

**Social Studies 201**  
**Winter 2005**  
**First Midterm Examination**  
**8:30-9:20, February 2, 2005**

**Answer any three (3) of the six questions. Each question has equal value.**

**1. Undergraduate students.** The data in Table 1 come from a 2003 survey of undergraduates across Canada. Grades are measured on a seven-point scale, from 1 to 7; the hours spent at community service refer to the approximately one-half of students who perform some community service during the week.

- a. Using the data in Table 1, compute the mode, median, mean, and range for each of the variables grades and hours per week at community service.
- b. If you were to summarize these variables by presenting an average, which of the three averages, mode, median, and mean do you consider the best to use? The worst? Explain your reasoning.

**2. Retirement experiences.** Table 2 gives percentage distributions of income for Saskatchewan respondents aged 45 or more who had retired, classified by their experience with retirement. Many respondents were satisfied with their experiences but some were dissatisfied because of being forced to retire for health reasons or a mandatory retirement policy of their employer. For respondents in each of the two groups, obtain the mode and mean household income. In words, briefly compare the two distributions.

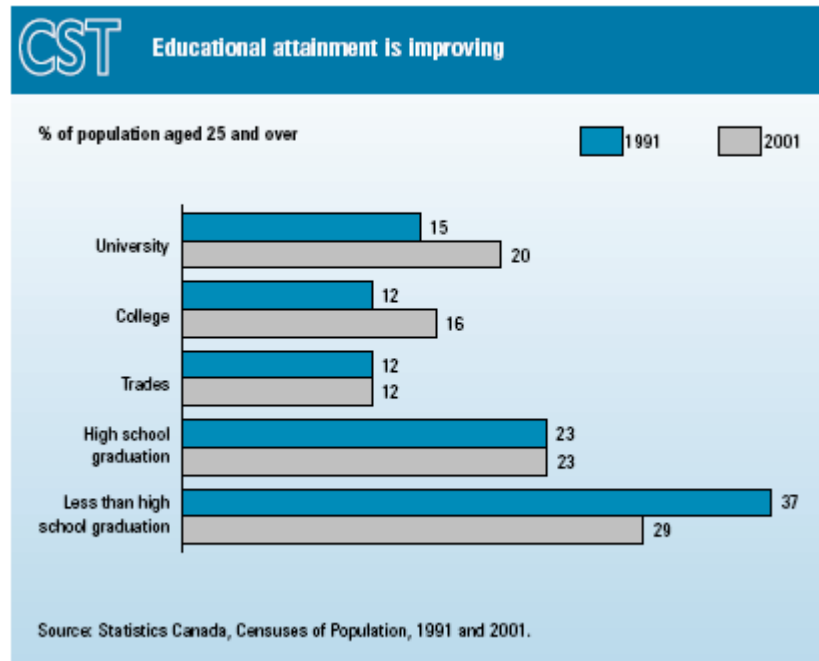
**3. Sense of belonging to Saskatchewan.** The frequency distributions in Table 3 represent responses of Saskatchewan adults concerning their sense of belonging to the province. Use the data in Table 3 to compute the mean and median sense of belonging. Write a short note comparing the sense of belonging to Saskatchewan for those in the two age groups.

**4. Sense of belonging to Canada, province, and community.** Figure 2 presents percentage distributions of responses of Canadian adults about the strength of their sense of belonging to Canada, their province, and their community. From the data in Figure 2, obtain the mode, median, and seventieth percentile of strength of sense of belonging to each of the three areas – Canada, province, and community. Write a short note comparing the strength of the sense of belonging for the three areas, using the statistics and the distributions.

**5. Education of parents of high school graduates and dropouts.** Figure 1 compares the educational attainment of Canadian adults aged 25 and over for 1991 and 2001. This table comes from “Update on education,” *Canadian Social Trends*, Winter 2003, pp. 19-22. Use the distributions in Figure 1 to answer this question.

- What is the modal level of education in each year?
- Regarding education as an ordinal variable, for each of the two years, obtain the median, thirtieth percentile, and seventieth percentile (do not attempt to interpolate).
- Which of the measures you obtained in a. or b. would be best to illustrate the title of the article, “Educational attainment is improving”? Explain your rationale, commenting briefly on the differences in the two distributions.

**Figure 1. Educational trends in Canada, 1991-2001**



**6. Types of variables.** Explain what is the highest level of scale each of the following variables has (nominal, ordinal, interval, or ratio). Also explain whether each is continuous or discrete.

- Hours per week in community service (Table 1).
- Discipline (Table 1).
- Household income (Table 2)
- Sense of belonging (Table 3 and Figure 2).

**Table 1. Canadian undergraduate students, grades and hours per week in community service, 2003**

Discipline	Average grade on a seven-point scale	Average hours per week in community service, among those involved
Arts and Humanities	5.0	4.5
Biological Science	4.9	4.2
Business	4.6	4.3
Education	5.2	4.4
Engineering	4.6	3.8
Physical Science	4.7	3.4
Professional	5.2	5.4
Social Science	4.6	4.7

Source: Canada Undergraduate Survey Consortium, *2003 Graduating Students Survey*. Tables 17 and 36. Available from University of Regina, Office of Resource Planning, <http://www.uregina.ca/presoff/orp/surveys.shtml>

**Table 2. Experience with retirement, Saskatchewan respondents, classified by household income**

Household income in thousands of dollars	Percentage of respondents who were:	
	Satisfied with retirement experiences	Not satisfied with retirement experiences
0 to 20	11	28
20 to 30	18	20
30 to 40	16	13
40 to 60	24	19
60 to 100	31	20
Total	100	100

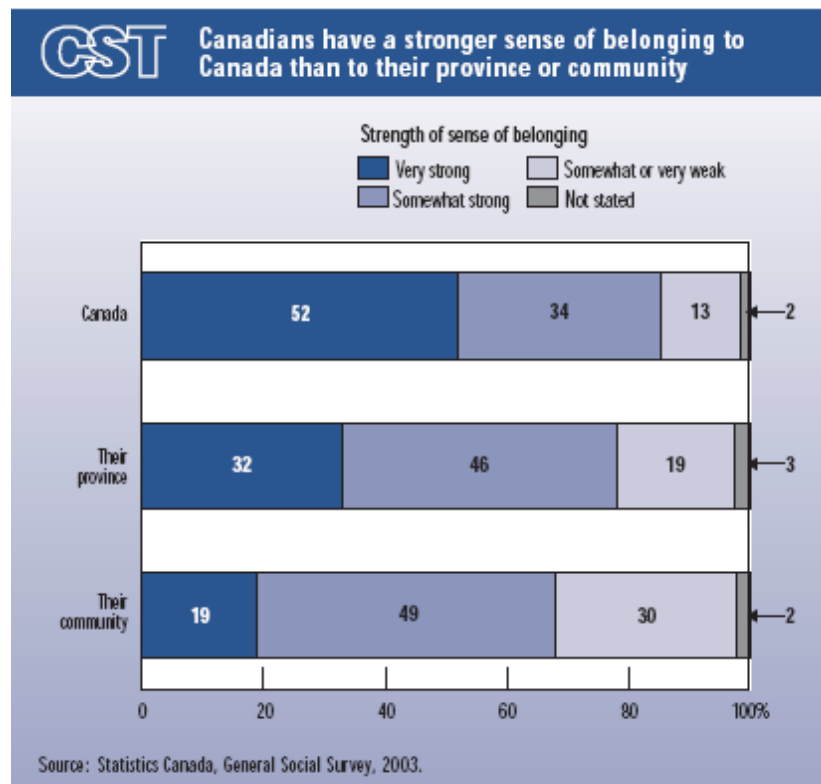
Source: Adapted from Grant Schellenberg and Cynthia Silver, "You can't always get what you want: Retirement preferences and experiences," *Canadian Social Trends*, Winter 2004, pp. 2-7.

**Table 3. Frequency distribution of sense of belonging of Saskatchewan respondents aged 15-24 and 55-64**

Sense of belonging to Saskatchewan	Age of respondents	
	15-24	55-64
1 – very strong	36	73
2 – somewhat strong	83	78
3 – somewhat weak	44	15
4 – very weak	14	2
Total	177	168

Social Survey of Canada, 2001. Statistics Canada. General Social Survey of Canada, 2003. Cycle 17: Social Engagement [machine readable data file]. 1st Edition. Ottawa, ON: Statistics Canada [publisher and distributor] 10/1/2004.

**Figure 2. Sense of belonging of Canadian adults to Canada, their province, and their local community**



Source: Grant Schellenberg, "Perceptions of Canadians: A sense of belonging, confidence and trust," *Canadian Social Trends*, Winter 2004, pp. 16-21.