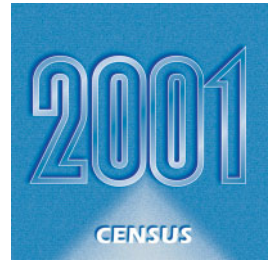




Catalogue No. 92-381-XIE

Families

2001 Census Technical Report



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2001 Census Technical Report

Families

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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. This report is aimed at informing users on the complexity of the data and on any difficulties that could affect their use. It explains the theoretical framework and the definitions used to gather the data, and describes unusual circumstances that could affect data quality. Moreover, the report touches upon data capture, edit and imputation, and deals with the historical comparability of the data.

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 families. It has been prepared by the Housing, Family and Social Statistics Division, with the support of staff from the Census Operations Division and the Social Survey Methods Division.

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).

For the 2001 Census, major changes were made to the census family definition. These changes consisted of the inclusion of same-sex couples (with or without children) as census families, as well as a broader definition of children in census families. These changes affect the comparability of data on families when comparing 2001 data with data from previous censuses. Appendix A1 provides a detailed rationale, a description of the changes, and an evaluation of their effect.

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 November 2004.

1.2 Questionnaire and Instructions

Published census data on families are obtained from the question on Relationship to Person 1 on the 2B and 2D questionnaires, which are used to enumerate a 20% sample of all private households in Canada. The responses are processed together with the responses to the questions on Sex, Date of Birth, Marital Status and Common-law Status, to resolve any cases of non-response or of inconsistent responses, after which family-level variables are derived. These include characteristics for census families and for

economic families (see Appendix A, Glossary of Terms). The concept of “census family” was modified for 2001; Chapter 4 (Historical Comparability) provides details on the change.

Aspects of the 2001 questionnaire relevant to family data were similar to 1996, with the following exceptions:

- In the section WHOM TO INCLUDE IN STEP B (STEP 2 in 1996), a new item was added: “ABSENT SPOUSES: spouses or common-law partners who live elsewhere while working or studying, but who return here periodically”.
- In the instruction for the household roster in STEP B, the words “who usually live here” were added to the end of the sentence “Begin the list with an adult followed, if applicable, by that person’s spouse or common-law partner and by their children”.
- Regarding the Relationship to Person 1 question, the following changes were made:
 - The question was moved to the bottom of the first page of questions (Question 6 instead of Question 2).
 - An “X” symbol was added to the instruction “Mark or specify one response only”.
 - The self-code category “Common-law partner of Person 1” was changed to read “Common-law partner (opposite-sex) of Person 1”.
 - A self-code category, “Common-law partner (same-sex) of Person 1”, was added.
 - The self-code category “Grandparent of Person 1” was deleted.
 - The list of write-in examples was modified, mainly to reflect the change in available self-code categories.
- Regarding the demographic questions other than Relationship to Person 1, see the 2001 Technical Report entitled *Age, Sex, Marital Status and Common-law Status* (Catalogue No. 92-380-XIE).

The following shows details of the Relationship to Person 1 question from the 2B form.

2001 Question on Relationship to Person 1 (2B Form)

<p>6 RELATIONSHIP TO PERSON 1 For each person usually living here, describe his/her relationship to Person 1. <i>Mark “X” or specify one response only.</i> <i>Stepchildren, adopted children and children of a common-law partner should be considered sons and daughters.</i> <i>If none of the choices apply, use the “Other” box to indicate this person’s relationship to Person 1.</i> <i>Examples of “Other” relationships to Person 1:</i></p> <ul style="list-style-type: none"> • grandparent • cousin • niece or nephew • lodger’s husband or wife • room-mate’s daughter or son • employee 	<p>11 X PERSON 1</p>	<p>12 <input type="radio"/> Husband or wife of Person 1</p> <p>13 <input type="radio"/> Common-law partner (opposite-sex) of Person 1</p> <p>14 <input type="radio"/> Common-law partner (same-sex) of Person 1</p> <p>15 <input type="radio"/> Son or daughter of Person 1</p> <p>16 <input type="radio"/> Son-in-law or daughter-in-law of Person 1</p> <p>17 <input type="radio"/> Grandchild of Person 1</p> <p>18 <input type="radio"/> Father or mother of Person 1</p> <p>19 <input type="radio"/> Father-in-law or mother-in-law of Person 1</p> <p>20 <input type="radio"/> Brother or sister of Person 1</p> <p>21 <input type="radio"/> Brother-in-law or sister-in-law of Person 1</p> <p>22 <input type="radio"/> Lodger or boarder</p> <p>23 <input type="radio"/> Room-mate</p> <p style="text-align: center;">Other — Specify</p> <p>24 <input style="width: 100%;" type="text"/></p>
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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 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 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, 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 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 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.

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 visitation records (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 a 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 labour, 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 Instructions 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 (DCS)

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, 111,626 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 143,684 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 Families - Pre-processing

In the 2001 Census, the write-in responses for Question 6 (Relationship to Person 1) on Forms 2B, 2C, 2D and 3B (2B, 2C, 2D and 3 in 1996) were captured as reported by respondents. The write-in responses on the Forms 2A and 3A (2A only in 1996) were not captured, but were classified as "Other write-ins". For this reason, all published data on families, as in 1996, come from 20% sample data (private households only).

An autocoding system similar to the 1996 system was used to assign a code to each write-in response from the 2B, 2C, 2D and 3B forms. This consisted of: (a) a batch component, where a response was matched, if possible, against a reference file to automatically assign the correct code; (b) an interactive (general) component, where most responses not matched in batch were examined on screen, along with auxiliary information from the household, in order to assign the final code; and (c) an interactive (expert) component, in which subject-matter specialists dealt with cases that failed edit rules, were referred by general coders, or matched a special file of keywords requiring special attention.

For Relationship to Person 1, it is important to note that coding was performed in the context of the household, rather than at the person level. A series of automated edits, which used responses to other questions as well as the responses of other persons in the household, was applied to each coded response, flagging any cases that needed to be examined more closely before the selection of the final code was made. The interactive component of the coding system presented the response to be coded along with the responses to Questions 2 through 7 for all household members.

The set of codes for Relationship to Person 1 was associated with the valueset shown in Appendix B2.

Write-in responses for the Relationship to Person 1 question were entered and autocoded for a total of approximately 161,000 persons, or about 2.6% of all persons reporting on long forms.

2.3 Families - Processing

Section 2.2 described how the write-in responses for Question 6 (Relationship to Person 1) on Forms 2B, 2C, 2D and 3B (the "long forms") were captured as reported by respondents. The write-in responses on Forms 2A and 3A ("short forms") were not captured, but were classified as "Other write-ins". Although published data on families were based on 20% sample data (private households only), the short-form responses still had to be processed, because of the need to publish demographic data at the 100% level, as well as the need for 100% family data for processing purposes.

This decision created a requirement to have two processing streams. One processed all questionnaire types, without the write-in responses, to create 100% data. The other stream re-processed the raw long-form questionnaires, using the write-in responses to create the 20% data. As the 20% data contained many more possible relationships to Person 1, two sets of edits were created. One set contained the relationships listed on the questionnaires and was applied to the 100% data. The second set of edits contained many more relationships and was applied to the 20% data. The 2001 Census Technical Report entitled *Age, Sex, Marital Status and Common law Status* (Catalogue No. 92-380-XIE) contains more information on the two processing streams. Since all published family data are at the 20% sample level, all subsequent information in the current chapter will deal with the second (20%) processing stream.

As in 1996, processing of the data from the Relationship to Person 1 question began with a SPIDER module (known as R2P1MULT in 2001). This module took the responses to the several checkboxes and to the write-in box, and deterministically derived a single variable representing a person's relationship to the household reference person. The processing valueset¹ for the Relationship to Person 1 variable is shown in Appendix B2.

For the 2001 Census, the functionality of the modules REORDER1, REORDER7, REORDER8, as well as the FAMFORM program for family formation, were incorporated into a new FAMFORM program: FAMFORM_B1. Its primary function, which was to identify potential couples and parent-child pairs, was performed prior to the hot-deck imputation in CANCEIS, while FAMFORM_B2, which identified final couples and parent-child pairs, and formed census and economic families, took place afterwards. This provided a means of ensuring consistency in the concepts, related to families, used before, during and after CANCEIS. Also, a single program was easier to specify, program and maintain. Finally, changes in the concepts related to families (including same-sex couples and the treatment of children and grandchildren) necessitated that major changes be made to the programs.

For 2001, certain systematic reporting errors were fixed deterministically in the early stages of FAMFORM_B1. One of these types of error involved a "Yes" response to Common-law Status for all members of the household. This error was corrected by changing the response to "No" for any child of

¹ A shorter valueset is used for dissemination purposes. For example, the valueset used in processing includes the value "Stepson/stepdaughter". However, because the frequency associated with this category is not considered an accurate estimate of the number of stepchildren, it is subsumed into the category "Son/daughter of Person 1" for dissemination.

Person 1 whose partner was not present in the household. Another type of error occurred when the questionnaire was completed by a child (often an older child whose parents did not have a good grasp of English or French), who put himself/herself in Position 3, but reported the other person's relationships in reference to himself/herself, instead of in reference to Person 1. In such a case, Person 3 usually had a non-response to Relationship to Person 1. This type of error was dealt with by moving the child into Position 1 and the parents into Positions 2 and 3, updating their responses to Relationship to Person 1 as appropriate.

In 1996, processing included the identification of potential couples prior to hot-deck imputation; the REORDER7 program flagged these potential couples so that NIM could determine the appropriate imputation actions, e.g., whether a potential couple should be retained as a couple. One recommendation based on the 1996 experience was that this process should be applied to parent-child pairs as well. In 1996, age verifications were performed on Person 1 and Person 1's spouse in relation to their children and their parents, as well as on Person 1's brother or sister in relation to their parents. For example, it was an edit failure if both Person 1 and Person 1's husband/wife were less than 15 years older than a Person 1's son/daughter. However, this type of verification was not done for families that did not include Person 1, since their relationships were not unique. If two persons were reported as Person 1's brother/sister and someone else as Person 1's nephew/niece, it was not possible to be sure which brother/sister was the parent of the nephew/niece.

In order to apply similar edit rules to these situations, it was necessary to identify these potential families before CANCEIS, as was done in 1996 for potential couples. Then the appropriate edit rules could be applied in CANCEIS, ensuring the characteristics of the identified persons would be consistent with each other, after CANCEIS (i.e. CANCEIS would make sure that all the demographic characteristics were in line with a family, or it would change the relationships so they were no longer consistent with a parent-child relationship). Thus, for 2001, FAMFORM_B1 identified potential couples, and parent-child and grandparent-grandchild relationships, using a scoring scheme based on unimputed demographic data. These were flagged so that the appropriate edit rules would be applied to these potential families in CANCEIS.

After the hot-deck imputation in CANCEIS, the FAMFORM_B2 module performed the identification of census families and economic families, derived the required variables, and did a final "clean-up" of the demographic data. See Section 2.3.3 for more details on this stage of the processing.

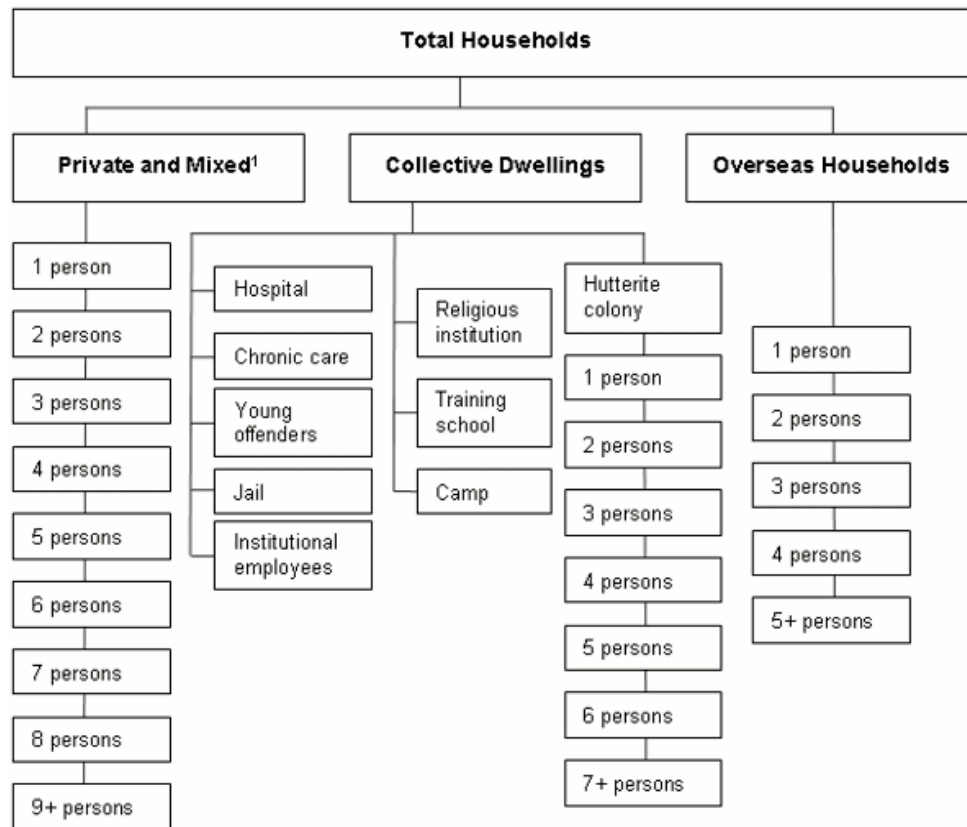
2.3.1 Stratification

As in 1996, the first step to processing was Stratification. This step was required in order to group together households and individuals with similar characteristics (i.e. geographic region, household type and household composition). These strata ensured that the imputation system was able to select, in the most efficient manner possible, a donor record with demographic characteristics which most closely resembled those of the record requiring imputation.

The number of strata was slightly reduced from 29 in 1996 to 23 in 2001. The most significant changes since 1996 stemmed from modifications to the classification of collective dwellings. In particular, the "Hospital" stratum now includes chronic care hospitals along with hospitals, psychiatric hospitals and institutions for the physically handicapped. The name of the stratum that previously contained chronic care hospitals has changed from "Chronic Care" to "Senior Citizens", since it now contains only nursing homes and residences for senior citizens. The "Shelter" stratum, new in 2001, includes persons living in hostels, homeless shelters and other shelters with assistance services.

In 1996, people living in Hutterite colonies were stratified by household size. In 2001, the seven-size strata were combined into a single stratum, since in 2001, most (99.67%) of the people living in Hutterite colonies were living in households with seven or more members. Hence, there was no need for the seven strata used in 1996.

Figure 1. 1996 Census Processing of Demographic Data – Stratification of Households



¹ At least one household member not related by blood, marriage or adoption. Includes campgrounds and parks, hotels, motels and tourist homes, lodging and rooming houses, YM/YWCAs, missions and shelters, and other collective dwellings.

Collective dwellings are grouped as indicated below

Hospital: hospital, institution for persons physically handicapped, psychiatric hospital.

Chronic care: chronic care hospital, nursing home, residence for senior citizens.

Young offenders: children's group home, young offenders' facility.

Jail: correctional institution, penal institution and jail.

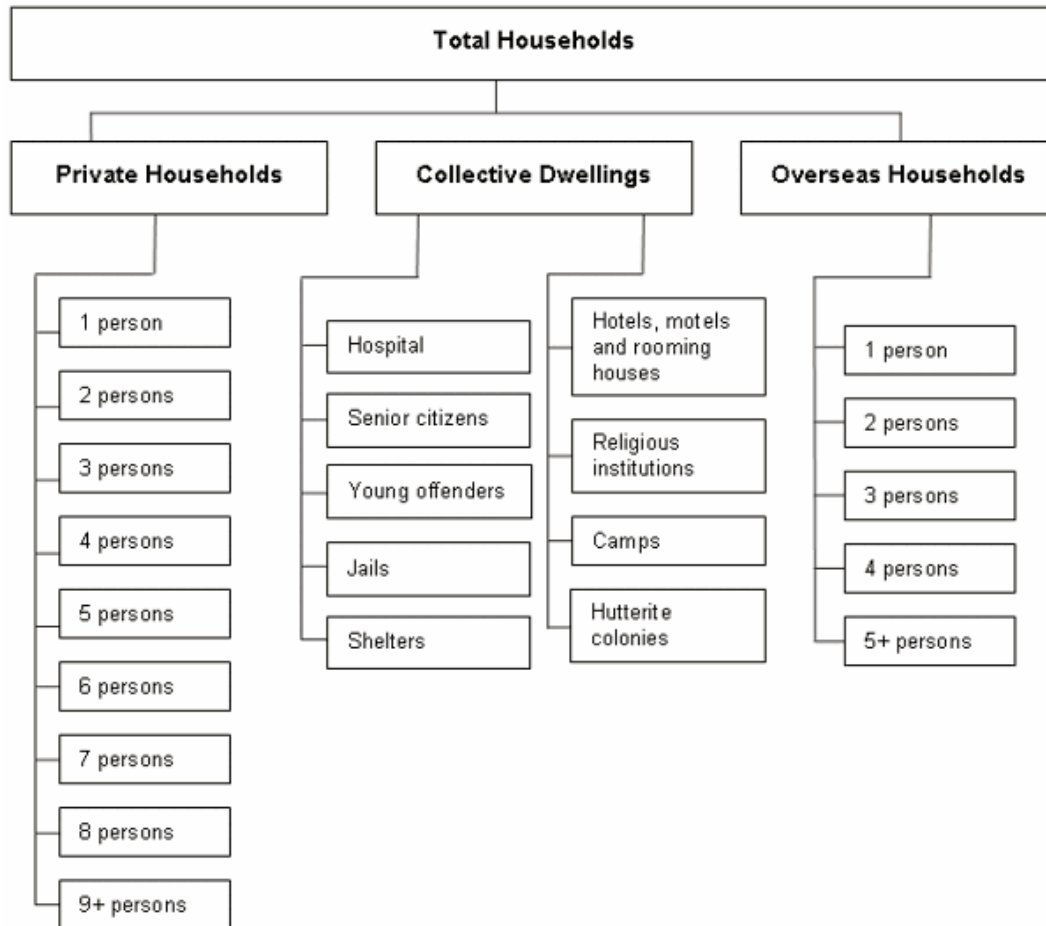
Camp: military camp, naval vessel, merchant vessel and coast guard vessel.

Religious institution: religious institution.

Training school: school residence and training centre.

In 2001, a person living in a hotel, motel, campground, etc., was considered to be living in a collective dwelling and was not included in the private dwelling stratum.

Figure 2. 2001 Census Processing of Demographic Data - Stratification of Households



Collective dwellings are grouped as indicated below:

Hospitals: hospitals, institutions for persons physically handicapped and psychiatric hospitals.
 Senior citizens: nursing homes and residences for senior citizens.
 Young offenders: children's group homes, young offenders' facilities.
 Jails: correctional institutions, penal institutions and jails.
 Hotels, motels and rooming houses: school residences, training centres and camping areas.
 Camps: military camps, naval vessels, merchant vessels and coast guard vessels.
 Shelters: shelters for homeless and other shelters with assistance services.

2.3.2 Edit and Imputation

2.3.2.1 Edit

At the edit stage, CANCEIS uses a set of conflict resolution rules (edit rules). Those rules were put in place to determine whether a record has missing, invalid or inconsistent responses. When such a record is identified, it is imputed at the next stage in the process. The complete list of edit rules is presented in Appendix B.

Two types of edits were used: primary edits and secondary edits. The primary edits were used to identify records that contained inconsistent data. The records that did not pass the primary edits were marked for imputation. The primary edits for 2001 demographic variables were categorized into three groups: within-person edits, between-person edits and family edits. A within-person edit identified a record with inconsistent data contained in that same record. A between-person edit identified records with inconsistent data between two records. A family edit was a special type of between-person edit that examined the characteristics of parent-child pairs or grandparent-grandchild pairs that did not include Person 1. Secondary edit rules were used to identify records that contain outlier values. The records that did not pass the secondary edits were not used as donors during imputation.

A number of edit rules were added to what existed in 1996, most notably the following:

- rules to verify the validity of a couple, or of a parent-child or grandparent-grandchild relationship excluding Person 1;
- rules to deal with same-sex couples (note that opposite-sex and same-sex common-law partners were treated the same way in all aspects of processing);
- in 1996, rare relationships were collapsed into one single category at an early stage of processing in a pre-derive module; however, for 2001, the complete valueset of the Relationship to Person 1 variable was used, to allow for more precision in CANCEIS imputation. (Consequently, the set of edit rules for couples was expanded to include, for example, owner and owner's husband/wife.)

As stated in Section 2.3, FAMFORM_B1 looked for, and flagged, potential couples, parent-child pairs and grandparent-grandchild pairs. This allowed CANCEIS to apply the appropriate edit rules to the appropriate persons.

Below is a sample household comprised of four persons.

	Relationship	Age	Sex	Marital Status	Common-law
1	Person 1	48	M	Legally married	No
2	Wife	46	F	Legally married	No
3	Son	21		Single	No
4	Mother	56	F	Legally married	Yes

In the example shown above, the first two persons would be flagged as a couple, and the pairs of Persons 1 and 3, as well as Persons 2 and 3, would be flagged as parent-child pairs. If each record is evaluated separately, Person 3 has a missing piece of data, and Person 4 has an inconsistency between Marital Status and Common-law Status. (Conflict detection indicates that the person is both legally married and living common-law.) Then, when the records are compared, there is an inconsistency between the birth dates of Person 1 and Person 4 since there has to be at least 15 years' difference between a parent and a child.

In 1996, a large number of the edits were used for basic family relationships as well as other links, such as room-mates and employees. In 2001, two new features greatly increased the number of edit rules: first, the above-mentioned process for identifying parent-child pairs, and second, the fact that the set of possible values of the Relationship to Person 1 variable doubled between 1996 and 2001. That is, a number of possible responses, such as aunt, uncle and employee, are no longer lumped into an "Other" category, and edits are now possible on those responses. This means that an eight-member household underwent about 32,000 edits.

The edit rules applied to each record and the edit rules applied between two records are known as primary edit rules. A record that does not satisfy all primary edit rules is imputed. In 2001, about 17% of households failed one or more primary demographic edit rules.

Following is an example where all primary edits are passed, but a secondary edit fails.

	Relationship	Age	Sex	Marital Status	Common-law
1	Person 1	52	M	Legally married	No
2	Wife	53	F	Legally married	No
3	Sister-in-law	25	F	Divorced	No

This household would pass all primary edits; it would then not be subject to imputation. However, because it violates a secondary edit rule stating that Person 1's husband/wife cannot be more than 25 years older than Person 1's brother-in-law/sister-in-law, it will never be considered as a donor household.

2.3.2.2 Imputation

CANCEIS uses hot-deck imputation and adheres more closely to the following objectives:

- The donor household should closely resemble the failed-edit household.
- Imputed data should come from a single donor.
- Possible donor households should have an equal chance of being selected.

CANCEIS also has the ability to classify the members of potential donor households in order to improve the search for the best possible match with the failed-edit household. The classification and matching step sometimes produced more than one potential donor. All potential donor records were scored, and only those which might keep the number of imputation measures to a minimum were selected for the pool of final donor records. The final donor record was then selected at random from the pool.

Table 1 compares the rates of hot-deck imputation for the Relationship to Person 1 variable in 2001 and 1996. A detailed evaluation of the data is found in Section 3.2.

Table 1. Hot-deck Imputation Rates for Relationship to Person 1, Population in Private Households, Canada and Regions, 1996 and 2001 Censuses - 20% Sample Data

	2001	1996
	percentage	
Canada	2.1	2.3
East	1.6	1.9
Quebec	1.9	2.0
Ontario	2.2	2.2
West	2.1	2.2

Note: The East database comprises the four Atlantic provinces. The West database comprises all the provinces west of Ontario and the three territories.

2.3.3 Finalization

The FAMFORM_B2 module, which was run after the donor imputation was complete, performed three main functions:

- the identification of the final couples, parent-child pairs, and grandparent-grandchild pairs;
- the derivation of the necessary variables related to census and economic families;
- a final "clean-up" of the demographic data.

The key variables for census and economic families include C_FAM (census family number), CFAMST (census family status), CF_RP (census family reference person), E_FAM (economic family number), and EF_RP (economic family reference person).

The "clean-up" referred to above involves changing the values of the Common-law and Relationship variables. A person who has a spousal relationship or a common-law status of "Yes", but who is not part of a couple, will have his or her common-law status and/or relationship changed. A person with a "child" relationship, who is not in a census family, may have his or her relationship changed. Persons also may have their relationship changed to be made consistent with their marital/common-law status.

Finally, after FAMFORM_B2 and the derivation of information on household maintainer (see the definition of Census Family Type in Appendix A), the module FFP5 reassigns the value of C_FAM (census family number) for the census family that contains the primary household maintainer (if applicable). The primary household maintainer is defined as the first person reported as being responsible for major household payments. FFP5 also reassigns the value of E_FAM (economic family number) for the economic family containing the primary household maintainer (if applicable). By convention, the family containing the primary household maintainer is assigned C_FAM=1. If the primary household maintainer is not a member of the household or is not a census family member, there will be no persons with C_FAM=1. Similarly, E_FAM=1 is reserved for the members of the economic family that contains the primary maintainer (if there is one).

3. Data Quality Measurement

3.1 General

Throughout the census-taking process, every effort was made to ensure high-quality results. Rigorous quality standards were set for data collection and processing, and the Public Communications Program assisted in minimizing non-response. A Data Quality Measurement Program was established to provide users with information on the quality and limitations of census data.

Although considerable effort is made throughout the entire process to ensure high standards of data quality, the resulting data are subject to a certain degree of inaccuracy. To assess the usefulness of census data for their purposes and to understand the risk involved in drawing conclusions or making decisions on the basis of these data, users should be aware of their inaccuracies and appreciate their origin and composition.

Within the **2001 Census Technical Reports Series**, users will find detailed 2001 Census information on *Coverage* and *Sampling and Weighting*. These two reports are scheduled to be released in November and December 2004 respectively.

3.2 Families

This section examines the major family variables in comparison with historical census data and other data sources, where available, including the General Social Survey and census results from other countries.

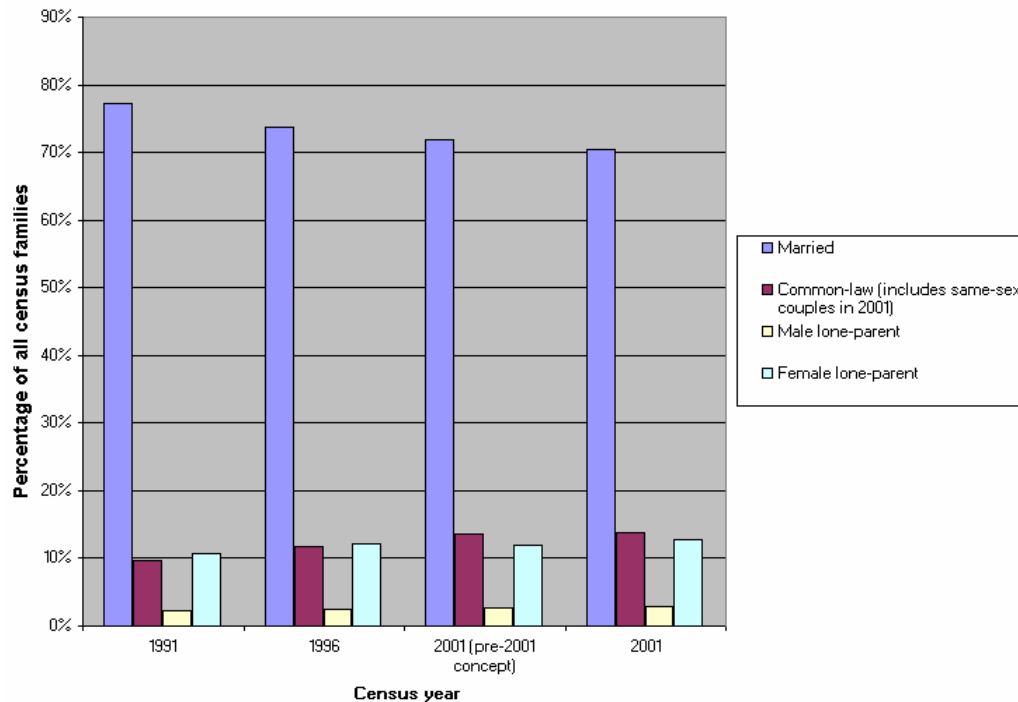
As mentioned previously (in Sections 1.2 and 2.3), changes were made in the 2001 Census to the concept of the census family. Chapter 4 describes these changes in detail. A set of parallel variables, applying the pre-2001 concept to 2001 data, was created to facilitate historical comparison. These variables have been used in the following analysis, which focuses on census family structure, same-sex couples, presence and number of children, and age groups of children. Since all published data on families for 2001 are at the 20% sample level, the following sections deal only with data at that level.

3.2.1 Census Family Structure

Figure 3 illustrates the change in distribution of families by census family structure (see Appendix A for the Glossary of Terms). Note that same-sex couples are included in common-law families according to the 2001 concept. The continuing decline in the proportion of married couple families is apparent, and is somewhat balanced by an increased proportion of common-law and male lone-parent families.

From 1996 to 2001, the total number of married couples increased by 2%, while the number of opposite-sex common-law couples went up by 22% (Appendix C, Table C1). This is consistent with 1995-2001 increases of 3% and 20% respectively from the 1995 and 2001 General Social Survey (GSS). The change in concept does not affect these two categories.

Figure 3. Distribution of Census Families by Family Structure, Canada, 1991 to 2001 Censuses - 20% Sample Data



At the provincial/territorial level, Prince Edward Island, Quebec, Ontario and Alberta had an increase in the number of opposite-sex common-law couples that was substantially above the national rate of increase. Note, however, that the incidence of such couples as a proportion of all opposite-sex couples was much higher in Quebec (30%) than elsewhere in Canada (12%).

Female lone-parent families increased by 13% but, after removing the conceptual effect, this is an increase in real terms of only 3%. Male lone-parent families went up by 28%, or 16%, after removing the conceptual effect, compared to an increase of 24% in the GSS. One of the potential reasons for the substantial increase in male lone-parent families would be an increase in children living in joint custody compared to children living in the sole custody of their mother.² Female lone-parent families accounted for 81% of all lone-parent families, compared to 82% from the GSS, and down from 83% in 1996. This proportion was fairly uniform across the country, varying only from 79% to 83%, except in the Northwest Territories and Nunavut, where it was somewhat lower (75% and 73% respectively).

² As stated in The Daily of December 2, 2002, "Of the 37,000 dependents for whom custody was determined through divorce proceedings in 2000, the custody of a slim majority (53.5%) was awarded to the wife. This proportion has been in steady decline since 1988, when custody of 75.8% of dependents was awarded to the wife only. In contrast, custody of 37.2% of dependents was awarded to the husband and wife jointly in 2000, continuing a 14-year trend of steady increases in joint custody arrangements." An instruction on the census questionnaire states that children living in joint custody should be reported at the address where they spend most of their time; children who spend equal time with each parent are to be counted where they are staying on the night of the census.

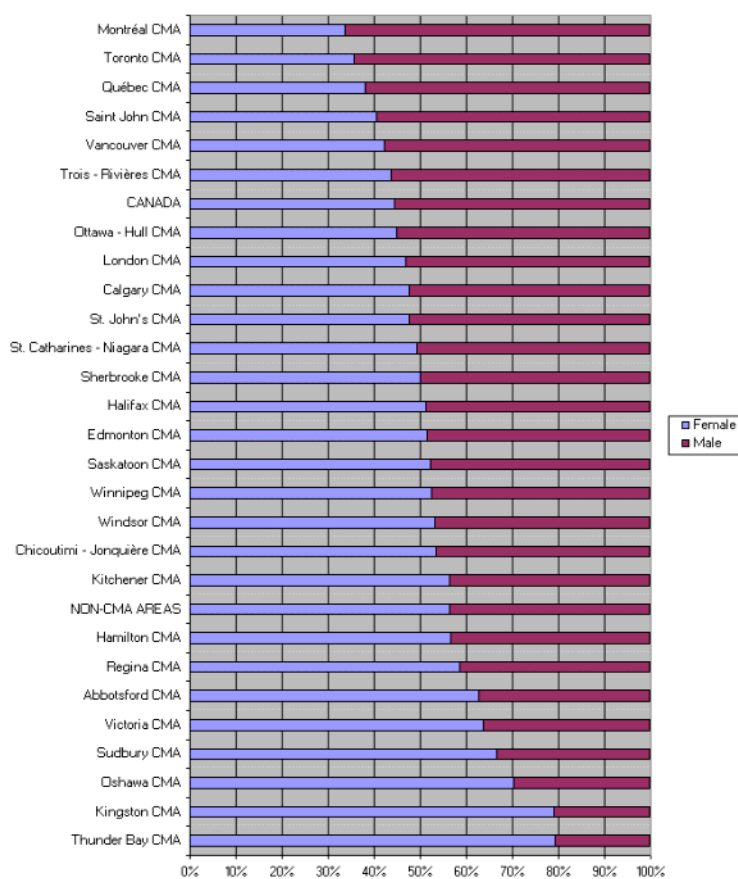
3.2.2 Same-sex Couples

The 2001 Census enumerated a total of 34,200 same-sex common-law couples (Appendix C, Table C1), accounting for 0.5% of all couples. This compares with New Zealand census figures of 0.4% in 1996 and 0.6% in 2001. The proportion based on the 2000 United States Census was 1%.³

In most provinces and territories, same-sex couples accounted for 0.4% to 0.6% of all couples, although there were a few below this range: Newfoundland with only 0.1%, Prince Edward Island and Saskatchewan with 0.2%, and New Brunswick, Manitoba and Nunavut with 0.3%.

Female couples accounted for 44% of all same-sex couples. Female couples have a greater tendency to live in rural or smaller urban areas than do male couples; to illustrate this, the proportion of female couples in the CMA's of Toronto and Montréal is only about one third, while it is 56% in the non-CMA part of Canada (see Figure 4).

Figure 4. Same-sex Couples by Sex, Census Metropolitan Areas, 2001 Census - 20% Sample Data



³ The count of same-sex couples in the United States is based on the concept of "unmarried partner", which is a rather broader concept than that of a common-law partner. The definition of unmarried partner is "a person who is not related to the householder, but who shares living quarters and has a close personal relationship with the householder" (Households and Families: 2000, U.S. Census Bureau, September 2001). The term "unmarried partner" is not used as widely in the United States as is "common-law partner" in Canada; for example, on the standard Internal Revenue Service income tax form, there is a simple distinction between married and single, with spouses having the option of filing individually or jointly – it is only in a background document where it is mentioned that persons are considered married if they are "living together in a common-law marriage that is recognized in the state where you now live or in the state where the common-law marriage began". The term "unmarried partner" is nowhere to be found.

A total of 9% of all same-sex couples have children living with them. This compares with 10% of United States same-sex couples having children under 15 in 2000 (Current Population Survey). In Canada, 15% of female same-sex couples, and 3% of male couples, had children living with them.

3.2.3 Presence and Number of Children

Children refer to blood, step- or adopted sons and daughters (regardless of age or marital status) who are living in the same dwelling as their parent(s), as well as grandchildren in households where there are no parents present. Sons and daughters who are living with their spouse or common-law partner, or with one or more of their own children, are not considered to be members of the census family of their parent(s), even if they are living in the same dwelling. In addition, the sons or daughters who do not live in the same dwelling as their parent(s) are not considered members of the census family of their parent(s). When sons or daughters study or have a summer job elsewhere but return to live with their parent(s) during the year, these sons and daughters are considered members of the census family of their parent(s).

As seen in Appendix C, Table C2, the proportion of families with no children, which stayed fairly stable between 1991 and 1996, has increased for 2001 (regardless of whether the conceptual change is taken into account). Also, the share for families with one child has continued to increase, while the share for families with three or more children has continued to decrease. These trends are apparent in all provinces and territories, and they are corroborated by the 1995 and 2001 GSS figures.

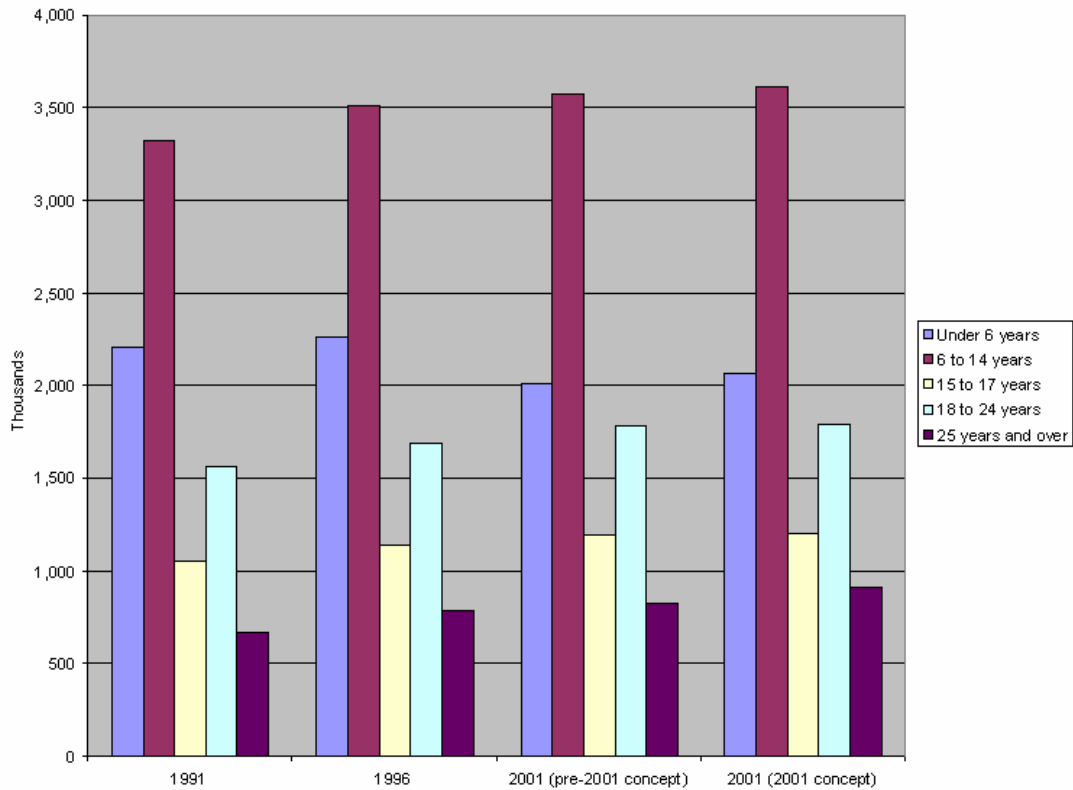
Similarly, if we look at Appendix C, Table C3, the average number of children per family, which stayed constant from 1991 to 1996, dropped substantially between 1996 and 2001, even with the compensating effect of the conceptual change. This was also the trend at the provincial/territorial level, except in Ontario, Manitoba and British Columbia (where the average stayed quite constant from 1991 to 2001, possibly due to the effect of immigrating families, which tend to be larger), and in Alberta and Yukon, where there was a drop from 1991 to 1996, followed by no change for 1996 to 2001.

Another trend that has continued through 2001 is the increasing proportion of children living with common-law parents. In 1981, the parents of only 2.5% of children were living common-law; by 2001, this had increased to 9.5%. If we look at children under the age of 15, the trend is even more pronounced: from 3.1% in 1981 to 13% in 2001.

3.2.4 Age Groups of Children

Figure 5 and Table C4 (in Appendix C) show children in census families by age group. Overall there was only a 2.3% increase in the total number of children (0.2% after taking out the conceptual change), compared to 6.3% between 1991 and 1996. This is consistent with the overall increase in families with no children, and the decrease in average number of children. Most notable is the decrease of some 200,000 in the number of children between the ages of 0 and 5; essentially the same information can be seen by comparing the 1996 and 2001 age and sex pyramids from the July 2002 release on Age and Sex (see Bibliography).

Figure 5. Children in Census Families by Age Group, Canada, 1991 to 2001 Censuses - 20% Sample Data



3.3 Sources of Error and Evaluation Studies

One of the main sources of error in the census is net undercoverage. In 2001, it was approximately 3.21% for the population. No precise estimate has been made for families, but the rate is likely to be lower than for the population, since the rate of undercoverage for married persons is much lower than for persons with other marital statuses, and higher for one-person households than for other household sizes.

Non-response to the various census questions is also a cause of flaws in the data. The rate of non-response for Relationship to Person 1 at the 20% sample level was 1.3%. This compares with 1.5% in 1996. Note that, for calculation of non-response rates for Relationship to Person 1, all Person 1's are excluded from the denominator since there is a preprinted response of "Person 1" in Column 1 of the census questionnaire, i.e. the answer is provided for the first person.

As mentioned in Section 2.3.2.2, 2.1% of persons in private households had their relationship to Person 1 changed during hot-deck imputation in 2001, compared to 2.3% in 1996. However, as referred to in Sections 2.3 and 2.3.3, additional changes were performed before and after hot-deck imputation. These deterministic changes contributed to the overall incidence of imputation, the rates for which are shown in Table 2.

Table 2. Overall Imputation Rates for Relationship to Person 1, Population in Private Households, Canada and Regions, 2001 Census - 20% Sample Data

	2001
	percentage
Canada	3.6
East	2.6
Quebec	3.5
Ontario	3.7
West	3.6

Note: The East database comprises the four Atlantic provinces. The West database comprises all the provinces west of Ontario and the three territories.

A certification study was conducted to assess the quality of the 2001 data for families, to determine its fitness for publication. The study indicated that the variables compared well with other sources and with previously observed trends. Thus, it was recommended that all family data for private households within Canada from the 2001 Census (20% sample) be released.

Same-sex partnerships in the 2001 Census

For the first time, the 2001 Census provided data on same-sex partnerships. Changes in the legal status of same-sex common-law couples were the primary reason for collecting these data. The number of same-sex couples in the census reflects people who identified themselves as living in a same-sex common-law relationship.

The 2001 Census did not ask about sexual orientation. Therefore, the data on same-sex partnerships should not be interpreted as an estimation of the number of gays and lesbians in Canada, some of whom may be living alone or with parents or friends.

During the processing of the 2001 demographic variables, an unexpectedly high proportion of conflicts between responses to the Sex and the Relationship to Person 1 questions were observed, specific to potential same-sex partners. The following section describes the situation and its resolution.

Conflicts between sex and relationship for same-sex partners

In order to obtain preliminary counts of same-sex partners based on the unimputed 2001 data (100% level), all persons who checked the box "Common-law partner (same-sex) of Person 1" in the Relationship to Person 1 question were selected and cross-tabulated with other demographic variables. An unexpectedly high proportion of these cases (26%), where Person 1 and Person 2 had opposite responses to the Sex question, was noticed.

Table 3 gives the national-level counts of potential same-sex couples, classified according to the values of the "Relationship to Person 1" and "Sex" variables for Persons 1 and 2. Case types 3 through 6 were considered problem cases because of a conflict between the responses.

Table 3. Households Having a Possible Same-sex Relationship - Frequency by Case Type

Case Person 2's reported relationship to Person 1 No.		Reported sexes of Persons 1 and 2	Frequency
1	Common-law partner (same-sex) of Person 1	both male	16,369
2	Common-law partner (same-sex) of Person 1	both female	13,647
3	Common-law partner (same-sex) of Person 1	one male, one female	11,062
4	Common-law partner (same-sex) of Person 1	one or both blank or invalid	802
5	Common-law partner (opposite-sex) of Person 1	both male or both female	6,227
6	Common-law partner (opposite-sex) of Person 1 and Common-law partner (same sex) of Person 1	--	533
		Total	48,640

Because of the potential impact on the count of same-sex couples, it was decided to examine a sample of questionnaires for case types 3 through 6 to determine which of the couples were in reality same-sex or opposite-sex. Required sample sizes by region and problem type were determined, and systematic samples were selected. The total counts and sample sizes for the four types of problem cases as shown in Table 4.

Table 4. Conflictual and Ambiguous Same-sex Cases: Frequency and Sample Size

Case No.	Total frequency	Sample size
3	11,062	647
4	802	405
5	6,227	623
6	533	325
Total	18,624	2,000

Questionnaires were examined for given names as well as for comments or capture errors that might provide insight into the situation. It was found that the vast majority of cases were valid common-law couples, although a few cases were noticed where Persons 1 and 2 were not in fact an unmarried couple, but errors in response or data capture had caused them to be flagged by our tabulation. Of the cases where there was a valid common-law couple, a substantial proportion of these cases could not be identified as clearly opposite-sex or same-sex due to unfamiliar or ambiguous names. Of the remainder, the majority turned out to be opposite-sex, although the proportion varied by problem type. See Table 5.

Table 5. Resolved Conflictual and Ambiguous Same-sex Cases by Type of Couple

Case No.	Opposite-sex couples	Same-sex couples	Same-sex couples as a % of all unambiguous common-law couples
3	379	4	1%
4	193	127	40%
5	362	44	11%
6	153	18	11%

The two problem types of highest concern because of their frequency were Cases 3 and 5. The Case 3s occur when Person 2 has checked "Common-law partner (same-sex) of Person 1", but Persons 1 and 2 have provided opposite responses to Sex. Almost all of these cases (99%) were found to be opposite-sex couples: the response to Relationship to Person 1 was in error. Case 5 occurs where Person 2 has checked "Common-law partner (opposite-sex) of Person 1", but Persons 1 and 2 have provided the same response to Sex. Here again, a majority of the cases (89%) were found to be opposite-sex couples, as the result of an error in either the response to, or the data capture of, the response to the Sex question.

The 2001 imputation system for family and demographic variables resolved such conflict cases via donor imputation, so that when there was a conflict between the Relationship to Person 1 and Sex variables, a donor household with similar characteristics was used to assign the required values. Thus in most cases, based on donor availability, the situation would have been resolved as an opposite-sex couple. On the other hand, in parts of Canada where there is a concentration of same-sex couples (in certain large urban centres), a substantial proportion of cases would have been imputed to same-sex couples, because of the greater availability of potential donors that are members of same-sex households.

Based on the findings of the questionnaire study, an estimate of the "true" number of same-sex couples (100% level) was produced, yielding the following:

• Total potential same-sex couples	48,640
• Estimated same-sex couples based on questionnaire study (with a 95% confidence interval of 30,835, 31,527)	31,181
• Same-sex couples after edit and imputation who reported in Positions 1 and 2 on the questionnaire	31,748 *

Although the final number is not within the confidence interval, it is quite close to the estimate, given the number of ambiguous cases involved. Also, part of the difference would be due to cases where Person 2 did not check the same-sex partner box, but provided a write-in response, or cases where the relationship was "room-mate" or "husband/wife", but all other variables pointed to it being a valid same-sex couple. Such cases were not included in the questionnaire study.

It was therefore determined that the processing system resolved these cases in a statistically acceptable manner.

* This is lower than the published number of 34,200, since it consists only of cases where the couple reported in the first two positions on the questionnaire. In many of the cases where there are other persons in the household, the same-sex couple do not occupy the first two positions.

4. Historical Comparability

To fully utilize census data, we must analyze not only the historical trends of the data we are presenting, but also the historical changes relating to the type of data required and to the collection procedures. In the past, the Census of Canada has undergone many changes in order to meet the ever-changing need of Canadians for timely and accurate information on Canada's statistical profile. This has continued for the 2001 Census.

Changes to the concepts, to the formulation of the questions or to the instructions to the respondents for census questions can potentially cause a lack of comparability of the data over time. Details concerning changes since 1996 to the questions used to obtain data on families are described in Section 1.2, and in the 2001 Census Technical Report entitled *Age, Sex, Marital Status and Common-law Status* (Catalogue No. 92-380-XIE). Further information affecting specific family concepts is provided below.

Coverage

Before 1976, the published statistics on families came from four types of households: occupied private households, Hutterite colonies, other types of collective households, and households outside Canada. Beginning in 1976, only the data on private households were published. However, this difference is minimal, since in 2001 there were only about 2,000 households outside Canada and 26,000 collective households, or approximately 0.2% of the total number of households.

Census Families

As mentioned previously, substantial changes were made to the definition of census family for 2001. Appendix A1 provides details of the changes as well as of the impact on the data. Prior to this, the census family concept remained much the same since 1951, the most significant change being in regard to children in census families (see **Children** below).

Census Family Structure

Since 1951, families have been classified according to whether they consist of a couple or only one parent. However, until 1981, it was not possible to distinguish married couples from common-law couples, and the instructions for including the latter varied considerably from 1971 to 1991.

In the 1971 and 1976 Censuses, common-law relationships were implicitly recognized, although there was nothing in the questionnaire or in the Guide explicitly asking that such unions be indicated. The only mention of the term "common-law" was in the instruction on marital status in the Guide accompanying the questionnaire: it asked that persons living common-law indicate "married" as their marital status. The subject of common-law relationships was not discussed in connection with any question, but the instruction for the "Partner" category in the question on the relationship to the head of the household was ambiguous and could lead to error.⁴

Also, in the 1976 Census, even though respondents were not specifically asked to indicate common-law relationships, some 73,000 respondents did write in answers that indicated or suggested that their relationship was a common-law one. However, these responses were not recorded as such in the final database, but were recoded to show what was considered an appropriate relationship. For example, if the answer written in was "Common-law spouse of head of household", the new response assigned was "Spouse of head of household".

⁴ According to the Guide accompanying the questionnaire for the 1971 and 1976 Censuses, the respondent was "to indicate as a partner a person who was not related to the head of the household, had equal access to the dwelling facilities and/or shared the responsibility for maintaining the household (for example, a room-mate)".

Beginning with the 1981 Census, the question on the relationship to Person 1 included the category "Common-law partner". Respondents were also encouraged to indicate less direct relationships, like "Common-law partner of son or daughter", in the answer box for this purpose for Persons 3 to 6. For 1981, the data on common-law unions were not presented separately in the publications, but were grouped with the data for husband-wife families (however, the 1981 data on common-law relationships can be found in the 1981 database and in some 1986 publications).

In 1991, in addition to the question on the relationship to Person 1, a direct question on common-law relationships was added. However, the corresponding changes to the processing of the information ensured the comparability of the family data with that of 1981 and 1986. It is of course possible that adding this question encouraged some respondents to indicate a common-law relationship more clearly.

In 2001, there were two common-law categories in the "Relationship to Person 1" question: "Common-law partner (opposite-sex) of Person 1" and "Common-law partner (same-sex) of Person 1". In addition, the instruction accompanying the direct common-law question specified that the couple could be of opposite or same sex. According to the census results, same-sex couples accounted for about 3% of all common-law couples. In most of the 2001 Census standard products, opposite-sex and same-sex couples were grouped into a single common-law category.

Census Family Type

This variable relates to whether a family is maintaining its own household. Changes made to certain concepts since 1951 may have some effect on comparability of the family type data.

Up to and including 1976, the primary family was considered to be the one containing the head of the household. The criterion for choosing the head was changed slightly between 1971 and 1976, but the change had very little effect on this variable.

In 1981, the concept of head of household was replaced with the reference person, or Person 1, but the selection criteria were not changed significantly. However, the classification into families maintaining their own households (primary families) and families not maintaining their own households (secondary families) was no longer done on the basis of Person 1, but on the basis of a new specific question on the household maintainer. Respondents were asked to enter the name of the person (or one of the persons) living in the dwelling who was responsible for paying the rent, the mortgage, the taxes, or the electricity bill, and so on, for the dwelling. The family that included the person responsible for making the household payments was then considered the primary family. This change may have caused differences between the 1981 and 1976 data, for example. Thus the person entered first on the 1976 questionnaire was automatically considered the head of the household, and if that person was a husband, that person's family was a primary family. However, in 1981, that situation would have given a different result if the person responsible for the household payments was not part of Person 1's family or if there was no one in the household responsible for the payments.

In 1991, the question on household payments was changed again so that more than one person could be entered. That change resulted in the following classification of families: primary maintaining families, other maintaining families and non-maintaining families. This still did not compromise comparability, since the first category is equivalent to the primary family category for 1981 and 1986, and the other two together correspond to the secondary families for those years.

It is difficult to assess all the effects of these changes on comparability of the data over time. The most important factor is probably the introduction of the question on the person responsible for the household payments, but it probably had only a very limited effect. In the 2001 Census, it was found that, for about 98% of households, the person responsible for the household payments was Person 1, Person 1's spouse or one of their children. Also, the way respondents followed the instructions on the order of

entering persons on the questionnaire - and therefore the selection of Person 1 or the head of the household - over the various censuses may also have had an effect in this area.

Children

The concept of children in census families has undergone some changes over the years, affecting historical comparability.

Before the 1976 Census, guardianship children (such as grandchildren, nephews and nieces of the head of the family) and wards under age 21 for whom no guardianship pay had been received were considered as children of the head of the family. Between 1976 and 1996, grandchildren, nephews and nieces were classified according to their actual relationship to the reference person in the household, and they were considered non-census-family persons in the publications if neither of the parents was in the household. In 2001, grandchildren whose parents were not present in the household were considered as children in the census family of their grandparent(s). Children in foster homes and wards were considered lodgers, and also counted as non-census family persons in the publications.

Concerning the age of the children, never-married sons and daughters living at home, regardless of their age, were considered members of the census family over the entire period from 1951 to 2001. However, never-married children 25 years old and over were not included as children in most of the published tables for the 1951-to-1971 period. Only a few tables including children aged 25 and over are available for those years. Thus, great caution is advised when using these data, and it is strongly recommended that the explanatory notes be consulted to find out which tables these are. In 2001, previously married sons and daughters were included as children in a census family, provided they were not living with their own spouse, common-law partner, or child.

Economic Families

Since the 1971 Census, some data have been published on economic families. These data are comparable over time, except that, for 2001, same-sex partners are now considered to be common-law partners. Thus they are considered related and members of the same economic family. The impact of this is very small, as there were 34,200 same-sex couples enumerated in 2001, compared to a total of 8,273,220 economic families.

5. Conclusion

The purpose of this report was to examine the quality of the 2001 Census data on families. The various aspects that were examined were data collection and coverage, data processing, data evaluation and historical comparability, as well as the relevant concepts and definitions. Analysis showed that the variables compared well with other sources and with previously observed trends. Therefore, they were deemed suitable for publication at the 20% sample level.

One caveat is that changes to the concept of census family have placed limits on the historical comparability of data for lone-parent families. For this reason, a set of census family variables based on the pre-2001 concept was created, for purposes of historical comparison. Users engaged in historical analysis may wish to take advantage of these variables rather than the standard family variables (which reflect the new 2001 concept). See Appendix A1 for more information.

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.

Age: Refers to the age at last birthday (as of the census reference date, May 15, 2001). This variable is derived from date of birth.

Census Family: Refers to a married couple (with or without children of either or both spouses), a couple living common-law (with or without children of either or both partners) or a lone parent of any marital status, with at least one child living in the same dwelling. A couple living common-law may be of opposite or same sex. "Children" in a census family include grandchildren living with their grandparent(s), but with no parents present.

Census Family Composition: Refers to the classification of census families according to the number, and/or age groups, of children at home.

Census Family Household Composition: Refers to the classification of census families according to the presence and number of **additional persons** in the household.

Additional persons refer to any household member who is not a member of the census family being considered. These additional persons may be either members of another census family or non-family persons.

Census Family Status: Classification of persons according to whether or not they are members of a census family and the status they have in the census family. A person can be a spouse, a common-law partner, a lone parent, a child or a non-family person.

Census Family Structure: Refers to the classification of census families into **married couples** (with or without children of either or both spouses), **common-law couples** (with or without children of either or both partners), and **lone-parent families** by sex of parent. A couple living common-law may be of opposite or same sex. "Children" in a census family include grandchildren living with their grandparent(s), but with no parents present.

Census Family Type: Refers to the classification of census families according to whether or not any family member is responsible for household payments, i.e. rent, or mortgage, or taxes, or electricity.

Primary maintaining family refers to the census family of which the primary household maintainer (i.e. the first person identified as being responsible for household payments) is a member.

In cases where no person in the household is responsible for such payments, no primary maintaining family is identified, although Person 1 is considered as the household maintainer for classification purposes. In the context of census family type, the family of this Person 1 is considered as a non-maintaining family.

Other maintaining family refers to any census family which contains a household maintainer other than the primary household maintainer.

Non-maintaining family refers to any census family which does not contain any person who is responsible for household payments.

Common-law Status: Refers to two people of the opposite sex or of the same sex who live together as a couple, but who are not legally married to each other.

Economic Family: Refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law or adoption.

Economic Family Status: Refers to the classification of the population according to whether or not the persons are members of an economic family.

Economic family persons refer to two or more household members who are related to each other by blood, marriage, common-law or adoption, and thereby constitute an economic family.

They can be further classified as follows:

Economic family reference persons

In each economic family, one person is designated as the reference person. For purposes of presentation of historically comparable low-income statistics, the following designations have been made. The male spouse or partner is designated as the reference person in couple families. In lone-parent families, the male or female lone parent is the reference person. In same-sex families where one of the partners is the reference person, the first person in the couple listed on the questionnaire is the economic family reference person. In all other economic families, either a male or female non-census family person is designated as the reference person.

Economic family members

Persons other than the reference person (as described above) who belong to the same economic family are classified as spouses or opposite-sex partners, male or female same-sex partners, never-married sons or daughters, other sons or daughters or other economic family members.

Unattached individuals refer to household members who are not members of an economic family. Persons living alone are included in this category.

Economic Family Structure: Refers to the classification of economic families into those of **couple families, lone-parent families** and **other economic families**.

Couple families are those in which a member of either a married or common-law couple is the economic family reference person.

Lone-parent families are those in which either a male or female lone parent is the economic family reference person.

Other economic families are those in which a non-census family person is the economic family reference person.

Economic Family Type: Refers to the classification of economic families according to whether or not any family member is responsible for household payments, i.e. rent, or mortgage, or taxes, or electricity.

Primary maintaining economic family refers to the economic family of which the primary household maintainer (i.e. the first person identified as being responsible for household payments) is a member.

Other maintaining economic family refers to any economic family which contains a household maintainer other than the primary household maintainer.

Non-maintaining economic family refers to any economic family which does not contain any person who is responsible for household payments.

Household Living Arrangements: Refers to the classification of persons in terms of whether they are members of a family household or of a non-family household, and whether they are family or non-family persons.

Household, Private: Refers to a person or a group of persons (other than foreign residents) who occupy a private dwelling and do not have a usual place of residence elsewhere in Canada.

Institutional Resident: Person, other than a staff member and his or her family, who lives in an institution, such as a hospital, a senior citizens' home or a jail.

Legal Marital Status: A person's conjugal status under the law (e.g. single, married, widowed). **Legal marital status** data are derived from the responses to Question 4 (Marital Status) on the census questionnaires.

Relationship to Household Reference Person (Person 1): Refers to the relationship of household members to the household reference person (Person 1). A person may be **related** to Person 1 through blood, marriage, common-law or adoption (e.g. spouse, common-law partner, son or daughter, father or mother) or **unrelated** (e.g. lodger, room-mate or employee).

Sex: Refers to the gender of the respondent.

Appendix A1 - Changes to Family Concepts for the 2001 Census

For the 1996 Census, the definition of **census family** was as follows:

Refers to a now-married couple (with or without never-married sons and/or daughters of either or both spouses), a couple living common-law (with or without never-married sons and/or daughters of either or both partners) or a lone parent of any marital status, with at least one never-married son or daughter living in the same dwelling.

This reflected a concept that had not changed since 1976. However, during the planning for the 2001 Census, it was decided that some changes were required, due to the following factors: (1) changes to federal and provincial legislation putting same-sex couples on an equal footing with opposite-sex common-law couples (most notably Bill C-23, the *Modernization of Benefits and Obligations Act*, which was passed by the Government of Canada in 2000); (2) recommendations by the United Nations as part of a process of standardization of concepts for the 2000-2001 round of censuses in member countries; and (3) a significant number of persons less than 15 years of age classified as "non-family persons" in previous censuses.

As a result, the census family concept for the 2001 Census reflects the following changes:

- Two persons living in a same-sex common-law relationship, along with any of their children residing in the household, are considered a census family.
- Children in a census family can have been previously married (as long as they are not currently living with a spouse or common-law partner). Previously, they had to be "never-married".

- A grandchild living in a three-generation household where the parent (middle generation) is never-married is, contrary to previous censuses, now considered as a child in the census family of his or her parent, provided the grandchild is not living with his or her own spouse, common-law partner, or child. Traditionally, the census family usually consisted of the two older generations.
- A grandchild of another household member, where a middle-generation parent is not present, is now considered as a child in the census family of his or her grandparent, provided the grandchild is not living with his or her own spouse, common-law partner, or child. Traditionally, such a grandchild would not be considered as a member of a census family.

The last three changes listed (definition of "child"), together, result in a 1.5% increase in the total number of census families, and in a 10.1% increase in the number of lone-parent families. The inclusion of same-sex couples results in a 0.4% increase in the number of census families at the national level.

The term **economic family** refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law or adoption. This definition has not changed for 2001. The only effect of conceptual changes on economic families are that same-sex partners are now considered to be common-law partners. Thus they are considered related and members of the same economic family.

Outside of the "family universe", there are two related concepts that are affected by the change in census family definition: **common-law status** and **household type**. Prior to 2001, two persons living together as husband and wife without being legally married to each other were considered to be living common-law. For 2001, this has been expanded to persons living in a same-sex partnership. The concept of household type refers to the basic division of private households into family and non-family households. Since it is based on the census family concept, the household type (whether a household is "family" or "non-family") is affected by the change. Also, the detailed classification of this variable is affected, since married couples and common-law couples were broken down into those "without never-married sons or daughters" and "with never-married sons or daughters". For 2001, this reads "without children" and "with children", with the attendant change in meaning.

In view of the substantial effect of this change, Families subject-matter specialists created a set of census family variables (CFAMST96, CF_RP96, C_FAM96PP/C_FAM96CF and CFSTRUCT96) based on the pre-2001 concept, for purposes of historical comparison. These correspond to the standard family variables CFamSt, CF_Rp, C_FamPp/C_FamCf and CfStruct (which reflect the new concept for 2001). It is important to note that the "96" group of variables was created by means of a person-level mapping of 2001 characteristics, and did not deal with all possible situations, such as four-generational and similarly complex households; as such, there will be some anomalies at the microdata level but, overall, the impact is very small compared to the impact of the conceptual change.

For additional information, please refer to the *2001 Census Dictionary*, Catalogue No. 92-378-XIE or 92-378-XPE.

Appendix B. Edit Rules

Appendix B1 - Edit Rules

2001 Primary and Secondary Edit Rules for Sex, Age, Marital Status, Common-law Status and Relationship to Person 1

In 1996, the edit rules included checks for missing and invalid responses for the variables Sex, Age, Marital Status, Common-law Status and Relationship to Person 1. For 2001, these edits were removed from CANCEIS but were still performed through "domain validation" before the application of the edits. These included the following checks:

- Any of the variables Sex, Age, Marital Status, Common-law Status and Relationship to Person 1 were blank or invalid.
- The age of a person was negative or more than 121 years.

In the following edit rules, certain terminological conventions are used:

- "Living common-law" means that the value of the common-law status variable is "Yes". By contrast, "common-law partner" refers to the person's relationship to Person 1. "Common-law partners" includes both opposite-sex and same-sex common-law partners.
- "Single" and "legally married" refer to values of the Marital Status variable.
- "Person 1" and "Person 2" refer to the reporting position on the questionnaire.
- If two persons were "flagged as a couple", then, based on their responses to the demographic questions, as well as the proximity of their reporting positions on the questionnaire, the FAMFORM program found that there was enough evidence to consider them as a potential couple for purposes of edit and imputation in CANCEIS. The phrases "flagged as a parent/child pair" or "flagged as a grandparent/grandchild pair" refer to a similar evaluation procedure conducted by FAMFORM.

Appendix B2 shows the possible values of the Relationship to Person 1 variable. Note that three special values were created to accommodate the immediate relatives of same-sex partners, specifically, son/daughter of same-sex partner, father/mother of same-sex partner and brother/sister of same-sex partner (rather than including such persons in the categories stepson/stepdaughter, father-in-law/mother-in-law and brother-in-law/sister-in-law respectively). This was done in order to permit closer monitoring of households with same-sex couples, since this was the first census where such information was retained throughout edit and imputation.

PRIMARY EDITS

Within-person Edit Rules

1. Someone other than Person 1 had a relationship of "Person 1".
2. Person 1's husband/wife or common-law partner was present but was not Person 2.
3. A person in a private household was a Hutterite or institutional resident.
4. Person 1 had a relationship other than "Person 1".
5. Person 1 was younger than 15 years of age.
6. A person younger than 15 years of age was not single (never married).
7. A person younger than 15 years of age was living common-law.
8. A person younger than 15 years of age had a relationship to Person 1 reserved for adults.
9. A foster child was not single (never married).
10. A foster child was living common-law.
11. A person was living alone and living common-law.

12. A person was legally married and living common-law.
13. A common-law partner was legally married.
14. A common-law partner was not living common-law.
15. Person 1's son-in-law/daughter-in-law was single (never married) and not living common-law.
16. A person having a husband/wife relationship (other than Person 1's husband/wife) was not legally married and not living common-law.
17. Person 2 was Person 1's husband/wife but was not legally married.
18. Person 2 was Person 1's husband/wife but was living common-law.
19. Person 2 was living common-law and was flagged as a couple with Person 1, but was not Person 1's common-law partner.
20. Person 1's son/daughter was more than 106 years of age.
21. Person 1's grandchild was more than 91 years of age.
22. Person 1's great grandchild was more than 76 years of age.
23. Person 1's grandparents were less than 45 years of age (this also applied to common-law partners of grandparents).
24. Person 1's parents were less than 30 years of age (this also applied to step-parents, common-law partners of parents, parents-in-law [including parents of same-sex partner] and common-law partners of parents-in-law).

Between-person Edit Rules

1. Person 1 and Person 1's husband/wife or opposite-sex partner had the same sex.
2. Person 1 and Person 1's same-sex common-law partner did not have the same sex.
3. Person 1 was not legally married but Person 2 was Person 1's husband/wife.
4. Person 1 was living common-law but Person 2 was Person 1's husband/wife.
5. Person 1 was legally married but Person 2 was Person 1's common-law partner.
6. Person 1 was not living common-law but Person 2 was Person 1's common-law partner.
7. Person 1 was living common-law but Person 2 was not Person 1's common-law partner.
8. Person 1 was less than 15 years older than Person 1's son/daughter, and Person 1's husband/wife or common-law partner was not present.
9. Person 1 and Person 1's husband/wife or common-law partner were both less than 15 years older than Person 1's son/daughter.
10. Person 1's husband/wife or common-law partner was less than 15 years older than Person 1's stepson/stepdaughter (also applies to the son/daughter of Person 1's same-sex partner).
11. Person 1's father/mother was less than 15 years older than Person 1, and only one parent was present.
12. Person 1's father/mother was less than 15 years older than Person 1's brother/sister, and only one parent was present.
13. Person 1's father-in-law/mother-in-law was less than 15 years older than Person 1's husband/wife or common-law partner, and only one parent-in-law was present (also applies to father/mother of Person 1's same-sex partner).
14. Person 1's father and Person 1's mother were both less than 15 years older than Person 1.
15. Person 1's father-in-law and mother-in-law were both less than 15 years older than Person 1's husband/wife or common-law partner (also applies to parents of Person 1's same-sex partner).
16. Person 1's father and Person 1's mother were both less than 15 years older than Person 1's brother/sister.
17. Person 1's grandparent was less than 30 years older than both Person 1 and Person 1's husband/wife or common-law partner.
18. Person 1's grandparent was less than 30 years older than Person 1, and Person 1's husband/wife or common-law partner was not present.
19. Both Person 1 and Person 1's husband/wife or common-law partner were less than 30 years older than Person 1's grandchild.
20. Person 1 was less than 30 years older than Person 1's grandchild, and Person 1's husband/wife or common-law partner was not present.

21. Both Person 1 and Person 1's husband/wife or common-law partner were less than 45 years older than Person 1's great grandchild.
22. Person 1 was less than 45 years older than Person 1's great grandchild, and Person 1's husband/wife or common-law partner was not present.
23. Person 1's father-in-law/mother-in-law was younger than Person 1, and Person 1's husband/wife or common-law partner was not present.
24. Person 1's son-in-law/daughter-in-law was older than Person 1.
25. Person 1 was more than 50 years older than Person 1's son/daughter, and Person 1 was female.
26. Person 1's husband/wife or common-law partner was more than 50 years older than Person 1's son/daughter, and the husband/wife or common-law partner was female.
27. Person 1's mother was more than 50 years older than Person 1.
28. Person 1's mother-in-law was more than 50 years older than Person 1's husband/wife or common-law partner (also applies to the mother of Person 1's same-sex partner).
29. More than 2 persons in the household were reported as Person 1's parent (this also included step-parents and common-law partners of parents).
30. More than 2 persons in the household were reported as Person 1's parent-in-law (this also included parents of Person 1's same-sex partner, and common-law partners of parents-in-law).
31. More than 4 persons in the household were reported as Person 1's grandparent. (This also included common-law partners of grandparents).
32. Two persons were flagged as a couple and had explicit opposite-sex couple relationships, or were both legally married, and had the same sex.
33. Two persons were flagged as a couple and had explicit same-sex couple relationships, but did not have the same sex.
34. Two persons had appropriate relationships for a couple, one was legally married and the other was not.
35. Two persons had explicit same-sex couple relationships and at least one was legally married.
36. Two persons had appropriate relationships for a couple, one was living common-law and the other was not.
37. Two persons had appropriate relationships for a couple, one was neither legally married nor living common-law.
38. Two persons were flagged as a couple, one was living common-law but did not have an appropriate relationship to the other person for a couple.
39. Where secondary relationships were present, there had to be a primary relationship (for example, if there was a lodger's husband/wife, there had to be a lodger).

Family Edit Rules

The following set of rules performed age verification and other edits on parent/child pairs or grandparent/grandchild pairs that did not include Person 1.

1. Both parents were less than 15 years older than the child.
2. A person's husband/wife or common-law partner was less than 15 years older than the person's stepchild.
3. Both grandparents were less than 30 years older than the grandchild.
4. For opposite-sex couples, the female parent was more than 50 years older than the child.
5. For same-sex female couples, both parents were more than 50 years older than the child.
6. A person's female husband/wife or common-law partner was more than 50 years older than the person's step-child.
7. Where the parent's husband/wife or common-law partner was unidentifiable, the parent was less than 15 years older than the child.
8. Where the female parent's husband/wife or common-law partner was unidentifiable, the parent was more than 50 years older than the child.
9. The parent was less than 15 years older than the child, and only one parent was present in the household.

10. The female parent was more than 50 years older than the child, and only one parent was present in the household.
11. The grandparent was less than 30 years older than the grandchild, and only one grandparent (and no parent) was present.
12. Two persons were flagged as a parent/child pair or grandparent/grandchild pair, but did not have the appropriate relationships to form a pair, and only one parent (or grandparent) was present in the household.
13. Two persons were flagged as a parent/child pair or grandparent/grandchild pair, but did not have the appropriate relationships to form a pair, and two parents (or grandparents) were present in the household.
14. Where secondary relationships were present, there had to be a primary relationship (for example, if there was a lodger's husband/wife, there had to be a lodger).

SECONDARY EDITS (auxiliary constraints)

1. A widowed person was less than 24 years of age.
2. Person 1 was more than 25 years older than Person 1's brother/sister.
3. Person 1's brother/sister was more than 20 years older than Person 1.
4. Person 1's husband/wife or common-law partner was more than 25 years older than Person 1's brother-in-law/sister-in-law.
5. Person 1's brother-in-law/sister-in-law was more than 20 years older than Person 1's husband/wife or common-law partner.
6. Person 1's same-sex partner was more than 25 years older than the brother/sister of Person 1's same-sex partner.
7. The brother/sister of Person 1's same-sex partner was more than 20 years older than Person 1's same-sex partner.
8. Person 1's nephew/niece was more than 10 years older than Person 1.
9. Person 1's husband/wife or common-law partner was not present, and Person 1 was less than 15 years older than Person 1's stepchild.
10. Person 1's husband/wife or common-law partner was not present, and Person 1 was less than 15 years older than Person 1's foster child.
11. Both Person 1 and Person 1's husband/wife or common-law partner were less than 15 years older than Person 1's foster child.

Appendix B2 - Valueset for Relationship to Person 1

Brother/sister
 Brother/sister's opposite-sex partner
 Brother/sister's same-sex partner
 Brother-in-law/sister-in-law
 Brother-in-law/sister-in-law's opposite-sex partner
 Brother-in-law/sister-in-law's same-sex partner
 Cousin
 Cousin's husband/wife
 Cousin's opposite-sex partner
 Cousin's same-sex partner
 Cousin's son/daughter
 Employee
 Employee's grandchild
 Employee's husband/wife
 Employee's opposite-sex partner
 Employee's same-sex partner
 Employee's son/daughter
 Employee's stepson/stepdaughter
 Father/mother

Father/mother's opposite-sex partner
Father/mother's same-sex partner
Father-in-law/mother-in-law
Father-in-law/mother-in-law's opposite-sex partner
Father-in-law/mother-in-law's same-sex partner
Foster/guardianship child
Grandchild
Grandchild's husband/wife
Grandchild's opposite-sex partner
Grandchild's same-sex partner
Grandparent
Grandparent's opposite-sex partner
Grandparent's same-sex partner
Great grandchild
Husband/wife
Hutterite
Hutterite's grandchild
Hutterite's husband/wife
Hutterite's son/daughter
Institutional resident
Lodger or boarder
Lodger's grandchild
Lodger's husband/wife
Lodger's opposite-sex partner
Lodger's same-sex partner
Lodger's son/daughter
Lodger's stepson/stepdaughter
Nephew/niece
Nephew/niece's husband/wife
Nephew/niece's opposite-sex partner
Nephew/niece's same-sex partner
Nephew/niece's son/daughter
Opposite-sex partner
Other relative
Other relative's grandchild
Other relative's husband/wife
Other relative's opposite-sex partner
Other relative's same-sex partner
Other relative's son/daughter
Other relative's stepson/stepdaughter
Owner/manager
Owner/manager's grandchild
Owner/manager's husband/wife
Owner/manager's opposite-sex partner
Owner/manager's same-sex partner
Owner/manager's son/daughter
Owner/manager's stepson/stepdaughter
Person 1
Room-mate
Room-mate's grandchild
Room-mate's husband/wife
Room-mate's opposite-sex partner
Room-mate's same-sex partner
Room-mate's son/daughter
Room-mate's stepson/stepdaughter
Same-sex partner

Same-sex partner's brother/sister
Same-sex partner's father/mother
Same-sex partner's son/daughter
Son/daughter
Son/daughter's opposite-sex partner
Son/daughter's same-sex partner
Son-in-law/daughter-in-law
Stepfather/stepmother
Stepson/stepdaughter
Uncle/aunt
Uncle/aunt's opposite-sex partner
Uncle/aunt's same-sex partner

Appendix C. Appendix Tables

Note that, in the following tables, 1991 and 1996 data shown for the Northwest Territories include data for the territory of Nunavut.

Table C1. Census Families by Family Structure, Canada, Provinces and Territories, 1991 to 2001 Censuses - 20% Sample Data

Census family structure	1991	1996	2001		Percentage change	Percentage change	
			Pre-2001 concept	2001 concept	1991-1996	1996-2001	
			Pre-2001 concept	2001 concept		Pre-2001 concept	2001 concept
CANADA							
Total	7,355,725	7,837,865	8,221,795	8,371,020	6.6%	4.9%	6.8%
Married couple	5,682,815	5,779,720	5,901,425	5,901,425	1.7%	2.1%	2.1%
Common-law (opposite-sex)	719,275	920,635	1,124,205	1,124,205	28.0%	22.1%	22.1%
Common-law (same-sex)	..	..	..	34,205	...	...	...
Male lone parent	165,240	192,275	222,300	245,825	16.4%	15.6%	27.9%
Female lone parent	788,395	945,235	973,870	1,065,365	19.9%	3.0%	12.7%
Newfoundland and Labrador							
Total	150,715	155,750	151,270	154,385	3.3%	-2.9%	-0.9%
Married couple	123,050	121,860	116,440	116,440	-1.0%	-4.5%	-4.5%
Common-law (opposite-sex)	9,785	13,415	14,715	14,715	37.1%	9.7%	9.7%
Common-law (same-sex)	..	..	..	180	...	...	...
Male lone parent	3,205	3,245	3,530	4,115	1.2%	8.7%	26.8%
Female lone parent	14,670	17,240	16,590	18,935	17.5%	-3.7%	9.8%

Census family structure	1991	1996	2001		Percentage change 1991-1996	Percentage change 1996-2001	
			Pre-2001 concept	2001 concept			Pre-2001 concept	2001 concept
Prince Edward Island							
Total	33,895	35,875	37,675	38,420	5.8%	5.0%	7.1%
Married couple	27,505	27,915	28,490	28,490	1.5%	2.1%	2.1%
Common-law (opposite-sex)	2,015	2,760	3,575	3,575	37.0%	29.4%	29.4%
Common-law (same-sex)	..	..	..	55	...	...	...
Male lone parent	705	855	980	1,055	21.3%	14.6%	23.5%
Female lone parent	3,670	4,345	4,630	5,250	18.4%	6.7%	20.8%
Nova Scotia							
Total	244,625	253,960	257,110	262,910	3.8%	1.2%	3.5%
Married couple	191,735	190,035	188,805	188,805	-0.9%	-0.6%	-0.6%
Common-law (opposite-sex)	19,775	24,240	29,110	29,110	22.6%	20.1%	20.1%
Common-law (same-sex)	..	..	..	855	...	...	...
Male lone parent	5,435	6,040	6,465	7,440	11.2%	7.1%	23.2%
Female lone parent	27,690	33,640	32,735	36,695	21.5%	-2.7%	9.1%
New Brunswick							
Total	198,015	207,235	210,800	215,100	4.7%	1.7%	3.8%
Married couple	155,825	155,315	152,760	152,765	-0.3%	-1.6%	-1.6%
Common-law (opposite-sex)	15,685	22,485	27,220	27,220	43.4%	21.0%	21.0%
Common-law (same-sex)	..	..	..	510	...	...	...
Male lone parent	4,505	4,835	5,865	6,540	7.3%	21.3%	35.2%
Female lone parent	21,990	24,595	24,950	28,075	11.8%	1.4%	14.1%

Census family structure	1991	1996	2001		Percentage change 1991-1996	Percentage change 1996-2001	
			Pre-2001 concept	2001 concept		Pre-2001 concept	2001 concept
Quebec							
Total	1,883,140	1,949,975	1,989,610	2,019,555	3.5%	2.0%	3.6%
Married couple	1,308,365	1,240,265	1,175,440	1,175,440	-5.2%	-5.2%	-5.2%
Common-law (opposite-sex)	305,920	400,265	498,160	498,160	30.8%	24.5%	24.5%
Common-law (same-sex)	..	..	..	10,365	...	...	...
Male lone parent	47,645	56,920	64,160	68,025	19.5%	12.7%	19.5%
Female lone parent	221,205	252,515	251,850	267,570	14.2%	-0.3%	6.0%
Ontario							
Total	2,726,625	2,932,725	3,132,295	3,190,990	7.6%	6.8%	8.8%
Married couple	2,204,950	2,283,110	2,406,340	2,406,340	3.5%	5.4%	5.4%
Common-law (opposite-sex)	179,370	227,910	286,040	286,040	27.1%	25.5%	25.5%
Common-law (same-sex)	..	..	..	12,500	...	...	...
Male lone parent	57,700	66,670	75,835	84,865	15.5%	13.8%	27.3%
Female lone parent	284,595	355,035	364,085	401,240	24.7%	2.5%	13.0%
Manitoba							
Total	285,895	292,930	296,800	302,855	2.5%	1.3%	3.4%
Married couple	227,405	226,345	224,055	224,055	-0.5%	-1.0%	-1.0%
Common-law (opposite-sex)	21,145	25,325	28,770	28,775	19.8%	13.6%	13.6%
Common-law (same-sex)	..	..	..	865	...	...	...
Male lone parent	6,905	6,805	7,795	9,060	-1.4%	14.6%	33.1%
Female lone parent	30,445	34,450	36,170	40,100	13.2%	5.0%	16.4%

Census family structure	1991	1996	2001		Percentage change 1991-1996	Percentage change 1996-2001	
			Pre-2001 concept	2001 concept			Pre-2001 concept	2001 concept
Saskatchewan							
Total	257,580	260,385	260,370	265,615	1.1%	0.0%	2.0%
Married couple	209,940	203,295	198,300	198,300	-3.2%	-2.5%	-2.5%
Common-law (opposite-sex)	17,385	22,165	24,775	24,775	27.5%	11.8%	11.8%
Common-law (same-sex)	..	..	..	480	...	...	...
Male lone parent	5,265	5,640	6,730	7,910	7.2%	19.3%	40.2%
Female lone parent	24,980	29,285	30,570	34,160	17.2%	4.4%	16.6%
Alberta							
Total	667,910	717,560	797,215	811,285	7.4%	11.1%	13.1%
Married couple	525,745	552,760	600,995	601,000	5.1%	8.7%	8.7%
Common-law (opposite-sex)	59,240	72,315	91,240	91,240	22.1%	26.2%	26.2%
Common-law (same-sex)	..	..	..	2,525	...	...	...
Male lone parent	14,330	16,555	21,190	23,575	15.5%	28.0%	42.4%
Female lone parent	68,595	75,930	83,785	92,945	10.7%	10.3%	22.4%

Census family structure	1991	1996	2001		Percentage change 1991-1996	Percentage change 1996-2001	
			Pre-2001 concept	2001 concept			Pre-2001 concept	2001 concept
British Columbia							
Total	887,510	1,008,440	1,065,645	1,086,030	13.6%	5.7%	7.7%
Married couple	695,795	765,565	797,490	797,485	10.0%	4.2%	4.2%
Common-law (opposite-sex)	84,700	103,865	114,335	114,335	22.6%	10.1%	10.1%
Common-law (same-sex)	..	..	..	5,790	...	...	...
Male lone parent	18,830	23,900	28,755	31,960	26.9%	20.3%	33.7%
Female lone parent	88,185	115,110	125,065	136,455	30.5%	8.6%	18.5%
Yukon Territory							
Total	7,105	8,075	7,680	7,810	13.6%	-4.8%	-3.2%
Married couple	4,640	4,900	4,470	4,465	5.6%	-8.9%	-8.9%
Common-law (opposite-sex)	1,425	1,840	1,765	1,760	28.7%	-4.1%	-4.1%
Common-law (same-sex)	..	..	..	30	...	...	...
Male lone parent	205	225	300	325	11.4%	34.2%	45.3%
Female lone parent	835	1,105	1,150	1,220	32.4%	3.9%	10.4%

Census family structure	1991	1996	2001		Percentage change 1991-1996	Percentage change 1996-2001	
			Pre-2001 concept	2001 concept			Pre-2001 concept	2001 concept
Northwest Territories							
Total	12,725	14,955	9,370	9,700	17.5%	2.4%	7.4%
Married couple	7,850	8,345	5,110	5,110	6.3%	-6.0%	-6.0%
Common-law (opposite-sex)	2,825	4,050	2,525	2,525	43.2%	11.2%	11.2%
Common-law (same-sex)	..	..	..	30	...	...	...
Male lone parent	515	585	385	500	13.3%	16.4%	61.4%
Female lone parent	1,530	1,975	1,345	1,530	29.2%	15.6%	37.8%
Nunavut							
Total	...	...	5,945	6,355	...	...	...
Married couple	...	...	2,730	2,735	...	...	...
Common-law (opposite-sex)	...	...	1,975	1,980	...	...	...
Common-law (same-sex)	...	...	..	15	...	...	...
Male lone parent	...	...	295	445	...	...	...
Female lone parent	...	...	940	1,190	...	...	...

Table C2. Census Families by Number of Children, Canada, Provinces and Territories, 1991 to 2001 Censuses - 20% Sample Data

	1991		1996		2001			
	Number	%	Number	%	Pre-2001 concept	%	2001 concept	%
CANADA								
Total families	7,355,730	100.0%	7,837,865	100.0%	8,221,795	100.0%	8,371,020	100.0%
Without children	2,571,825	35.0%	2,729,775	34.8%	3,063,755	37.3%	3,059,225	36.5%
With children	4,783,905	65.0%	5,108,090	65.2%	5,158,045	62.7%	5,311,795	63.5%
1	1,942,980	40.6%	2,105,575	41.2%	2,159,985	41.9%	2,285,110	43.0%
2	1,931,435	40.4%	2,046,770	40.1%	2,065,885	40.1%	2,087,355	39.3%
3	700,980	14.7%	729,065	14.3%	707,365	13.7%	711,890	13.4%
4	163,490	3.4%	175,445	3.4%	174,690	3.4%	176,310	3.3%
5	31,025	0.6%	35,655	0.7%	34,075	0.7%	34,700	0.7%
6	8,940	0.2%	9,905	0.2%	10,610	0.2%	10,880	0.2%
7	3,110	0.1%	3,160	0.1%	3,205	0.1%	3,255	0.1%
8 or more	1,955	0.0%	2,505	0.0%	2,225	0.0%	2,300	0.0%
Newfoundland and Labrador								
Total families	150,710	100.0%	155,755	100.0%	151,270	100.0%	154,385	100.0%
Without children	37,430	24.8%	44,640	28.7%	54,370	35.9%	53,820	34.9%
With children	113,280	75.2%	111,115	71.3%	96,900	64.1%	100,565	65.1%
1	42,145	37.2%	47,720	42.9%	45,730	47.2%	49,260	49.0%
2	45,585	40.2%	44,525	40.1%	38,190	39.4%	38,425	38.2%
3	19,210	17.0%	14,795	13.3%	10,670	11.0%	10,605	10.5%
4	4,780	4.2%	3,335	3.0%	1,900	2.0%	1,865	1.9%
5	1,085	1.0%	580	0.5%	315	0.3%	310	0.3%
6	305	0.3%	80	0.1%	75	0.1%	75	0.1%
7	135	0.1%	55	0.0%	15	0.0%	20	0.0%
8+	35	0.0%	25	0.0%	10	0.0%	15	0.0%

	1991		1996		2001			
	Number	%	Number	%	Pre-2001 concept	%	2001 concept	%
Prince Edward Island								
Total families	33,895	100.0%	35,875	100.0%	37,680	100.0%	38,425	100.0%
Without children	10,235	30.2%	11,280	31.4%	13,445	35.7%	13,400	34.9%
With children	23,660	69.8%	24,595	68.6%	24,230	64.3%	25,020	65.1%
1	9,130	38.6%	9,840	40.0%	10,405	42.9%	11,140	44.5%
2	8,700	36.8%	9,115	37.1%	8,730	36.0%	8,765	35.0%
3	4,060	17.2%	3,990	16.2%	3,940	16.3%	3,940	15.7%
4	1,385	5.9%	1,315	5.3%	890	3.7%	895	3.6%
5	250	1.1%	240	1.0%	225	0.9%	215	0.9%
6	100	0.4%	50	0.2%	35	0.1%	50	0.2%
7	25	0.1%	20	0.1%	5	0.0%	5	0.0%
8+	15	0.1%	15	0.1%	5	0.0%	5	0.0%
Nova Scotia								
Total families	244,630	100.0%	253,965	100.0%	257,115	100.0%	262,905	100.0%
Without children	82,390	33.7%	88,670	34.9%	101,730	39.6%	101,190	38.5%
With children	162,240	66.3%	165,290	65.1%	155,385	60.4%	161,715	61.5%
1	68,220	42.0%	73,010	44.2%	70,090	45.1%	75,690	46.8%
2	64,180	39.6%	64,340	38.9%	60,415	38.9%	61,105	37.8%
3	22,755	14.0%	21,615	13.1%	19,420	12.5%	19,455	12.0%
4	5,620	3.5%	4,995	3.0%	4,320	2.8%	4,325	2.7%
5	1,045	0.6%	990	0.6%	780	0.5%	780	0.5%
6	295	0.2%	240	0.1%	280	0.2%	290	0.2%
7	75	0.0%	75	0.0%	50	0.0%	50	0.0%
8+	40	0.0%	30	0.0%	30	0.0%	30	0.0%

	1991		1996		2001			
	Number	%	Number	%	Pre-2001 concept	%	2001 concept	%
New Brunswick								
Total families	198,010	100.0%	207,235	100.0%	210,795	100.0%	215,105	100.0%
Without children	62,875	31.8%	69,735	33.7%	81,670	38.7%	81,205	37.8%
With children	135,135	68.2%	137,500	66.3%	129,130	61.3%	133,895	62.2%
1	55,475	41.1%	61,320	44.6%	61,395	47.5%	65,700	49.1%
2	54,985	40.7%	54,135	39.4%	49,435	38.3%	49,790	37.2%
3	19,440	14.4%	17,630	12.8%	14,600	11.3%	14,715	11.0%
4	4,320	3.2%	3,520	2.6%	3,210	2.5%	3,205	2.4%
5	720	0.5%	705	0.5%	385	0.3%	375	0.3%
6	145	0.1%	145	0.1%	70	0.1%	85	0.1%
7	35	0.0%	25	0.0%	25	0.0%	25	0.0%
8+	10	0.0%	20	0.0%	10	0.0%	10	0.0%
Quebec								
Total families	1,883,135	100.0%	1,949,975	100.0%	1,989,610	100.0%	2,019,555	100.0%
Without children	640,490	34.0%	663,450	34.0%	747,195	37.6%	751,735	37.2%
With children	1,242,650	66.0%	1,286,525	66.0%	1,242,420	62.4%	1,267,820	62.8%
1	549,995	44.3%	578,380	45.0%	570,285	45.9%	590,620	46.6%
2	495,750	39.9%	507,315	39.4%	482,910	38.9%	486,720	38.4%
3	158,785	12.8%	159,600	12.4%	147,895	11.9%	148,725	11.7%
4	30,795	2.5%	32,655	2.5%	32,800	2.6%	33,105	2.6%
5	5,125	0.4%	6,065	0.5%	5,920	0.5%	6,005	0.5%
6	1,380	0.1%	1,620	0.1%	1,740	0.1%	1,780	0.1%
7	505	0.0%	460	0.0%	500	0.0%	485	0.0%
8+	315	0.0%	425	0.0%	380	0.0%	375	0.0%

	1991		1996		2001			
	Number	%	Number	%	Pre-2001 concept	%	2001 concept	%
Ontario								
Total families	2,726,620	100.0%	2,932,725	100.0%	3,132,300	100.0%	3,190,985	100.0%
Without children	950,910	34.9%	996,730	34.0%	1,114,100	35.6%	1,110,095	34.8%
With children	1,775,710	65.1%	1,935,995	66.0%	2,018,200	64.4%	2,080,895	65.2%
1	708,160	39.9%	774,875	40.0%	808,305	40.1%	858,700	41.3%
2	727,285	41.0%	790,155	40.8%	829,845	41.1%	839,170	40.3%
3	264,480	14.9%	283,380	14.6%	289,470	14.3%	291,130	14.0%
4	60,165	3.4%	67,695	3.5%	70,590	3.5%	71,345	3.4%
5	10,765	0.6%	13,970	0.7%	13,505	0.7%	13,885	0.7%
6	3,070	0.2%	3,640	0.2%	4,295	0.2%	4,395	0.2%
7	1,050	0.1%	1,215	0.1%	1,320	0.1%	1,355	0.1%
8+	740	0.0%	1,070	0.1%	865	0.0%	915	0.0%
Manitoba								
Total families	285,895	100.0%	292,930	100.0%	296,805	100.0%	302,855	100.0%
Without children	101,910	35.6%	104,015	35.5%	111,910	37.7%	111,185	36.7%
With children	183,985	64.4%	188,910	64.5%	184,885	62.3%	191,665	63.3%
1	71,220	38.7%	74,280	39.3%	73,770	39.9%	79,295	41.4%
2	72,140	39.2%	72,725	38.5%	70,885	38.3%	71,730	37.4%
3	29,690	16.1%	30,260	16.0%	28,325	15.3%	28,635	14.9%
4	8,025	4.4%	8,330	4.4%	8,600	4.7%	8,630	4.5%
5	1,920	1.0%	2,150	1.1%	2,080	1.1%	2,140	1.1%
6	625	0.3%	745	0.4%	785	0.4%	780	0.4%
7	230	0.1%	275	0.1%	250	0.1%	265	0.1%
8+	125	0.1%	140	0.1%	195	0.1%	200	0.1%

	1991		1996		2001			
	Number	%	Number	%	Pre-2001 concept	%	2001 concept	%
Saskatchewan								
Total families	257,575	100.0%	260,385	100.0%	260,375	100.0%	265,615	100.0%
Without children	94,290	36.6%	97,030	37.3%	103,910	39.9%	103,260	38.9%
With children	163,285	63.4%	163,360	62.7%	156,465	60.1%	162,360	61.1%
1	58,300	35.7%	59,445	36.4%	58,825	37.6%	63,470	39.1%
2	61,920	37.9%	60,905	37.3%	59,040	37.7%	59,950	36.9%
3	30,590	18.7%	30,290	18.5%	27,015	17.3%	27,225	16.8%
4	9,230	5.7%	9,380	5.7%	8,540	5.5%	8,680	5.3%
5	2,130	1.3%	2,185	1.3%	2,025	1.3%	1,985	1.2%
6	670	0.4%	720	0.4%	635	0.4%	660	0.4%
7	240	0.1%	240	0.1%	220	0.1%	220	0.1%
8+	200	0.1%	195	0.1%	165	0.1%	175	0.1%
Alberta								
Total families	667,910	100.0%	717,560	100.0%	797,215	100.0%	811,280	100.0%
Without children	229,370	34.3%	252,565	35.2%	299,135	37.5%	297,650	36.7%
With children	438,540	65.7%	465,000	64.8%	498,075	62.5%	513,630	63.3%
1	164,000	37.4%	174,630	37.6%	193,280	38.8%	206,175	40.1%
2	178,595	40.7%	189,070	40.7%	202,290	40.6%	204,340	39.8%
3	70,555	16.1%	74,605	16.0%	74,975	15.1%	75,295	14.7%
4	19,285	4.4%	20,275	4.4%	20,815	4.2%	21,005	4.1%
5	4,090	0.9%	4,200	0.9%	4,490	0.9%	4,545	0.9%
6	1,310	0.3%	1,385	0.3%	1,410	0.3%	1,440	0.3%
7	415	0.1%	480	0.1%	470	0.1%	485	0.1%
8+	290	0.1%	350	0.1%	340	0.1%	345	0.1%

	1991		1996		2001			
	Number	%	Number	%	Pre-2001 concept	%	2001 concept	%
British Columbia								
Total families	887,505	100.0%	1,008,440	100.0%	1,065,645	100.0%	1,086,030	100.0%
Without children	357,025	40.2%	395,745	39.2%	430,085	40.4%	429,485	39.5%
With children	530,485	59.8%	612,700	60.8%	635,550	59.6%	656,550	60.5%
1	211,155	39.8%	246,120	40.2%	261,810	41.2%	278,290	42.4%
2	217,160	40.9%	248,530	40.6%	258,335	40.6%	261,375	39.8%
3	78,860	14.9%	89,870	14.7%	88,170	13.9%	89,240	13.6%
4	18,685	3.5%	22,600	3.7%	21,800	3.4%	22,020	3.4%
5	3,385	0.6%	4,060	0.7%	3,855	0.6%	3,975	0.6%
6	815	0.2%	1,090	0.2%	1,115	0.2%	1,165	0.2%
7	305	0.1%	250	0.0%	290	0.0%	295	0.0%
8+	115	0.0%	180	0.0%	175	0.0%	190	0.0%
Yukon Territory								
Total families	7,105	100.0%	8,070	100.0%	7,680	100.0%	7,810	100.0%
Without children	2,300	32.4%	2,735	33.9%	2,745	35.7%	2,755	35.3%
With children	4,805	67.6%	5,340	66.2%	4,935	64.3%	5,055	64.7%
1	1,980	41.2%	2,115	39.6%	2,090	42.4%	2,200	43.5%
2	1,875	39.0%	2,160	40.4%	1,925	39.0%	1,935	38.3%
3	700	14.6%	780	14.6%	680	13.8%	670	13.3%
4	190	4.0%	240	4.5%	205	4.2%	210	4.2%
5	60	1.2%	35	0.7%	25	0.5%	25	0.5%
6	5	0.1%	5	0.1%	10	0.2%	10	0.2%
7	5	0.1%	5	0.1%	0	0.0%	0	0.0%
8+	0	...	5	0.1%	10	0.2%	10	0.2%

	1991		1996		2001			
	Number	%	Number	%	Pre-2001 concept	%	2001 concept	%
Northwest Territories								
Total families	12,725	100.0%	14,960	100.0%	9,370	100.0%	9,705	100.0%
Without children	2,595	20.4%	3,185	21.3%	2,550	27.2%	2,555	26.3%
With children	10,130	79.6%	11,775	78.7%	6,815	72.7%	7,145	73.6%
1	3,195	31.5%	3,835	32.6%	2,530	37.1%	2,785	39.0%
2	3,255	32.1%	3,805	32.3%	2,440	35.8%	2,505	35.1%
3	1,840	18.2%	2,245	19.1%	1,145	16.8%	1,170	16.4%
4	1,010	10.0%	1,120	9.5%	450	6.6%	440	6.2%
5	450	4.4%	480	4.1%	155	2.3%	165	2.3%
6	210	2.1%	185	1.6%	50	0.7%	40	0.6%
7	85	0.8%	65	0.6%	20	0.3%	25	0.3%
8+	80	0.8%	50	0.4%	20	0.3%	20	0.3%
Nunavut								
Total families	...	...	...	...	5,945	100.0%	6,355	100.0%
Without children	...	...	...	...	895	15.1%	885	13.9%
With children	...	...	...	...	5,045	84.9%	5,480	86.2%
1	...	...	...	...	1,475	29.2%	1,780	32.5%
2	...	...	...	...	1,440	28.5%	1,555	28.4%
3	...	...	...	...	1,080	21.4%	1,090	19.9%
4	...	...	...	...	575	11.4%	585	10.7%
5	...	...	...	...	315	6.2%	300	5.5%
6	...	...	...	...	120	2.4%	125	2.3%
7	...	...	...	...	30	0.6%	25	0.5%
8+	...	...	...	...	15	0.3%	15	0.3%

Table C3. Average Number of Children per Census Family, Canada, Provinces and Territories, 1991 to 2001 Censuses - 20% Sample Data

	Average number of children 2001			
	1991	1996	Pre-2001 concept	2001 concept
CANADA	1.20	1.20	1.14	1.14
Newfoundland and Labrador	1.45	1.27	1.08	1.09
Prince Edward Island	1.37	1.31	1.19	1.19
Nova Scotia	1.21	1.16	1.06	1.06
New Brunswick	1.24	1.16	1.04	1.05
Quebec	1.16	1.15	1.08	1.08
Ontario	1.20	1.22	1.19	1.19
Manitoba	1.23	1.24	1.19	1.20
Saskatchewan	1.28	1.26	1.19	1.19
Alberta	1.26	1.25	1.18	1.19
British Columbia	1.11	1.12	1.09	1.09
Yukon Territory	1.26	1.24	1.17	1.17
Northwest Territories	1.89	1.81	1.50	1.49
Nunavut	...	...	2.10	2.05

Table C4. Children in Census Families by Age Groups, Canada, Provinces and Territories, 1991 to 2001 Censuses - 20% Sample Data

	2001				1991 - 1996	1996 - 2001 (pre-2001 concept)	1996 - 2001 (2001 concept)
	1991	1996	Pre-2001 concept	2001 concept			
CANADA							
Total - Age groups	8,810,310	9,369,750	9,388,770	9,582,615	6.3%	0.2%	2.3%
Under 6 years	2,204,615	2,257,085	2,014,140	2,064,230	2.4%	-10.8%	-8.5%
6 to 14 years	3,324,415	3,504,885	3,573,590	3,614,095	5.4%	2.0%	3.1%
15 to 17 years	1,051,400	1,138,725	1,193,225	1,201,505	8.3%	4.8%	5.5%
18 to 24 years	1,565,920	1,684,425	1,781,680	1,790,200	7.6%	5.8%	6.3%
25 years and over	663,955	784,630	826,140	912,590	18.2%	5.3%	16.3%
Newfoundland and Labrador							
Total - Age groups	218,540	198,490	163,925	167,590	-9.2%	-17.4%	-15.6%
Under 6 years	41,440	35,715	28,740	30,290	-13.8%	-19.5%	-15.2%
6 to 14 years	80,110	70,210	56,945	58,110	-12.4%	-18.9%	-17.2%
15 to 17 years	30,510	26,270	22,690	23,015	-13.9%	-13.6%	-12.4%
18 to 24 years	48,065	45,650	37,115	37,010	-5.0%	-18.7%	-18.9%
25 years and over	18,410	20,645	18,425	19,165	12.1%	-10.8%	-7.2%
Prince Edward Island							
Total - Age groups	46,350	47,100	44,690	45,565	1.6%	-5.1%	-3.3%
Under 6 years	11,055	10,460	9,015	9,420	-5.4%	-13.8%	-9.9%
6 to 14 years	17,375	17,855	16,925	17,130	2.8%	-5.2%	-4.1%
15 to 17 years	5,690	6,030	6,020	6,080	6.0%	-0.2%	0.8%
18 to 24 years	8,600	8,690	8,650	8,540	1.0%	-0.4%	-1.7%
25 years and over	3,635	4,065	4,080	4,395	11.8%	0.3%	8.2%

	2001						
	1991	1996	Pre-2001 concept	2001 concept	1991 - 1996	1996 - 2001 (pre-2001 concept)	1996 - 2001 (2001 concept)
Nova Scotia							
Total - Age groups	295,225	293,670	272,635	279,790	-0.5%	-7.2%	-4.7%
Under 6 years	69,800	64,890	56,000	58,080	-7.0%	-13.7%	-10.5%
6 to 14 years	107,885	109,735	104,125	105,980	1.7%	-5.1%	-3.4%
15 to 17 years	37,095	35,420	36,415	36,790	-4.5%	2.8%	3.9%
18 to 24 years	55,650	56,440	50,735	50,775	1.4%	-10.1%	-10.0%
25 years and over	24,795	27,190	25,360	28,175	9.7%	-6.7%	3.6%
New Brunswick							
Total - Age groups	245,880	241,315	219,535	224,885	-1.9%	-9.0%	-6.8%
Under 6 years	54,605	52,015	44,240	45,930	-4.7%	-14.9%	-11.7%
6 to 14 years	91,525	88,700	82,330	83,525	-3.1%	-7.2%	-5.8%
15 to 17 years	32,655	31,065	29,355	29,620	-4.9%	-5.5%	-4.7%
18 to 24 years	46,605	47,420	42,045	42,200	1.7%	-11.3%	-11.0%
25 years and over	20,495	22,110	21,560	23,600	7.9%	-2.5%	6.8%
Quebec							
Total - Age groups	2,181,190	2,249,405	2,157,900	2,190,140	3.1%	-4.1%	-2.6%
Under 6 years	517,165	544,065	453,100	460,670	5.2%	-16.7%	-15.3%
6 to 14 years	829,870	806,475	819,100	824,905	-2.8%	1.6%	2.3%
15 to 17 years	263,350	292,055	265,880	267,300	10.9%	-9.0%	-8.5%
18 to 24 years	382,410	410,975	427,535	429,445	7.5%	4.0%	4.5%
25 years and over	188,405	195,840	192,285	207,825	3.9%	-1.8%	6.1%

	2001						
	1991	1996	Pre-2001 concept	2001 concept	1991 - 1996	1996 - 2001 (pre-2001 concept)	1996 - 2001 (2001 concept)
Ontario							
Total - Age groups	3,282,910	3,585,570	3,729,055	3,809,265	9.2%	4.0%	6.2%
Under 6 years	822,325	865,170	800,320	818,690	5.2%	-7.5%	-5.4%
6 to 14 years	1,183,255	1,306,835	1,388,465	1,402,160	10.4%	6.2%	7.3%
15 to 17 years	379,410	405,260	453,595	456,415	6.8%	11.9%	12.6%
18 to 24 years	635,140	674,600	721,175	724,900	6.2%	6.9%	7.5%
25 years and over	262,785	333,710	365,495	407,100	27.0%	9.5%	22.0%
Manitoba							
Total - Age groups	352,735	362,240	353,450	362,115	2.7%	-2.4%	0.0%
Under 6 years	92,195	91,305	80,930	84,175	-1.0%	-11.4%	-7.8%
6 to 14 years	134,965	140,595	140,440	143,300	4.2%	-0.1%	1.9%
15 to 17 years	44,160	43,320	46,100	46,480	-1.9%	6.4%	7.3%
18 to 24 years	58,085	61,090	59,910	59,895	5.2%	-1.9%	-2.0%
25 years and over	23,330	25,925	26,065	28,265	11.1%	0.6%	9.0%
Saskatchewan							
Total - Age groups	328,975	328,230	309,030	316,685	-0.2%	-5.8%	-3.5%
Under 6 years	88,810	81,250	69,450	72,615	-8.5%	-14.5%	-10.6%
6 to 14 years	137,960	136,900	127,280	130,415	-0.8%	-7.0%	-4.7%
15 to 17 years	41,305	44,440	45,195	45,645	7.6%	1.7%	2.7%
18 to 24 years	44,950	48,305	49,790	49,650	7.5%	3.1%	2.8%
25 years and over	15,955	17,335	17,320	18,360	8.6%	-0.1%	5.9%

	2001						
	1991	1996	Pre-2001 concept	2001 concept	1991 - 1996	1996 - 2001 (pre-2001 concept)	1996 - 2001 (2001 concept)
Alberta							
Total - Age groups	843,775	893,420	943,195	962,450	5.9%	5.6%	7.7%
Under 6 years	239,025	226,530	217,870	223,715	-5.2%	-3.8%	-1.2%
6 to 14 years	341,995	368,265	379,150	384,000	7.7%	3.0%	4.3%
15 to 17 years	97,580	110,305	127,690	128,470	13.0%	15.8%	16.5%
18 to 24 years	122,385	136,290	159,790	160,435	11.4%	17.2%	17.7%
25 years and over	42,790	52,020	58,690	65,830	21.6%	12.8%	26.5%
British Columbia							
Total - Age groups	981,740	1,133,310	1,159,780	1,187,490	15.4%	2.3%	4.8%
Under 6 years	257,655	274,470	245,380	250,950	6.5%	-10.6%	-8.6%
6 to 14 years	386,405	443,880	443,480	448,630	14.9%	-0.1%	1.1%
15 to 17 years	116,290	140,560	155,995	157,335	20.9%	11.0%	11.9%
18 to 24 years	159,565	190,290	220,055	222,550	19.3%	15.6%	17.0%
25 years and over	61,825	84,110	94,865	108,035	36.0%	12.8%	28.4%
Yukon Territory							
Total - Age groups	8,930	9,990	9,025	9,165	11.9%	-9.7%	-8.3%
Under 6 years	2,810	2,755	1,975	2,015	-2.0%	-28.3%	-26.9%
6 to 14 years	3,675	4,385	3,800	3,845	19.3%	-13.3%	-12.3%
15 to 17 years	990	1,185	1,335	1,355	19.7%	12.7%	14.4%
18 to 24 years	1,170	1,320	1,425	1,445	12.8%	8.1%	9.5%
25 years and over	285	340	485	500	19.3%	42.1%	47.9%

	2001						
	1991	1996	Pre-2001 concept	2001 concept	1991 - 1996	1996 - 2001 (pre-2001 concept)	1996 - 2001 (2001 concept)
Northwest Territories							
Total - Age groups	24,045	27,015	14,050	14,450	12.4%	-1.7%	1.8%
Under 6 years	7,740	8,455	3,430	3,660	9.2%	-15.9%	-9.1%
6 to 14 years	9,395	11,045	6,065	6,280	17.6%	4.4%	9.5%
15 to 17 years	2,365	2,810	1,630	1,660	18.8%	4.9%	7.1%
18 to 24 years	3,305	3,365	2,055	2,035	1.8%	2.5%	-0.1%
25 years and over	1,240	1,340	865	805	8.1%	12.9%	-0.1%
Nunavut							
Total - Age groups	...	...	12,505	13,045	...	...	...
Under 6 years	...	...	3,680	4,020	...	...	...
6 to 14 years	...	...	5,470	5,815	...	...	...
15 to 17 years	...	...	1,315	1,350	...	...	...
18 to 24 years	...	...	1,395	1,325	...	...	...
25 years and over	...	...	645	535	...	...	...

Appendix D. 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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