, but not least, the individual Canadian citizen uses census statistics even though he may not be conscious of this. He does this in reading his newspaper, listening to his radio, scanning the advertisements and in many other ways.

Census Documents

Eight documents will be used in the 1951 Census. These deal with (1) population, (2) blind and deaf, (3) housing, (4) agriculture, (5) irrigation, (6) live stock and greenhouses elsewhere than on farms, (7) commercial fishermen, and (8) distribution.

The population card has 29 questions to be asked of each person by the enumerator who will thereby record the name, address, relation to head of household, age, sex, marital status, birthplace, citizenship or nationality, origin, language, religion, education, occupation and employment, etc., of every individual.

The census of the blind and deaf is primarily to determine who are blind, deaf or blind and deaf, their ages, and the age at which their disability occurred. The record of the blind and deaf is to supplement the information obtained from the population card and to facilitate the work of educational and other institutions for those with such disabilities.

The housing document will record for every fifth house such things as type of dwelling, number of dwelling units in the structure, principal exterior material, need of repair, number of rooms, water supply, heating and other facilities, tenure and monthly rent.

The general farm schedule of the Census of Agriculture will record information about the farm operator; the location, area, tenure and value of the farm;

field crops, fruits, greenhouses and nurseries; condition of the land; irrigation, new breaking and forest fires; farm machinery and equipment; employment; live stock; forest products; dairy products, etc. This schedule was drawn up in consultation with Dominion and provincial Departments of Agriculture and other agricultural authorities, and in the light of suggestions made for a World Census of agriculture by the Food and Agriculture Organization of the United Nations.

Owing to its limited agricultural activity, there will be a separate, smaller agriculture schedule for Newfoundland. On the form for recording live stock and greenhouses elsewhere than on farms information will be collected about the numbers of cattle, poultry, bees, goats, swine, and the area of greenhouses and the value of their production, on holdings of less than three acres.

The enumeration booklet for commercial fishermen will classify fishermen as fishing on their own account, on shares or "lay", or for wages in four groupings according to the number of days spent in fishing. This information will provide the basis of a sample survey to be taken later in the year.

On the enumeration folio for the Census of Distribution the enumerators will enter details concerning the name, address, kind of business and relative sales-size classification of all retail, wholesale and service establishments. This will provide a mailing record which will serve as a basis for the conduct of a mail questionnaire survey early in 1952.

The irrigation schedule is applicable only to those sections of Canada where irrigation is an important aspect of the farm picture, and will supply basic data, for the Government Departments concerned, of the acreages affected and other relevant facts.

In connection with these somewhat elaborate and searching inquiries three points should be emphasized: (1) that no question has been inserted merely to gratify idle curiosity but only because the resulting tabulation of the information has a distinct bearing on basic social or economic conditions; (2) that census information obtained from or about an individual may not be used for taxation or for military purposes; and (3) that the answers given by the individual are absolutely confidential, every enumerator and all other employees of the Bureau being under oath not to reveal any single item about any individual under penalty of fine or imprisonment or both: the Bureau itself is also forbidden by the Statistics Act of 1948 to issue any statement that would lay bare any personal matter. Though the name of every person is taken down by the enumerator this is not for the purpose of associating the individual with any of the facts recorded but merely to serve as a check on the accuracy and completeness of the enumeration. The census is first and last for statistical purposes only. It should also be noted that enumerators are required to use courtesy and tact in collecting the information.

Organization for Taking the Census

To carry out this far-flung investigation, and to reduce its results to comprehensible and usable form, necessarily requires a large organization. Its nucleus exists in a small permanent staff constituting one of the branches of the Bureau of Statistics. This branch maintains connection between census and census, so that experience is continuous and cumulative. This organization has been expanded for the planning of the forthcoming Census by the creation of a Census Executive Committee, into which have been drawn other senior officers of the Bureau with appropriate administrative or technical skills, besides those of the Bureau's Demography (Census) Division.

In planning the field work the country is divided first into census districts, each of which is placed in charge of a census commissioner. There are approximately 260 of these census districts. Each district is then subdivided into subdistricts, varying in population from 600 to 800 in rural localities and from 1,000 to 1,500 in urban areas. The subdistricts, which number approximately 18,000, are allotted to census enumerators. These are the officials who go from door to door collecting the information required by the census. They are the only officials with whom the general public comes in direct contact. Their work is supervised by some 850 field supervisors.

Since one object of the census is to determine Parliamentary representation, the Act directs that the census districts and subdistricts shall correspond, respectively, "as nearly as may be, with the electoral divisions and subdivisions for the time being" i.e. with the federal constituencies and polling subdivisions.

Census commissioners will be appointed by the Minister of Trade and Commerce with the assistance of the Members of Parliament, and will be instructed by officers of the Dominion Bureau of Statistics. Working under the direction of the commissioners will be a number of field supervisors each responsible for a group of subdistricts. The supervisors will train the enumerators in their areas and give detailed supervision to their work. The enumerators will be recommended by the Commissioners on the basis of their suitability. Supervisors and enumerators are required to pass a practical test in the work before appointment. All field officers are paid, for the most part, on a piece work basis, i.e., according to the population, farms, etc., enumerated.

For a census that covers half a continent, embracing the most varied conditions of nature and settlement, uniformity of plan is clearly impossible. In Labrador, the northern parts of the Prairie Provinces, the Eastern Arctic, certain areas of Quebec and the remote parts of the North, the Census will be taken by the R.C.M.P. field officials of the Department of Resources and Development and of the Department of Citizenship and Immigration.

Practically every known means of locomotion will be used. Some enumerators will, of course, go on foot and others will use automobiles. In the far north, river steamers and dog sleds will be employed and to reach many of the settlements in Newfoundland it will be necessary to

go by ship or boat. In some districts aircraft will be used.

Compilation of Census Statistics

When the enumerators have finished their work, and it has all been checked by the field supervisors, the returns will be forwarded to the Bureau's regional offices at St. John's, N'f'ld., Halifax, N.S., Montreal, Que., Toronto, Ont., Winnipeg, Man., and Vancouver, B.C. There the returns will be in part processed by a staff of nearly 2,000 temporary employees. Formerly this work was done at Ottawa but, for the first time, the Bureau is decentralizing its activities in the matter of the census. This staff will punch on specially designed cards perforations showing by their location on the cards the exact information obtained at the census. The complete editing, coding and revision of the census material will be undertaken at the regional offices. The punched cards will be then forwarded to Ottawa for machine tabulation.

At Ottawa the cards will be run through a machine one at a time, an electrical impulse being allowed to pass whenever a hole appears. The machine is instructed by means of a control panel or switches how to interpret these impulses and what to do with them. One machine will sort all the cards into groups, i.e., those punched in the first position in the column being dealt with being piled in one stack, those punched in the second position in another stack, and so on. Another machine will add the figures punched in particular fields from each card in somewhat the same way as an adding machine. A third will count the cards punched for a certain characteristic, such as occupation, "carpenter". These functions of first reading the card and then sorting, adding and counting will be carried out by combinations of relays. A card takes 1/8 of a second to pass through a machine in which time it may be examined for 30 or 40 different items. The machines will print the basic tabulations resulting from these operations and the tabulations will then be analyzed, arranged, edited and published by the Bureau's central staff.

The Census of 1951 has been planned with the utmost care over a period of years. The experience of previous censuses in Canada and in other countries has been freely drawn upon. It contains no inquiry that is not fully justified and its uses for government, business, social work, justice, education, etc., are almost without limit. It merits the support of everyone as a patriotic duty notwithstanding anything that may be considered irksome. It is a duty towards one's neighbours, the whole fourteen million of them.

It helps to show that Canada merits the place that has been accorded her in the family of nations. It is a further link in recording the growth of our country from colony to nation and from nation to world power. It is efficient, business-like, democratic and modern. It is every Canadian's own business and he ought to look after it by giving it his unqualified support.

The Importance of the Census

The Census which will be taken in Canada in June 1951, will be the most important since the first Census of the Dominion in 1871. In the first place, it is at the half-way mark of the century and will give us more measurement of the progress made during that period. It will show us how we compare today in human resources, the greatest asset of a nation, and how the greatest of our primary industries - agriculture - compares with the beginnings of a half century of development.

In the second place, it will reveal many changes as compared with the Census of 1941. In the interval we have experienced the great cataclysm of the Second World War, which changed vastly the pattern of our economy. There have been important shifts in population as between provinces. Since the industrialization of the Dominion was considerably accelerated, more and more people moved to the cities and towns from rural areas. At the same time, the occupations of the people have undergone substantial changes. The population has also continued to become older on the average. These and many more changes from 1941 will be brought out in the 1951 Census.

New Techniques

The next Census will also be especially important because it will mark the introduction of drastic changes in technique. Canada is introducing new procedures which may set a new pattern for other countries. Owing to the importance of census data and their usefulness for a vast variety of purposes, it is essential that the census be completed with greater speed. In the past it has been a time-consuming process to get out the final results. The increased costs of taking a census make it imperative to find new means of shortening the collection and tabulation processes. The Bureau of Statistics has attacked the problem in several ways.

1. For the Population and Housing Census, the usual cumbersome 'line' schedule into which all information had to be written is being replaced by a 'mark-sense' card for each individual.

In a mark-sense document, a question is answered by making a mark in a pre-arranged space instead of writing the answer in full. Special electronic machines read the marks and produce automatically, as an 'end' product, a punched card. One great advantage of this new procedure is the elimination of most of the hand-punching of hollerith cards, which was one of the delaying factors in past censuses.

2. New machines - The electronic statistical machine, a recent invention, will be used for the census compilations. These machines are far superior to any hitherto available, including machines which had been invented in the Bureau for use in the 1931 Census and which increased census output immensely. The new electronic statistical machine can count and sort at the same time; it permits of a wider range of simultaneous cross-classifications, and is much speedier in operation. The machine-processing of documents and punch cards for

a Test Census revealed that the hand editing of documents to correct errors could be eliminated. The electronic statistical machine quickly and accurately rejects punch cards containing errors and indicates, in general groups, the type of error present on the card. Thus, a much more economical editing procedure is possible.

3. Decentralization will be an important aspect of the coming Census. Hitherto, all schedules have been returned to Ottawa for editing and processing. In the coming Census, six Regional Offices across Canada will act as sectional centres, controlling the enumeration in their territories and supervising the office processing of returns to the card-punching stage. This change has the advantage of spreading the work of processing returns across Canadian, and of having the agencies which do the initial processing close to the area covered, where difficulties can be quickly dealt with. Incidentally, some 1500 clerks are required for processing from three months to a year, and the housing situation makes it practically impossible to concentrate that number in any one centre.

A Census of the Americas

During the years 1950 and 1951, the world is experiencing census-taking activity on an unprecedented scale. Some 40 countries are engaged in this activity. In the Western Hemisphere, 22 countries are working co-operatively to take a Census of the Americas. This is the first attempt to gather vital economic and social data about the 300,000,000 inhabitants of North and South America at approximately the same census period.

This effort is unique in several ways. It is a co-operative programme co-ordinated by the Inter-American Statistical Institute, of which Canada is a member and in the work of which Canada's census experts have participated. While each nation will take its own census and publish the results, a minimum programme has been accepted by all, involving the use of certain basic minimum standards as to census questions, definitions and published results. Thus, as between countries, the statistics will be comparable.

Census-taking in South American countries in the past has varied widely in character. The range is from no census at all, through partial and indifferent, to adequate efforts. In some, the last attempt at a census was from 20 all the way to 50 years ago. It is obvious, therefore, that personnel capable of taking a census had to be trained from the beginning in some countries. To meet this need, the Inter-American Statistical Institute and the Food and Agriculture Organization of the United Nations organized classes in which considerable numbers were trained for census-taking.

Encouragement by U.N. Bodies

Special efforts to promote the taking of current censuses have gone farther afield than the Census of the Americas. The latter has the endorsement of the Economic and Social Council of the United Nations, together with its

Population and Statistical Commissions, the Food and Agriculture Organization and the International Labour Office. These same bodies have also strongly endorsed the plan for the World Census of Agriculture which is being promoted by the Food and Agriculture Organization, and have urged all countries to take a World Census of Population. The Population and Statistical Commissions have set out suggestions for questions, definitions and procedures, and FAO has done the same thing for the World Census of Agriculture. For this wider effort, training schools were organized in different sections of the world. Dr. O.A. Lemieux, the Director of the Census Division of the Dominion Bureau of Statistics, was lent for this purpose and instructed for three months in the training centre at Cairo.

These efforts by international organizations to promote census-taking on a world-wide scale spell out the need for reliable evaluations of the human and economic resources of all nations. For the formulation of policy to achieve their high objectives, the various United Nations organizations require a vastly improved record of the population, food and other resources of the nations. While census information in itself cannot yield the solution of the many problems concerned with social and economic welfare which confront the United Nations, these statistical data furnish a basis to which many other facts can be related and by which they may be appraised. In connection with the vital problem of population versus food supply, an adequate World Census would show, on one hand, the national and world production of food through the Agricultural Census and, on the other, through the Population Census, the numbers who have to be fed - thus providing a basic picture of needs in relation to supply.

It is not to be expected, however, that the long-cherished objective of a World Census enumerated according to an internationally recommended plan, complete and comparable as between nations, will be achieved in 1950 and 1951 or for many years thereafter. Nevertheless, through the efforts of international statistical organization, considerable gains in that direction will be achieved in the current census programme.

June 5, 1951

