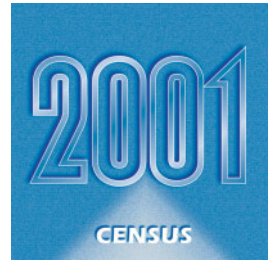




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Unpaid Work

2001 Census Technical Report



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Introduction

The 2001 Census required the participation of the entire population of Canada, i.e. some 30 million people distributed over a territory of 9 million square kilometres. An endeavour of this magnitude represented a tremendous challenge. Although there are high quality standards governing the collection and processing of the data, and in spite of efforts aimed at reducing non-response, for example through the use of communications, it is not possible to eliminate all errors. While this term does not necessarily imply any mistake as such, some element of error is bound to result in view of decisions to control census costs.

Statistics Canada is committed to explaining the methods and concepts used to collect and process its data and to providing users with information on the quality of the data produced, as well as other data characteristics which might limit their usefulness or interpretation.

The **2001 Census Technical Reports Series** includes 16 reports covering the variables of the 2001 Census of Population, as well as *Coverage* and *Sampling and Weighting*.

This report deals with unpaid work. It has been prepared by the Labour Statistics Division, with the support of staff from the Census Operations Division and the Social Survey Methods Division.

It presents a data quality analysis of the unpaid work data collected by the 2001 Census. More precisely, it examines the answers to the part questions 33 a), b) and c) which refer respectively to hours spent doing unpaid housework, hours spent looking after children, without pay; and hours spent providing unpaid care or assistance to seniors. A description of the process used to guarantee the quality of the variable is shown. This process includes the validation of the methodology, a data quality assessment and finally certain recommendations on data dissemination.

Users will find additional information on census concepts, variables and geography in the *2001 Census Dictionary* (Catalogue No. 92-378-XIE), and an overview of the complete census process in the *2001 Census Handbook* (Catalogue No. 92-379-XIE).

1. Data Collection and Coverage

This stage of the census process ensures that each of the 11.8 million households in Canada is enumerated. The census enumerates the entire Canadian population, which consists of Canadian citizens (by birth and by naturalization), landed immigrants, and non-permanent residents, together with family members who live with them. Non-permanent residents are persons living in Canada who have a Minister's permit, a student or employment authorization, or who are claiming refugee status, and family members living with them.

The census also counts Canadian citizens and landed immigrants who are temporarily outside the country on Census Day. This includes federal and provincial government employees working outside Canada, Canadian embassy staff posted to other countries, members of the Canadian Armed Forces stationed abroad, and all Canadian crew members of merchant vessels. Because people outside the country are enumerated, the Census of Canada is considered a modified *de jure* census.

1.1 General

1.1.1 Collection Methods

To ensure the best possible coverage, the country is divided into small geographic areas called enumeration areas (EAs). Each census representative is responsible for at least one EA. The optimal number of households in an EA ranges from 175 in rural areas to 600 in urban areas. In the 2001 Census, there were 42,851 enumeration areas in Canada, and 38,000 people were engaged in collecting the data.

In 2001, approximately 98% of households were self-enumerated. Self-enumeration requires that a census representative drop off a questionnaire at each household during the two weeks before Census Day. An adult or responsible member of the household is asked to complete the questionnaire for all members of the household, and then mails the questionnaire in a pre-addressed envelope.

Approximately 2% of households were enumerated in the 2001 Census using the canvasser enumeration method. In this case, a census representative visits the household and completes a questionnaire for the household by interview. This method is normally used in remote and northern areas of the country, and on most Indian reserves. The canvasser enumeration method is also used in certain urban areas where it is considered highly possible that respondents would be unlikely to return a questionnaire.

1.1.2 Special Coverage Studies

Since 100% coverage is virtually impossible with such a large survey, a number of checks are performed on the collection of data. These studies measure the extent of coverage errors that occur when dwellings or individuals are missed, incorrectly included or double-counted. These checks are the Vacancy Check, the Reverse Record Check and the Overcoverage Study. These studies are discussed in the 2001 Census Technical Report on *Coverage* (Catalogue No. 92-394-XIE), planned for release in December 2004.

1.2 Questionnaire and Instructions

Six types of questionnaires were used to collect the 2001 Census data. Of these, 4 out of 5 households used the 2A questionnaire (short form) and the remainder of Canadians used either the 2B, the 2C or the 2D questionnaire (long form). The 3A and 3B questionnaires were used in private dwellings to enumerate usual residents who wanted to be enumerated separately, and in collective dwellings.

The question on unpaid work was first asked in the 1996 Census. The respondents, by means of a three-part question, were asked to report the number of unpaid hours spent doing housework, looking after children, and providing care or assistance to seniors during the week prior to Census Day. The same question was asked in the 2001 Census. In both censuses, respondents had to choose the number of hours spent at each unpaid activity by checking the appropriate mark-in circle. The activities could take place at the same time. For example, a person preparing the meal while at the same time looking after his or her own children would report both the time spent on housework and the time spent looking after children. Persons 15 years of age and over were to answer the question on unpaid work.

Below is a reproduction of the unpaid work question that was asked in the 2001 Census.

HOUSEHOLD ACTIVITIES	
<p>Note: Last week refers to Sunday, May 6 to Saturday, May 12, 2001. In Question 33, report all time spent on each activity, even if two or more activities took place at the same time. See the Guide for examples.</p>	
<p>33 Last week, how many hours did this person spend doing the following activities:</p>	
<p>(a) doing unpaid housework, yard work or home maintenance for members of this household, or others? <i>Some examples include: preparing meals, washing the car, doing laundry, cutting the grass, shopping, household planning, etc.</i></p>	<p>05 <input type="radio"/> None 06 <input type="radio"/> Less than 5 hours 07 <input type="radio"/> 5 to 14 hours 08 <input type="radio"/> 15 to 29 hours 09 <input type="radio"/> 30 to 59 hours 10 <input type="radio"/> 60 hours or more</p>
<p>(b) looking after one or more of this person's own children, or the children of others, without pay? <i>Some examples include: bathing or playing with young children, driving children to sports activities or helping them with homework, talking with teens about their problems, etc.</i></p>	<p>11 <input type="radio"/> None 12 <input type="radio"/> Less than 5 hours 13 <input type="radio"/> 5 to 14 hours 14 <input type="radio"/> 15 to 29 hours 15 <input type="radio"/> 30 to 59 hours 16 <input type="radio"/> 60 hours or more</p>
<p>(c) providing unpaid care or assistance to one or more seniors? <i>Some examples include: providing personal care to a senior family member, visiting seniors, talking with them on the telephone, helping them with shopping, banking or with taking medication, etc.</i></p>	<p>17 <input type="radio"/> None 18 <input type="radio"/> Less than 5 hours 19 <input type="radio"/> 5 to 9 hours 20 <input type="radio"/> 10 to 19 hours 21 <input type="radio"/> 20 hours or more</p>

2. Data Processing

This part of the census process involved the processing of all the completed questionnaires, from the data capture of the information through to the creation of an accurate and complete retrieval database. The final database was transferred to the Data Quality Measurement Project to determine the overall quality of the data, and to the Dissemination Project for the production and marketing of the 2001 Census products and services. A new objective for 2001 was to create an image retrieval system giving access to the images (pictures) of all the census questionnaires and visitation records, so that subsequent processes requiring access to original census forms would not have to handle the thousands of boxes and paper documents, as in previous censuses.

2.1 General

2.1.1 Regional Processing

Regional Processing was responsible for the manual coding of the industry and occupation responses and the data capture of the questionnaire information into a machine-readable format for subsequent processing systems. Given the enormous volume of census questionnaires and information to be captured (representing over 4 billion keystrokes), Regional Processing has been contracting this work out since 1981 to the Canada Customs and Revenue Agency (CCRA), formerly called Revenue Canada. By using the trained staff and infrastructure already in place at CCRA, the census realized cost savings by partnering with another government agency. For the 2001 Census, approximately 2,800 CCRA employees were sworn to secrecy under the *Statistics Act* to perform the census work, under the same rules and regulations as those which apply to the employees of Statistics Canada.

When the collection activities for a specific enumeration area (EA) were completed, the questionnaires, along with their maps and visitation records, were shipped in EA boxes from the field collection units to one of eight designated CCRA tax centres across the country.

The first step was to prepare the completed questionnaires for data capture. This traditionally included the manual assignment of codes to written answers that were provided by the respondents. For 2001, most of the written responses were converted to codes using automated systems (see Section 2.1.4). The only written responses that had to be manually coded for the 2001 Census were the questions on industry and occupation contained in the long-form questionnaires. Research into the automation of the coding of these questions has begun, and it is expected that an automated system will be operational for the 2006 Census.

The industry responses were coded at CCRA according to the North American Industry Classification System (NAICS), which was introduced as a standard within Statistics Canada a few years ago. NAICS is designed to provide a common framework for Canada, the United States and Mexico, which will enable the production of industry statistics under the North American Free Trade Agreement (NAFTA). This meant a change for industry coding - in 1996, industry was coded using the 1980 Standard Industrial Classification (SIC). In order to allow longitudinal comparisons, the 2001 industry question was also coded using the 1980 SIC during the Automated Coding phase (see Section 2.1.4). This phase was carried out with more automated means than in previous censuses.

Once the questionnaires were received and registered at one of the CCRA tax centres, and the industry and occupation codes assigned, the next step was to sort, label and batch the questionnaires in preparation for data capture. The labels affixed to each questionnaire contained a unique sequence number that was used to control the movement of the questionnaire throughout the CCRA operations. For the first time, the label also included a bar code to facilitate the scanning of the questionnaire in the imaging operation (see Section 2.1.2).

Data capture was then performed by traditional manual keying at mainly mainframe terminals. Verification of the accuracy of the data capture operation was done by selecting a sample of questionnaires that were already key-entered and capturing the information from the questionnaires in this sample a second time. Quality control statistics were produced by comparing the two sets of captured information.

As the data were keyed, they were transmitted in real time over dedicated communication lines to the CCRA computer in Ottawa. Within 24 hours, the data were then transferred to tape cartridges and transported by bonded carrier to Statistics Canada, where they were loaded into the mainframe computer. Questionnaires were reassembled into their EA boxes for shipment to Statistics Canada's 2001 processing site in Ottawa.

2.1.2 Imaging

In previous censuses, the remaining processing steps that required access to the questionnaires and visitation records used the paper documents. For 2001, the need to handle the paper was eliminated by imaging (scanning) all the questionnaires and visitation records as soon as they arrived at the 2001 processing site from the Canada Customs and Revenue Agency (CCRA) tax centres. Subsequent operations then had access to the questionnaires and visitation record images, using an image retrieval system, rather than using the paper documents.

As the enumeration area (EA) boxes arrived at the 2001 processing site, they were registered. Then, the documents were prepared for imaging. Since the questionnaires and visitation records were in booklet format, they had to be cut into separate sheets in order to be run through the scanners. Following the cutting, since the 2A questionnaire was actually two booklets glued together (one English and the other French), the unused portion had to be separated from the completed portion. Extra material that was included with the questionnaires was removed (e.g., paper clips and notes). The questionnaires were then batched by EA for imaging.

The 13 million documents were imaged using 15 high-volume scanners running five days a week, two shifts per day. The geographic identifier that was required to identify each document image was automatically assigned using the bar code on the label affixed during the data-capture operations at CCRA (see Section 2.1.1). Quality control was performed to ensure that each document contained the right number of pages, and that the number of questionnaires by form type was correct for each EA. A problem-resolution operation resolved any problems that arose. The images were then written to optical platters for subsequent access and archiving. As the questionnaires were scanned, their images were also kept in magnetic storage for immediate access by the Interactive Verification activities (see Section 2.1.3).

The images on the optical platters are being kept in a secure location and are only accessible to authorized Statistics Canada employees from within the secure location.

2.1.3 Interactive Verification

The main objective of Interactive Verification was to identify and correct errors in the data, for which proper resolution required reference to the images of the questionnaires and/or visitation records. A detailed set of edits was applied to the captured data to identify possible errors, such as households with missing or duplicate persons, incorrect enumeration of foreign or temporary residents, questionnaires assigned to the wrong household, or misclassification of households as occupied or unoccupied. A thorough review of the information on all relevant census forms was conducted to determine the appropriate corrective action for each edit failure. In some cases, this required adding and/or deleting persons or dwellings; consequently, this process had an impact on the census counts.

As the census data arrived on cartridges from the Canada Customs and Revenue Agency (CCRA), they were loaded into Statistics Canada's computers, ready for the Interactive Verification activities. A series of automated "structural" edits were performed, mainly to verify the information filled out by the Census

Representative on the front cover of the questionnaire. These edits included, among other things, matching questionnaire and household types, cross-checking the number of questionnaires and people enumerated, and verifying that the geographic identifiers were unique. Some edits were also performed on the income information, so that anomalies could be extracted and examined by income subject-matter experts.

All edits were done by enumeration area (EA). Errors were flagged, and then corrected by referring to the images of the questionnaires and visitation record for that EA. The corrections were made to the electronic data using an interactive PC-based system. Some of the corrections were also noted on the questionnaire images, using a process commonly called "annotation".

Once the EA edits were completed, automated and manual processes were used to verify the block number that the Census Representative had copied from the EA map onto the questionnaire and Visitation record (VR).

A National Block Program has been implemented for the first time in 2001. A "block" is basically the smallest area bounded by streets or roads, lakes and rivers. In urban centres, "blocks" are generally recognizable city blocks. In rural areas, "blocks" are much larger areas, but are still bounded by identifiable features, with no significant feature splitting an area. These blocks are added together to create the EAs for data collection purposes, and the dissemination areas (DAs) for the dissemination of census products and services.

During the field collection operations, as census representatives delivered a questionnaire to each dwelling within their EA, they wrote the person's name (if possible) and the address in their VRs. At the same time, they copied the VR line number from the VR onto the questionnaire, to uniquely identify the questionnaire for that dwelling. As well, they identified the block number for the dwelling from their EA map and copied the number into the VR and onto the questionnaire. These block numbers were data-captured, so that all the dwellings in Canada could be identified as belonging to a particular block.

As a final step in the Interactive Verification process, the data were reformatted and forwarded for the final processing steps, namely Automated Coding and Edit and Imputation.

Interactive Verification also performed some special processing to ensure that Canadians living outside Canada on Census Day (people aboard coast guard and Canadian Armed Forces vessels, Canadian-registered merchant vessels, and diplomatic and military personnel) were enumerated.

2.1.4 Automated Coding

Automated coding matched the write-in responses that were "data-captured" from the long-form questionnaires during Regional Processing (see Section 2.1.1) to entries in an automated reference file/classification structure containing a series of words or phrases and corresponding numerical codes. Although a large percentage of write-in responses can be coded in a purely automated manner, a series of responses always remains unmatched. Specially trained coders and subject-matter experts reviewed all unmatched responses and, with the assistance of PC-based interactive coding systems, assigned the appropriate numerical code after examining responses to other questions and from other members of the household. Automated coding was applied to write-in responses for the following questions on the long form (2B):

- relationship to Person 1;
- home language;
- non-official languages;
- first language learned in childhood (mother tongue);
- language of work (new in 2001);
- place of birth;
- place of birth of parents (new in 2001);

- citizenship;
- ethnic origin (ancestry);
- population group;
- Indian Band/First Nation;
- place of residence 1 year ago;
- place of residence 5 years ago;
- major field of study;
- religion (last asked in 1991);
- place of work;
- industry according to the 1980 SIC (first time for automated coding in 2001).

As the responses for a particular variable were coded, the data for that variable were sent to the Edit and Imputation phase.

2.1.5 Edit and Imputation

2.1.5.1 General

The data collected in any survey or census contain omissions or inconsistencies. These errors can be the result of respondents answering the questions incorrectly or incompletely, or they can be due to errors generated during processing. For example, a respondent may be reluctant to answer a question, may fail to remember the right answer or may misunderstand the question. Census staff may code responses incorrectly or may make other mistakes during processing.

Prior to Edit and Imputation, the questionnaires underwent some basic manual edits during collection. Field staff reviewed the questionnaires for missing responses or unacceptable multiple responses. Such problems were resolved by contacting the respondents and obtaining the required information. Following collection, Interactive Verification (see Section 2.1.3) performed some basic structural edits, where the images of the questionnaires and visitation records were referenced as necessary.

The final clean-up of the data was done in Edit and Imputation and was, for the most part, fully automated. It applied a series of detailed edit rules that identified any missing or inconsistent responses. These missing or inconsistent responses were corrected most of the time by changing the values of as few variables as possible through imputation. Imputation invoked "deterministic" and/or "minimum-change "hot deck"" methods. For deterministic imputation, errors were corrected by inferring the appropriate response value from responses to other questions. For minimum-change "hot deck" imputation, a record with a number of characteristics in common with the record in error was selected. Data from this "donor" record were borrowed and used to change the minimum number of variables necessary to resolve all the edit failures.

Two different automated systems were used to carry out this processing.

The **N**earest-neighbour **I**mputation **M**ethod (NIM), developed for the 1996 Census to perform Edit and Imputation for basic demographic characteristics such as age, sex, marital status, common-law status and relationship to Person 1, was expanded for 2001 and implemented in a system called CANCEIS (**C**ANadian **C**ensus **E**dit and **I**mputation **S**ystem) to include Edit and Imputation for such variables as industry, place of work, mode of transportation and mobility. As in 1996, CANCEIS continued to allow more extensive and exact edits to be applied to the response data, while preserving responses through minimum-change "hot deck" imputation.

SPIDER (**S**ystem for **P**rocessing **I**nstructions from **D**irectly **E**ntered **R**equirements) was used to process the remaining census variables, such as mother tongue, dwelling and income. This tool translated subject-matter requirements, identified through decision logic tables, into computer-executable modules. SPIDER performed both deterministic and "hot deck" imputation.

2.1.5.2 Dwelling Classification Study

The Dwelling Classification Study takes a sample of dwellings declared either unoccupied or absent during the collection process. Later, the DCS returns to these dwellings to determine if, on Census Day, they were occupied, unoccupied or should not have been listed because they did not meet the definition of a census dwelling. If a dwelling was occupied, one of two separate adjustments is made to the census database. If the dwelling was listed as vacant in the census, then a technique, called "random additions", was applied to add households and persons to the census database. In the 2001 Census, 111,628 households and 222,720 persons were added to the database to account for the estimated number of persons living in vacant dwellings. The second adjustment was concerned with absent households. These were adjusted by creating a new household size for all such dwellings on the census database. A total of 143,681 households with 317,587 persons were added to the census database through this adjustment.

2.1.5.3 Weighting

Data on age, sex, marital status, common-law status, mother tongue and relationship to Person 1 were collected from all Canadians. However, the bulk of the information gathered in the census came from the 20% sampling of the population. Weighting, applied to the respondent data after Edit and Imputation, was used to adjust the census sample to represent the whole population.

The weighting method produced fully representative estimates from the sample data. For the 2001 Census, weighting employed a methodology known as calibration (or regression) estimation. Calibration estimation started with initial weights of approximately 5 and then adjusted them by the smallest possible amount needed to ensure closer agreement between the sample estimates (e.g., number of males, number of people aged 15 to 19) and the actual population counts for age, sex, marital status, common-law status and household size.

Once invalid and non-response data were corrected, they were transferred to the final national retrieval databases for subsequent data quality studies and dissemination.

2.2 Processing of the Variables on Unpaid Work

2.2.1 General

Captured data transmitted to Statistics Canada by Canada Customs and Revenue Agency (CCRA) were stored in an "edit and imputation" database to resolve multiple, missing and conflicting responses.

2.2.2 Edit and Imputation

Table 2 presents a review of the various processing steps for the 2001 Census variables on unpaid work, that is, data entry, multiple-response coding and non-response imputation. It is interesting to note that the final distribution of the results has not significantly changed after the processing of the variables, if we compare it to the initial distribution of single responses (column [a]).

Table 2. Imputation of Multiple Responses and Missing Values for the Variables on Unpaid Work, by Hour Categories, Unweighted Data, Canada, 2001 Census

	Single Response a)		Multiple Response b)		Total Imputations c)		Total d) a) + c)	
	Number	%	Number	%	Number	%	Number	%
Housework								
Total	4,689,865	100.0	28,020	100.0	159,525	100.0	4,849,385	100.0
None	491,755	10.5	8,420	30.0	21,565	13.5	513,320	10.6
Less than 5 hours	1,078,585	23.0	7,335	26.2	38,240	24.0	1,116,825	23.0
5 to 14 hours	1,458,895	31.1	7,520	26.8	46,190	29.0	1,505,085	31.0
15 to 29 hours	925,455	19.7	3,380	12.1	28,735	18.0	954,195	19.7
30 to 59 hours	509,020	10.9	1,370	4.9	16,520	10.4	525,545	10.8
60 hours or more	226,145	4.8	0	0.0	8,270	5.2	234,415	4.8
Child Care								
Total	4,635,110	100.0	15,960	100.0	214,275	100.0	4,849,385	100.0
None	2,817,120	60.8	7,855	49.2	139,035	64.9	2,956,160	61.0
Less than 5 hours	450,730	9.7	2,180	13.7	20,375	9.5	471,105	9.7
5 to 14 hours	461,830	10.0	2,580	16.2	19,135	8.9	480,970	9.9
15 to 29 hours	323,400	7.0	1,935	12.1	12,745	5.9	336,140	6.9
30 to 59 hours	250,275	5.4	1,410	8.8	9,795	4.6	260,070	5.4
60 hours or more	331,750	11.8	0	0.0	13,190	9.5	344,940	11.7
Care or Assistance to Seniors								
Total	4,643,920	100.0	8,265	100.0	205,100	100.0	4,849,385	100.0
None	3,769,735	81.2	6,715	81.3	165,750	80.8	3,935,760	81.2
Less than 5 hours	543,670	11.7	995	12.0	23,005	11.2	566,700	11.7
5 to 9 hours	187,410	4.0	400	4.9	8,635	4.2	196,065	4.0
10 to 19 hours	68,730	1.5	155	1.9	3,450	1.7	72,200	1.5
20 hours or more	74,380	1.6	0	0.0	4,265	2.1	78,665	1.6

2.2.3 Deterministic Imputation

Column (b) of table 2 shows the deterministic assignment of the multiple response to the lowest reported value. The lowest value was chosen to avoid assigning a disproportionate number of persons to the highest hour category, while still retaining one of the responses written on the questionnaire.

Overall, multiple response was a minor problem. The question on unpaid housework had the highest incidence of multiple response with 28,020 (0.6%) cases unweighted, while the questions on child care and care or assistance provided to seniors had 15,960 (0.3%) and 8,265 (0.2%) cases respectively.

2.2.4 Donor Imputation

Donor imputation of non-response was done using SPIDER (System for Processing Instructions from Directly Entered Requirements). The process used to edit and impute unpaid work modules imputed the data on unpaid housework and child care separately from the data on the unpaid care or assistance provided to seniors. It was felt that in selecting a donor, characteristics that might determine the number of hours spent on unpaid housework and child care, such as the presence of children, would not be relevant to the care or assistance provided to seniors. Separating the imputation process into two modules allowed for the use of different stratification rules and auxiliary constraints for the two sets of variables.

2.2.5 Stratification Rules

The stratification rules used for the variables on unpaid housework and child care first grouped persons living in collective dwellings according to the type of collective dwelling they lived in. Persons in occupied private dwellings, on the other hand, were further stratified by age and sex. The variables used as auxiliary constraints in the choice of a donor were document type, five-year age groups, legal marital status, presence of children, number of children, hours of paid work and place of work.

As a result of the imputation process, excluding records for overseas households (2C questionnaire), a perfect donor was found in approximately 92% of cases. A donor was found in all cases. Column (d) of Table 2 shows the distribution of the imputed responses.

The stratification rules used for the variable on unpaid care or assistance provided to seniors again grouped persons living in collective dwellings according to the type of collective dwelling they lived in. Persons in occupied private dwellings, however, were stratified by sex, membership in an economic family and presence of a senior (defined as a person 60 years of age and over) in the economic family. Persons in families with no senior present were further divided by age into persons under 45 years and persons 45 years and over. The auxiliary constraints used to select a donor were document type, five-year age groups, legal marital status, place of work, hours of paid work and age group of senior.

Excluding records for overseas households (2C questionnaire), a perfect donor was found in 98% of cases. A donor was found in all cases. Column (d) of Table 2 shows the distribution of the imputed responses.

Appendix B presents the 1996 Census final distributions of the three variables on unpaid work, by sex, for the population 15 years of age and over, excluding institutional residents, for Canada, provinces, territories and census metropolitan areas.

3. Data Quality Measurement

3.1 Methodology and Scope

Few sources of data on unpaid work presently exist. Data from the 2001 Census have been compared to data from the 1996 Census and from the 1998 General Social Survey (GSS) on Time Use (Cycle 12).

Since the GSS sample excludes the residents of the Territories, the comparison between GSS data and data from the 2001 Census will cover only Canada and the provinces, but the comparison between data from the 1996 and 2001 Censuses will cover the country as well as the provinces and the territories.

3.2 Data Sources

3.2.1 1996 and 2001 Censuses

The question on unpaid work asked in the 1996 and 2001 Censuses was identical. For these two years, the question appeared just before the set of questions on paid work. However, in the 2001 Census questionnaire, the question appeared on the page preceding the one where the questions on paid work were found, in order to prevent any confusion between the two concepts.

In 1996 and 2001, the answers to the unpaid work question were in the form of hour categories. The housework and child care variables had the same number of hour categories in both censuses (i.e., "None", "Less than 5 hours", "5 to 14 hours", "15 to 29 hours", "30 to 59 hours", and "60 hours or more"). The variable on unpaid care or assistance provided to seniors included an extra hour category in 2001: the "10 hours or more" category, the highest category of hours in 1996, was disaggregated to form the "10 to 19 hours" and the "20 hours or more" categories.

This disaggregation aimed at measuring the possible increase in hours spent providing unpaid care or assistance to seniors, on account of the general aging of the population. We have not observed an increase of the number of hours for this variable in 2001. It is however possible that the increase will come later because of the progression in the aging of the population.

In 1996 and 2001, the question was asked only of persons 15 years of age and over. The reference period for the 1996 and 2001 Censuses was set at the same time of year, that is from Sunday, May 5, to Saturday, May 11, in 1996 and from Sunday, May 6, to Saturday, May 12, in 2001.

3.2.2 1998 General Social Survey on Time Use

The 1998 General Social Survey (GSS) on Time Use (Cycle 12) asked respondents to report the number of unpaid hours spent looking after children, providing care or assistance to seniors, or doing housework in the week preceding that of the survey. The 1998 GSS also included a set of questions on volunteer work. The GSS sample was made up of nearly 14,000 persons 15 years of age and over who resided in the provinces. The residents of the Yukon and the Northwest Territories as well as the institutional residents were excluded. There was a 77.6% response rate; thus, 10,749 completed questionnaires make up the 1998 ESG data file.

3.2.3 Differences Between the Census and the General Social Survey

The data from Cycle 12 of the 1998 General Social Survey (GSS) on Time Use were collected every month, from February 1998 to January 1999. The sample was evenly distributed over the whole twelve-month period to offset the effects of seasonal variations. The Cycle 12 GSS data were collected using the

computer-assisted telephone interviewing (CATI) method. The reference period for the GSS was the week preceding the survey.

Unlike the GSS data, the census data were collected using self-enumeration. The reference period of the questions on unpaid work was the week preceding the census (i.e. from Sunday, May 6, to Saturday, May 12, 2001). Seasonal aspects may affect the number of hours spent doing unpaid work in the case of the census.

Both in the census and the GSS there were three questions on unpaid work: child care, care or assistance provided to seniors and housework. The GSS used a daily diary to report the specific number of hours spent on the various unpaid activities of the respondents, including volunteer activities, whereas persons responding to census questions on unpaid work had to report the number of hours by categories (for example, "None", "Less than 5 hours", "5 to 14 hours", "15 to 29 hours", "30 to 59 hours", and "60 hours or more" for housework and child care).

For the 1998 GSS on Time Use, contrary to the 1992 GSS, the persons benefitting from unpaid housework, child care, and care or assistance provided to seniors could be either household members or non-members. This was also the case for the 1996 and 2001 Censuses.

When responding to the census question, a household member must report the time spent on unpaid activities by all household members 15 years of age and over. On the other hand, the GSS focuses on the time spent on unpaid activities only for the respondent, as long as he or she is 15 years of age and over.

For the GSS, only the respondents who are members of a household comprising at least one child under 15 years of age must answer the question on unpaid child care: the concept on unpaid child care applies only to children who are household members. For the census, the same question applies to any child, regardless of age and household membership, as long as the care given be unpaid.

3.3 Data Quality Indicators

3.3.1 Non-response

Non-response is defined as the number of persons 15 years of age and over (excluding institutional residents) who have not responded to the questions on unpaid work, divided by the total number of persons 15 years of age and over.

Tables 1a and 1b present the non-response rates for unweighted and weighted data for Canada and the provinces and territories, by sex, for each of the three unpaid work variables. In all cases, the weighting had the effect of reducing the non-response rate. This reduction is particularly important for the Yukon non-response rate which goes from 8.2% for unweighted data to 5.2% when the data are weighted (data for unpaid housework). The unweighted rates are generally higher than the weighted ones because the non-response is higher in collective dwellings and in the enumeration areas in which a Northern and Reserves Questionnaire (Form 2D) was used. In these two cases, there is no sampling. Therefore, after weighting the data from the questionnaires for occupied private dwellings (Form 2B), the global non-response rate diminishes.

A review of the non-response rate for weighted data shows that the variable on unpaid housework has the lowest non-response rate of the three variables, while the variables on unpaid child care and on unpaid care or assistance provided to seniors have relatively higher rates. Since there is only one question on unpaid work which is presented in three parts, it is possible that some respondents do not realize that they must respond to the three part questions; they may be responding solely to the part question regarding housework.

It is also possible that some respondents simply avoid responding to questions that do not concern them instead of checking the "None" mark-in circle. This could be the case, for example, of some respondents who have no children at home or who do not provide care to seniors.

The non-response rate is generally higher for males than for females. In fact, this is the case in all instances, except in some territories and in Prince Edward Island (in the Yukon Territory and in Nunavut, the unweighted data rate for males is lower, and in Nunavut, the weighted data rate for males is lower). As for 1996, the Yukon Territory has the highest non-response rate, whereas Newfoundland has the lowest rate. The 2001 non-response rate has increased in comparison to the 1996 rate for the variables on housework and care or assistance provided to seniors. The variable on child care shows a very slight decrease in its non-response rate in nearly all of Canada, except in the Northwest Territories. Overall, the 2001 Census shows an increase of the non-response rate for almost all of its variables: the variable on unpaid work is no exception.

Table 1a. Non-response Rate for Variables on Unpaid Work, by Sex, Unweighted Data, Canada, Provinces and Territories, 1996 and 2001 Censuses

	Housework			Child Care			Care or Assistance Provided to Seniors		
	Both sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
	percentage								
2001									
Canada	2.7	2.9	2.5	4.1	4.4	3.8	4.1	4.3	3.8
Newfoundland and Labrador	1.7	1.7	1.6	2.8	2.9	2.6	2.8	2.9	2.6
Prince Edward Island	2.4	2.3	2.5	3.8	3.8	3.8	3.9	3.8	3.9
Nova Scotia	1.8	1.9	1.7	3.1	3.3	2.9	3.0	3.2	2.8
New Brunswick	2.0	2.2	1.9	3.2	3.4	3.1	3.2	3.3	3.0
Quebec	2.1	2.2	2.0	3.7	3.9	3.6	3.4	3.6	3.3
Ontario	3.0	3.2	2.8	4.4	4.6	4.1	4.4	4.7	4.2
Manitoba	2.3	2.3	2.2	3.5	3.6	3.5	3.6	3.6	3.5
Saskatchewan	2.0	2.2	1.9	3.1	3.3	2.9	3.1	3.3	3.0
Alberta	2.6	2.9	2.4	3.9	4.3	3.6	4.0	4.3	3.7
British Columbia	3.7	4.1	3.3	5.0	5.6	4.5	5.1	5.6	4.6
Yukon Territory	8.2	8.0	8.4	8.6	8.3	8.9	8.5	8.3	8.7
Northwest Territories	5.3	5.5	5.1	5.8	6.1	5.5	6.0	6.2	5.7
Nunavut	5.1	4.9	5.3	5.3	5.2	5.5	5.4	5.2	5.6
1996									
Canada	1.5	1.6	1.4	3.9	4.1	3.6	2.6	2.7	2.4
Newfoundland and Labrador	1.0	1.0	1.0	2.9	3.0	2.8	1.7	1.7	1.6
Prince Edward Island	1.4	1.5	1.2	4.2	4.5	3.9	2.6	2.8	2.4
Nova Scotia	1.3	1.3	1.2	4.2	4.5	3.9	2.4	2.5	2.4

	Housework			Child Care			Care or Assistance Provided to Seniors		
	Both sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
	percentage								
New Brunswick	1.4	1.5	1.3	3.6	4.1	3.2	2.2	2.4	2.0
Quebec	1.3	1.3	1.2	2.7	2.8	2.5	2.2	2.2	2.2
Ontario	1.5	1.7	1.4	4.3	4.6	4.0	2.7	2.9	2.5
Manitoba	1.2	1.3	1.1	3.4	3.7	3.2	2.0	2.2	1.9
Saskatchewan	1.2	1.3	1.2	3.6	3.8	3.4	2.2	2.3	2.1
Alberta	1.6	1.7	1.4	4.2	4.5	3.8	2.5	2.7	2.3
British Columbia	1.9	2.1	1.8	5.0	5.4	4.7	3.3	3.6	3.1
Yukon Territory	5.1	5.6	4.4	6.7	7.4	5.9	5.7	6.4	4.8
Northwest Territories	2.2	2.3	2.1	3.2	3.4	3.1	2.7	2.8	2.6

Table 1b. Non-response Rate for Variables on Unpaid Work, by Sex, Weighted Data, Canada, Provinces and Territories, 1996 and 2001 Censuses

	Housework			Child Care			Care or Assistance Provided to Seniors		
	Both sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
	percentage								
2001									
Canada	2.2	2.2	2.1	3.5	3.7	3.4	3.5	3.7	3.4
Newfoundland and Labrador	1.5	1.5	1.5	2.8	2.9	2.6	2.7	2.8	2.6
Prince Edward Island	2.0	2.1	1.8	3.4	3.5	3.3	3.4	3.6	3.3
Nova Scotia	1.7	1.8	1.7	3.0	3.2	2.8	2.9	3.1	2.8
New Brunswick	2.0	2.0	1.9	3.1	3.3	3.0	3.1	3.2	3.0
Quebec	1.9	2.0	1.8	3.5	3.7	3.4	3.3	3.4	3.1
Ontario	2.2	2.3	2.2	3.7	3.8	3.5	3.7	3.9	3.6
Manitoba	1.9	1.9	1.9	3.0	3.1	2.9	3.0	3.0	2.9
Saskatchewan	1.8	1.9	1.7	2.9	3.0	2.7	2.8	3.0	2.7
Alberta	2.2	2.3	2.0	3.3	3.5	3.1	3.3	3.5	3.1
British Columbia	2.7	2.8	2.5	4.1	4.3	3.9	4.2	4.4	4.0
Yukon Territory	5.2	5.4	5.0	6.0	6.1	5.9	5.8	6.0	5.7
Northwest Territories	5.3	5.5	5.0	5.8	6.1	5.5	6.0	6.2	5.7
Nunavut	5.1	4.9	5.3	5.3	5.2	5.5	5.4	5.2	5.6
1996									
Canada	1.1	1.1	1.0	3.6	3.8	3.4	2.2	2.3	2.1
Newfoundland and Labrador	0.8	0.8	0.9	2.9	3.1	2.8	1.6	1.6	1.6

	Housework			Child Care			Care or Assistance Provided to Seniors		
	Both sexes	Males	Females	Both Sexes	Males	Females	Both Sexes	Males	Females
	percentage								
Prince Edward Island	1.1	1.1	1.0	4.0	4.2	3.8	2.4	2.5	2.2
Nova Scotia	1.0	1.0	1.0	4.0	4.4	3.8	2.2	2.3	2.2
New Brunswick	1.0	1.0	0.9	3.2	3.6	2.9	1.8	1.9	1.7
Quebec	0.9	0.9	0.8	2.3	2.4	2.2	1.8	1.9	1.8
Ontario	1.1	1.1	1.1	4.0	4.2	3.7	2.3	2.4	2.3
Manitoba	0.9	1.0	0.9	3.5	3.7	3.3	1.9	2.0	1.7
Saskatchewan	0.9	1.0	0.9	3.6	3.9	3.4	2.0	2.1	1.9
Alberta	1.2	1.2	1.1	3.9	4.2	3.7	2.2	2.3	2.1
British Columbia	1.4	1.4	1.3	4.7	4.9	4.5	2.9	3.0	2.8
Yukon Territory	3.3	3.6	3.1	5.7	6.2	5.1	4.1	4.5	3.6
Northwest Territories	2.2	2.3	2.1	3.2	3.4	3.1	2.7	2.8	2.6

4. Comparison of Census Data with General Social Survey

Unpaid work data from the 2001 Census were compared to those of the 1996 Census and the 1998 General Social Survey (GSS) on Time Use (Cycle 12). Census data pertaining to the Labour Force Survey universe are used when a comparison is made with GSS data.

4.1 Unpaid Housework

Table 3 presents data on unpaid housework from the 1996 and 2001 Censuses for Canada and the provinces and territories. Between these censuses, at the Canada level, we note a slight decrease in the number of persons who spend either no time or 30 hours or more doing unpaid housework, and a slight increase between these two limits.

The review of the distribution by province reveals similar tendencies from 1996 to 2001. At the Canada level, the proportion of individuals 15 years of age and over who spend no time doing unpaid housework and the proportion of those who spend 30 hours or more on that activity have slightly decreased, whereas the proportion of individuals spending less than 30 hours doing unpaid housework has slightly increased. These tendencies appear in most of Canada. For these two censuses, Newfoundland and Labrador as well as Nunavut showed the highest proportions of individuals spending no time doing unpaid housework.

In 1996 and 2001, Saskatchewan was the province showing the lowest proportion of respondents who spent no time doing unpaid housework in the reference week. Lastly, it is in Quebec that the lowest proportion of individuals spent 60 hours or more doing unpaid housework in 1996 and 2001.

Tables 4a to 4d present the percentage distribution of the population 15 years of age and over by hour categories of unpaid housework and by sex, age, legal marital status, and labour force activity, respectively. Among the changes recorded between 1996 and 2001, fewer females spent long hours doing unpaid housework in 2001, while the reverse is true for males. In addition, the proportion of males who spent no time doing unpaid housework dropped significantly compared to the drop for females.

The decrease in the proportion of males spending no time doing unpaid housework was observed in all age groups and for all legal marital statuses, regardless of the labour force activity. Only unemployed persons showed a very similar proportion in 1996 and 2001.

Table 5 enables us to compare 2001 Census data with those of the 1998 General Social Survey (GSS). In these two surveys, the question on unpaid housework was identical. The two data sources show similar counts except for the "60 hours or more" category for which the census shows a number of responses more than twice as high as the one for the GSS, mainly attributable to females. Respondents who had refused to answer this question for the GSS, or who indicated that they did not know the number of hours spent doing unpaid housework, were excluded from the GSS percentage calculations. For the census, these types of responses were imputed. It is therefore possible that the difference be attributable partly to imputation or to the differences in non-response processing.

Table 3. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Doing Unpaid Housework, Canada, Provinces and Territories, 1996 and 2001 Censuses

	None		Less Than 5 Hours		5 to 14 Hours		15 to 29 Hours		30 to 59 Hours		60 Hours or More	
	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001
	percentage											
CANADA	11.5	10.4	22.7	23.5	30.3	31.5	19.2	19.7	11.4	10.6	4.8	4.3
Newfoundland and Labrador	15.0	13.0	15.9	16.6	25.3	26.6	19.1	20.5	15.3	14.5	9.5	8.8
Prince Edward Island	12.8	10.2	20.0	20.2	28.1	30.5	20.2	22.2	13.5	12.6	5.4	4.5
Nova Scotia	12.9	11.2	19.4	20.2	28.1	30.0	19.8	20.7	13.4	12.4	6.3	5.6
New Brunswick	13.3	11.3	19.7	19.9	27.9	29.9	20.1	21.5	13.1	12.3	5.9	5.1
Quebec	12.1	10.9	24.8	26.0	30.2	31.9	18.6	18.8	10.5	9.4	3.7	3.0
Ontario	11.4	10.3	22.7	23.3	30.9	32.0	19.4	20.0	11.1	10.4	4.5	4.1
Manitoba	10.8	9.4	20.4	21.5	30.2	31.1	20.1	20.6	12.5	11.7	6.0	5.7
Saskatchewan	9.8	8.9	19.5	19.8	29.1	29.9	20.0	21.0	14.2	13.5	7.4	7.0
Alberta	10.4	9.4	22.9	23.7	31.0	31.8	18.9	19.3	11.5	10.7	5.3	5.1
British Columbia	11.1	10.1	22.6	23.6	30.7	31.4	19.3	19.7	11.5	10.8	4.9	4.4
Yukon Territory	10.8	9.7	18.2	18.9	30.9	32.4	22.2	22.8	11.4	11.2	6.4	5.0
Northwest Territories	10.2	10.3	20.0	20.6	32.2	32.4	20.2	21.0	10.4	9.5	7.0	6.1
Nunavut	14.2	12.7	17.5	21.5	26.2	28.9	19.3	16.8	12.2	9.9	10.6	10.2

Table 4a. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Doing Unpaid Housework and by Sex, Canada, 1996 and 2001 Censuses

Sex	Both Sexes		Males		Females	
	1996	2001	1996	2001	1996	2001
	percentage					
None	11.5	10.4	15.6	13.3	7.7	7.5
Less than 5 hours	22.7	23.5	30.1	30.0	15.7	17.4
5 to 14 hours	30.3	31.5	32.7	33.5	28.1	29.7
15 to 29 hours	19.2	19.7	14.3	15.4	23.9	23.9
30 to 59 hours	11.4	10.6	5.6	5.9	16.9	14.9
60 hours or more	4.8	4.3	1.8	1.9	7.6	6.5

Table 4b. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Doing Unpaid Housework and by Age, Canada, 1996 and 2001 Censuses

Age Groups	15–24 Years		25–44 Years		45–64 Years		65 Years and Over	
	1996	2001	1996	2001	1996	2001	1996	2001
	percentage							
None	19.2	18.9	7.5	6.7	9.6	7.7	17.9	15.4
Less than 5 hours	44.8	47.4	20.3	21.2	17.0	17.4	14.5	15.3
5 to 14 hours	24.8	24.0	33.4	35.2	31.6	33.8	25.7	26.3
15 to 29 hours	7.2	6.5	21.2	21.5	22.6	23.7	21.1	21.8
30 to 59 hours	2.6	2.1	11.5	10.2	14.2	12.8	16.3	16.3
60 hours or more	1.4	1.1	6.1	5.2	5.0	4.6	4.6	4.8

Table 4c. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Doing Unpaid Housework and by Legal Marital Status, Canada, 1996 and 2001 Censuses

Legal Marital Status	Legally Married		Separated or Divorced		Widowed		Never Legally Married	
	1996	2001	1996	2001	1996	2001	1996	2001
percentage								
None	7.8	6.6	10.3	8.9	18.5	17.1	16.7	15.3
Less than 5 hours	15.4	15.3	18.9	20.1	15.0	16.8	37.4	38.1
5 to 14 hours	30.7	32.3	34.1	35.6	27.1	28.1	29.3	29.7
15 to 29 hours	23.8	25.0	21.5	21.8	21.3	20.9	10.7	11.1
30 to 59 hours	15.8	14.8	10.7	9.8	13.8	13.0	4.1	4.0
60 hours or more	6.6	6.0	4.5	3.9	4.2	4.2	1.8	1.8

Table 4d. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Doing Unpaid Housework and by Labour Force Activity, Canada, 1996 and 2001 Censuses

Labour Force Activity	Employed		Unemployed		Not in the Labour Force	
	1996	2001	1996	2001	1996	2001
percentage						
None	8.8	7.8	10.8	10.4	16.3	15.0
Less than 5 hours	24.9	25.4	22.2	24.6	19.3	20.0
5 to 14 hours	35.2	36.2	27.4	27.8	22.7	23.7
15 to 29 hours	19.8	20.2	18.7	18.4	18.3	19.1
30 to 59 hours	8.4	7.7	13.6	12.3	16.1	15.5
60 hours or more	2.9	2.7	7.2	6.7	7.3	6.8

Table 5. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Doing Unpaid Housework and by Sex, Canada, 1998 General Social Survey (GSS) and 2001 Census (Labour Force Survey Universe)

	Both Sexes		Males		Females	
	1998 GSS*	2001 Census	1998 GSS*	2001 Census	1998 GSS*	2001 Census
	percentage					
None	8.7	10.3	11.0	13.3	6.4	7.5
Less than 5 hours	25.9	23.6	33.6	30.1	18.2	17.5
5 to 14 hours	35.9	31.6	36.6	33.5	35.1	29.8
15 to 29 hours	19.6	19.7	14.0	15.3	25.2	23.9
30 to 59 hours	8.7	10.5	4.5	5.9	13.0	14.9
60 hours or more	1.2	4.2	0.2	1.9	2.2	6.4

* Respondents who refused to answer were excluded from percentage calculations.

4.2 Unpaid Child Care

Table 6 enables us to compare unpaid child care data by province and territory for the 1996 and 2001 Censuses. At the Canada and provincial or territorial levels, few changes can be observed between 1996 and 2001. For the hour categories of unpaid child care, the Northwest Territories, the Yukon Territory and Nunavut show population distribution profiles different from the other provinces. In 1996 and in 2001, they show the lowest proportion of individuals spending no time looking after children, without pay, which is compensated by higher proportions in all other hour categories of unpaid child care. The proportion of individuals spending 60 hours or more looking after children, without pay, is the highest in Nunavut, followed by the Northwest Territories and finally by the Yukon Territory. Moreover, it is in Quebec that the proportion of individuals spending 60 hours or more looking after children, without pay, is the lowest.

Table 6. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Looking After Children, Without Pay, Canada, Provinces and Territories, 1996 and 2001 Censuses

	None		Less Than 5 Hours		5 to 14 Hours		15 to 29 Hours		30 to 59 Hours		60 Hours or More	
	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001	1996	2001
	percentage											
CANADA	61.6	61.9	9.7	9.8	10.2	9.9	6.8	6.8	5.2	5.2	6.5	6.4
Newfoundland and Labrador	60.8	62.6	7.9	7.6	9.6	8.7	6.8	6.4	5.5	5.3	9.4	9.3
Prince Edward Island	60.3	61.0	9.9	9.0	10.3	9.3	6.7	7.0	5.4	5.9	7.4	7.8
Nova Scotia	62.5	63.3	8.5	8.4	9.4	8.9	6.4	6.4	5.3	5.2	7.9	7.9
New Brunswick	61.6	62.4	9.5	9.1	9.7	9.3	6.6	6.7	5.1	5.3	7.4	7.2
Quebec	61.2	62.1	11.5	11.2	11.2	10.6	7.1	7.1	4.8	4.8	4.3	4.2
Ontario	62.1	61.9	9.4	9.6	10.0	10.0	6.7	6.9	5.3	5.3	6.5	6.3
Manitoba	60.3	59.9	9.4	9.7	9.9	9.6	6.7	6.7	5.6	5.6	8.2	8.5
Saskatchewan	59.0	60.0	9.8	9.8	10.3	9.5	6.7	6.6	5.6	5.3	8.7	8.9
Alberta	59.2	60.4	9.3	9.3	10.4	9.8	7.1	6.9	5.7	5.5	8.2	8.2
British Columbia	63.7	63.7	8.6	8.9	9.3	9.1	6.3	6.4	5.0	5.0	7.2	7.0
Yukon Territory	58.2	60.0	8.0	7.4	9.6	9.4	6.6	6.3	6.1	7.0	11.6	9.9
Northwest Territories	49.2	51.8	9.0	7.9	10.2	9.7	8.2	8.1	8.0	7.8	15.4	14.7
Nunavut	33.0	32.0	9.3	10.4	11.4	11.6	11.0	10.2	12.4	11.8	23.0	24.0

In further analyzing the data on unpaid child care, the presence and age of children in the household are taken into consideration. As was found in the analysis of the Census data, there is a direct relationship between the presence of children in the household and the number of hours spent looking after children, without pay, reported by respondents. Therefore, the data presented in Tables 7a to 7d and 8 are restricted to persons in households with at least one member less than 15 years of age.

Table 7a to 7d present the results of the 1996 and 2001 Censuses by sex, age, legal marital status and labour force activity. Similarly to the distribution of the data on unpaid housework, when these data are cross-classified by age and sex, the distributions for the two data sources are again remarkably similar.

Table 7a. Percentage Distribution of the Population in Households With at Least One Member Less Than 15 Years of Age by Categories of Hours Spent Looking After Children, Without Pay, and by Sex, Canada, 1996 and 2001 Censuses

Sex	Both Sexes		Males		Females	
	1996	2001	1996	2001	1996	2001
percentage						
None	18.5	18.1	22.9	21.9	14.7	14.8
Less than 5 hours	12.8	12.0	18.0	16.5	8.2	8.1
5 to 14 hours	20.7	19.8	25.8	24.5	16.2	15.6
15 to 29 hours	16.6	17.1	16.8	17.5	16.5	16.8
30 to 59 hours	13.6	14.1	9.3	10.5	17.4	17.3
60 hours or more	17.8	18.7	7.3	9.0	27.1	27.4

Table 7b. Percentage Distribution of the Population in Households With at Least One Member Less Than 15 Years of Age by Categories of Hours Spent Looking After Children, Without Pay, and by Age, Canada, 1996 and 2001 Censuses

Age Groups	15–24 Years		25–44 Years		45–64 Years		65 Years and Over	
	1996	2001	1996	2001	1996	2001	1996	2001
percentage								
None	53.4	53.8	8.9	8.4	20.2	17.1	47.8	44.1
Less than 5 hours	18.3	19.0	10.0	8.7	19.9	17.5	17.1	18.1
5 to 14 hours	9.5	9.5	22.3	20.8	27.5	27.2	16.0	16.8
15 to 29 hours	4.7	4.7	20.0	20.6	15.1	17.2	9.1	9.8
30 to 59 hours	4.1	3.9	17.0	17.9	8.9	10.4	5.8	6.3
60 hours or more	10.1	9.2	21.9	23.6	8.5	10.5	4.3	4.9

Table 7c. Percentage Distribution of the Population in Households With at Least One Member Less Than 15 Years of Age by Categories of Hours Spent Looking After Children, Without Pay, and by Legal Marital Status, Canada, 1996 and 2001 Censuses

Legal Marital Status*	Legally Married		Separated or Divorced		Widowed		Never Legally Married	
	1996	2001	1996	2001	1996	2001	1996	2001
percentage								
None	10.0	9.5	12.9	13.0	35.5	33.8	40.9	37.3
Less than 5 hours	12.0	11.1	9.5	8.8	14.8	15.0	15.7	14.9
5 to 14 hours	23.9	22.9	19.5	19.0	17.5	17.4	13.1	13.5
15 to 29 hours	19.4	20.0	17.7	18.6	11.8	12.4	9.4	10.7
30 to 59 hours	15.5	16.2	16.1	16.4	9.7	9.9	8.0	9.3
60 hours or more	19.1	20.3	24.3	24.3	10.8	11.4	12.9	14.2

* The "legal marital status not stated" category is not shown.

Table 7d. Percentage Distribution of the Population in Households With at Least One Member Less Than 15 Years of Age by Categories of Hours Spent Looking After Children, Without Pay, and by Labour Force Activity, Canada, 1996 and 2001 Censuses

Labour Force Activity	Employed		Unemployed		Not in the Labour Force	
	1996	2001	1996	2001	1996	2001
percentage						
None	30.9	30.8	18.7	19.4	14.0	14.0
Less than 5 hours	11.1	11.3	10.6	10.2	13.6	12.4
5 to 14 hours	12.2	11.8	15.9	14.8	24.3	22.8
15 to 29 hours	10.1	10.0	13.9	13.7	19.3	19.7
30 to 59 hours	11.2	11.0	14.0	13.5	14.4	15.2
60 hours or more	24.5	25.1	26.9	28.3	14.4	15.9

Compared to those of the 1998 General Social Survey (GSS), the hours of unpaid child care in Table 8 below appear underestimated by the 2001 Census, with 18.1% of respondents reporting "None" compared to 5.5% by the survey. More persons reported very few hours spent looking after children, without pay, in the 2001 Census, and a relatively high proportion reported 30 hours or more in the survey. There are some differences by sex as the proportion of males reporting "60 hours or more" is higher in the census at 8.7% than in the 1998 GSS at 5.6%. On the other hand, the proportion of females reporting "60 hours or more" remains lower for the census (27.1%) than for the survey (36.7%).

Table 8. Percentage Distribution of the Population in Households With at Least One Member Less Than 15 Years of Age by Categories of Hours Spent Looking After Children, Without Pay, and by Sex, Canada, 1998 General Social Survey (GSS) and 2001 Census (Labour Force Survey Universe)

	Both Sexes		Males		Females	
	2001 Census	1998 GSS	2001 Census	1998 GSS	2001 Census	1998 GSS
	percentage					
None	18.1	5.5	21.9	7.8	14.8	3.4
Less than 5 hours	12.1	2.5	16.7	4.5	8.1	0.8
5 to 14 hours	19.9	12.3	24.7	21.6	15.7	4.0
15 to 29 hours	17.2	17.0	17.6	24.6	16.9	10.3
30 to 59 hours	14.1	30.2	10.5	26.0	17.4	33.9
60 hours or more	18.5	22.1	8.7	5.6	27.1	36.7
Other	..	10.4	..	9.8	..	10.9

.. Not available

One explanation for the difference between the census and the the GSS may be self-enumeration and proxy reporting. The census form is filled out by the respondent without the aid of an interviewer. Often, one respondent will fill out the questionnaire for other household members. The proxy respondent may not have full knowledge of the amount of time spent on unpaid work activities by other household members. Previous studies have found, for example, that married persons tend to underestimate the time spent by their spouses.

Another point to be made is that respondents may not have understood that time spent on unpaid activities such as housework and child care, which can often take place simultaneously, should have been reported in both the unpaid housework and child care part questions. As a result, census respondents may have reported their hours for one activity only.

4.3 Unpaid Care or Assistance Provided to Seniors

Table 9 shows the percentage distribution of the population 15 years of age and over by categories of hours spent providing unpaid care or assistance to seniors for Canada, provinces and territories. For 2001, we must remember that two hour categories were added ("10 to 19 hours" and "20 hours or more"). Since these categories cannot be compared to the 1996 Census category ("10 hours or more"), we have combined them in 2001 in order that they correspond to it.

At the Canada, province and territory levels, we note a small but generalized increase in the proportion of the population providing unpaid care or assistance to its seniors. In Nunavut, this increase is more pronounced. Moreover, the Nunavut shows a distribution that is different from that of other provinces and territories since a much higher proportion of its population 15 years of age and over provides care or assistance to its seniors. In addition, it is in the Yukon Territory that the lowest proportion of individuals providing unpaid care or assistance to seniors is observed. There is generally little provincial variation between 1996 and 2001.

Table 9. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors, Canada, Provinces and Territories, 1996 and 2001 Censuses

	None		Less Than 5 Hours		5 to 9 Hours		10 Hours or More		10 to 19 Hours		20 Hours or more	
	1996	2001	1996	2001	1996	2001	1996	2001	1996*	2001	1996*	2001
	percentage											
CANADA	83.5	81.8	10.8	11.6	3.3	3.9	2.4	2.7	..	1.4	..	1.4
Newfoundland and Labrador	84.0	81.6	8.8	9.8	3.6	4.4	3.6	4.2	..	1.9	..	2.3
Prince Edward Island	80.7	79.4	12.5	13.2	3.9	4.5	2.9	2.9	..	1.5	..	1.4
Nova Scotia	82.8	81.5	10.2	10.7	3.7	4.2	3.3	3.5	..	1.6	..	1.8
New Brunswick	81.6	80.7	11.7	11.9	3.7	4.3	3.0	3.1	..	1.5	..	1.6
Quebec	83.8	82.3	11.5	12.2	2.8	3.4	1.9	2.2	..	1.1	..	1.0
Ontario	83.8	81.9	10.4	11.4	3.3	4.0	2.4	2.7	..	1.4	..	1.4
Manitoba	80.5	79.3	12.5	12.9	4.0	4.5	3.0	3.4	..	1.7	..	1.7
Saskatchewan	79.5	78.1	13.3	13.8	4.3	4.7	3.0	3.4	..	1.7	..	1.8
Alberta	83.7	82.9	10.6	10.8	3.3	3.7	2.5	2.7	..	1.3	..	1.4
British Columbia	84.9	82.1	9.7	11.0	3.1	3.9	2.4	2.9	..	1.5	..	1.4
Yukon Territory	87.9	86.4	6.9	8.2	2.8	2.8	2.5	2.5	..	1.1	..	1.4
Northwest Territories	83.7	83.0	8.4	8.3	2.9	3.9	4.9	4.8	..	1.8	..	3.0
Nunavut	69.6	63.6	14.4	17.9	6.8	7.9	9.2	10.5	..	4.0	..	6.4

.. not available

* In 1996 the "10 to 19 hours" and "20 hours or more" categories did not exist.

Tables 10a to 10d enable us to compare the results of the two last censuses for four variables. For each one of these variables, a small increase can be observed in the proportion of persons 15 years of age and over who provide care or assistance to seniors; for example, in all of Canada, the proportion increases from 16.4% to 18.2%. In 2001, an hour category had been added in order to determine a possible increase in the number of hours spent providing unpaid care or assistance to seniors. However, the “10 hours or more” category showed a very small increase since a very small proportion of the population 15 years of age and over provides 20 hours or more of unpaid care or assistance to its seniors.

Table 10a. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors and by Sex, Canada, 1996 and 2001 Censuses (Census Universe)

Sex	Both Sexes		Males		Females	
	1996*	2001	1996*	2001	1996*	2001
	percentage					
None	83.6	81.8	86.5	84.7	80.9	79.1
Less than 5 hours	10.8	11.6	9.6	10.4	12.0	12.7
5 to 14 hours	3.2	3.9	2.4	2.9	4.1	4.8
15 to 29 hours	2.3	2.7	1.6	1.9	3.1	3.5
30 to 59 hours	..	1.4	..	0.9	..	1.8
60 hours or more	..	1.4	..	0.9	..	1.8

.. not available

* In 1996, the “10 to 19 hours” and “20 hours or more” categories did not exist.

Table 10b. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors and by Age, Canada, 1996 and 2001 Censuses

Age Groups	15–24 Years		25–44 Years		45–64 Years		65 Years and Over	
	1996*	2001	1996*	2001	1996*	2001	1996*	2001
percentage								
None	90.1	89.0	83.8	82.5	78.8	76.2	84.7	83.5
Less than 5 hours	8.0	8.7	11.2	11.6	13.3	14.5	8.3	8.8
5 to 9 hours	1.2	1.5	3.1	3.6	4.6	5.5	3.5	4.0
10 hours or more	0.7	0.9	1.9	2.3	3.4	3.8	3.5	3.7
10 to 19 hours	..	0.4	..	1.1	..	1.9	..	2.2
20 hours or more	..	0.4	..	1.2	..	2.0	..	1.6

.. not available

* In 1996, the “10 to 19 hours” and “20 hours or more” categories did not exist.

Table 10c. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors and by Legal Marital Status, Canada, 1996 and 2001 Censuses

Legal Marital Status*	Legally Married		Separated or Divorced		Widowed		Never Legally Married	
	1996**	2001	1996**	2001	1996**	2001	1996**	2001
percentage								
None	80.4	78.1	83.5	81.4	86.5	85.3	88.3	86.9
Less than 5 hours	12.8	13.8	10.2	11.2	8.0	8.4	8.3	9.0
5 to 9 hours	4.0	4.8	3.6	4.3	3.3	3.8	1.9	2.3
10 hours or more	2.8	3.3	2.6	3.1	2.2	2.5	1.5	1.8
10 to 19 hours	..	1.6	..	1.5	..	1.2	..	0.9
20 hours or more	..	1.7	..	1.6	..	1.3	..	0.8

.. not available

* The “legal marital status not stated” category is not shown.

** In 1996, the “10 to 19 hours” and “20 hours or more” categories did not exist.

Table 10d. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors and by Labour Force Activity, Canada, 1996 and 2001 Censuses

Labour Force Activity*	Employed		Unemployed		Not in the Labour Force	
	1996**	2001	1996**	2001	1996**	2001
	percentage					
None	84.4	81.4	83.7	82.0	83.2	81.4
Less than 5 hours	9.0	12.7	10.0	10.6	11.9	12.7
5 to 9 hours	3.4	3.7	3.5	4.1	3.1	3.7
10 hours or more	3.2	2.1	2.8	3.3	1.8	2.1
10 to 19 hours	..	0.9	..	1.7	..	0.9
20 hours or more	..	1.2	..	1.7	..	1.2

.. not available

* The "labour force activity not stated" category is not shown.

** In 1996, the "10 to 19 hours" and "20 hours or more" categories did not exist.

Table 11 enables us to compare data on unpaid care or assistance provided to seniors from the 2001 Census and the 1998 General Social Survey (GSS). As was the case in the 1996 Census, the number of hours spent providing unpaid care or assistance to seniors for the 2001 Census is low in comparison to the one for the GSS. For example, 81.9% of census respondents indicated "None" against only 71.9% for the GSS. The difference was higher for males (84.8% vs. 73.1%). Comparing males and females, only the "Less than 5 hours" and "5 to 9 hours" categories were higher in the census, and only for females.

Table 11. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors and by Sex, Canada, 1998 General Social Survey (GSS) and 2001 Census (Labour Force Survey Universe)

	Both Sexes		Males		Females	
	1998 GSS*	2001 Census	1998 GSS*	2001 Census	1998 GSS*	2001 Census
	percentage					
None	71.9	81.9	73.1	84.8	70.8	79.1
Less than 5 hours	11.9	11.6	12.8	10.4	11.0	12.7
5 to 9 hours	3.8	3.9	3.3	2.9	4.3	4.7
10 to 19 hours	2.6	1.4	1.9	0.9	3.3	1.7
20 hours or more	2.1	1.3	1.6	0.9	2.7	1.7
Other	7.6	..	7.3	..	7.9	..

.. Not available

* Respondents who refused to answer as well as those who did not know the number of hours spent providing care or assistance to seniors are excluded from percentage calculations.

Table 12 presents the same data by age groups so that we can further examine the possibility that the 2001 Census underestimated the number of hours spent providing unpaid care or assistance to seniors. The most important difference between the census data and the 1998 General Social Survey (GSS) data can be seen in the group of persons 65 years of age and over. For the census, 83.5% of this group of persons responded "None" to the number of hours spent providing unpaid care or assistance to seniors in comparison to 66.4% for the GSS. Furthermore, one must note that this age group is the most likely to be in contact with seniors.

Table 12. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors and by Age Groups, Canada, 1998 General Social Survey (GSS) and 2001 Census (Labour Force Survey Universe)

	15 - 24 years		25 - 44 years		45 - 64 years		65 years and over	
	1998 GSS	2001 Census	1998 GSS	2001 Census	1998 GSS	2001 Census	1998 GSS	2001 Census
	percentage							
None	80.2	89.2	74.9	82.6	65.6	76.2	66.4	83.5
Less than 5 hours	12.3	8.6	11.4	11.6	13.9	14.5	8.9	8.8
5 to 9 hours	2.2	1.4	3.2	3.6	6.0	5.5	3.5	4.0
10 to 19 hours	1.3	0.4	2.1	1.2	3.5	1.9	4.0	1.6
20 hours or more	0.5	0.3	1.6	1.0	3.3	1.8	3.5	2.1
Other	3.4	..	6.8	..	7.9	..	13.8	..

.. Not available

The GSS non-response rate is the highest for persons 65 years of age and over (4.8%). If these responses had been imputed, they would probably have been coded to the “None” hour category. Even by adding these 4.8% to the 66.4% coded in the “None” hour category, there remains an important gap between the GSS and 2001 Census non-response rates. The census non-response rate for this age group was 3.5% — again the highest of all the age groups (table not provided).

The GSS questionnaire is much more detailed than the census one for this question. It is therefore possible that census respondents have difficulty understanding the type of activity required by the census, whereas the detailed GSS questionnaire makes it easier for respondents to understand the concepts.

5. Conclusion

The analysis of the variables on unpaid work shows that the 2001 Census results are comparable to those from the 1996 Census. Comparing the 2001 results to those from the 1998 General Social Survey (GSS) shows some gaps, notably for the variables on unpaid child care and unpaid care or assistance to seniors. These gaps could be due to the more detailed GSS questions, which yield more accurate answers. Moreover, the fact that one member of a household can answer the census questionnaire for all other members may also affect the results.

Appendix A. Glossary of Terms

The definitions of census terms, variables and concepts are presented here as they appear in the *2001 Census Dictionary* (Catalogue No. 92-378-XIE). Users should refer to the *2001 Census Dictionary* for full definitions and additional remarks related to any concepts, such as information on direct and derived variables and their respective universe.

Labour Force Activity: Refers to the labour market activity of the population 15 years of age and over in the week (Sunday to Saturday) prior to Census Day (May 15, 2001). Respondents were classified as either employed, or unemployed, or as not in the labour force. The labour force includes the employed and the unemployed.

Legal Marital Status: Refers to the legal conjugal status of a person. The various response categories are as follows: never legally married (single); legally married (and not separated); separated, but still legally married; divorced; widowed.

Hours Spent Doing Unpaid Housework: Refers to the number of hours persons spent doing unpaid housework, yard work or home maintenance in the week (Sunday to Saturday) prior to Census Day (May 15, 2001). It includes hours spent doing unpaid housework for members of one's own household, for other family members outside the household, and for friends or neighbours.

Hours Spent Looking After Children, Without Pay: Refers to the number of hours persons spent looking after children without pay. It includes hours spent providing unpaid child care for members of one's own household, for other family members outside the household, for friends or neighbours or for other family members outside the household in the week (Sunday to Saturday) prior to Census Day (May 15, 2001).

Hours Spent Providing Unpaid Care or Assistance to Seniors: Refers to the number of hours persons spent providing unpaid care or assistance to seniors of one's own household, to other senior family members outside the household, and to friends or neighbours in the week (Sunday to Saturday) prior to Census Day (May 15, 2001).

Appendix B. Appendix Tables

Table B1. Population 15 Years of Age and Over by Categories of Hours Spent Doing Unpaid Housework, Canada, Provinces, Territories and Census Metropolitan Areas, 1996 Census

	Total	None	Less Than 5 Hours	5 to 14 Hours	15 to 29 Hours	30 to 59 Hours	60 Hours or More
CANADA	22,628,925	2,612,074	5,138,767	6,867,642	4,348,355	2,582,907	1,079,180
Newfoundland	437,344	65,405	69,640	110,820	83,347	66,711	41,420
St. John's	137,830	19,070	27,295	39,790	26,605	16,600	8,470
Prince Edward Island	103,752	13,232	20,744	29,187	20,970	14,001	5,618
Nova Scotia	719,973	93,019	139,727	202,127	142,875	96,521	45,704
Halifax	263,575	31,815	58,730	79,995	51,325	28,965	12,740
New Brunswick	585,023	77,681	115,385	163,007	117,522	76,926	34,501
Saint John	98,560	13,040	20,100	28,825	19,520	11,845	5,230
Quebec	5,673,466	687,362	1,406,114	1,715,965	1,056,468	598,164	209,394
Chicoutimi-Jonquière	127,490	14,760	30,305	36,985	24,800	15,015	5,615
Québec	546,080	65,100	148,705	170,190	96,935	49,195	15,965
Sherbrooke	116,840	12,430	32,235	37,000	21,575	10,760	2,845
Trois-Rivières	112,770	12,540	28,295	34,035	22,085	12,340	3,470
Montréal	2,662,050	332,435	699,560	834,025	468,100	241,725	86,205
Ontario	8,429,214	961,726	1,915,395	2,604,924	1,634,186	935,762	377,221
Ottawa-Hull	793,035	73,955	189,605	264,150	159,525	77,890	27,915
Oshawa	202,950	20,385	43,935	63,640	41,785	22,955	10,245
Toronto	3,374,725	436,660	842,410	1,054,610	594,735	316,000	130,305
Hamilton	493,070	53,745	111,485	153,665	97,030	54,890	22,245
St. Catharines-Niagara	295,970	34,300	60,585	86,585	62,080	37,425	14,995
Kitchener	296,285	31,790	69,950	95,910	56,225	30,530	11,875
London	311,915	31,635	73,695	100,985	60,935	32,915	11,745

	Total	None	Less Than 5 Hours	5 to 14 Hours	15 to 29 Hours	30 to 59 Hours	60 Hours or More
Windsor	219,860	25,835	50,045	67,165	40,905	25,030	10,885
Sudbury	127,630	13,630	26,660	38,385	26,720	15,585	6,645
Thunder Bay	99,805	10,780	21,440	30,500	20,875	11,680	4,530
Manitoba	855,882	92,537	174,400	258,346	171,768	107,197	51,634
Winnipeg	525,125	55,320	117,065	168,380	104,290	56,720	23,355
Saskatchewan	748,133	73,298	146,029	217,982	149,626	105,955	55,243
Regina	148,700	12,820	32,315	47,995	30,870	17,880	6,825
Saskatoon	166,690	14,860	36,995	52,430	33,860	19,710	8,840
Alberta	2,055,018	213,338	470,769	637,946	387,951	235,340	109,673
Calgary	639,055	66,905	162,865	208,370	114,970	60,830	25,120
Edmonton	665,315	69,340	156,700	213,090	125,745	69,930	30,510
British Columbia	2,954,704	326,943	668,055	907,163	569,898	338,930	143,716
Vancouver	1,476,980	177,580	377,080	463,215	261,610	141,460	56,035
Victoria	249,360	26,785	54,390	81,270	50,125	27,295	9,495
Yukon	23,268	2,512	4,241	7,199	5,172	2,658	1,487
Northwest Territories	43,148	5,022	8,268	12,975	8,572	4,741	3,570

Table B2. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Doing Unpaid Housework, Canada, Provinces, Territories and Census Metropolitan Areas, 1996 Census

	None	Less Than 5 Hours	5 to 14 Hours	15 to 29 Hours	30 to 59 Hours	60 Hours or More
	percentage					
CANADA	11.5	22.7	30.3	19.2	11.4	4.8
Newfoundland	15.0	15.9	25.3	19.1	15.3	9.5
St. John's	13.8	19.8	28.9	19.3	12.0	6.1
Prince Edward Island	12.8	20.0	28.1	20.2	13.5	5.4
Nova Scotia	12.9	19.4	28.1	19.8	13.4	6.3
Halifax	12.1	22.3	30.3	19.5	11.0	4.8
New Brunswick	13.3	19.7	27.9	20.1	13.1	5.9
Saint John	13.2	20.4	29.2	19.8	12.0	5.3
Quebec	12.1	24.8	30.2	18.6	10.5	3.7
Chicoutimi-Jonquière	11.6	23.8	29.0	19.5	11.8	4.4
Québec	11.9	27.2	31.2	17.8	9.0	2.9
Sherbrooke	10.6	27.6	31.7	18.5	9.2	2.4
Trois-Rivières	11.1	25.1	30.2	19.6	10.9	3.1
Montréal	12.5	26.3	31.3	17.6	9.1	3.2
Ontario	11.4	22.7	30.9	19.4	11.1	4.5
Ottawa-Hull	9.3	23.9	33.3	20.1	9.8	3.5
Oshawa	10.0	21.6	31.4	20.6	11.3	5.0
Toronto	12.9	25.0	31.3	17.6	9.4	3.9
Hamilton	10.9	22.6	31.2	19.7	11.1	4.5
St. Catharines-Niagara	11.6	20.5	29.3	21.0	12.6	5.1
Kitchener	10.7	23.6	32.4	19.0	10.3	4.0

	None	Less Than 5 Hours	5 to 14 Hours	15 to 29 Hours	30 to 59 Hours	60 Hours or More
	percentage					
London	10.1	23.6	32.4	19.5	10.6	3.8
Windsor	11.8	22.8	30.5	18.6	11.4	5.0
Sudbury	10.7	20.9	30.1	20.9	12.2	5.2
Thunder Bay	10.8	21.5	30.6	20.9	11.7	4.5
Manitoba	10.8	20.4	30.2	20.1	12.5	6.0
Winnipeg	10.5	22.3	32.1	19.9	10.8	4.4
Saskatchewan	9.8	19.5	29.1	20.0	14.2	7.4
Regina	8.6	21.7	32.3	20.8	12.0	4.6
Saskatoon	8.9	22.2	31.5	20.3	11.8	5.3
Alberta	10.4	22.9	31.0	18.9	11.5	5.3
Calgary	10.5	25.5	32.6	18.0	9.5	3.9
Edmonton	10.4	23.6	32.0	18.9	10.5	4.6
British Columbia	11.1	22.6	30.7	19.3	11.5	4.9
Vancouver	12.0	25.5	31.4	17.7	9.6	3.8
Victoria	10.7	21.8	32.6	20.1	10.9	3.8
Yukon	10.8	18.2	30.9	22.2	11.4	6.4
Northwest Territories	11.6	19.2	30.1	19.9	11.0	8.3

Table B3. Population 15 Years of Age and Over by Categories of Hours Spent Looking After Children, Without Pay, Canada, Provinces, Territories and Census Metropolitan Areas, 1996 Census

	Total	None	Less Than 5 Hours	5 to 14 Hours	15 to 29 Hours	30 to 59 Hours	60 Hours or More
CANADA	22,628,925	13,937,410	2,205,132	2,310,713	1,534,259	1,174,446	1,466,965
Newfoundland	437,344	265,721	34,624	41,929	29,888	24,233	40,949
St. John's	137,830	84,570	11,240	13,140	9,810	7,810	11,260
Prince Edward Island	103,752	62,525	10,283	10,707	7,004	5,593	7,640
Nova Scotia	719,973	450,208	60,917	67,909	46,316	38,070	56,553
Halifax	263,575	165,830	21,415	24,005	18,210	14,310	19,805
New Brunswick	585,022	360,629	55,608	56,617	38,859	30,093	43,216
Saint John	98,570	60,890	8,255	9,410	6,550	5,170	8,295
Quebec	5,673,467	3,472,144	650,910	634,553	401,094	271,790	242,976
Chicoutimi-Jonquière	127,490	73,495	16,090	15,340	9,955	6,530	6,080
Québec	546,090	344,310	62,960	59,370	36,675	23,770	19,005
Sherbrooke	116,845	72,130	14,135	12,795	8,435	4,915	4,435
Trois-Rivières	112,765	69,340	13,260	12,475	8,475	4,930	4,285
Montréal	2,662,045	1,671,995	284,680	285,685	182,475	125,455	111,755
Ontario	8,429,214	5,238,132	788,726	843,240	564,949	444,831	549,336
Ottawa-Hull	793,030	481,970	78,175	85,050	58,650	44,775	44,410
Oshawa	202,955	116,055	18,700	21,310	15,325	12,725	18,840
Toronto	3,374,720	2,121,580	321,470	345,430	227,840	172,940	185,460
Hamilton	493,065	309,545	44,475	46,540	32,455	26,795	33,255
St. Catharines-Niagara	295,965	188,655	26,505	27,545	17,770	14,325	21,165
Kitchener	296,290	180,090	29,105	31,080	20,125	16,495	19,395
London	311,920	195,870	28,730	30,190	20,325	16,500	20,305
Windsor	219,870	137,535	20,795	20,360	13,915	11,370	15,895
Sudbury	127,625	78,425	12,240	12,355	8,845	6,835	8,925

	Total	None	Less Than 5 Hours	5 to 14 Hours	15 to 29 Hours	30 to 59 Hours	60 Hours or More
Thunder Bay	99,810	61,905	9,415	9,865	6,060	5,660	6,905
Manitoba	855,882	516,081	80,281	85,058	56,999	47,678	69,785
Winnipeg	525,125	325,325	49,025	51,740	34,055	28,400	36,580
Saskatchewan	748,134	441,343	72,990	76,800	50,492	41,536	64,973
Regina	148,705	87,640	14,980	15,295	10,660	8,625	11,505
Saskatoon	166,685	98,575	16,125	16,830	11,855	9,725	13,575
Alberta	2,055,017	1,217,543	191,940	213,647	145,814	117,512	168,561
Calgary	639,050	389,800	56,585	65,600	45,050	36,945	45,070
Edmonton	665,320	399,880	62,990	68,580	46,730	37,685	49,455
British Columbia	2,954,703	1,880,779	253,081	273,442	187,359	147,566	212,476
Vancouver	1,476,990	959,505	129,185	137,085	93,090	71,100	87,025
Victoria	249,355	169,615	18,440	20,260	14,420	11,475	15,145
Yukon	23,268	13,535	1,848	2,243	1,523	1,415	2,704
Northwest Territories	43,148	18,770	3,925	4,565	3,964	4,128	7,796

Table B4. Percentage Distribution of the Population 15 Years of Age And Over by Categories of Hours Spent Looking After Children, Without Pay, Canada, Provinces, Territories and Census Metropolitan Areas, 1996 Census

	None	Less Than 5 Hours	5 to 14 Hours	15 to 29 Hours	30 to 59 Hours	60 Hours or More
	percentage					
CANADA	61.6	9.7	10.2	6.8	5.2	6.5
Newfoundland	60.8	7.9	9.6	6.8	5.5	9.4
St. John's	61.4	8.2	9.5	7.1	5.7	8.2
Prince Edward Island	60.3	9.9	10.3	6.8	5.4	7.4
Nova Scotia	62.5	8.5	9.4	6.4	5.3	7.9
Halifax	62.9	8.1	9.1	6.9	5.4	7.5
New Brunswick	61.6	9.5	9.7	6.6	5.1	7.4
Saint John	61.8	8.4	9.5	6.6	5.2	8.4
Quebec	61.2	11.5	11.2	7.1	4.8	4.3
Chicoutimi-Jonquière	57.6	12.6	12.0	7.8	5.1	4.8
Québec	63.1	11.5	10.9	6.7	4.4	3.5
Sherbrooke	61.7	3.8	4.2	7.2	11.0	12.1
Trois-Rivières	61.5	11.8	11.1	7.5	4.4	3.8
Montréal	62.8	10.7	10.7	6.9	4.7	4.2
Ontario	62.1	9.4	10.0	6.7	5.3	6.5
Ottawa-Hull	60.8	9.9	10.7	7.4	5.6	5.6
Oshawa	57.2	9.2	10.5	7.6	6.3	9.3
Toronto	62.9	9.5	10.2	6.8	5.1	5.5
Hamilton	62.8	9.0	9.4	6.6	5.4	6.7
St. Catharines-Niagara	63.7	9.0	9.3	6.0	4.8	7.2
Kitchener	60.8	9.8	10.5	6.8	5.6	6.5
London	62.8	9.2	9.7	6.5	5.3	6.5

	None	Less Than 5 Hours	5 to 14 Hours	15 to 29 Hours	30 to 59 Hours	60 Hours or More
	percentage					
Windsor	62.6	9.5	9.3	6.3	5.2	7.2
Sudbury	61.4	9.6	9.7	6.9	5.4	7.0
Thunder Bay	62.0	9.4	9.9	6.1	5.7	6.9
Manitoba	60.3	9.4	9.9	6.7	5.6	8.2
Winnipeg	62.0	9.3	9.9	6.5	5.4	7.0
Saskatchewan	59.0	9.8	10.3	6.7	5.6	8.7
Regina	58.9	10.1	10.3	7.2	5.8	7.7
Saskatoon	59.1	9.7	10.1	7.1	5.8	8.1
Alberta	59.2	9.3	10.4	7.1	5.7	8.2
Calgary	61.0	8.9	10.3	7.0	5.8	7.1
Edmonton	60.1	9.5	10.3	7.0	5.7	7.4
British Columbia	63.7	8.6	9.3	6.3	5.0	7.2
Vancouver	65.0	8.7	9.3	6.3	4.8	5.9
Victoria	68.0	7.4	8.1	5.8	4.6	6.1
Yukon	58.2	7.9	9.6	6.5	6.1	11.6
Northwest Territories	43.5	9.1	10.6	9.2	9.6	18.1

Table B5. Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors, Canada, Provinces, Territories and Census Metropolitan Areas, 1996 Census

	Total	None	Less Than 5 Hours	5 to 9 Hours	10 Hours or More
CANADA	22,628,925	18,905,474	2,443,210	735,681	544,560
Newfoundland	437,344	367,167	38,705	15,894	15,578
St. John's	137,830	116,315	12,885	4,425	4,205
Prince Edward Island	103,752	83,698	12,936	4,095	3,023
Nova Scotia	719,973	595,930	73,514	26,946	23,583
Halifax	263,580	226,525	23,010	7,690	6,355
New Brunswick	585,022	477,101	68,425	21,688	17,808
Saint John	98,565	81,725	10,700	3,270	2,870
Quebec	5,673,466	4,752,241	653,733	159,612	107,880
Chicoutimi-Jonquière	127,485	104,775	16,005	4,105	2,600
Québec	546,080	462,190	61,795	13,370	8,725
Sherbrooke	116,845	97,865	13,910	3,115	1,955
Trois-Rivières	112,770	91,915	15,445	3,310	2,100
Montréal	2,662,055	2,262,075	278,610	71,855	49,515
Ontario	8,429,214	7,064,802	880,715	279,510	204,187
Ottawa-Hull	793,025	664,215	86,885	24,810	17,115
Oshawa	202,955	171,540	20,830	6,160	4,425
Toronto	3,374,725	2,878,570	314,305	102,130	79,720
Hamilton	493,065	412,585	51,600	16,600	12,280
St. Catharines-Niagara	295,965	243,365	33,075	11,080	8,445
Kitchener	296,280	252,190	29,945	8,310	5,835
London	311,920	262,190	32,720	10,085	6,925
Windsor	219,865	184,145	23,035	7,240	5,445
Sudbury	127,630	105,630	14,210	4,495	3,295
Thunder Bay	99,810	81,065	12,045	4,065	2,635
Manitoba	855,881	688,941	107,200	34,203	25,537
Winnipeg	525,115	428,255	63,435	19,995	13,430
Saskatchewan	748,133	594,515	99,361	31,838	22,419
Regina	148,695	122,900	17,205	5,235	3,355
Saskatoon	166,690	136,835	20,080	5,860	3,915
Alberta	2,055,018	1,719,357	216,907	68,357	50,397
Calgary	639,050	548,315	60,020	17,920	12,795
Edmonton	665,310	555,075	71,950	21,840	16,445
British Columbia	2,954,704	2,507,293	285,557	91,053	70,801
Vancouver	1,476,975	1,256,395	141,650	45,350	33,580
Victoria	249,360	208,480	26,245	8,500	6,135

	Total	None	Less Than 5 Hours	5 to 9 Hours	10 Hours or More
Yukon	23,269	20,443	1,606	642	578
Northwest Territories	43,148	33,985	4,552	1,843	2,768

Table B6. Percentage Distribution of the Population 15 Years of Age and Over by Categories of Hours Spent Providing Unpaid Care or Assistance to Seniors, Canada, Provinces, Territories and Census Metropolitan Areas, 1996 Census

	None	Less Than 5 Hours	5 to 9 Hours	10 Hours or More
	percentage			
CANADA	83.5	10.8	3.3	2.4
Newfoundland	84.0	8.9	3.6	3.6
St. John's	84.4	9.3	3.2	3.1
Prince Edward Island	80.7	12.5	3.9	2.9
Nova Scotia	82.8	10.2	3.7	3.3
Halifax	85.9	8.7	2.9	2.4
New Brunswick	81.6	11.7	3.7	3.0
Saint John	82.9	10.9	3.3	2.9
Quebec	83.8	11.5	2.8	1.9
Chicoutimi-Jonquière	82.2	12.6	3.2	2.0
Québec	84.6	11.3	2.4	1.6
Sherbrooke	83.8	11.9	2.7	1.7
Trois-Rivières	81.5	13.7	2.9	1.9
Montréal	85.0	10.5	2.7	1.9
Ontario	83.8	10.4	3.3	2.4
Ottawa-Hull	83.8	11.0	3.1	2.2
Oshawa	84.5	10.3	3.0	2.2
Toronto	85.3	9.3	3.0	2.4
Hamilton	83.7	10.5	3.4	2.5
St. Catharines-Niagara	82.2	11.2	3.7	2.9
Kitchener	85.1	10.1	2.8	2.0
London	84.1	10.5	3.2	2.2
Windsor	83.8	10.5	3.3	2.5
Sudbury	82.8	11.1	3.5	2.6
Thunder Bay	81.2	12.1	4.1	2.6

	None	Less Than 5 Hours	5 to 9 Hours	10 Hours or More
	percentage			
Manitoba	80.5	12.5	4.0	3.0
Winnipeg	81.6	12.1	3.8	2.6
Saskatchewan	79.5	13.3	4.3	3.0
Regina	82.7	11.6	3.5	2.3
Saskatoon	82.1	12.0	3.5	2.3
Alberta	83.7	10.6	3.3	2.5
Calgary	85.8	9.4	2.8	2.0
Edmonton	83.4	10.8	3.3	2.5
British Columbia	84.9	9.7	3.1	2.4
Vancouver	85.1	9.6	3.1	2.3
Victoria	83.6	10.5	3.4	2.5
Yukon	87.9	6.9	2.8	2.5
Northwest Territories	78.8	10.5	4.3	6.4

Appendix C. 2001 Census Products and Services

The census is a reliable source for describing the characteristics of Canada's people and dwellings. The range of products and services derived from census information is designed to produce statistics that will be useful, understandable and accessible to all users. Sources, such as the *2001 Census Catalogue*, the Statistics Canada Web site (<http://www.statcan.ca>) and, specifically, the On-Line Catalogue, contain detailed information about the full range of 2001 Census products and services.

There are several new product and service features for the 2001 Census:

1. Media

- The Internet is the preferred medium for disseminating standard data products and reference products.
- More census data are available to the public free of charge via the Internet.

2. Content

- Data tables for the 2001 Census are released by **topics**, that is, groups of variables on related subjects.
- Wherever possible, the language and vocabulary used in 2001 Census products available on the Internet is simplified to make the information accessible to more people.
- Users are offered various methods of searching and navigating through **census standard products** (including **reference products** on the Internet).

3. Geography

- Geographic units such as dissemination areas, urban areas, designated places and metropolitan influenced zones were added to the standard products line. Some new units, such as dissemination areas, replace others.

4. Variables

- Information on the following new subjects was collected in the 2001 Census: birthplace of parents, other languages spoken at home and language of work. The 2001 questionnaire also included the question on religion, which is asked in every decennial census. The family structure variable was broadened to include same-sex couples.

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