RETHINKING SCIENCE AND SOCIETY

PUBLIC SURVEY FINDINGS

Executive Summary

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EKOS
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EXECUTIVE SUMMARY

Results from this year's edition of Rethinking Science and Society suggest that Canadians continue to express very positive views about science and research, and clearly connect activities in these areas with our overall quality of life. At the same time, however, concerns about both our science capacity and the ethical issues associated with science and research are expressed. Survey results also reveal that the perceived connection between science and quality of life has weakened somewhat since 2004. These results are summarized below (and in more detail in later sections of this report).

Awareness, Interest and Perceptions

Despite widespread media attention given to issues such as global warming, stem cell research, and genetically modified foods, Rethinking Science and Society results suggest that Canadians' knowledge of science and research is quite superficial. Only about one in ten feel "very" knowledgeable about either science or research – the vast majority of Canadians are either "somewhat" or "not very" knowledgeable about both science and research.

Despite a somewhat superficial understanding of science and research, Canadians continue to hold overwhelmingly positive top-of-mind impressions of both these areas. Nearly nine in ten have a favourable impression of both science and research, and over four in ten have "very favourable" impressions of both (although there has been a decrease in the proportion of Canadians who possess a "very" favourable view of research, from 46 per cent in 2004 to 40 per cent currently).

Rethinking Science and Society results also suggest that Canadians are clearly interested in learning more about science and research: six in ten feel they have too little information about the impact of science and research on society, and only two per cent feel they have too much information about this issue.

Canada's Science and Research Capacity

According to Statistics Canada, the Government of Canada allocated approximately $9 billion during the 2005/2006 fiscal year to science and technology spending, the majority of which was directed at research and development.[1]

Rethinking Science and Society results suggest that, while still vastly underestimated, Canadian perceptions of Canada's spending on science and research is more in line with actual spending than was the case in 2004. While only 18 per cent think Canada spends more than one billion dollars per year on science and research, this is up from 15 per cent in 2004. At the same time, the proportion who feel

[1] http://www.statcan.ca/Daily/English/051208/d051208d.htm

Canada spends one billion dollars or less annually on science and research is down five points since 2004 (from 52 per cent to 47 per cent currently).

Rethinking Science and Society results also indicate that most Canadians feel governments should be spending more on science and research. Roughly seven in ten (68 per cent) feel that governments should spend more to strengthen Canada's science and research capacity, and only four per cent feel that governments should spend less in this area.

Looking at perceptions of how Canada's investment in science and research compares internationally, we find that Canadians generally feel that Canada spends less in this area than other countries. A majority of Canadians feel that Canada's investment in science and research is less than that of the United States or Japan, and the plurality feel it is less than that of China or Great Britain. India is the only country tested which is perceived to spend less on science and research than Canada.

Connection Between Science and Quality of Life

Results of Rethinking Science and Society suggest that Canadians clearly draw a connection between science and quality of life. Respondents were asked how important a role science and research plays across a range of areas such as health care, the economy, and citizenship. Findings reveal that at least two-thirds of Canadians believe that science plays an important role in all the areas tested, however, they are particularly likely to see a connection in terms of improving health care (86 per cent), protecting the environment (85 per cent), and providing Canadians with a good quality of life (82 per cent).

The economy is another area where science and research is perceived to have an important influence. Three in four Canadians feel that science plays a significant role in improving Canada's economic prospects (77 per cent) and developing a qualified and adaptable workforce (77 per cent), and seven in ten (68 per cent) feel science and research helps Canadian businesses become more competitive. In addition to these health and economic areas, Canadians also acknowledge the role of science and research in helping to solve social problems like poverty, crime, and terrorism (76 per cent), in making our communities more sustainable and vibrant (72 per cent), and in developing more informed and engaged citizens (69 per cent). Interestingly, however, the proportion of Canadians who see a connection between science/research and the various areas tested has declined since 2004.

Social Sciences and Humanities Research

Social sciences and humanities research is aimed at providing a better understanding of human and social behaviour by increasing our knowledge in a range of social, economic, political, and cultural areas. Findings from this study reveal a generally positive outlook on social sciences and humanities research on the part of the public, despite an admitted lack of familiarity with this branch of research.

Respondents were asked if they were familiar with social sciences and humanities research in general, and with the Social Sciences and Humanities Research Council of Canada (SSHRC), specifically. While familiarity with both is generally low, Canadians are nearly twice as likely to say they have some

degree of familiarity with research conducted in the field of social sciences and humanities generally (33 per cent), than with SSHRC specifically (18 per cent).

To test the impact of providing information about social sciences and humanities research on support for this type of research, half the sample were read an introductory sentence about social sciences and humanities research[2], and the other half of the sample were not. All respondents were then asked several questions about their support for this type of research.

Survey results reveal that the majority of respondents from both groups think research in the social sciences and humanities contributes to Canada's overall quality of life to some degree, however, those who were read the introductory sentence prior to this question are more inclined to strongly agree with this idea (48 per cent, versus 37 per cent of those who were not read the introductory sentence).

Results are more consistent between the two groups when asked whether they thought the federal government should invest in social sciences and humanities research even if it means less investment in other areas of research, although those who were read the introductory sentence are slightly more likely to strongly agree with this idea (38 per cent, versus 34 per cent of those who were not read the introductory sentence).

Environmental Research

Rethinking Science and Society also asked a range of questions about Canadians' views on science/research and the environment.

Canadians were asked, unprompted, who they think provides the most credible health and environmental information. Findings indicate that Canadians are most trusting of the federal government in terms of both environmental (18 per cent) and health information (16 per cent), however, the proportion of Canadians who feel this way has declined somewhat since 2004.

Respondents were also asked to gauge their familiarity with Government of Canada environmental research activities. Results indicate that the majority of Canadians are not familiar with Government of Canada research activities aimed at improving either the Canadian environment or the global environment (and fewer than one in five say they are "very" familiar with Government of Canada efforts in these areas).

Despite a lack of familiarity with research activities the Government of Canada has undertaken to protect the Canadian and global environment, a strong majority of Canadians are nonetheless supportive of these activities. Three-quarters of Canadians support Government of Canada research aimed at protecting the Canadian environment, and seven in ten are similarly supportive of efforts to protect the global environment. Fewer than one in ten say they oppose Government of Canada research activities aimed at protecting either the Canadian or the global environment.

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2 "Social sciences and humanities research is aimed at increasing our knowledge in a wide range of areas, such as education, families and health care, immigration, the environment, ethics, economic prosperity, and the study of history and civilizations."

Results also reveal that Canadians are highly supportive of the idea that the Government of Canada collaborate its research efforts with governments in other countries. Fully three-quarters of Canadians (73 per cent) support the Government of Canada collaborating with foreign countries when conducting research in general, and an even larger proportion (77 per cent) are supportive of collaborating with other governments when conducting environmental research. Fewer than one in ten Canadians are opposed to the Government of Canada conducting research in collaboration with governments in other countries.

Attitudes Toward Science and Research

According to recent research, there are two negatively correlated sets of attitudes about science. One set of attitudes reflects "reservations concerning science and technology," including fears about the speed of change and the belief that science and technology conflict with traditional values; the other set of attitudes reflects a "belief in the promise of science and technology," including respect for the intentions of scientists, and the belief that scientific work provides useful results for society. Further complicating this situation is the fact that these two sets of attitudes often coexist within the same individuals.[3]

Findings from Rethinking Science and Society findings reflect this ambivalence about science and research. While Canadians generally express positive views about the promise of science and research, concerns about ethical issues and science going "too far" are also expressed.

Results reveal widespread agreement that scientific advances will solve a lot of society's problems, like disease and pollution (78 per cent), and that science is helping us use our natural resources in a more sustainable way (73 per cent). Moreover, strong majorities of Canadians agree that scientific research brings long term benefits to Canadians and Canadian society.

However, Canadians also express significant concern with a number of different aspects of science and research. Two-thirds of Canadians think that new technologies (65 per cent), and scientific advances (62 per cent) are developing faster than our capacity to deal with the ethical issues associated with them (and fewer than one in five disagree with either of these ideas). Canadians also express cynicism about whether research is actually being used: fully 71 per cent of Canadians agree that lots of valuable knowledge from research exists, it's just not being used to benefit society (and only one in ten disagrees with this idea).

Results also reveal that Canadians would value a greater voice in research decisions. Six in ten think individual Canadians should be given more opportunity to influence the type of research pursued by businesses (61 per cent) and universities (63 per cent), and an even larger proportion (68 per cent) feel average Canadians should have more input into government research decisions.

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[3] J.D. Miller, R. Pardo and F. Niwa, *Public Perceptions of Science and Technology: A comparative study of the European Union, the United States, Japan, and Canada*, Chicago: Chicago Academy of Sciences, 1997; Matthew C. Nisbet et al., 'Knowledge, Reservations, or Promise? A Media Effects Model for Public Perceptions of Science and Technology,' *Communication Research*, Vol. 29, No. 5, October 2002, 584-608, p. 588.

Sources of Information and Trust

Rethinking Science and Society also examined sources of information about science and research, as well as public views on trust and confidence in scientific players.

Respondents were asked, unprompted, where they primarily get their information about both science and research. Television tops the list, followed by newspapers and the Internet (and these three sources account for more than half of the provided responses). All other responses were mentioned by one in ten or fewer respondents.

Turning to Canadians' trust in individuals and institutions when talking about issues related to science and research, results reveal that universities clearly hold a reputational advantage over government and the private sector. University researchers (81 per cent) and university scientists (80 per cent) are assigned highest trust levels, and are seen as significantly more trustworthy than their counterparts in government and the private sector. Interestingly, while assuming the lead as the primary source of information about science and research, the media is not seen as particularly trustworthy when talking about science/research issues (only 28 per cent of Canadians express trust in the media). Business executives (19 per cent) and political leaders (ten per cent) are seen as least trustworthy to talk about issues related to science and research.

Rethinking Science and Society also examined Canadians' views on whether the Government of Canada should conduct scientific research or fund the research conducted by the private sector and universities. Results reveal that Canadians generally prefer that research be funded by the Government of Canada, rather than being conducted by the Government itself. The majority of Canadians (52 per cent) say they prefer the Government of Canada fund research conducted by the private sector (and only 37 per cent prefer that the Government conduct the research itself). Results are even more dramatic when looking at university research. Fully eight in ten Canadians (83 per cent) say they prefer the Government of Canada fund research conducted by universities, and only ten per cent prefer that government conduct the research directly.

Looking at confidence in government, private sector and university research facilities, we find that (consistent with other findings) Canadians express highest levels of confidence in university research. Canadians are split in terms of their confidence in research from a government-run facility versus a privately-run facility (46 per cent and 47 per cent, respectively), however, they express significantly higher confidence in research from a university research facility than a government-run facility (84 per cent versus 12 per cent, respectively).