

**Comparative Study of Electoral Systems (CSES)
 Module 3: Sample Design and Data Collection Report**

June 05, 2006

Country:	Canada
Date of Election:	October 14, 2008
Prepared by:	Elisabeth Gidengil
Date of Preparation:	October 24, 2012

NOTES TO COLLABORATORS:

- Where brackets [] appear, answer by placing an “X” within the appropriate bracket or brackets.
- If more space is needed to answer any question, please lengthen the document as necessary.

Collaborator(s):

Collaborators are the contact persons for election studies that appear in the CSES dataset - they are not necessarily the parties who collected the data. These collaborators and their contact information will be listed on the CSES website.

<p>Name: Elisabeth Gidengil Title: Hiram Mills Professor Organization: McGill University</p> <p>Address: Department of Political Science McGill University 855 Sherbrooke West Montreal QC Canada H3A 2T7</p> <p>Telephone: 01 514 398 4400 x00581 Fax: 01 514 398 1770 E-Mail: elisabeth.gidengil@mcgill.ca Website:</p>	<p>Name: Patrick Fournier Title: Professor Organization: Université de Montréal</p> <p>Address: Département de science politique Université de Montréal C.P. 6128, Succ. Centre-ville Montréal QC Canada H3C 3J7</p> <p>Telephone: 01 514 343 6111 x54437 Fax: 01 514 343 2360 E-Mail: patrick.fournier@umontreal.ca Website: http://patrick-fournier.com/e/Home.html</p>
<p>Name: Joanna Everitt Title: Dean of Arts Organization: University of New Brunswick (Saint John)</p> <p>Address: University of New Brunswick PO Box 5050 Saint John NB E2L 4L5 Canada</p> <p>Telephone: 01 506 648 5560 Fax: 01 506 648 5947 E-Mail: jeveritt@unbsj.ca Website:</p>	<p>Name: Neil Nevitte Title: Professor Organization: University of Toronto</p> <p>Address: Department of Political Science University of Toronto 100 St. George Street Toronto. ON Canada M5S3G3</p> <p>Telephone: 01 416 978 6298 Fax: 01 416 978 5566 E-Mail: n.nevitte@utoronto.ca Website: http://www.nevitte.org</p>

Data Collection Organization:

Organization that conducted the survey field work/data collection:

Organization:	Institute for Social Research (Canada outside Quebec)
Address:	York University 4700 Keele Street Toronto ON Canada M3J 1P3
Telephone:	01 416 736 5061
Fax:	01 416 736 5749
E-Mail:	isrnews@yorku.ca
Website:	www.isr.yorku.ca
Organization:	Jolicoeur & Associés (Quebec)
Address:	370 Rachel East Montreal QC Canada H2W 1E9
Telephone:	01 514 284 3106
Fax:	01 514 284 9206
E-Mail:	info@etudesondage.com
Website:	www.etudesondage.com

Funding Organization(s):

Organization(s) that funded the data collection:

Organization:	Elections Canada
Address:	257 Slater Street Ottawa ON Canada K1A 0M6
Telephone:	01 613 993 2975
Fax:	01 613 954 8584
E-Mail:	info@elections.ca
Website:	www.elections.ca

Archiving Organization

If appropriate, please indicate the primary location where the full, original election study dataset (not just the CSES portion) will be archived:

Organization:	The Canadian Opinion Research Archive
Address:	Joseph S. Stauffer Library Queen's University 101 Union Street Kingston ON Canada K7L 5C4
Telephone:	01 613 533 6000 x77481
Fax:	None
E-Mail:	cora@post.queensu.ca
Website:	www.queensu.ca/cora/ces.html

Please indicate the date when the study is expected to be available at this archive:

It is available

Study Design

1. Timing of the study that the CSES Module was included in:

- Post-Election Study
- Pre-Election/Post-Election Panel Study
- Self-administered Mail-back Study

2a. Date Post-Election Interviewing Began:

October 15, 2008

2b. Date Post-Election Interviewing Ended:

December 23, 2008

3. Mode of (post-election) interview:

- In person, face-to-face
- Telephone
- Mail or self-completion supplement
- Internet

4a. Was the survey part of a panel study?

- Yes
- No

4b. If the survey was part of a panel study, please describe the design of the panel study, including the date at which interviewing for each prior wave began and ended:

Interviewing for the campaign study (CPS) began on September 26, 2008. Excepting the first day of calling and Thanksgiving Day (October 10), between 130 and 260 interviews were completed each day until midnight of the evening before the October 14 election. In total 3,257 CPS

interviews were completed.

The sample for the post-election surveys was comprised of respondents to the CPS. For the 2008 survey this included not only the new 2008 RDD sample (n = 2,451) but also the 2006 panel sample (n = 1,238). At the end of the CPS in 2008, as in 2006, the interviewer ensured that they had a first name or some other identifier (such as the respondent's initials or position in the household, e.g., mother). This information, as well as the sex and year of birth of the CPS respondent, and the respondent's telephone number, was recorded on a "cover sheet." The interviewer called and asked for the person by name or identifier. If there was any concern about reaching the correct person the interviewer also checked age and gender. Calling for the post-election study (PES) started on October 15 the day after vote and all of the campaign respondents were called back within three days of the vote. After 10 days of calling 50 percent of the PES interviews were completed. By day 20 almost 70 percent of the interviews were completed but small numbers of interviews were completed until late December 23. In total 3,689 PES interviews were completed of which 2,451 were from the new 2008 CPS and the remaining 1,238 were respondents who were interviewed in the 2006 CPS. Many of the panel respondents were also interviewed in the 2006 PES and a small number were interviewed in 2004 but not 2006.

At the end of the post-election survey, respondents were asked to provide their address so they could be sent the mail-back survey. Mail-back information was provided by 76 percent of the PES respondents.

Translation

Please provide copies of questionnaires in all languages used as part of the election study deposit. For questionnaires in a language other than English, please also provide a version of each translated back into English. Note: Questions are based on those developed for the ISSP.

5. Was the questionnaire translated?

- Yes, translated by member(s) of research team
- Yes, by translation bureau
- Yes, by specially trained translator(s)
- No, not translated

6. Please list all languages used for the fielded module:

English, French

7a. If the questionnaire was translated, was the translated questionnaire assessed/checked or evaluated?

Note: used French version of module unless the self-administered mail-back required any modifications in the English

- Yes, by group discussion
- Yes, an expert checked it
- Yes, by back translation

- Other; please specify: _____
 No
 Not applicable

7b. If the questionnaire was translated, was the questionnaire pre-tested?

- Yes
 No
 Not applicable

7c. If the questionnaire was translated, were there any questions which caused problems when translating?

- Yes
 No
 Not applicable

7d. If the questionnaire was translated, please provide a list of all questions which caused problems when translating. For each question listed, describe what problems were encountered and how they were solved: Not applicable.

Sample Design and Sampling Procedures

8. Please describe the population that your sample is meant to be representative of:

The RDD sample for the 2008 campaign study was designed to represent the adult population of Canada: Canadian citizens 18 years of age or older who speak one of Canada's official languages, English or French, and reside in private homes in the ten Canadian provinces

Eligibility Requirements

9a. Must a person be a certain age to be interviewed?

- Yes
 No

If yes, what ages could be interviewed? 18 years of age

9b. Must a person be a citizen to be interviewed?

- Yes
 No

9c. Must a person be registered to vote to be interviewed?

- Yes
 No

9d. Please list any other interviewing requirements or filters used:

None

Sample Frame

10a. Were any regions of the country excluded from the sample frame?

Yes

No

If yes, what percent of the total eligible population did this exclude from the sample frame? 0.3%

If yes, please explain:

Residents of the three Northern territories were excluded

10b. Were institutionalized persons excluded from the sample?

Yes

No

If yes, what percent of the total eligible population did this exclude from the sample frame? 1%

If yes, please explain:

Residents of old age homes, group homes, educational institutions and penal institutions were excluded from the sample. Using Statistics Canada figures, about 12,500 Canadians reside in prisons or other penal institutions (2002 data) and about 250,000 live in homes for the aged or other health institutions (1995 data). The population of Canada, 18 and over in 2006 was 24,649,530. Accordingly, the number of people in these institutions is estimated to be about 1%. There is no easy way to develop an estimate for group homes but the numbers will be very small since most group home residents are under 18 years of age. For penal institutions, see <http://www.csc-scc.gc.ca/text/rsrch/reports/r144/r144-eng.shtml> For residents of health care institutions, see: <http://www.statcan.gc.ca/pub/82-003-x/1995003/article/2452-eng.pdf> For the population aged 18 and over, see: <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/tbt/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=88983&PRID=0&PTYPE=88971,97154&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=66&VID=0&VNAMEE=&VNAMEF=>

10c. Were military personnel excluded from the sample?

Yes

No

10d. If interviews were conducted by telephone, what is the estimated percentage of households without a phone? 1.2%

10e. If interviews were conducted by telephone, were unlisted telephone numbers included in the population sampled?

Yes

No

10f. Were other persons excluded from the sample frame?

Yes

No

10g. Please estimate the total percentage of the eligible population excluded from the sample frame: _____ %

Exclusions include: (1) those living in institutions 1% (see above) (2) those without a telephone 1.1% <http://www.statcan.gc.ca/daily-quotidien/110405/dq110405a-eng.htm> (3) cell phone numbers are included in the sample but the coverage is not known as there is no comprehensive list, so some cell phone-only households would have been excluded. Cell phone-only households constitute 13% of the population; about half of them may have been included in the sample. <http://www.statcan.gc.ca/daily-quotidien/110405/dq110405a-eng.htm>

Sample Selection Procedures

11. Please describe, in your own words, how the sample for the study was selected. If the survey is part of a panel study, please also describe the original sample, from the beginning of the study.

A modified random digit-dialling (RDD) sample along with the birthday selection method within households was used for 2008 CPS. Respondents to the 2008 PES included both 2008 CPS respondents, who were willing to complete a second interview, as well as respondents from the 2006 CES and/or 2004 CES who could be located and were willing to complete the survey. Thus, the 2008 PES has both a new (to 2008) sample and a panel sample. PES respondents were asked to provide their name and address for the mail-back study (MBS).

12a. What were the primary sampling units?

Households

12b. How were the primary sampling units selected?

Households were selected by randomly selecting telephone numbers. To select numbers ISR employs a modified form of random digit dialing. All telephone numbers in Canada consist of an

area code, a “central office code” or exchange (the first three digits of the telephone number), and a suffix or “bank” (the last four digits of the number). A list of most telephone numbers in Canada can be constructed from CD-ROM versions of telephone books and other commercially available lists of telephone numbers. Numbers from these sources, as well as telephone numbers between or on either side of listed numbers are included in the sampling frame. For example, if the following telephone number were found in a directory, (416) 651-8513, then (416) 651-8512 and (416) 651- 8514 would be included in the sample. A computer is then used to generate a random sample of telephone numbers from this list. Unlisted numbers and numbers too new to be included in directories are interspersed among valid numbers .

12c. Were the primary sampling units randomly selected?

Yes

No

Please explain how the units were randomly selected. If the units were not randomly selected, please provide a justification for why the units were not randomly selected.

A modified form of random digit dialing (see 12b)

13. Were there further stages of selection?

Yes

No

13a. If there were further stages of selection, what were the sampling units at each of the additional stages?

The second stage of the sample selection process was the random selection of a respondent from the selected household. To be eligible for the interview the household member had to be an adult (18 years of age or older) and a Canadian citizen. If there was more than one eligible person in the household, the person with the next birthday was selected as the survey respondent. For the 2004-2006-2008 panel component of the survey, the respondent was the person who was initially randomly selected to complete the 2006 CPS or, in a small number of cases, the 2004 CPS). Interviewers, when they asked to speak to the person who did the 2006 survey typically had a first name or initial as well as the respondent’s gender and age to maximize their ability to secure the re-interview with the correct respondent.

13b. If there were further stages of selection, how were the sampling units selected at each of the additional stages?

Using the birthday selection method (see 13a)

13c. If there were further stages of selection, were units at each of these stages randomly selected?

Yes

No

Please explain how the units were randomly selected. If the units were not randomly selected, please provide a justification for why the units were not randomly selected.

Using the birthday selection method (see 13a)

14a. How were individual respondents identified and selected in the final stage?

Using the birthday selection method (see 13a)

14b. Could more than one respondent be interviewed from a single household?

Yes

No

If yes, please explain:

15. Did the sample design include clustering at any stage?

Yes

No

16. Did the sample design include stratification?

Definition: Stratification involves the division of the population of interest according to certain characteristics (for instance: geographic, political, or demographic). Random selection then occurs within each of the groups that result.

Yes

No

If yes, please describe (please include the list of characteristics used for stratification):

The sample was stratified by province. In terms of the percentage of sample per province, the design called for a slight over representation of the seven smaller provinces and a corresponding under representation in Ontario and Alberta. For example, Newfoundland and Labrador had 1.64 percent of the households in the country, but 3.15 percent of the households in the in the 2008 CPS survey sample. Conversely, Ontario, which had 36.59 percent of Canada's population, had only 31.61 percent of the sample.

17. Was quota sampling used at any stage of selection?

Yes

No

18. Was substitution of individuals permitted at any stage of the selection process or during fieldwork?

Yes

No

If yes, please describe:

19. Under what circumstances was a household designated non-sample? Please check all that apply:

- Non-residential sample point
- All members of household are ineligible
- Housing unit is vacant
- No answer at housing unit after 15 or more callbacks
- Other (Please explain):

Note: no answers were assumed to be non-households in the same proportion for non-answered numbers as for answered numbers

20. Were non-sample replacement methods used?

- Yes
- No

21a. For surveys conducted by telephone, was the sample a random digit dial (RDD) sample?

- Yes
- No

21b. For surveys conducted by telephone, was the sample a listed sample?

- Yes
- No

Note: list-assisted

21c. For surveys conducted by telephone, was the sample a dual frame sample?

- Yes
- No

If yes, what % list frame_____ and what % RDD_____

22. For surveys conducted by mail, was the sample a listed sample?

- Yes
- No

23. For surveys conducted on the Internet, did any respondents self-select into the survey?

- Not applicable
- Yes
- No

Please explain:

Incentives

24a. Prior to the study, was a letter sent to the respondent?

- Yes
 No

(If yes, please provide a copy of the letter.)

24b. Prior to the study, was a payment sent to the respondent?

- Yes
 No

24c. Prior to the study, was a token gift sent to the respondent?

- Yes
 No

24d. Did respondent receive an additional payment after their participation? (Do not include any payment made prior to the study.)

- Yes
 No

24e. Were any other incentives used?

- Yes
 No

Interviewers

25. Please describe the interviewers (e.g., age, level of education, years of experience):

Experience varied from 3 months to a maximum of 13 years, with an average of about 1.5 years. Age varied, ranging from 18 to 67, with an average of about 27 years. Approximately 50% of the interviewers were York University (mainly), Seneca College, Ryerson University or University of Toronto students of which almost all were undergraduates. Of those who were not current students a bachelors' degree was the most common level of education

26. Please provide a description of interviewer training:

Training for new to ISR interviewers consists of three components. Interviewers attend a two-day workshop that includes both in-class and practice interviewing with each other. In-class training centers on the role of the interviewer, interviewer responsibilities and good interviewing techniques such as active listening and speaking skills as well as an explanation of the goals and

history of the Canadian Election Study project and the need to protect confidentiality. Practice interviewing follows in-class training and includes CATI training as well as reading the questions and recording answers. Interviewers then proceed to 'cold calling' where they complete the CES survey with randomly selected respondents who are not from the study sample. Quality control monitors or supervisors listen to the new interviewers; provide feedback, and when the recruit demonstrates proper interviewing skills promotes them to be an interviewer on the main study.

Established interviewers who were trained to work on the CES reviewed the CATI questionnaire on a screen as if they were completing an interview, attended a classroom session about the project and completed a practice interview before being placed on the main study.

For the CPS and PES, supervisors monitored (listened to) about 10 percent of interviewers' calls to verify that the interviewers were reading questions and recording answers correctly.

Contacts

27a. What was the average number of contact attempts made per household, for the entire sample?

For CPS completions = 4.46; for the entire CPS sample = 3.91. For PES completions = 5.71; for the entire PES sample = 5.789. Note: the lower number for the entire CPS sample results from screening out non-household number sin one or two call attempts. For the MBS the mean contacts for the entire sample = 3.2

27b. For households where contact was made, what was the average number of contact attempts prior to first contact?

Number of Call Attempts: Campaign-Period and Post-Election Survey

	Campaign		Post-Election	
Calls	Number of calls	%	Number of calls	%
1	614	18.85	712	19.30
2	616	18.91	649	17.59
3	456	14.00	451	12.23
4	383	11.76	344	9.33
5	294	9.03	268	7.26
6-9	586	17.99	593	16.07
10-14	236	7.25	377	10.22
15 or more	72	2.21	295	8.00
Totals	3,257	100.00	3,689	100.00

Note: Typically, between each number was called twice each day, once before and once after 6:00pm.

The PES respondents who provided mailing addresses received up to five contacts encouraging them to complete and return the MBS questionnaire. The first contact included the questionnaire, a covering letter, and a postage-paid pre-addressed return envelope. The second was a reminder/thank you card (physically like a post card) sent one week after the first questionnaire package was sent. The first and second mail contacts were sent to all respondents. The mailings were staggered and sent every week at the start of the PES calling and somewhat less often near the end of calling. A second questionnaire (covering letter and return envelope) was sent only to non-responders and typically was mailed about three weeks after the first reminder card. One week later the second reminder card was sent. Finally, telephone calls were made to all non-responders about two weeks after the last reminder card was sent.

27c. During the field period, how many contacts were made with the household before declaring it a **non-sample**?

No sample was declared as non-sample. For the 'ring-no-answers' and 'always-busy' numbers in the sample a minimum of 15 calls were made and it was assumed, for response rate calculations, that the proportion of these numbers that were households was the same as in the rest of the sample, (see household eligibility rate in the response rate section).

28d. During the field period, how many contacts were made with the household before declaring it a **non-interview**?

A minimum of 15 calls for the CPS and 21 calls for the PES

28e. During the field period, what were the maximum number of days over which a household was contacted?

18 days for the CPS and 39 days for the PES

28f. During the field period, did interviewers vary the time of day at which they re-contacted the household?

- Yes
 No

If yes, please describe:

In order to maximize the chances of getting a completed interview from each telephone number in the CPS sample, call attempts were made during the day and the evening - for both week and weekend days. Typically, between each number was called twice each day, once before and once after 6:00pm.

Refusal Conversion

29a. Were efforts made to persuade respondents who were reluctant to be interviewed?

- Yes
 No

Please describe:

Respondents and/or households who refused to participate when initially contacted by the interviewer were called a second time. In the CPS refusal conversion attempts were made in the last several days calling period whereas in the PES the conversion attempts were typically made over the last three weeks of the 69 day calling period.

29b. Were respondents who were reluctant to be interviewed sent a letter persuading them to take part?

Yes

No

(If yes, please provide a copy of the letter or letters.)

If yes, please describe:

29c. Was payment offered to respondents who were reluctant to take part?

Yes

No

If yes, how much?

29d. Were respondents who were reluctant to take part turned over to a more experienced interviewer?

Yes

No

29e. What was the maximum number of re-contacts used to persuade respondents to be interviewed?

Two

29f. Were any other methods used to persuade respondents reluctant to be interviewed to take part?

Yes

No

If yes, please describe

Interview/Survey Verification

Definition: Interview/survey verification is the process of verifying that an interview was conducted and that the survey was administered to the correct respondent, for quality control purposes.

30. Was interview/survey verification used?

Yes

No but about 10% of all interviews were monitored by a supervisor

If yes, please describe the method(s) used:

If yes, please indicate the percent of completed surveys that were verified: _____ %

Response Rate

31. What was the response rate of the survey that the CSES Module appeared in? Please show your calculations. (If the CSES Module appeared in a panel study, please report the response rate of the first wave of the study, even if the CSES Module did not appear in that wave.)

The response rate was defined as the number of completed interviews divided by the estimated number of eligible households times 100 percent.

Details on the calculation of the response rate for the CPS are as follows. Of the 9,442 telephone numbers included in the sample, 6,652 were identified as being eligible households (completions [n=3,257] + refusals [n=2,634] + callbacks [n=761]). Not eligible households (respondent was unable to speak English or French, was not physically or mentally healthy enough to complete the interview, was not a Canadian citizen, and nonresidential and not in service numbers accounted for 2,356 of the telephone numbers. It was not possible to determine the eligibility status for 414 of the sample telephone numbers. For response rate calculations, it was assumed that the proportion of these 414 numbers that were eligible household numbers was the same as it was in the rest of the sample. This proportion, or “household eligibility rate” was .7385 (eligibles [6,652]/(eligibles [6,652] +not eligibles [2,356]) = .7385). The estimated total number of eligibles was then computed as 6,958 (6652 + [.7385 x 414] = 6,958). Dividing the number of completions (3,257) by the estimated number of eligibles (6,958) gives a final response rate of 47 percent.

The PES reinterview rate for the new 2008 sample was 78%. The reinterview rate, at 60%, was lower for the 2004-2006-2008 panel sample. The overall reinterview rate was 69%. For the new RDD sample about two thirds of the non-response was accounted for by refusals. Illness or death of CPS respondents, never answered telephones (typically 15 or more calls), and changes in telephone numbers accounted for the remaining nonresponse. A small number of PES respondents had their number changed and the new number was unlisted. In addition, neither the telephone provider nor other household members either could not or would not provide a new number. For the panel sample more than half of the non-response resulted from an inability to locate the 2006 respondent and most of the remaining non-response resulted from refusals.

Of those who provided an address at the end of the PES (76%) and were sent the MBS, 70 percent returned a completed questionnaire. This represents 66% of the respondents to the PES.

32. Please provide the following statistics for the survey that the CSES Module appeared in.

Note: If the CSES Module appeared in a panel study, please report the statistics for the first wave of the study, even if the CSES Module did not appear in that wave.)

Final Sample Disposition and Response Rate: CPS

Results	Number	Percent
Completions	3,257	35
Refusals	2,634	28
Callbacks	761	8
Ill/aged/language problem/absent/not a citizen	858	9
Not-in-service/non-residential	1,498	16
Eligibility not determined	414	4
Total	9,422	100
Household eligibility rate	.738455	
Estimated number of eligibles	6,958	
Response rate	47%	

33. If the CSES Module appeared in a panel study, how many waves were conducted prior to the wave that included the CSES Module?

The CSES module was split among the CPS, PES and MBS. Most of the module appeared in the MBS.

34. If the CSES Module appeared in a panel study, what was the total panel attrition between the first wave of the study and the wave that included the CSES Module? Please show your calculations.

See response to 31.

35. If the CSES Module appeared in a panel study, please provide the number of completed interviews for the wave that included the CSES Module:

See response to 31

36. If the CSES Module appeared in a panel study, please provide the following statistics for panel attrition by age and education. In each cell, indicate the percent of all completed interviews in each category for the indicated wave.

Age	CPS	PES	MBS
18-25	7.4%	7.0%	4.5%
26-40	24.8%	24.0%	21.8%
41-64	45.9%	47.5%	50.0%
65 and over	21.9%	21.5%	23.7%

Education	CPS	PES	MBS
None	.2%	0.1%	0.1%
Incomplete primary	1.2%	0.9%	0.6%

Primary completed	2.6%	2.1%	2.0%
Incomplete secondary	10.9%	10.1%	9.3%
Secondary completed	21.6%	20.3%	20.2%
Post-Secondary Trade/Vocational	25.6%	25.7%	23.5%
University incomplete	7.0%	7.0%	7.8%
University degree	31.0%	33.7%	36.5%

2008 new sample (excludes 2004-2006-2008 panel respondents)

Post-Survey Adjustment Weights

37. Are weights necessary to make the sample representative of the populated being studied?

Yes

No

If yes, please explain:

The national sample weight is required to correct for disproportionalities in the probability of selection based on household size and province of residence

38. Are weights included in the data file?

Yes

No

39. If weights are included in the data file, please describe in detail how the weights were constructed:

Household Weight: The probability of an adult member of the household being selected for an interview varies inversely with the number of people living in that household. In a household with only one adult, this person has a 100 percent chance of selection, in a two adult household each adult has a 50 percent chance of selection, and so on. Analyses based on unweighted estimates are therefore biased: members of one adult households are over represented, and larger households with two or more adults are under represented. In the 2008 campaign-period survey there were 3,257 households in the sample and 982 were one-adult households, 1,752 were two-adult households, 359 were three-adult households, etc. (see table below). The weights for each household are calculated as follows. First, the total number of weighted cases is calculated (number of cases times the number of adults in the household). For three-adult households the calculation is: 359 times 3, which gives 1,077 three-adult households in the weighted sample. In the campaign-period survey there are 6,278 weighted cases. Second, the 6,278 weighted cases are adjusted down to the original sample size of 3,257 (calculated as weighted cases for each household size divided by the weighted sample size times the original sample size). For three-adult households the calculation is: $(359/6,278) * 3,257 = 558.74$. Third, the weight for each household size is calculated (by dividing the adjustment to original sample size by the number of cases). For three-adult households the calculation is: $558.74/359 = 1.556387$. (In essence, weights are obtained by dividing the proportion of households in the population (as estimated

from the data) by the proportion of the households in the sample.)

Note that in the calculation of the household weights the total number of observations in the sample –the “weighted sample size” – is based on the original sample size, but we do not have a true random sample (as households were used to locate adults) and there is no accounting for sample design effects. Weighting in this manner, so that the weighted sample size is equal to the actual number of interviews, provides researchers with a very good approximation of the precision of their sample for point estimates (such as percentages, means, correlation coefficients (r), coefficients of determination (r^2), and so on). But, treating the sample as if it was a simple random sample of equal size results in **incorrect** estimates of standard errors and, of course, incorrect significance tests. The errors are **downwardly** biased and so give a false sense of the precision of estimates as well as significance tests with too many false positives. Researchers should consider the use of the complex sample module in SPSS or use a statistical package that takes proper account of weights (such as STATA) when analysing the data.

Household Weights

# of adults	# households	Weighted sample	Adjusted to original sample size	Weight
1 adult	982	982	509.4575	0.518796
2 adults	1,752	3,504	1,617.8605	1.037592
3 adults	359	1,077	558.7431	1.556387
4 adults	125	500	259.3979	2.075183
5 adults	32	160	83.0073	2.593979
6 adults	3	18	9.3383	3.112775
7 adults	1	7	3.6316	3.631571
10 adults	3	30	15.5639	5.187958
Totals	3,257	6,278	3257.0000	

Province Weight: Because the sample was stratified, the distribution is not proportional to the population size (pps) of the provinces. Therefore, the data must be weighted before national estimates are derived. (No province weight is required in comparisons between provinces.)

Weights are obtained by dividing the proportion of households in the province by the proportion of the households in the sample for that province. For example, Ontario has a weight of 1.1577 (36.59/31.61 plus rounding error). In preparing national estimates, each Ontario case counts for 1.1577 observations in the weighted data set; in other words, Ontario cases are “weighted up” so that the impact of the Ontario sample on national estimates is an accurate reflection of Ontario's proportion of the total number of households in Canada. Conversely, provinces where the weights are less than one, for example Newfoundland and Labrador (.5207), are “weighted down.” Caveats about the effect of weighting on the variance estimates noted above apply here as well.

Provincial Sample Distribution and Provincial Weight

Province	# households	% households	#households in sample	% households in sample	Weight
Newfoundland	189,045	1.64	102	3.15	0.5207

Prince Edward Island	50,800	0.04	101	3.12	0.1413
Nova Scotia	360,025	3.12	102	3.15	0.9917
New Brunswick	283,825	2.50	109	3.36	0.7316
Quebec	2,978,115	25.58	880	27.16	0.9508
Ontario	4,219,410	36.59	1,024	31.61	1.1577
Manitoba	432,555	3.75	150	4.63	0.8102
Saskatchewan	379,680	3.29	140	4.32	0.7620
Alberta	1,104,100	9.57	143	4.41	2.1693
British Columbia	1,534,335	13.31	506	15.62	0.8520
Totals	11,531,890	100.00	3,257	100.00	

National Weight: In order to produce national estimates it is advisable to correct for both the unequal probabilities of selection at the household stage and the unequal probabilities of selection based on province of residence. The National Weight is the product of the household weight and the provincial weight and should be used when national estimates are required. Because the weights include fractions that are rounded, there will be minor variations in the number of cases for different analytical procedures and subsets of the data.

40a. If weights are included in the data file, are the weights designed to compensate for disproportionate probability of selection?

- Yes
 No

If yes, please describe:

See response to 39

40b. If weights are included in the data file, are the weights designed to match known demographic characteristics of the population?

- Yes
 No

40c. If weights are included in the data file, are the weights designed to correct for non-response?

- Yes
 No

40d. If weights are included in the data file, are the weights designed to correct to the official election results?

- Yes
 No

41. Comparison of Completed Interviews to Population (please provide as percentages of the total):

Characteristic	<u>Population Estimates</u>	<u>Completed Interviews</u>	
		<u>Unweighted Distribution</u>	<u>Weighted Distribution</u>
<u>Age</u>			
18-25	%	7.4%	10.4%
26-40	%	24.8%	24.4%
41-64	%	45.9%	47.5%
65 and over	%	21.9%	17.6%
<u>Education</u>			
None	%	.2%	.1%
Incomplete Primary	%	1.2%	1.1%
Primary Completed	%	2.6%	2.1%
Incomplete Secondary	%	10.9%	9.8%
Secondary Completed	%	21.6%	22.4%
Post-Secondary Trade/ Vocational	%	25.6%	25.9%
University Incomplete	%	7.0%	7.3%
University Degree	%	31.0%	31.4%
<u>Gender</u>			
Male	48.5%	44.9%	47.4%
Female	51.5%	55.1%	52.6%

Note: data are not available for these age and education categories

42. Please indicate the source of the population estimates in the prior question. English language sources are especially helpful. Include website links or contact information if applicable.

<http://www12.statcan.gc.ca/census-recensement/2006/index-eng.cfm>