Chapter 13
Searching for Happiness: The Importance of Social Capital

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Abstract After four decades of research, scholars of happiness continue to debate its causes. While it is generally agreed that a combination of internal and external factors play a role, predicting happiness well remains a challenge. Recent research has proposed that social capital may be a vital factor that has been overlooked. This paper attempts to address that omission. According to Coleman's (Am J Sociol 94:S95–S120, 1988) seminal work, three dimensions of social capital exist: (1) trust and obligations, (2) information channels, and (3) norms and sanctions. Using bootstrap hierarchical regression on data from the Canadian General Social Survey of Social Engagement Cycle 17 (2003), we identified blocks of social capital variables described by Coleman, as well as an additional factor of belongingness. Even after controlling for major demographic and individual characteristics, the majority of these blocks show significant relationships with happiness. Our findings support social capital as an important piece in predicting happiness.

Keywords Happiness • Social capital • Trust • Obligations • Information channel

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13.1 Introduction

The pursuit of happiness is an important personal goal that has attracted the attention of many social scientists across various disciplines around the world. In 1967, Warner Wilson summarized the characteristics of a happy person as follows: 'young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married, with high self-esteem, high job morale, modest aspirations, of either sex and of a wide range of intelligence' (p. 294). Wilson's observations have led to four decades of research on happiness. Many researchers have re-examined the factors suggested by Wilson (Argyle 2001; Diener et al. 1999; Frey and Stutzer 2002). Recent research has proposed that social capital may be a vital factor that has been overlooked (Diener and Oishi 2004; Helliwell 2006). Social capital refers to individual resources accumulated through interpersonal activities that help to develop a strong social network and ties among individuals and their community (Leung 2002).

The purpose of this paper is to examine the relationship between happiness and different forms of social capital. A review of the happiness literature will identify important correlates of happiness. The literature on social capital will then be examined. Finally, extant literature on the potential relationship between happiness and social capital will be presented to construct a theoretical framework and to generate hypotheses about the relationship between happiness and social capital. Following Bjornskov (2003) and Frey and Stutzer (2002), we use the terms 'happiness', 'life satisfaction', and 'well-being' interchangeably. However, it is acknowledged that each of these terms can be defined in different ways and may contain a variety of components.

13.2 Review of Literature

13.2.1 Correlates of Happiness from Previous Research

Most research on happiness has focused on the relationship between external factors and the level of happiness as summarized by Argyle (2001), Diener et al. (1999), Dolan et al. (2008), and Frey and Stutzer (2002). Aside from the basic demographic factors such as age, race, and sex that are commonly discussed, happiness has been found to have significant relationships with other external factors such as having a job, being married (rather than being single, divorced, or separated), good health, and having a religion. Education has a small but significant correlation with happiness. Associations between the above demographics and external factors and happiness, however, fail to fully account for why people are happy. "[T]heories that focus only on external influences on SWB [Subjective Well Being] ignore a substantial source of variation in happiness reports" according to Diener et al. (1999, p. 227). Diener et al. (1999) cited studies that revealed

demographic variables such as age, sex, income, race, education, and marital status accounted for only 8–20 % of the variance in explaining happiness. Diener et al. (1999, p. 294) concluded, "The past 30 years of research have shown that all of the demographic factors taken together do not account for much variance in SWB".

Furthermore, individual factors such as genetics (Lykken and Tellegen 1996 as cited in Argyle 2001), optimism, a sense of personal control, self-esteem, and extraversion (Myers and Diner 1995) have also been found to be related to happiness; while neuroticism appears to be associated with unhappiness (Argyle 2001). However, even after the inclusion of individual factors along with demographic and external factors described above, researchers still cannot fully account for what contributes to happiness. Some other important component(s) remain missing. Despite of the suggestion by some researchers (e.g., Diener and Oishi 2004 Helliwell 2006) that social capital may be an important missing variable to explain happiness, hardly any research has examined this in an organized fashion.

13.2.2 Social Capital

Social capital is "the idea that individuals and groups can gain resources from their connections to one another (and the type of these connections)" (Paxton 1999, p. 89). Most research on social capital stems from Coleman's (1988) seminal work (Furstenberg 2005; Paxton 1999), suggesting three major forms of social capital: (1) trust and obligations; (2) information channels; and (3) norms and sanctions.

Coleman initially suggested that trust was based on the understanding help received from other people is like a "credit slip" issued to the helper and that an obligation on the part of the person who received help is implied. Coleman believed trust will vanish if the expected obligation is not fulfilled.

More recent literature suggests Coleman's category of trust may be defined too narrowly. Allum et al. (2012), Paldam (2000) argued that the dimension of trust actually consists of two dimensions: generalized trust (trust in people in general) and special trust (trust in known people or particular institutions). Paxton (1999) also suggested that trust was not a single dimension but consisted of trust in individuals and trust in institutions. There is support in the literature to distinguish the two types of trust. Hudson (2006), for instance, found evidence among Europeans of a positive relationship between people's well-being and trust in institutions. Rus and Iglic (2005) found that entrepreneurs in Slovenia relied more on institutional trust while business relationships in Bosnia centred on interpersonal trust.

As a second form of social capital, Coleman suggested that information channels involve an individual gaining more information by knowing more people and developing closer ties with others. Coleman gave a couple of general examples to show how social relations can be used to obtain information (1988). The literature has elaborated on Coleman's idea and suggested two main forms of information channels: social relationships through contacts with family and friends (e.g., Lelkes 2006; Powdthavee 2008); and civic engagement such as participation in

a sports organization or a professional association, and membership in voluntary organizations (e.g., Bjornskov 2006; Putnam 2000).

The third major form of Coleman's social capital consists of effective norms and sanctions that can promote actions beneficial for common goals, and constrain actions not desired by society. For example, Coleman suggested "effective norms that inhibit crime make it possible to walk freely outside at night in a city…" (1988, p. 104) There is very little in the literature assessing this form of social capital, although Bjornskov (2006) measured social norms by asking respondents whether behaviour such as accepting bribes and cheating on taxes can be justified. The theoretical construction of norms and sanctions appears to be the most abstract amongst the dimensions of social capital postulated by Coleman.

13.2.3 Happiness and Social Capital

The literature has provided evidence that there may be relationships between happiness and social capital, although no study has investigated all three types of social capital as defined by Coleman.

13.2.3.1 Trust and obligations

Trust, measured in a variety of ways such as trusting most other people and trusting public institutions, was strongly related to happiness in a review of over 100 happiness studies by Dolan et al. (2008). Bjornskov (2006), using an international sample of more than 80 countries, found a positive relationship between generalized social trust ("In general, do you think that most people can be trusted, or can't you be too careful?") and life satisfaction. Hudson (2006) found a positive relationship between well-being and trust in institutions such as the law, the national government, and the UN among EU member countries. Empirical relationships between happiness and obligations have yet to be explored. We believe we may be the first to examine this.

13.2.3.2 Information Channels

There are correlations with happiness for the social type of information channels. Time spent seeing family and friends (Lelkes 2006; Powdthavee 2008), and talking to neighbours (Peasgood 2007) have been found to be positively associated with happiness. Socializing with people was also related to happiness in the review by Dolan et al. (2008), although one study (Martin and Westerhof 2003, as cited in Dolan et al. 2008) found that socializing with family was related to life satisfaction but socializing with friends was not.

Since Coleman's work on information channels, Putnam (2000) distinguished two forms of civic engagement which he named civic participation (membership in organizations) and political participation (voting, following political discussion,

signing petitions, etc.). In the review by Dolan et al. (2008), belonging to organizations and engaging in volunteer work was correlated with higher levels of happiness in some studies but not others. Although Bjornskov (2006) included an indicator for civic participation to examine its relationship with well-being and found a negative association, the relationship between happiness and political participation has not been explored. This will be examined in the present study.

13.2.3.3 Norms and Sanctions

The theoretical construction of norms and sanctions appears to be the most abstract amongst the dimensions of social capital postulated by Coleman, so empirical approximations have been more difficult to create. The only study of which we are aware that empirically examined the relationship between norms and happiness was Bjornskov (2006). As proxies for social norms, Bjornskov used questions about whether dishonest behaviour such as bribery or cheating on taxes can ever be justified, and found no significant relationship between such norms and happiness.

13.2.3.4 Sense of Belonging

After Coleman's initial work, the literature discussed a sense of belonging as a form of social capital. For example, this has been explored in relation to health outcomes (Fujiwara and Kawahi 2008a; Maycock and Howat 2007) and children's school achievement (Clift Gore 2005; Maeroff 1998). However, minimal effort can be found in the literature to examine the relationship between happiness and sense of belonging as a form of social capital. An exception is the study by Fujiwara and Kawachi (2008b) who found a significant negative relationship between depression and sense of belonging to one's community. To our knowledge, the relationship between happiness and sense of belonging measured at different levels has not been discussed in the literature.

13.2.4 Bjornskov's Study: Critique

The only study of which we are aware that attempted to investigate all three forms of social capital in relation to happiness was provided by Bjornskov (2006). Using data from a number of countries, Bjornskov identified three dimensions of social capital consistent with Coleman's theory, which he named social trust, associational activities, and social norms. Bjornskov's regression analysis showed that social trust was the only factor to have a significant positive relationship with life satisfaction. Associational activities (which can be considered information channels in Coleman's words) had an unexpected negative relationship with life satisfaction, while the social norms factor had no significant relationship.

Although Bjornskov's use of empirical variables to represent each of the three forms of social capital suggested by Coleman was very informative, his study did

not take into account certain important dimensions of social capital. For example, Bjornskov used only a single survey question to represent social trust with no indicator for institutional trust. Furthermore, his study provided no measure of obligations, which has been considered an important aspect of social capital (Dasgupta 2005; Parks-Yancy et al. 2008). As for information channels, although Bjornskov discussed the relationship between life satisfaction and organization membership (civic participation), he examined neither political participation nor contacts with family and friends.

There is clearly a need for more research to investigate the relationship between different forms of social capital and happiness. The aim of this study is to conduct such an examination, encompassing measures for all three facets of social capital and building upon work conducted by Bjornskov (2006) and others.

13.3 Method

13.3.1 Participants

For Statistics Canada's 2003 general social survey (GSS), Cycle 17 (2004), 24,951 individuals aged 15–80 or over were interviewed. The greatest percentage of participants was aged 40–44, with 50.8 % female participants, and 60.8 % currently married. Most participants came from Ontario (38.5 %), 7.6 % came from the Atlantic regions, 24.0 % from Quebec, and 16.5 % from the Prairie provinces. Household income ranged from less than $5,000 to over $100,000, with a mean of between $50 and 60,000. 12.4 % of participants experienced unemployment in the past year. The sample was chosen to reflect the total population of Canada. The data reported here use the sample weights provided by Statistics Canada which reflect the population distribution (Statistics Canada 2004) to ensure accurate estimation of population parameters. After accounting for missing observations, the sample size is 15,660.

13.4 Measures

13.4.1 General Social Survey on Social Engagement, 2003

The present study uses data collected by Statistics Canada in 2003 from the general social survey (GSS) cycle 17. The focus of this survey was social engagement, involving 24,951 participants who are 15 years of age and older across the 10 Canadian provinces, excluding residents of Northwest Territories, Yukon, and Nunavut, and full-time residents of institutions (Statistics Canada 2004). Questions from GSS cycle 17 covered a wide range of topics about age, sex, marital status, well-being, cultural background, social participation, political participation, education, activities, and housing characteristics.

13.4.1.1 Survey Questions: Variables to Measure Social Capital

Questions were selected from the GSS survey to assess the social capital variables described above. Seven questions were used to represent two forms of trust: social trust (trust in family members, neighbours, and strangers), and institutional trust (confidence in the police, the health care system, banks, and business). Fourteen of the survey questions were used to proxy for obligations: six different forms of help received, and eight different forms of help given. Questions related to information channels were divided into four groups: contact with relatives, contact with friends, political participation, and civic participation. Four questions were used to approximate social norms, including feeling safe to walk alone after dark, feeling safe to be home alone after dark, trusting someone living close by to return a lost wallet, and trusting a stranger to return a lost wallet. Questions on sense of belonging (to the community, to the province, and to Canada) were also considered. See "Appendix A" for a list of the original survey questions.

13.5 Results

Bootstrap hierarchical regression (based on Statistics Canada's original method of bootstrapping) was used to assess whether social capital variables were related to happiness. These regression analyses control for the influence of all other blocks when assessing a particular block. Eight control variables were included as a block, as previous research has found them to be associated with happiness: age, sex, region of residence, marital status, unemployment status, household income, self-assessed health, and score on mastery scale. In addition, ten blocks of variables representing the social capital items were entered into the regressions. These were social trust, institutional trust, obligations (help received), obligations (help given), information channels (relatives), information channels (friends), information channels (political participation), information channels (civic participation), norms and sanctions, and sense of belongingness. The variables that make up each of these blocks can be seen in Table 13.1.

Results for the block of control variables indicated a significant effect, $F(11, 189) = 106.95$, $p < 0.001$, supporting previous work that these variables are indeed important to consider in predicting happiness.

Regression results for the block consisting of social trust reached significance, $F(3,197) = 9.00$, $p < 0.001$. Trust in family was significant, $t = 4.58$, $p < 0.001$, but trust in neighbours, $t = 1.54$, NS and trust in strangers, $t = -1.61$, NS were not. This suggests that the more a person trusts family, the higher the happiness level. Trust in others does not seem to factor into one's happiness.

For institutional trust there was a significant effect, $F(4,196) = 16.72$, $p < 0.001$. This was accounted for by a significant effect for confidence in police, $t = 4.05$, $p < 0.001$, confidence in the health care system, $t = 2.72$, $p = 0.007$, confidence in banks, $t = 2.83$, $p = 0.005$, and a non-significant tendency to have confidence in businesses, $t = 1.92$, $p = 0.056$. In all cases, greater trust was associated with greater happiness.

Table 13.1 Summary statistics of weighted variables

Variable blocks	Variable names	Continuous and ordinal variables		Standard error	Binary variables
		Mean	Scale		% of yes
Dependent variable	Happiness	4.40	1–5	0.005	
Control variables	Age	7.33	1–15	0.001	
	Male				49.2
	Married				60.8
	Atlantic				7.6
	Quebec				24.0
	Ontario				38.5
	Prairies				16.5
	Health	3.74	1–5	0.007	
	Income	8.82	1–12	0.019	
	Unemployed				12.4
	Mastery_scale	18.78	0–28	0.029	
Social trust	Trust_family	4.76	1–5	0.004	
	Trust_neighbourhood	3.73	1–5	0.007	
	Trust_stranger	2.23	1–5	0.008	
Institutional trust	Trust_police	3.20	1–4	0.005	
	Trust_healthcare	2.87	1–4	0.006	
	Trust_banks	2.87	1–4	0.006	
	Trust_business	3.05	1–4	0.005	
Obligations: help received	Rhelp_chores				22.4
	Rhelp_transportation				25.5
	Rhelp_childcare				10.8
	Rhelp_teaching				29.1
	Rhelp_emotion				41.5
	Rhelp_other				7.3
Obligations: help given	Ghelp_chores				37.2
	Ghelp_transportation				44.7
	Ghelp_childcare				24.1
	Ghelp_teaching				43.0
	Ghelp_emotion				56.0
	Ghelp_other				12.8
	Ghelp_volunteer				33.6
	Ghelp_donate				73.3
Information channels: relatives	Relative_see	2.98	1–5	0.009	
	Relative_phone	3.51	1–5	0.008	
	Relative_close	3.13	1–5	0.009	
Information channels: friends	Friend_close	3.05	1–5	0.008	
	Friend_other	4.48	1–5	0.010	
	Friend_see	3.64	1–5	0.007	
	Friend_phone	3.56	1–5	0.008	

(continued)

Table 13.1 (continued)

Variable blocks	Variable names	Continuous and ordinal variables		Standard error	Binary variables
		Mean	Scale		% of yes
Information channels: political participation	Search_political				26.1
	Volunteer_political				3.0
	Contact_newspaper				12.7
	Sign_petition				28.0
	Boycott_product				20.1
	Attend_meeting				21.7
	Participate_demonstration				6.3
Information channels: civic participation	Member_proforg				25.1
	Member_political				4.7
	Member_sports				29.0
	Member_education				17.9
	Member_religious				16.8
	Member_school				16.6
	Member_service				8.0
	Member_other				5.7
Norms and sanctions	Walk_alone	4.06	1–5	0.007	
	Home_alone	2.83	1–4	0.003	
	Wallet_close	3.09	1–4	0.007	
	Wallet_stranger	1.87	1–4	0.007	
Belonging-ness	Belong_community	3.49	1–5	0.010	
	Belong_province	3.87	1–5	0.009	
	Belong_Canada	4.21	1–5	0.009	

Results for the block of obligations (help received) reached significance, $F(6,194) = 5.20$, $p < 0.001$, but the block of obligations (help given) did not, $F(8,192) = 1.35$, NS. Examining the individual variables reveals that receiving help in domestic chores did not reach significance, $t = 1.17$, NS, nor did receiving help with transportation, $t = 0.30$, NS, nor receiving help with childcare, $t = 0.06$, NS Receiving teaching help from someone was not significant, $t = -0.97$, NS, nor was receiving other help not listed, $t = -0.54$, NS. The only significant individual help received variable was receiving emotional support, $t = -4.87$, $p < 0.001$. This means that people who received emotional help were less happy than those who did not. Other types of help received did not relate to level of happiness.

Turning to information channels, contact with relatives reached significance, $F(3, 197) = 17.98$, $p < 0.001$ as did contact with friends, $F(4, 196) = 10.37$, $p < 0.001$. This was accounted for by having relatives one feels close to, $t = 7.19$, $p < 0.001$ but not the amount of contact one had with relatives by phone, $t = -1.06$, NS. For friends, there was a significant effect for the number of close friends, $t = 2.58$, $p = 0.011$, for the number of non-close friends, $t = 2.12$, $p = 0.035$ and frequency of seeing friends, $t = 3.91$, $p < 0.001$, but not for frequency of phoning friends, $t = 0.50$, NS.

Table 13.2 *F*-statistics of variable blocks: bootstrap hierarchical regression model

Variable blocks	*F* statistics	Prob $> F$
Control variables	$F(11, 189) = 106.95$	0.0000
Social trust	$F(3, 197) = 9.00$	0.0000
Institutional trust	$F(4, 196) = 16.72$	0.0000
Obligations: help received	$F(6, 194) = 5.20$	0.0001
Obligations: help given	$F(8, 192) = 1.35$	0.2228
Information channels: relatives	$F(3, 197) = 17.98$	0.0000
Information channels: friends	$F(4, 196) = 10.37$	0.0000
Information channels: political participation	$F(7, 193) = 2.40$	0.0223
Information channels: civic participation	$F(8, 192) = 1.39$	0.2009
Norms and sanctions	$F(4, 196) = 2.46$	0.0468
Belongingness	$F(11, 189) = 63.74$	0.0000

As for political participation information channels, there was a significant effect, $F(7, 193) = 2.40$, $p = 0.022$. This was accounted for by a significant effect of searching for information about a political issue, $t = -2.08$, $p = 0.039$. There was a non-significant trend for contacting a newspaper to express one's views, $t = -1.84$, $p = 0.068$, but none of the other individual variables were significant: for volunteering for a political group or party, $t = 1.27$, NS, for signing a petition, $t = 0.17$, NS, for boycotting a product, $t = -1.17$, NS, for attending a public meeting, $t = -1.46$, NS, and for taking part in a demonstration, $t = -0.23$, NS. This suggests that having searched for information on a political issue and having expressed one's view by contacting a newspaper are negatively correlated with happiness. The other variables do not seem to be related to happiness level.

People who engaged in civic participation information channels (e.g., were members of political, religious, or educational organizations) were no more happy than people who did not engage in such behaviour, $F(8, 192) = 1.39$, NS.

The block measuring norms and sanctions was borderline significant, $F(4, 196) = 2.46$, $p = 0.047$. There was a significant effect for feeling safe walking alone, $t = -2.08$, $p = 0.039$ and a non-significant trend for feeling safe being home alone, $t = 1.94$, $p = 0.054$. The safer a person felt walking alone after dark the less happy the person reported being. The less worried a person was about being home alone the happier he/she felt. Believing that a lost wallet would be returned by someone who lived close by, $t = 1.34$, NS or by a stranger, $t = 0.95$, NS were not significant.

Having a sense of belonging (to the community, the province, and to Canada) was found to be a significant predictor of happiness, $F(3,197) = 63.74$, $p < 0.001$. This was accounted for by a significant effect of feeling one belongs to one's community, $t = 11.31$, $p < 0.001$ and of a feeling of belonging to Canada, $t = 3.14$, $p = 0.002$. There was no significant effect for a feeling of belonging to one's province, $t = 1.26$, NS The stronger the sense of belonging to the community and to Canada, the higher the reported happiness.

Table 13.2 shows the *F*-statistics of the different blocks of variables. Coefficients and t-statistics of each variable are contained in "Appendix B".

13.6 Discussion

The goal of this project was to assess whether social capital has a role in explaining people's happiness. We found significant relationships between happiness and each of three types of social capital suggested by Coleman (1988), namely trust and obligations, information channels, and norms and sanctions. Furthermore, we identified sense of belonging as an additional form of social capital that can predict happiness.

Trust is one of the defining elements of social capital (Coleman 1988; Putnam 1995), and our findings support Bjornskov's (2006) conclusion that trust is an essential element of life satisfaction. Our work goes beyond Bjornskov's study by illustrating that both trust in people and trust in institutions are independently related to happiness. Institutional trust in the police, the health care system, banks, and business people are all shown to be positively related to happiness, implying an important relationship between the well being of citizens and their level of trust in both the public and private sectors of society, as also reported by Hudson (2006) and Rus and Iglic (2005).

In terms of social and personal trust, our analysis showed that this has an important relationship with happiness, but only trust in people within one's family was significant. Family likely plays an important role in better living within Canadian society, but the fact that trust in neighbours and strangers doesn't play a role may support Putnam's argument that people are feeling disconnected (Putnam 2000).

According to Coleman (1988), trust is built upon people's obligations for each other through help given and received. While help given appeared to have no significant relationship with happiness, help received was shown to have a significant negative relationship with happiness in the form of emotional support received. Perhaps a person who has received emotional support has experienced difficult times in life, and is likely to be less happy. The fact that people did not feel especially happy giving help to others begs the question of the truth of an oft-repeated notion that being altruistic is actually a rational or selfish way to make oneself feel good (e.g., Cialdini et al. 1997). For instance, some research in public economics has proposed that acts of charity and gift-giving generate a "warm glow" and are done in order for the givers to feel good about themselves (e.g., Allgood 2009; Mayo and Tinsley 2009). The empirical results from our study cast some doubt over this suggestion. More research is needed to further explore the potentially complex relationship between obligations and happiness.

Three of the four forms of information channels included in our analysis were found to have significant relationships with happiness. Consistent with most of the findings from the literature about time spent seeing friends (Lelkes 2006; Powdthavee 2008; cf Martin and Westerhof 2003, as cited in Dolan et al. 2008), our results showed that a strong social network of friends appeared to be an important factor related to one's happiness, including seeing friends and having more friends. Furthermore, having more relatives that a person feels close to was also found to be positively related to happiness. This supports both Coleman's (1988) and Putnam's (2000) contentions about the importance of

social connections. Being involved in political activities was related to happiness, but in a negative direction. The people who searched for information about a political issue reported less happiness than those who didn't get involved. A possible explanation for this result is that people who actively searched for political issues may have become more aware of problems around the world, hence are likely to be less happy. Another possibility is that people do not search for information about a particular political issue unless they feel worried or discontented about it, otherwise they just do not bother getting involved. If this were the case, it would support Putnam's (2000) idea that on the whole, today's citizens are apathetic about the world around them. This interpretation may be further supported by our finding that organizational membership is not related to level of happiness, and Bjornskov's (2006) finding of a negative relationship between happiness and organizational membership.

Another category of social capital defined by Coleman is social norms and sanctions. Bjornskov used questions about whether dishonest behaviour such as cheating on taxes can ever be justified as proxies for norms and sanctions, and found no significant relationship with life satisfaction. Unlike Bjornskov's finding, the block of norms and sanctions variables in our analysis was found to have a significant correlation with happiness. Feeling safe alone in one's home was associated with feeling happier. However, counter intuitively, feeling safe walking alone correlated with feeling less happy. We believe this is due to multicollinearity and is an artefact of the statistical process. Perhaps controlling for all other variables previously entered in the hierarchical regression rendered feeling safe walking alone non-significant. This explanation is supported by the finding that when examined in separate analyses including only the four norms and sanctions factors, the variable feeling safe walking alone was a significant positive predictor of happiness.

A form of capital suggested by the literature is sense of belonging (e.g., Clift Gore 2005; Maeroff 1998; Maycock and Howat 2007; Morrow et al. 2002). Our results showed a positive relationship between happiness and sense of belonging to one's local community and to Canada (but not to one's province). Sense of belonging appears to be an important dimension of social capital to complement Coleman's original suggestions and needs to be further explored.

In short, this study has identified measures for social capital in the forms of trust and obligations, information channels, norms and sanctions, and belongingness that are related to happiness. Our results confirm our hypothesis that social capital is a vital piece of information for predicting happiness. While people may not be able to change their internal or external characteristics, some aspects of their social may be modifiable. In addition to demographic and individual factors such as age, income, and health conditions, future research should include variables representing social capital when exploring what accounts for happiness.

Appendix A: Description of Variables

Dependent variable

Happiness

1 very unhappy
2 somewhat unhappy
3 no opinion
4 somewhat happy
5 very happy

Control variables

Age

1   15–17
2   18–19
3   20–24
4   25–29
5   30–34
6   35–29
7   40–44
8   45–49
9   50–54
10 55–59
11 60–64
12 65–60
13 70–74
14 75–79
15 80 years and over

Male

1 male
0 female

Married

1 married or living common law
0 otherwise

Atlantic

1 living in Atlantic
0 otherwise

Quebec

1 living in Quebec
0 otherwise

Ontario

1 living in Ontario
0 otherwise

Prairie

1 living in Prairie
0 otherwise

Health

In general, would you say your health is…?

1 poor
2 fair
3 good
4 very good
5 excellent

Income

Annual personal income of the respondent

1 no income
2 less than $5,000
3 $5,000–$9,999
4 $10,000–$14, 999
5 $15,000–$19,999
6 $20,000–$29, 999
7 $30,000–$39, 999
8 $40,000–$49, 999
9 $50,000–$59, 999
10 $60,000–$79, 999
11 $80,000–$99, 999
12 $100,000 or more

Unemployed

Unemployed at any time in the past 12 months?

1 yes
0 no

Mastery_scale
A 28-point ascending scale to indicate the amount of control over life as perceived by the respondent

Social trust

How much do you trust each of the following group of people?
    People in your family
    People in your neighbourhood
    Strangers

1 cannot be trusted at all
2
3
4
5 can be trusted a lot

Institutional trust

How much confidence do you have in:

    …the police?
    …the health care system?
    …banks?
    …local merchants and business people?

1 No confidence at all
2 Not very much confidence
3 Quite a lot of confidence
4 A great deal of confidence

Obligations: help received

In the past month did anyone help you:

    by doing domestic work, home maintenance or outdoor work?
    by providing transportation or running errands?
    by helping with child care?
    by teaching, coaching or giving you practical advice?
    by giving you emotional support?
    by helping you in some other way?

Obligations: help given

In the past month did you help anyone:

    by doing domestic work, home maintenance or outdoor work?
    by providing transportation or running errands?

by helping with child care?
by teaching, coaching or giving you practical advice?
by giving someone emotional support?
by helping a person in some other way?
did you do unpaid volunteer work for any organization?
did you donate money or goods to any organization or charity?

1 yes
2 no

Information channels: relatives

In the last month, how often did you see relatives (outside of people you live with)?
In the last month, did you communicate with relatives by telephone?

1 not in the last month
2 once a month
3 a few time a month
4 a few times a week
5 every day

How many relatives do you feel close to?

1 1 or 2
2 3–5
3 6–10
4 11–20
5 more than 20

Information channels: friends

How many close friends do you have?
How may other friends do you have who are not relatives or close friends?

1 1 or 2
2 3–5
3 6–10
4 11–20
5 more than 20

In the last month, how often did you see your friends?
In the last month, how often did you communicate with your friends by telephone?

1 not in the last month
2 once a month
3 a few time a month
4 a few times a week
5 every day

Information channels: political participation

In the past 12 months, have you done any of the following activities:

…searched for information on a political issue?
…volunteered for a political party?
…expressed your views on an issue by contacting a newspaper or a politician?
…signed a petition?
…boycotted a product or chose a product for ethical reasons?
…attended a public meeting?
…participated in a demonstration or march?

1 yes
2 no

Information channels: civic participation

In the past 12 months, were you a member or participant in:

a union or professional association?
a political party or group?
a sports or recreation organization (such as hockey league, health club, golf club)?
a cultural, education or hobby organization (such as theatre group, book club, or bridge club)?
a religious-affiliated group (such as church youth group, choir)?
a school group, neighbourhood, civic or community association (such as PTA, alumni, block parents, neighbourhood watch)?
a service club or fraternal organization (such as Kiwanis, Knights of Columbus, the Legion)?
any other type of organization that you have not mentioned?

1 yes
0 no

Norms and sanctions

How safe do you feel from crime walking alone in your area after dark?

1 very unsafe
2 somewhat unsafe
3 reasonably safe
4 does not walk alone
5 very safe

When alone in your home in the evening or at night, do you feel:

1 very worried
2 somewhat worried

3 never alone
4 not at all worried

If you lost a wallet or purse that contained two hundred dollars, how likely is it to be returned with the money in it if it was found:

    by someone who lives close by?
    by a complete stranger?

1 not at all likely
2 don't know
3 somewhat likely
4 very likely

Belongingness

How would you describe your sense of belonging to:
    …your local community?
    …your province?
    …Canada?

1 very weak
2 somewhat weak
3 don't know
4 somewhat strong
5 very strong

Appendix B: Coefficients and Standard Errors of Bootstrap Hierarchical Regression Model

Variables	Coef.	Std. err.	t	P > |t|	Conf interval	
Age	−0.0101439	0.002236	−4.54	0	−0.01455	−0.00574
Male	−0.0437977	0.01512	−2.9	0.004	−0.07361	−0.01398
Married	0.1682807	0.013712	12.27	0	0.141242	0.195319
Atlantic	0.0005923	0.018215	0.03	0.974	−0.03533	0.036511
Quebec	−0.013001	0.021074	−0.62	0.538	−0.05456	0.028555
Ontario	−0.0242927	0.01726	−1.41	0.161	−0.05833	0.009743
Prairie	−0.0274024	0.01942	−1.41	0.16	−0.0657	0.010893
Health	0.1285453	0.007092	18.13	0	0.114561	0.14253
Income	0.0044611	0.002752	1.62	0.107	−0.00097	0.009889
Unemployed	−0.0248472	0.018304	−1.36	0.176	−0.06094	0.011247
Mastery_scale	0.031246	0.001811	17.26	0	0.027676	0.034816
Trust_family	0.0624439	0.01364	4.58	0	0.035546	0.089341

Variables	Coef.	Std. err.	t	P > |t|	Conf interval	
Trust_neighbour hood	0.0112093	0.00728	1.54	0.125	−0.00315	0.025564
Trust_stranger	−0.010892	0.006762	−1.61	0.109	−0.02423	0.002442
Trust_police	0.0400792	0.009892	4.05	0	0.020573	0.059586
Trust_healthcare	0.0241841	0.0089	2.72	0.007	0.006635	0.041734
Trust_banks	0.0235579	0.008325	2.83	0.005	0.007142	0.039974
Trust_business	0.0214546	0.011182	1.92	0.056	−0.00059	0.043504
Rhelp_chores	0.0157004	0.013369	1.17	0.242	−0.01066	0.042064
Rhelp_ transportation	0.0042811	0.014273	0.3	0.765	−0.02386	0.032427
Rhelp_childcare	0.0008789	0.01598	0.06	0.956	−0.03063	0.032391
Rhelp_teaching	−0.0149689	0.01544	0.97	0.333	−0.04541	0.015475
Rhelp_emotion	−0.0672723	0.013823	−4.87	0	−0.09453	−0.04001
Rhelp_other	−0.0116746	0.021439	−0.54	0.587	−0.05395	0.030601
Ghelp_chores	0.0026329	0.012383	0.21	0.832	−0.02178	0.027051
Ghelp_ transportation	0.0110134	0.012106	0.91	0.364	−0.01286	0.034886
Ghelp_childcare	0.0244669	0.013143	1.86	0.064	−0.00145	0.050385
Ghelp_teaching	0.0075806	0.01401	0.54	0.589	−0.02005	0.035207
Ghelp_emotion	−0.0201869	0.013653	−1.48	0.141	−0.04711	0.006736
Ghelp_other	−0.0312004	0.016897	−1.85	0.066	−0.06452	0.002119
Ghelp_volunteer	0.0079876	0.014288	0.56	0.577	−0.02019	0.036163
Ghelp_donate	−0.0070713	0.015085	−0.47	0.64	−0.03682	0.022676
Relative_see	0.0043683	0.006127	0.71	0.477	−0.00771	0.01645
Relative_phone	−0.0077681	0.007298	−1.06	0.288	−0.02216	0.006624
Relative_close	0.0397616	0.005531	7.19	0	0.028856	0.050668
Friend_close	0.0178798	0.00693	2.58	0.011	0.004214	0.031546
Friend_other	0.0136832	0.006443	2.12	0.035	0.000978	0.026388
Friend_see	0.026618	0.006807	3.91	0	0.013194	0.040042
Friend_phone	0.0037556	0.00747	0.5	0.616	−0.01098	0.018486
Search_political	−0.0288868	0.013917	−2.08	0.039	−0.05633	−0.00144
Volunteer_political	0.0484995	0.038122	1.27	0.205	−0.02668	0.123674
Contact_ newsppaper	−0.0365304	0.019897	−1.84	0.068	−0.07577	0.002705
Sign_petition	0.0022113	0.013377	0.17	0.869	−0.02417	0.02859
Boycott_product	−0.0177564	0.015198	−1.17	0.244	−0.04773	0.012214
Attend_meeting	−0.0207156	0.014142	−1.46	0.145	−0.0486	0.007173
Partcipate_ demonstra	−0.0053966	0.023462	−0.23	0.818	−0.05166	0.040869
Member_proforg	−0.0299317	0.011586	−2.58	0.01	−0.05278	−0.00709
Member_political	0.0405098	0.028646	1.41	0.159	−0.01598	0.096998
Member_sports	0.002438	0.012828	0.19	0.849	−0.02286	0.027734
Member_ education	−0.0092161	0.01514	−0.61	0.543	−0.03907	0.020639
Member_religious	0.0177512	0.015761	1.13	0.261	−0.01333	0.048831
Member_school	−0.0110948	0.01585	−0.7	0.485	−0.04235	0.020161
Member_service	0.0018436	0.021482	0.09	0.932	−0.04052	0.044206

Variables	Coef.	Std. err.	t	P > |t|	Conf interval	
Member_other	0.006251	0.024377	0.26	0.798	−0.04182	0.054321
Walk_alone	−0.0131691	0.006327	−2.08	0.039	−0.02565	−0.00069
Home_alone	0.0350363	0.018074	1.94	0.054	−0.0006	0.070677
Wallet_close	0.0097042	0.00723	1.34	0.181	−0.00455	0.023962
Wallet_stranger	0.0060467	0.006336	0.95	0.341	−0.00645	0.018541
Belong_ community	0.064539	0.005706	11.31	0	0.053287	0.075791
Belong_province	0.0082137	0.006538	1.26	0.21	−0.00468	0.021107
Belong_Canada	0.0195731	0.006226	3.14	0.002	0.007297	0.03185
Constant	1.970661	0.095658	20.6	0	1.782028	2.159294

Number of observations = 15,660; Population size = 15,961,659; Replications = 200; Design $df = 199$; $F(61,139) = 34.10$; Prob $> F = 0.0000$; R-squared = 0.1977

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