

Social Effects of Culture: Detailed Statistical Models



www.HillStrategies.com
info@HillStrategies.com

Statistical Insights on the Arts, Vol. 7 No. 1

© Hill Strategies Research Inc., July 2008

ISBN 978-0-9809466-2-8; Statistical Insights series ISSN 1713-3556

Prepared by Kelly Hill and Kathleen Capriotti

*Report funded by the Canada Council for the Arts,
the Department of Canadian Heritage
and the Ontario Arts Council*



Canada Council
for the Arts

Conseil des Arts
du Canada



Canadian
Heritage

Patrimoine
canadien



ONTARIO ARTS COUNCIL
CONSEIL DES ARTS DE L'ONTARIO

SOCIAL EFFECTS OF CULTURE: DETAILED STATISTICAL MODELS

A previous report in the *Statistical Insights on the Arts* series provided some interesting findings regarding the social effects of culture. The report examined the relationship between four cultural activities (reading books, attending live performances, visiting art galleries and attending movie theatres) and a variety of social phenomena. Because of the exploratory nature of the report, no definitive conclusions were drawn from the data.

Taking the previous report as a starting point, this report provides stronger evidence of the social effects of culture through detailed statistical models of a limited number of social indicators. These models include a range of potential demographic and cultural factors (the “independent variables”) that may have an effect on six social indicators (the “dependent variables”):

- [Section 1: Feeling Trapped in a Daily Routine;](#)
- [Section 2: Volunteering;](#)
- [Section 3: Donating;](#)
- [Section 4: Doing a Favour for a Neighbour;](#)
- [Section 5: Sense of Belonging to One’s Province;](#) and
- [Section 6: Sense of Belonging to Canada.](#)

The report’s [key findings](#) are highlighted at the end of the report.

The statistical models examine whether cultural activities have an impact on social indicators *above and beyond demographic information*. That is, do cultural participants simply “fit the demographic profile” of socially active citizens? Or might cultural participation explain more about social behaviour than simple demographics?

The statistical models provide strong evidence of a connection between certain cultural factors and the six social indicators. However, in the absence of an experiment to directly measure the impacts of culture on social phenomena, it is very difficult to provide irrefutable evidence of a cause and effect relationship between the variables in a statistical (regression) model.

Unlike the previous report, the current report does not limit the analysis to four cultural activities. Rather, 11 cultural activities from the survey dataset were entered into the statistical models. An important difference from the previous report is that the general “performing arts” attendance category has been separated into three component parts (theatre attendance, pop concert attendance and classical music attendance).

The 11 cultural activities examined in this report are:

- Attending a **theatrical performance** such as drama, musical theatre, dinner theatre, comedy
- Attending a **popular musical performance** such as pop/rock, jazz, blues, folk, country and western
- Attending a symphonic or **classical music performance**
- Attending a **cultural or artistic festival**
- Attending a performance of **cultural/heritage music, theatre or dance** (e.g. Aboriginal Peoples, Chinese, Ukrainian)
- Visiting a **public art gallery** or art museum (including attendance at special art exhibits)
- Visiting a **historic site**
- Visiting a **conservation area or nature park**
- Reading a **newspaper**
- Reading a **book**
- Visiting a **movie theatre** or drive-in

The data is drawn from Statistics Canada's General Social Survey of 2005, an in-depth telephone survey of about 20,000 Canadians 15 years of age or older. Because of a split in the survey design, only half of the respondents were asked questions about their cultural activities in 2005. A total of 9,851 respondents answered the cultural questions. The other half of the respondents were asked questions about social networking and trust, including some questions that, in theory, would be helpful in examining the social effects of culture. However, because of the survey split, these questions could not be cross-tabulated with the questions about cultural activities.

The report defines a cultural participant as anyone who participated at least once in the relevant cultural activity in 2005. This is a low threshold of cultural participation. In particular, many cultural activities do not have explicit social goals. As such, their social impacts may be less than for those artistic activities that have an explicit social goal.

For each of the six social indicators, a preliminary exploration was done to examine the percentage of respondents in each category based on their demographic characteristics and cultural activities. Both positive and negative effects were examined.

The variables that the preliminary research indicated may be of primary importance were included in the initial drafts of the models, while the remaining variables were added and removed in order to improve the accuracy of the model. This was done without preference for any of the variables. For example, if adding a variable did not cause the measures of statistical significance of the model (in particular, the -2 log likelihood) to change significantly, then the variable in question would not have much importance in predicting the dependent variable and was left out of the model. These steps of adding and removing different combinations of variables was done until the -2 log likelihood was as small as possible, while other statistical

tests showed that the data fit the model well and that the predictor variables did not exhibit multicollinearity.

In the statistical models, the typical margin of error of the estimates of the likelihood of participating in one of the six social indicators is 9 percent, 19 times out of 20. For the standard error associated with each variable as well as more information about the construction of the logistic regression model, please consult the Technical Supplement to this report at www.hillstrategies.com.

Section 1: Feeling Trapped in a Daily Routine

This section provides detailed information about cultural participants and non-participants who feel trapped in a daily routine, including a statistical model to predict those who feel trapped. Just over one-third of Canadians (36%) feel trapped in a daily routine.

As shown in Table 1, for nine of the 11 cultural activities examined in this report, the percentage of cultural participants feeling trapped in a daily routine is lower than for non-participants. The exceptions are movie going and festival attendance. Slightly more movie goers than non-goers feel trapped in a daily routine. There is no difference for festival attendees and non-attendees.

Table 1: Percentage of cultural participants and non-participants feeling trapped in a daily routine (Canada, 2005)		
All Canadians	36%	
Cultural activities	Participants	Non-participants
Newspaper reading	35%	41%
Book reading	35%	39%
Movie going	37%	35%
Theatre attendance	30%	38%
Pop music attendance	33%	37%
Classical music attendance	25%	37%
Festival attendance	36%	36%
Cultural/heritage performance	34%	37%
Art gallery visits	30%	38%
Historic site visits	33%	38%
Conservation area or park visits	35%	37%

The question was phrased: "Do you feel trapped in a daily routine?"

The remainder of this section summarizes a statistical model that provides estimates of the likelihood of someone in a particular group (e.g., women) feeling trapped in a daily routine, compared to others (e.g., men), holding other factors constant (e.g., age, education, income, etc.). A preliminary exploration was done to examine the percentage of respondents in each category based on their demographic characteristics and cultural activities. Both positive and negative effects were examined. The variables that the preliminary research indicated may be of primary importance were included in the initial drafts of the models, while the remaining variables were added and removed in order to improve the accuracy of the model.

Essentially, this model examines whether cultural activities have an impact on feeling trapped in a daily routine *above and beyond demographic information*. That is, do cultural participants simply fit the demographic profile of those who do not feel trapped in a daily routine? Or might cultural participation explain more than simple demographics?

This section highlights only those factors considered to be statistically significant in the regression model that predicts feeling trapped in a daily routine. For more information about the construction of the logistic regression model, please consult the Technical Supplement to this report at www.hillstrategies.com.

Statistical model demonstrates the importance of four cultural factors in not feeling trapped in a daily routine

Note: For this statistical model, a lower likelihood of feeling trapped in a daily routine is a better result, unlike the other models, where a greater likelihood of the social behaviour is the better result.

The statistical model indicates that four cultural activities are significant factors in predicting feeling trapped in a daily routine, even after adjusting for the impacts of other demographic and cultural factors in the model. The four cultural activities are classical music attendance, art gallery visits, theatre attendance and book reading:

- Canadians who attended a classical music performance in 2005 were 26% less likely to feel trapped in a daily routine as those who did not attend a classical music performance.
- Canadians who visited a public art gallery were 19% less likely to feel trapped in a daily routine than those who did not visit a gallery.
- Canadians who attended a theatrical performance were 13% less likely to feel trapped in a daily routine than those who did not attend the theatre.
- Canadians who read a book in 2005 were 11% less likely to feel trapped in a daily routine than those who did not read a book.

The seven other cultural activities were not found to be significant in the statistical model of feeling trapped in a daily routine. This means that these variables provided no additional explanatory value for the model beyond the other cultural and demographic variables.

The fact that four cultural variables were found to have an impact above and beyond demographic information shows that these forms of cultural participation can explain more than simple demographics regarding not feeling trapped in a daily routine. In other words, even adjusting for the effects of key demographic variables, Canadians who participate in these four cultural activities are less likely to feel trapped in a daily routine than Canadians who do not take part in the cultural activities.

Demographic factors that predict feeling trapped in a daily routine

A summary of the key results concerning the demographic variables in the statistical model follows. For more information about the demographic variables and the statistical models, please consult the Technical Supplement to this report.

Age

Compared to Canadians between 15 and 24 years of age, those 65 or older were 74% less likely to feel trapped in a daily routine in 2005, keeping other factors constant. Similarly, compared to Canadians between 15 and 24 years of age, those between 45 and 64 were 29% less likely to feel trapped in a daily routine in 2005.

Activity limitations

Compared with those with no activity limitations, Canadians with activity limitations (due to a physical condition, a mental condition or health problems) were 83% more likely to feel trapped in a daily routine.

Household language

Compared to those who speak English most commonly at home, Canadians who speak French at home were 58% more likely to feel trapped in a daily routine in 2005, keeping other factors constant. Compared to those who speak English most commonly at home, Canadians who speak a language other than English or French at home were 28% more likely to feel trapped in a daily routine.

Children at home

Compared to households with no children, those with at least one child were 40% more likely to feel trapped in a daily routine, keeping other factors constant.

Sex

Compared to men, women were 35% more likely to feel trapped in a daily routine in 2005, keeping other factors constant.

Religion

Canadians who attend religious services most frequently were the least likely to feel trapped in a daily routine. Compared with Canadians who attend religious services at least once a week:

- Those who attend religious services a few times a year were 17% more likely to feel trapped in a daily routine.
- Those who attend religious services at least once a year were 25% more likely to feel trapped in a daily routine.
- Those who do not attend religious services at all were 26% more likely to feel trapped in a daily routine.

Section 2: Volunteer Rates

This section provides detailed information about volunteer rates among cultural participants and non-participants, including a statistical model to predict volunteering in Canada. Overall, approximately one-third of Canadians 15 years of age or older (36%, or 9.3 million people) did unpaid volunteer work for an organization in 2005.

As shown in Table 2, for all 11 cultural activities examined in this report, the volunteer rate among participants is higher than for non-participants.

Table 2: Volunteer rates for cultural participants and non-participants (Canada, 2005)		
All Canadians	36%	
Cultural activities	Participants	Non-participants
Newspaper reading	37%	27%
Book reading	42%	25%
Movie going	41%	28%
Theatre attendance	55%	30%
Pop music attendance	47%	32%
Classical music attendance	59%	33%
Festival attendance	50%	32%
Cultural/heritage performance	52%	33%
Art gallery visits	50%	31%
Historic site visits	49%	29%
Conservation area or park visits	44%	29%

The question was phrased: "During the past 12 months, did you do unpaid volunteer work for any organization?"

The remainder of this section summarizes a statistical model that provides estimates of the likelihood of someone in a particular group (e.g., women) volunteering, compared to others (e.g., men), holding other factors constant (e.g., age, education, income, etc.). A preliminary exploration was done to examine the percentage of respondents in each category based on their demographic characteristics and cultural activities. Both positive and negative effects were examined. The variables that the preliminary research indicated may be of primary importance were included in the initial drafts of the models, while the remaining variables were added and removed in order to improve the accuracy of the model.

Essentially, this model examines whether cultural activities have an impact on volunteer rates *above and beyond demographic information*. That is, do cultural participants simply fit the demographic profile of volunteers? Or might cultural participation explain more about volunteer rates than simple demographics?

This section highlights only those factors considered to be statistically significant in the regression model of volunteering. For more information about the construction of the logistic regression model, please consult the Technical Supplement to this report at www.hillstrategies.com.

Statistical model demonstrates the importance of cultural factors in volunteering

The statistical model indicates that 10 different cultural activities are significant positive factors in volunteering, even after adjusting for the impacts of other demographic and cultural factors in the model. The cultural activities with the strongest impacts on volunteering are historic site visits, classical music attendance, theatre attendance and festival attendance.

- Canadians who visited a historic site in 2005 were 53% more likely to volunteer as those who did not visit a historic site, even keeping other factors constant.
- Canadians who attended a classical music performance in 2005 were 47% more likely to volunteer as those who did not attend a classical music performance.
- Canadians who attended a theatre performance in 2005 were 46% more likely to volunteer as those who did not attend a theatre performance.
- Canadians who attended a cultural festival in 2005 were 40% more likely to volunteer as those who did not attend a cultural festival.
- Canadians who read a newspaper in 2005 were 32% more likely to volunteer than those who did not read a newspaper.
- Canadians who attended a performance of cultural/heritage music, theatre or dance in 2005 were 31% more likely to volunteer as those who did not attend a cultural or heritage performance.
- Canadians who read a book in 2005 were 29% more likely to volunteer than those who did not read a book.
- Canadians who visited a public art gallery were 20% more likely to volunteer than those who did not visit a gallery.
- Canadians who attended a popular music concert were 17% more likely to volunteer than those who did not attend a pop concert.
- Canadians who visited a conservation area or park were 15% more likely to volunteer than those who did not visit a conservation area or park.

No cultural factors proved to have a significant *negative* influence on volunteering. Movie going was not found to be significant in the statistical model of volunteering. This means that movie going provided no additional explanatory value for the model beyond the other cultural and demographic variables.

The fact that 10 cultural variables were found to have an impact above and beyond demographic information shows that cultural participation can explain more about volunteering than simple demographics. In other words, even adjusting for the effects of key

demographic variables, Canadians who participate in cultural activities are more likely to volunteer than Canadians who do not take part in them.

Demographic factors in volunteering

A summary of the key results concerning the demographic variables in the statistical model follows. For more information about the demographic variables and the statistical models, please consult the Technical Supplement to this report.

Rural residents

One of the strongest influences on volunteering has to do with urban or rural residence. In fact, Canadians who reside in a rural or small-town area are 60% more likely to volunteer than those who reside in a larger urban centre (i.e., 10,000 residents or more).

Marital status

Compared with married Canadians (the reference level for the marital status variable), those who are separated were 45% more likely to volunteer in 2005. Canadians in a common-law relationship were 27% *less* likely to volunteer in 2005 than married Canadians, keeping other factors constant.

High income

Compared with Canadians who have household incomes of \$40,000 or less (the reference level for the income variable), those with household incomes of \$80,000 or more were 30% more likely to volunteer in 2005. Also compared with Canadians who have household incomes of \$40,000 or less, those with household incomes between \$40,000 and \$80,000 or more were 22% more likely to volunteer in 2005.

Children at home

Compared to households with no children, those with at least one child were 29% more likely to volunteer in 2005, keeping other factors constant.

Education

Canadians who have completed a university degree were 24% more likely to volunteer in 2005 than those currently in post-secondary studies or having completed a college diploma, even keeping other factors constant. Canadians with a high school education (or less) were 26% *less* likely to volunteer in 2005 than Canadians currently in post-secondary studies or having completed a college diploma.

Sex

The sex of the respondent is another important demographic factor. Compared to men, women were 15% more likely to volunteer in 2005, keeping other factors constant.

Birth location

Compared to those who were born in Canada, Canadians who were born elsewhere were 21% less likely to volunteer in 2005, keeping other factors constant.

Household language

Compared to those who speak English most commonly at home, Canadians who speak French at home were 23% less likely to volunteer in 2005, keeping other factors constant. Compared to those who speak English most commonly at home, Canadians who speak a language other than English or French at home were 35% less likely to do volunteer in 2005.

Religion

Those who attend religious services most frequently were more likely to volunteer in 2005 than other Canadians. Compared with Canadians who attend religious services at least once a week:

- those who attend religious services at least once a month were 39% less likely to volunteer in 2005.
- those who attend religious services a few times a year were 57% less likely to volunteer.
- those who attend religious services at least once a year were 70% less likely to volunteer.
- those who do not attend religious services at all were 70% less likely to volunteer.

Compared to those who have no religion, Roman Catholic Canadians were 28% less likely to volunteer in 2005, keeping other factors constant. This is the only religion type that was significant in the statistical model of volunteering.

Section 3: Donation Rates

This section provides detailed information about donation rates among cultural participants and non-participants, including a statistical model to predict donating in Canada. Overall, approximately three-quarters of Canadians 15 years of age or older (77%, or 19.9 million people) donated money or goods to an organization in 2005.

As shown in Table 3, for all 11 cultural activities examined in this report, the donation rate is higher for cultural participants than non-participants.

Table 3: Donation rates for cultural participants and non-participants (Canada, 2005)		
All Canadians	77%	
Cultural activities	Participants	Non-participants
Newspaper reading	79%	59%
Book reading	82%	66%
Movie going	79%	73%
Theatre attendance	89%	73%
Pop music attendance	83%	75%
Classical music attendance	90%	75%
Festival attendance	85%	74%
Cultural/heritage performance	86%	75%
Art gallery visits	87%	73%
Historic site visits	87%	71%
Conservation area or park visits	85%	69%

The question was phrased: "During the past 12 months, did you donate money or goods to any organization or charity? Do not include membership fees or dues."

The remainder of this section summarizes a statistical model that provides estimates of the likelihood of someone in a particular group (e.g., women) donating money or goods, compared to others (e.g., men), holding other factors constant (e.g., age, education, income, etc.). A preliminary exploration was done to examine the percentage of respondents in each category based on their demographic characteristics and cultural activities. Both positive and negative effects were examined. The variables that the preliminary research indicated may be of primary importance were included in the initial drafts of the models, while the remaining variables were added and removed in order to improve the accuracy of the model.

Essentially, this model examines whether cultural activities have an impact on donation rates *above and beyond demographic information*. That is, do cultural participants simply fit the demographic profile of donors? Or might cultural participation explain more about donation rates than simple demographics?

This section highlights only those factors considered to be statistically significant in the regression model of donating. For more information about the construction of the logistic regression model, please consult the Technical Supplement to this report at www.hillstrategies.com.

Statistical model demonstrates the importance of cultural factors in donating

The statistical model indicates that six different cultural activities are significant positive factors in donating, even after adjusting for the impacts of other demographic and cultural factors in the model. The cultural activities with the strongest impacts on donating are historic site visits, newspaper reading, conservation area or park visits and book reading.

- Canadians who visited a historic site in 2005 were 77% more likely to donate as those who did not visit a historic site, even keeping other factors constant.
- Canadians who read a newspaper in 2005 were 68% more likely to donate than those who did not read a newspaper.
- Canadians who visited a conservation area or park were 67% more likely to donate than those who did not visit a conservation area or park.
- Canadians who read a book in 2005 were 50% more likely to donate than those who did not read a book.
- Canadians who went to a movie in 2005 were 42% more likely to donate as those who did not go to a movie.
- Canadians who attended a theatre performance in 2005 were 41% more likely to donate as those who did not attend a theatre performance.

No cultural factors proved to have a significant *negative* influence on donating. Five cultural activities (public art gallery visits, attendance at classical music performances, pop music concerts, cultural festivals or performances of cultural/heritage music, theatre or dance) were not found to be significant in the statistical model of donating. This means that these cultural activities provided no additional explanatory value for the model beyond the other cultural and demographic variables.

The fact that six cultural variables were found to have an impact above and beyond demographic information shows that cultural participation can explain more about donating than simple demographics. In other words, even adjusting for the effects of key demographic variables, Canadians who participate in these six cultural activities are more likely to donate than Canadians who do not take part in them.

Demographic factors in donating

A summary of the key results concerning the demographic variables in the statistical model follows. For more information about the demographic variables and the statistical models, please consult the Technical Supplement to this report.

Age

Compared to Canadians between 15 and 24 years of age, those 75 or older were more than six times more likely to donate in 2005, keeping other factors constant. Similarly, compared to Canadians between 15 and 24 years of age, those between 65 and 74 were five times more likely to donate in 2005, while those between 55 and 64 were more than three times more likely to donate. Canadians between 35 and 44 and those between 45 and 54 were over twice as likely to donate in 2005 as Canadians between 15 and 24 years of age. Finally, those between 25 and 34 were 30% more likely to donate than Canadians between 15 and 24 years of age.

Region

Compared with Ontario residents (the reference level for the region variable), those who reside in the Atlantic provinces were 59% more likely to donate, while those residing in Quebec were 41% more likely to donate, keeping other factors constant. (These are the only regions that were statistically significant in the donating model.)

High income

Compared with Canadians who have household incomes of \$40,000 or less (the reference level for the income variable), those with household incomes of \$80,000 or more were nearly three times as likely to donate in 2005. Also compared with Canadians who have household incomes of \$40,000 or less, those with household incomes between \$40,000 and \$80,000 or more were twice as likely to donate in 2005.

Sex

The sex of the respondent is another important demographic factor. Compared to men, women were 40% more likely to donate in 2005, keeping other factors constant.

Children at home

Compared to households with no children, those with at least one child were 19% more likely to donate in 2005, keeping other factors constant.

Education

Canadians with a high school education (or less) were 32% less likely to donate in 2005 than Canadians currently in post-secondary studies or having completed a college diploma, keeping other factors constant. (This is the only education level that was statistically significant in the donating model.)

Religion

Given that many donations go to religious organizations, it is not surprising that religion is a significant factor in donating. Compared to those for whom religion is somewhat or not very important, Canadians for whom religion is very important were 19% more likely to donate in 2005, keeping other factors constant. Those for whom religion is not important at all were 29% less likely to donate than those for whom religion is somewhat or not very important.

Similarly, those who attend religious services most frequently were more likely to donate in 2005 than other Canadians. Compared with Canadians who attend religious services at least once a week:

- Those who attend religious services at least once a month were 32% less likely to donate in 2005.
- Those who attend religious services a few times a year were 30% less likely to donate.
- Those who attend religious services at least once a year were 56% less likely to donate.
- Those who do not attend religious services at all were 54% less likely to donate.

Section 4: Doing a Favour for a Neighbour

Neighbours and neighbourhood life are an important part of Canadians' social connections. Socially-engaged citizens are often active in neighbourhood life, including doing favours for neighbours. This section provides detailed information about cultural participants and non-participants who do favours for neighbours, including a statistical model to predict those who do favours. Overall, 69% of Canadians indicated that they had done a favour for a neighbour in the month before the survey.

As shown in Table 4, for all 11 cultural activities examined in this report, the percentage of cultural participants doing a favour for a neighbour in the past month is higher than for non-participants. There is only a very small difference between movie goers and non-goers.

Table 4: Percentage of cultural participants and non-participants doing a favour for a neighbour in the past month (Canada, 2005)		
All Canadians		
	69%	
Cultural activities	Participants	Non-participants
Newspaper reading	71%	60%
Book reading	71%	65%
Movie going	70%	68%
Theatre attendance	75%	67%
Pop music attendance	73%	68%
Classical music attendance	79%	68%
Festival attendance	75%	68%
Cultural/heritage performance	79%	68%
Art gallery visits	76%	67%
Historic site visits	76%	66%
Conservation area or park visits	75%	64%

The question was phrased: "In the past month, have you done a favour for a neighbour?"

The remainder of this section summarizes a statistical model that provides estimates of the likelihood of someone in a particular group (e.g., women) doing a favour for a neighbour, compared to others (e.g., men), holding other factors constant (e.g., age, education, income, etc.). A preliminary exploration was done to examine the percentage of respondents in each category based on their demographic characteristics and cultural activities. Both positive and negative effects were examined. The variables that the preliminary research indicated may be of primary importance were included in the initial drafts of the models, while the remaining variables were added and removed in order to improve the accuracy of the model.

Essentially, this model examines whether cultural activities have an impact on the helpfulness of neighbours *above and beyond demographic information*. That is, do cultural participants simply fit the demographic profile of those who do favours for neighbours? Or might cultural participation explain more about favour behaviour than simple demographics?

This section highlights only those factors considered to be statistically significant in the regression model that predicts doing a favour for a neighbour. For more information about the construction of the logistic regression model, please consult the Technical Supplement to this report at www.hillstrategies.com.

Statistical model demonstrates the importance of cultural factors in doing a favour for a neighbour

The statistical model indicates that six different cultural activities are significant positive factors in predicting doing a favour for a neighbour, even after adjusting for the impacts of other demographic and cultural factors in the model. The cultural activities with the strongest impacts on doing a favour for a neighbour are newspaper reading, conservation area or park visits, attending a performance of cultural/heritage music, theatre or dance, as well as art gallery visits.

- Canadians who read a newspaper in 2005 were 41% more likely to do a favour for a neighbour than those who did not read a newspaper.
- Canadians who visited a conservation area or park were 38% more likely to do a favour for a neighbour than those who did not visit a conservation area or park.
- Canadians who attended a performance of cultural/heritage music, theatre or dance in 2005 were 34% more likely to do a favour for a neighbour as those who did not attend a cultural or heritage performance.
- Canadians who visited a public art gallery were 26% more likely to do a favour for a neighbour than those who did not visit a gallery.
- Canadians who visited a historic site in 2005 were 18% more likely to do a favour for a neighbour as those who did not visit a historic site.
- Canadians who read a book in 2005 were 15% more likely to do a favour for a neighbour than those who did not read a book.

Movie going proved to have a *negative* influence on doing a favour for a neighbour. Canadians who went to a movie at a theatre or drive-in were 14% less likely to do a favour for a neighbour as those who did not go to a movie.

Festival attendance, theatre attendance, pop concert attendance and classical music attendance were not found to be significant in the statistical model of favours. This means that these variables provided no additional explanatory value for the model beyond the other cultural and demographic variables.

The fact that six cultural variables were found to have a positive impact above and beyond demographic information shows that these forms of cultural participation can explain more than simple demographics about doing a favour for a neighbour. In other words, even adjusting for the effects of key demographic variables, Canadians who participate in these six cultural activities are more likely to do a favour for a neighbour than Canadians who do not take part in them.

Demographic factors that predict doing a favour for a neighbour

A summary of the key results concerning the demographic variables in the statistical model follows. For more information about the demographic variables and the statistical models, please consult the Technical Supplement to this report.

High income

Compared with Canadians who have household incomes of \$40,000 or less (the reference level for the income variable), those with household incomes of \$80,000 or more were 37% more likely to do a favour for a neighbour, while those with household incomes between \$40,000 and \$80,000 were 15% more likely to do.

Rural residents

Canadians who reside in a rural or small-town area were 31% more likely to do a favour for a neighbour than those who reside in a larger urban centre (i.e., 10,000 residents or more).

Children at home

Compared to households with no children, those with at least one child were 24% more likely to do a favour for a neighbour, keeping other factors constant.

Education

Canadians who have completed a university degree were 22% less likely to do a favour for a neighbour than those currently in post-secondary studies or having completed a college diploma, keeping other factors constant. Canadians with a high school education (or less) were 14% less likely to do a favour for a neighbour than Canadians currently in post-secondary studies or having completed a college diploma.

Sex

The sex of the respondent is another significant demographic factor. Compared to men, women were 16% less likely to do a favour for a neighbour, keeping other factors constant.

Household language

Compared to those who speak English most commonly at home, Canadians who speak French at home were 17% less likely to do a favour for a neighbour, keeping other factors constant. Compared to those who speak English most commonly at home, Canadians who speak a language other than English or French at home were 21% less likely to do a favour for a neighbour.

Birth location

Compared to those who were born in Canada, Canadians who were born elsewhere were 21% less likely to do a favour for a neighbour, keeping other factors constant.

Section 5: Sense of Belonging to Province

A strong sense of belonging to one’s community, province and country can be important for social engagement and cohesiveness. A previous report showed that, while some cultural participants have a stronger sense of belonging to Canada than non-participants, cultural participants and non-participants have a fairly similar sense of belonging to their local community and to their province. The current report examines one indicator with seemingly strong impacts (i.e., sense of belonging to Canada) and one with seemingly weak impacts (sense of belonging to one’s province).

This section provides detailed information about the sense of belonging to one’s province among cultural participants and non-participants, including a statistical model to predict a very strong sense of belonging to one’s province. Overall, 28% of Canadians have a very strong sense of belonging to their province.

As shown in Table 5, for five of the 11 cultural activities examined in this report, the percentage of cultural participants with a very strong sense of belonging to their province is at least slightly higher than for non-participants. These five cultural activities are book reading, theatre attendance, classical music attendance, art gallery visits and historic site visits.

Table 5: Percentage of cultural participants and non-participants with a very strong sense of belonging to their province (Canada, 2005)		
All Canadians	28%	
Cultural activities	Participants	Non-participants
Newspaper reading	28%	28%
Book reading	28%	27%
Movie going	25%	31%
Theatre attendance	29%	27%
Pop music attendance	25%	29%
Classical music attendance	31%	27%
Festival attendance	27%	28%
Cultural/heritage performance	27%	28%
Art gallery visits	29%	27%
Historic site visits	29%	27%
Conservation area or park visits	27%	29%

The question was phrased: “[How would you describe your sense of belonging] to your province? Would you say it is: very strong, somewhat strong, somewhat weak or very weak?”

The remainder of this section summarizes a statistical model that provides estimates of the likelihood of someone in a particular group (e.g., women) having a very strong sense of belonging to their province, compared to others (e.g., men), holding other factors constant (e.g., age, education, income, etc.). A preliminary exploration was done to examine the percentage of respondents in each category based on their demographic characteristics and cultural activities. Both positive and negative effects were examined. The variables that the preliminary research indicated may be of primary importance were included in the initial drafts of the models, while the remaining variables were added and removed in order to improve the accuracy of the model.

Essentially, this model examines whether cultural activities have an impact on having a very strong sense of belonging to one's province *above and beyond demographic information*. That is, do cultural participants simply fit the demographic profile of those who have a very strong sense of belonging to their province? Or might cultural participation explain more about sense of belonging to one's province than simple demographics?

This section highlights only those factors considered to be statistically significant in the regression model that predicts having a very strong sense of belonging to one's province. For more information about the construction of the logistic regression model, please consult the Technical Supplement to this report at www.hillstrategies.com.

Statistical model demonstrates the importance of art gallery and historic site visits on sense of belonging to one's province

The statistical model indicates that art gallery and historic site visits are significant positive factors on sense of belonging to one's province, even after adjusting for the impacts of other demographic and cultural factors in the model:

- Canadians who visited a public art gallery were 21% more likely to have a very strong sense of belonging to their province than those who did not visit a gallery.
- Canadians who visited a historic site were 20% more likely to have a very strong sense of belonging to their province than those who did not visit a historic site.

Movie going proved to have a significant *negative* influence on sense of belonging to one's province. Canadians who went to a movie were 16% less likely to have a very strong sense of belonging to their province than those who did not go to a movie.

The eight other cultural activities were not found to be significant in the statistical model of sense of belonging to one's province. This means that these variables provided no additional explanatory value for the model beyond the other cultural and demographic variables.

The fact that art gallery and historic site visits were found to have an impact above and beyond demographic information shows that these forms of cultural participation can explain more

than simple demographics regarding sense of belonging to one's province. In other words, even adjusting for the effects of key demographic variables, Canadians who visit art galleries or historic sites are more likely to feel a very strong sense of belonging to their province than Canadians who do not take part in them.

Demographic factors that predict having a very strong sense of belonging to one's province

A summary of the key results concerning the demographic variables in the statistical model follows. For more information about the demographic variables and the statistical models, please consult the Technical Supplement to this report.

Age

Age is a strong factor in sense of belonging to one's province. Compared to Canadians between 15 and 44 years of age, those 75 or older were nearly three times as likely to have a very strong sense of belonging to their province. Those between 45 and 74 were 60% more likely to have a very strong sense of belonging to their province than those between 15 and 44 years of age.

Region

Compared with Ontario residents (the reference level for the region variable), those who reside in the Atlantic provinces were 67% more likely to have a very strong sense of belonging to their province, while those residing in Quebec were 55% more likely to do so, keeping other factors constant. Similarly, those residing in the three Prairie provinces were 41% more likely to have a very strong sense of belonging to their province, while those residing in British Columbia were 36% more likely to do so.

Religion

Compared to those for whom religion is somewhat or not very important, Canadians for whom religion is very important were 58% more likely to have a very strong sense of belonging to their province, keeping other factors constant. Those for whom religion is not important at all were 27% more likely to have a very strong sense of belonging to their province than those for whom religion is somewhat or not very important.

Compared to those who have no religion, Canadians of the United faith were 70% more likely to have a very strong sense of belonging to their province in 2005, keeping other factors constant. Similarly, Roman Catholic Canadians were 50% more likely to have a very strong sense of belonging to their province, while Protestant Canadians were 39% more likely to do so. Canadians of another faith were 47% more likely to have a very strong sense of belonging to their province than those who have no religion, keeping other factors constant.

Education

Canadians with a high school education (or less) were 14% more likely to have a very strong sense of belonging to their province than Canadians currently in post-secondary studies or having completed a college diploma. (This is the only education level that was statistically significant in the model of sense of belonging to one's province.)

Birth location

Compared to those who were born in Canada, Canadians who were born elsewhere were 25% less likely to have a very strong sense of belonging to their province in 2005, keeping other factors constant.

Section 6: Sense of Belonging to Canada

This section provides detailed information about the sense of belonging to Canada among cultural participants and non-participants, including a statistical model to predict a very strong sense of belonging to Canada. Overall, 47% of Canadians have a very strong sense of belonging to Canada.

As shown in Table 6, for eight of the 11 cultural activities examined in this report, the percentage of cultural participants with a very strong sense of belonging to Canada is higher than for non-participants. The exceptions are movie going, pop concert attendance and festival attendance.

Table 6: Percentage of cultural participants and non-participants with a very strong sense of belonging to Canada (Canada, 2005)		
All Canadians		
	47%	
Cultural activities	Participants	Non-participants
Newspaper reading	47%	42%
Book reading	49%	42%
Movie going	44%	50%
Theatre attendance	53%	45%
Pop music attendance	45%	47%
Classical music attendance	55%	46%
Festival attendance	45%	47%
Cultural/heritage performance	49%	46%
Art gallery visits	51%	45%
Historic site visits	50%	45%
Conservation area or park visits	50%	43%

The question was phrased: “[How would you describe your sense of belonging] to Canada? Would you say it is: very strong, somewhat strong, somewhat weak or very weak?”

The remainder of this section summarizes a statistical model that provides estimates of the likelihood of someone in a particular group (e.g., women) having a very strong sense of belonging to Canada, compared to others (e.g., men), holding other factors constant (e.g., age, education, income, etc.). A preliminary exploration was done to examine the percentage of respondents in each category based on their demographic characteristics and cultural activities. Both positive and negative effects were examined. The variables that the preliminary research indicated may be of primary importance were included in the initial drafts of the models, while the remaining variables were added and removed in order to improve the accuracy of the model.

Essentially, this model examines whether cultural activities have an impact on having a very strong sense of belonging to Canada *above and beyond demographic information*. That is, do cultural participants simply fit the demographic profile of those who have a very strong sense of belonging to Canada? Or might cultural participation explain more about sense of belonging to Canada than simple demographics?

This section highlights only those factors considered to be statistically significant in the regression model that predicts having a very strong sense of belonging to Canada. For more information about the construction of the logistic regression model, please consult the Technical Supplement to this report at www.hillstrategies.com.

Statistical model demonstrates the importance of art gallery visits, theatre attendance, visits to conservation areas or parks and historic site visits on sense of belonging

The statistical model indicates that four cultural activities are significant positive factors on one's sense of belonging to Canada, even after adjusting for the impacts of other demographic and cultural factors in the model:

- Canadians who visited a public art gallery were 21% more likely to have a very strong sense of belonging to Canada than those who did not visit a gallery.
- Canadians who attended a theatrical performance were 16% more likely to have a very strong sense of belonging to Canada than those who did not attend the theatre.
- Canadians who visited a conservation area or park were 14% more likely to have a very strong sense of belonging to Canada than those who did not visit a conservation area or park.
- Canadians who visited a historic site were 13% more likely to have a very strong sense of belonging to Canada than those who did not visit a historic site.

No cultural factors proved to have a significant *negative* influence on sense of belonging to Canada. The seven other cultural activities were not found to be significant in the statistical model of sense of belonging to Canada. This means that these variables provided no additional explanatory value for the model beyond the other cultural and demographic variables.

The fact that four cultural variables were found to have an impact above and beyond demographic information shows that these forms of cultural participation can explain more than simple demographics regarding sense of belonging to Canada. In other words, even adjusting for the effects of key demographic variables, Canadians who participate in these four cultural activities are more likely to feel a very strong sense of belonging to Canada than those who do not take part in them.

Demographic factors that predict having a very strong sense of belonging to Canada

A summary of the key results concerning the demographic variables in the statistical model follows. For more information about the demographic variables and the statistical models, please consult the Technical Supplement to this report.

Age

Age is a strong factor in sense of belonging to Canada. Compared to Canadians between 15 and 24 years of age, those in all other age groups have a higher likelihood of having a very strong sense of belonging to Canada:

- Those 75 or older were three times as likely to have a very strong sense of belonging to Canada.
- Those between 65 and 74 were two-and-a-half times as likely to have a very strong sense of belonging to Canada.
- Those between 55 and 64 were 90% more likely to have a very strong sense of belonging to Canada.
- Those between 45 and 54 were 49% more likely to have a very strong sense of belonging to Canada.
- Those between 35 and 44 were 39% more likely to have a very strong sense of belonging to Canada.
- Those between 25 and 34 were 24% more likely to have a very strong sense of belonging to Canada.

Religion

Compared to those for whom religion is somewhat or not very important, Canadians for whom religion is very important were 54% more likely to have a very strong sense of belonging to Canada in 2005, keeping other factors constant.

Region

Compared with Ontario residents (the reference level for the region variable), those who reside in the Prairie provinces were 13% less likely to have a very strong sense of belonging to Canada, while those residing in Quebec were 52% less likely to do so.

Children at home

Compared to households with no children, those with at least one child were 17% less likely to have a very strong sense of belonging to Canada in 2005, keeping other factors constant.

Marital status

Compared with married Canadians (the reference level for the marital status variable), those who are separated were 21% less likely to have a very strong sense of belonging to Canada in 2005. Single Canadians were 19% less likely to have a very strong sense of belonging to Canada than married Canadians, keeping other factors constant.

Birth location

Compared to those who were born in Canada, Canadians who were born elsewhere were 25% less likely to have a very strong sense of belonging to Canada in 2005, keeping other factors constant.

Household language

Compared to those who speak English most commonly at home, Canadians who speak French at home were 56% less likely to have a very strong sense of belonging to Canada in 2005, keeping other factors constant. Compared to those who speak English most commonly at home, Canadians who speak a language other than English or French at home were 34% less likely to have a very strong sense of belonging to Canada.

Key Findings

Social Effects of Culture: Detailed Statistical Models, the 23rd report in the *Statistical Insights on the Arts* series from Hill Strategies Research, provides strong evidence of the social effects of culture through detailed statistical models of six social indicators:

- Feeling trapped in a daily routine;
- Volunteering;
- Donating;
- Doing a favour for a neighbour;
- Sense of belonging to one's province; and
- Sense of belonging to Canada.

This report builds on a previous report in the *Statistical Insights on the Arts* series, which provided some exploratory findings regarding the social effects of culture. Taking the previous report as a starting point, the statistical models in this report examine whether cultural activities have an impact on social indicators *above and beyond demographic information*.

The current report shows that, in many cases, even adjusting for the effects of key demographic variables, Canadians who participate in cultural activities are more likely to be socially active than Canadians who do not take part in cultural activities.

Among the cultural activities, visits to public art galleries or historic sites each have a positive impact on five of the six social behaviours, while visits to conservation areas or parks and theatre attendance each have a positive impact on four social behaviours. Book reading, newspaper reading and attendance at a performance of cultural/heritage music, theatre or dance (e.g. Aboriginal Peoples, Chinese, Ukrainian) each have a positive impact on three of the social indicators. (All of these statistics relate to the models that held all other factors constant.)

Break out of your daily routine! And other key findings...

A potential slogan arising from the research is: *Break out of your daily routine! Visit a public art gallery, take in a performance or read a book*. Some of the findings that provide strong evidence of a relationship between cultural activities and positive social engagement are:

- **Trapped in a daily routine:** For nine of the 11 cultural activities examined in this report, the percentage of cultural participants feeling trapped in a daily routine is lower than for non-participants. Four cultural activities are significant factors in lowering the probability of feeling trapped in a daily routine, even after adjusting for the impacts of other demographic and cultural factors in the model. The four cultural activities are *classical music attendance, art gallery visits, theatre attendance* and *book reading*.

- **Volunteer rates:** For all 11 cultural activities, the volunteer rate among participants is higher than for non-participants. Ten of the 11 cultural activities are statistically significant predictors of volunteering, even taking key demographic factors into account. The cultural activities with the strongest impacts on volunteering are *historic site visits*, *classical music attendance*, *theatre attendance* and *festival attendance*.
- **Donation rates:** For all 11 cultural activities, the donation rate is higher for cultural participants than non-participants. A statistical model indicates that six cultural activities are significant positive factors in donating, even after adjusting for the impacts of other demographic and cultural factors in the model. The cultural activities with the strongest impacts on donating are *historic site visits*, *newspaper reading*, visits to *conservation areas or parks* and *book reading*.
- **Favour for a neighbour:** For all 11 cultural activities, the percentage of cultural participants doing a favour for a neighbour in the past month is higher than for non-participants. Six cultural activities are significant positive factors in predicting doing a favour for a neighbour, even after adjusting for the impacts of other demographic and cultural factors in the model. The cultural activities with the strongest impacts on doing a favour for a neighbour are *newspaper reading*, visits to *conservation areas or parks*, attending *performances of cultural/heritage music, theatre or dance*, as well as *art gallery visits*.
- **Sense of belonging to one's province:** For five of the 11 cultural activities, the percentage of cultural participants with a strong sense of belonging to one's province is higher than for non-participants. A statistical model indicates that *art gallery* and *historic site* visits are significant positive factors on sense of belonging to their province, even after adjusting for the impacts of other demographic and cultural factors in the model.
- **Sense of belonging to Canada:** For eight of the 11 cultural activities, the percentage of cultural participants with a strong sense of belonging to Canada is higher than for non-participants. A statistical model indicates that four cultural activities are significant positive factors on one's sense of belonging to Canada, even after adjusting for the impacts of other demographic and cultural factors in the model. The four cultural activities are *art gallery* visits, *theatre* attendance, visits to *conservation areas or parks* and *historic site visits*.

Methodological notes

The data is drawn from Statistics Canada's General Social Survey of 2005, an in-depth telephone survey of about 20,000 Canadians 15 years of age or older. Because of a split in the survey design, only half of the respondents were asked questions about their cultural activities in 2005. A total of 9,851 respondents answered the cultural questions. The other half of the respondents were asked questions about social networking and trust, including some questions that, in theory, would be helpful in examining the social effects of culture. However, because of the survey split, these questions could not be cross-tabulated with the questions about cultural activities.

The report defines a cultural participant as anyone who participated at least once in the relevant cultural activity in 2005. This is a low threshold of cultural participation. In particular, many cultural activities do not have explicit social goals. As such, their social impacts may be less than for those artistic activities that have an explicit social goal.

Unlike the previous report, the current report does not limit the analysis to four cultural activities. Rather, 11 cultural activities from the survey dataset were entered into the statistical models, including attendance at various types of performances (theatre, pop music, classical music, cultural/heritage performances), festivals, movies, public art galleries, historic sites, conservation areas or nature parks as well as reading newspapers or books.