

# SOCIAL PSYCHOLOGICAL DYNAMICS

EDITED BY  
DEREK CHADEE AND  
ALEKSANDRA KOSTIĆ



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# Social Psychological Dynamics

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Edited by Derek Chadee and Aleksandra Zurek

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To our students of social psychology

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## Social Capital, Motivational Autonomy and Health-Related Behaviour in Canadian and Russian Youth

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People all over the world want to be successful, healthy and happy, even though the meaning of these terms could vary significantly across communities and societies according to their diverse cultural prescriptions. Despite the potential cultural differences, “the vast majority of the planet’s people would agree with the following assertions: Life is better than death. Health is better than sickness. Liberty is better than slavery. Prosperity is better than poverty. Education is better than ignorance. Justice is better than injustice” (Harrison, 2000). Unfortunately, not many nations, states and communities have attained acceptable indicators of people’s lack of misery, poverty, sickness and deaths. Scholars, politicians and social activists continue to struggle with the question of why this is the case – that despite the evident advantages and strong desire of people for health, happiness and successful, prosperous lives, so many nations cannot provide these commodities for their citizens, and in fact many nations have been deteriorating steadily on many of these indicators. What are the causes of these low levels or even deteriorations of the main indicators of people’s functioning: economical, medical, political and psychological?

One vivid case of this paradox is Russia, a developed country that has shown an apparently unexplainable deterioration of life expectancy, health and overall functioning of its people since the 1970s (Cockerham, 1999; MacKenzie & Curran, 2002; Shkolnikov & Meslé 1996). Although it is one of the biggest nations in the world territorially and one of the richest with regard to natural resources, Russia nevertheless continuously has problems ensuring its people are prosperous, healthy and happy (according to Western standards). The goal of this chapter is to analyse the desperate situation of the health of Russian people (mostly youth), to suggest hypotheses that could explain this situation and to provide some empirical data about the relations between sociocultural factors and people’s health.

We did this analysis in a comparative mode, comparing Russia with another developed country – Canada, the country that has one of the highest standards of living in the world. First, we will provide some numbers to illustrate the state of affairs with regard to people’s functioning in these two countries and articulate a very



unfavourable situation in Russia. Then we will suggest that sociocultural parameters such as social capital and the culture of horizontality and verticality could be at the root of these vast differences in health, happiness and economic success between the people in these two countries. We will provide evidence to justify this claim and, in addition, suggest the mechanism through which these factors could exert their influence on people's well-being. We hypothesize that people's motivational autonomy and self-determination are at the core of their efficient behaviours and that those countries that promote the conditions that support these attributes will have a healthier, happier and more successful population in comparison to countries that do not support them. Finally, we will present the results of our cross-national study of health-related behaviours and attitudes among Canadian and Russian youth together with their relations to participants' motivation and several social capital, horizontality and verticality indicators in these countries.

We start this chapter by presenting some numbers related to the prosperity, health and happiness of people in Canada and Russia (see table 10.1) and demonstrating some evidence of the dangerous situation regarding health behaviours among youth in Russia.

It is evident from these numbers that, in general, Canadians are more prosperous than Russians; they live longer and have happier and better lives than do the people in Russia.

There are also differences between these two countries at the level of individuals' behaviour related to health. If we look at the numbers reflecting the health-related

**TABLE 10.1**

Selected Economic, Health and Happiness Indicators in Canada and Russia

	CANADA	RUSSIA
<b>Economy</b>		
Territory	~10 million sq km	~17 million sq km
Population	33.760 million (2010 est.)	139.39 million (2010 est.)
Gross national product per capita (USD)	39,600 (2010 est.)	\$15,900 (2010 est.)
<b>Life Expectancy</b>		
Total population/Male/Female	81.3/78.7/84 (2010 est.)	66/59.5/73 (2010 est.)
Healthy life expectancy: Male/Female (from <a href="http://www.who.int">www.who.int</a> )	70/74 (2006)	53/64 (2006)
Human Development Index (from <a href="http://hdrstats.undp.org/">http://hdrstats.undp.org/</a> <i>Human Development Report 2010</i> )	Rank 8 out of 182 Composite score .888	Rank 65 out of 182 Composite score .719
Quality-of-life Index (2005) <i>Economist</i> , 2004, Dec. 17	7.60	4.80
<b>Happiness and Well-being</b>		
(From <a href="http://worlddatabaseofhappiness.eur.nl/">http://worlddatabaseofhappiness.eur.nl/</a> )		
Happy life years	64.00	36.30
Overall happiness (out of 10)	8.00	5.60
Satisfaction with life (out of 10)**	7.80	4.74

Statistical data are retrieved from the *World Factbook* on February 2011 unless otherwise indicated.

\*\*World Values Survey

behaviours of young people in these two countries, the vast differences will continue to strike us. According to World Health Organization data ([www.who.int/gho/countries](http://www.who.int/gho/countries)), Russians consume 10.3 litres of alcohol per capita whereas Canadians consume 7.8 litres (2003). Among Russian females, 27.7 per cent smoke cigarettes and only 18.9 per cent of Canadian women indicated this practice (2006). The biggest difference between the two countries is in the percentage of smoking males: 70.1 per cent of Russian men smoked compared to only 24.3 per cent of Canadian men (2006). In Russia, 29.5 per cent of people younger than twenty-four years of age smoke. Out of the forty-one nations surveyed, Russia has the fourth greatest percentage of young smokers (<http://www.nationmaster.com/country/rs/Health>). In 2003, 17.8 per cent of Canada's population of twelve years and older were daily smokers. Among the youth of twelve to nineteen years old, 9.1 per cent were daily smokers (8.9 per cent of men and 9.3 per cent of women) (Canadian Institute for Health Information, 2004). Summarizing these and numerous other empirical data from demographers, medical sociologists and epidemiologists (Andreev, McKee, & Shkolnikov, 2003; Cockerham, 2000; Shkolnikov & Meslé 1996), we may state that Russians demonstrate a less healthy lifestyle than Canadians do.

One of the hypotheses that have been suggested to explain this desperate situation with Russians' mortality, destructive health behaviour and negligence to personal health is related to socialist and authoritarian political ideologies which have dominated Russia for nearly a century. Together with low social capital, these ideologies are held responsible for limiting people's individual freedom, opportunities of choice and responsibility regarding their own health (Cocherham, Hinote, Cocherham, et al., 2006; Cocherham & Snead, 2002; Cockerham, 1999; Kennedy, Kawachi, & Brainerd, 1998; Palosuo, 2000; Rose, 2000). This hypothesis is in full concordance with our understanding of why Russia as a country and Russians as people may have such poor indicators of their functioning, especially related to their health (Chirkov, 2007; Lebedeva, Chirkov, & Tatarko, 2007). Our proposition is that the horizontal component of social capital, which is in our understanding is crucially important for development of individual's autonomy and self-determined motivation, is highly underrepresented in Russia's ideological cultures, and this leads to passivity, alienation and finally self-destructive behaviour of Russians. In the following sections we will present a brief review of the concepts of social capital and its components and our understanding of the mechanism through which this type of social relations benefits people's functioning.

## Social Capital and the Culture of Horizontality and Verticality

Recent research from economists and social and political scientists has drawn the attention of the scientific community to the role that certain cultural, societal and socio-psychological factors play in developing prosperity in communities and societies and in determining the economic and political behaviours of individuals (Altman, 2001; Dayton-Johnson, 2001; Fukuyama, 1995, 2000; Grondona, 2000; Harrison, 1992; Harrison & Huntington, 2000; Inglehart, 2000). The main thesis

of these and related research projects is that countries' economic, social and political development depend not only on the availability of resources, technological advancements and other exclusively economic and structural factors but also on the cultural values that the people in these societies share, on the level and quality of their social relationships and on the norms that regulate them.

The concept of social capital has been suggested to embrace the essence of these beneficial social conditions; this concept has recently become extremely popular in various domains of the social sciences (Almedom, 2005; Campbell, Wood, & Kelly, 1999; Dekker & Uslaner, 2001; Fukuyama, 2000, 2002; Helliwell, 2001; Johnston & Soroka, 2001; Kawachi, Kennedy, Lochner, et al., 1997; Twigg & Schecter, 2003). The most general definition of SC could be presented as, "The social capital of a society includes the institutions, the relations, the attitudes and values that govern interactions among people and contribute to economic and social development" (Grootaert & van Bastelaer, 2001, p. 4). According to a recent conceptualization of this construct (Almedom, 2005; Grootaert & van Bastelaer, 2001; Hawe & Shiell, 2000), it is comprised of three levels: macro, meso and micro. The macro level of SC includes formalized institutions such as the political regime, the principles of a justice system, the structure of the government and its relations with the people. The meso level is comprised of middle-level civil institutions and associations, their self-regulatory and volunteering natures and their roles in the lives of the people in these communities. The micro level of SC includes interpersonal relations among people in the family, at school, at the workplace, on the streets and in other public places, and it reflects the natures, frequencies and emotional tones of these relations (for example, politeness, eagerness to help, trustworthiness of people). The typical definition of SC that embraces the last two levels is "networks [of people and groups] together with shared norms, values and understandings that facilitate cooperation within or among groups" (Social Capital Workshop, 2003, p. 42).

Social capital is also considered to have two forms: structural or objective and cognitive or subjective (Almedon, 2005; Grootaert & van Bastelaer, 2001). Structural SC could be understood (mostly on the meso level) as a set of established social units and networks in the forms of clubs, associations and institutions that facilitate cooperation, understanding and interrelations among people. The subjective component includes perceived norms, expectations, attitudes and beliefs regarding the nature of other people, "morally right" forms of interactions among them and the shared nature of the values of the trustworthiness, honesty and dignity of fellow citizens. Recent developments in conceptualizing social capital have acknowledged that it can be not only positive but also negative in nature, specifically when interdependent social relations benefit a narrow circle of people united in a certain association, yet these relations are simultaneously detrimental to the community at large. Examples include the mafia, corrupted governmental bureaucrats, *blat* in Russia and *guanxi* in China (Humphrey, 2002; Ledeneva, 2006; Michailova & Worm, 2003). The second extension within the current understanding of social capital is the inclusion of both horizontal and vertical components within this concept. (Gooertaer & van Bastelaer, 2001). The horizontal component includes horizontal associations and cooperative behaviour among people. Conversely, the vertical component is comprised of vertical associations which "are characterized

by hierarchical relationships and an unequal power distribution among members" (Gooertaer & van Bastelaer, 2001, p. 5) and competitive behaviour among these members.

As a descriptive concept, social capital is too complex to be applied in social psychological research directly; thus, we have decomposed it into two constructs: the horizontal and vertical dimensions of social relations in a community. Horizontal relations, which include individualistic and collectivistic components, describe relationships that are built around values of equality and trust together with favouring respect for people's rights and dignity as well as tolerance towards various manifestations of individuality. They are accompanied by support for people's self-development, dignity and autonomy (Lukes, 1973). They also include the willingness to share resources, ideas, information and feelings with others (Friedman, 1999; Govier, 1997; Hardin, 2002). This terminology also corresponds to the similar concepts that cross-cultural psychologists Triandis (1995, 2000) and Hofstede (1997) introduced to social psychology.

In addition to horizontal, there is the vertical dimension of social capital, which also include individualistic and collectivistic components (de Botton, 2004; Dumont, 1998/1970; Frank, 1985; Rubin, 2000). Vertical relations, which are built around status, hierarchy and power, promote obedience to those with higher status and more power, and they dictate a strong desire to control and manipulate those who have less power. These tendencies, for those with the power to exercise authoritarian control and for those who are blindly obedient to more powerful members of a community, are usually accompanied by the values and attitudes of distrust, disrespect, intolerance towards one another and fear (Hardin, 2004; Kemmelmeier, Burnstein, Krumov, et al., 2003; Maslow, 1937; Strunk & Chang, 1999). Very often, these relations are accompanied by strong competitiveness among members of a community that is typically bordered with aggression, anger and frustration (Knauff, 1991; Kohn, 1996).

It is important to differentiate vertical relations, which are necessary and unavoidable power-subordination relations determined by the division of labour and different social positions that people acquire in societies (for example, the relations between parents and children, teachers and students, managers and employees, and military officers and soldiers), from the culture of verticality as a negotiated social reality where every person is perceived, evaluated and treated according to his or her position in a hierarchy of status and power. The same distinction corresponds to horizontal relations, which are built on the acceptance of relatively equal statuses and power among people (for example, classmates, co-workers, friends), and the culture of horizontality, a dimension of social reality where people are respected and considered to be trustworthy individuals equal to each other in their worth and rights. We understand the cultures of horizontality and verticality as aspects of social reality enacted by the members of a community within the existing socially assigned roles and positions. Thus, teachers may interact with their students who are, by the nature of modern schools, in a subordinate position to them, either horizontally or vertically. When teachers interact horizontally (or, saying it differently, when they are constructing the culture of horizontality), they treat their pupils with respect, tolerance, trust and a feeling of equality, and they expect the same attitudes from the students. Alternatively, teachers may construct the culture of verticality, where



they promote their unquestionable authority and reward obedience, which encourages competitive and non-cooperative relations among students who will compete for the favour and attention of their teacher. Similarly, horizontal (equal by initial statuses) peer relations could also acquire a flavour of verticality when friends start to compete for domination over one another and strive to control each other's behaviour, thoughts and feelings.

The social world of every society is formed by a combination of vertical and horizontal relations, but it is up to members of these societies to construct a culture of horizontality or verticality within these relations. Our hypothesis is that those communities that have constructed a culture that strongly supports and encourages horizontality across the domains of politics, work relations, education and health care, and which discourage or strictly control verticality in those domains, will have what has been labelled a high social capital and, as a result, promote more beneficial economic, political, medical and psychological conditions for its members.

Many worldwide surveys have demonstrated that Canada, as a nation, possesses a higher social capital than Russia (Cockerham, 1997; Inglehart, Basanez, & Moreno, 1998; Johnston & Soroka, 2001; Kennedy, et al., 1998; Rose, 2000). This statement is justified by the data in table 10.2.

These data demonstrate that Canada possesses a higher social capital than Russia on the macro level (overall governmental ideology: liberal democracy vs. authoritarianism) as well as on the meso and micro levels (dominance of trust, tolerance and equality). The presented data make these two countries ideal for conducting a cross-cultural comparative study of the role social capital plays in young people's health attitudes, motivation and behaviour.

**TABLE 10.2**

Selected Indicators of Social Capital in Canada and Russia

	Canada	Russia
<b>Macro level</b>		
<b>State of World Liberty Index</b> (from <a href="http://www.stateofworldliberty.org/report/rankings.html">http://www.stateofworldliberty.org/report/rankings.html</a> )	Rank: 3 out of 159	Rank: 124 out of 167
<b>Democracy Index</b> ( <i>Economist</i> (2008))	Rank: 11 out of 167 Score 9.07	Rank 107 out of 167 Score 4.48
<b>Index of Economic Freedom</b> (Wall Street Journal/The Heritage Foundation <a href="http://www.heritage.org/Index/Ranking.aspx">http://www.heritage.org/Index/Ranking.aspx</a> )	Rank 7 out of 179 Score 80.4	Rank 143 out of 179 Score 50.3
<b>Corruption Perceptions Index 2009</b> ( <i>Transparency International</i> <a href="http://www.transparency.org">www.transparency.org</a> )	Rank 8 out of 180	Rank 143 out of 180
<b>Meso and Micro Levels</b> (from <a href="http://www.worldvaluessurvey.org/">http://www.worldvaluessurvey.org/</a> )		
Respect for human rights (out of 4)	3.09	1.77
How proud are you to be Canadian/Russian? (out of 4)	3.6	2.9
Tolerance towards homosexuals (out of 7)	5.44	2.20

## Relations of the Culture of Horizontality and Verticality with People's Health, Well-being and Productivity

A special domain within social capital research addresses the role it plays in people's health (Fukuyama, 2002; Hawe & Shiell, 2000; Helliwell, 2001; Kreuter & Lezin, 2002; Kritsotakis & Gamarnikow, 2004; Kunitz, 2004; Lomas, 1998; Macinko & Starfield, 2001). These and other researchers highlighted that both the horizontal and vertical dimensions of social capital relate to people's well-being, physical health and productivity. It has become conventionally accepted that social capital (predominantly its horizontal aspect) has positive relations with and a constructive effect on various health indicators, whereas verticality may have a neutral impact in some circumstances, but it mostly has a negative effect on people's health, mortality, well-being and overall functioning (Cockerham, 1999; Cockerham, 2000; Marmot, 2005; Wilkinson, 1996; Wilkinson, 1999a). Inglehart (1999) found positive relations between sociocultural and socio-psychological factors such as democracy and the level of trust with well-being. In their examination of thirty-nine US states, Kawachi and colleagues (1997) discovered that social capital measured by participation in voluntary organizations and attitudes of trust to people was associated negatively with total mortality, as well as with the rates of death from coronary heart disease, malignant neoplasm and infant mortality. Kennedy and colleagues (1998) replicated these results by analysing the associations between indicators of social capital and mortality rates across forty regions of Russia, and they discovered positive associations between the lack of social capital and life expectancy and negative associations with the number of deaths. Putnam (2001) calculated an index of social capital for all fifty US states and correlated it with several indicators of the quality of people's lives in these states. He discovered strong positive relations between the level of social capital and both the population's health status and the academic performance of children in schools. He also found negative associations between social capital and the levels of pugnaciousness and crime. Thus, it is evident that people in communities with high social capital live better lives and are happier and healthier than inhabitants of communities with low social capital.

If we refer to people's work-related activities and creativity as important aspects of their optimal functioning, we discover similar tendencies. Several cross-cultural researchers have investigated the relations that cultural dimensions of horizontality and verticality, both individualistic and collectivistic, have with various aspects of human functioning: creativity, performance, health, happiness and political attitudes, among others (Ahuvia, 2002; Arrindell, Hatzichristou, Wensink, et al., 1997; Cockerham, 1999; Green, 2006; Jing, Lu, & Peng, 2001; Kemmelmeier, et al., 2003; Shane, 1992; Veenhoven, 1999). For instance, Shane (1992) examined the number of invention patents per capita granted to nationals of thirty-three countries in 1967, 1971, 1976 and 1980 and, using Hofstede's dimensions of power distance (horizontality-verticality) and individualism-collectivism, compared this number with the prevalence of these cultural dimensions in the countries. The results showed that nonhierarchical and individualistic societies were more inventive than societies with hierarchical and collectivistic orientations. Among other reasons, the

author mentioned that horizontal relations may be more facilitating because they are characterized by decentralized authority and trust, which empower workers and give them the incentive to work creatively.

In the same vein, safety specialists (Jing, et al., 2001) studied the cultural dimensions of human errors in aviation. They collected airline accident rates from around the world over the previous twenty years and discovered that authoritarianism, the cultural dimension that is equivalent to verticality or a large power distance, correlates positively with the number of airline accidents, thus providing support for the idea that horizontal relations may be more conducive to safe, reliable and efficient behaviour. Cockerham (1999) investigated an unprecedented decline in life expectancy, along with the low level of health that citizens faced in the formerly communist countries in Eastern Europe, especially in Russia. He argued that the hierarchical (vertical, in our terms) system of governing society in general and the health care system in particular led to a loss of responsibility for one's own health and a loss of personal initiative and agency to look for and promote healthy lifestyles (Cocherham, et al., 2006; Cocherham & Snead, 2002). Thus, we may conclude that social capital in its horizontal dimension has a positive association with several indicators of human functioning, whereas the verticality has a tendency to relate negatively with them.

The central question of our inquiry is: Why is the horizontal dimension of social capital so beneficial for people's development and functioning? In other words, through what mechanisms does the culture of horizontality and verticality exert its positive influence on people's functioning? These questions lead us from the sociocultural level of analysis to the psychological mechanisms of people's motivation and behaviour.

Despite the evidence of strong relations between social capital, health and well-being, it is still unclear through what mechanisms the horizontal and vertical dimensions exert their influences on people's functioning, and many social scientists are struggling to unpack these mechanisms (Cockerham, 1997; Layard, 2005; Morrow, 1999). The majority of these discoveries address these mechanisms on a structural level, trying to find the determining power of social capital on people's health in various structural factors, such as communal networks (Berkman, 2000) and the supportive and buffering roles these networks provide, new neoliberal policies (Coburn, 2000), or income inequality (Wilkinson, 2006; Wilkinson, 1999b). In our understanding of these mechanisms, we want to go back to the individual, the actor who is actively involved in his or her social life and navigates among different options and opportunities that cultural realities and structural factors offer to him or her. We want to focus our explanation on the fundamental roles personal autonomy and self-determination, which are unfolded within the culture of horizontality and verticality, play in shaping people's attitudes and behaviours towards their health. Following is a sketch of our hypothesized model of these mechanisms.

### **Motivational Autonomy and Health: Our Hypothesis**

The issue of human motivational autonomy in psychology is directly addressed by the self-determination theory (SDT) of human motivation (Deci & Ryan, 1985,

2002). This theory states that in order for people to be healthy, happy and successful, they need to satisfy their basic psychological needs for autonomy, competence and relatedness in a stable and secure manner (Ryan, 1995; Ryan & Deci, 2000). It proposes that people can satisfy these needs only if they are involved in self-determined and competent actions in a socially supportive context (Ryan & Deci, 2010). In other words, if people regularly perform self-determined and effective actions that bring them closer to other people, they satisfy their basic psychological needs and, as a result, obtain self-realization, life satisfaction and good physical health (Chirkov, Sheldon, & Ryan, 2010; Kasser & Ryan, 1999; Ryan & Deci, 2001). Thus, from the perspective of this theory, the fundamental and universal condition for promoting self-determined and effective behaviour is the presence of an environment that supports the gratification of basic psychological needs and, especially, the need for autonomy (Chirkov, 2009; Williams, 2002; Williams, Deci, & Ryan, 1998).

SDT researchers have thoroughly studied the role that psychological needs support plays in people's functioning regarding health and parenting behaviour, activities within academic and work institutions and in other domains (Deci & Ryan, 2002; Vallerand, Pelletier, & Koestner, 2008; Williams, Teixeira, Carraca, et al., 2010). They have discovered that by providing an environment that supports people's basic psychological needs – an environment that respects and acknowledges people's goals, needs and feelings; provides them with choices; and expresses confidence in their competences – parents, teachers, managers and coaches can promote other people's personal autonomy, feelings of competence, high self-esteem, positive well-being and good general health. These conditions can be conceptualized as proximal conditions, meaning that these are the conditions that exist in people's nearest social environment. Not only do people in a proximal supportive environment directly gratify their basic needs and, as a result, promote their health and optimal functioning, but this environment also facilitates the development of self-determined, self-regulated and responsible forms of behaviour, which allow these people to achieve better outcomes in their lives. Based on the research of Chirkov and colleagues (Chirkov, Ryan, Kim, et al., 2003; Chirkov, Ryan, & Willness, 2005), we argue here that there are also distal sociocultural conditions, which provide context and background for proximal social environments and influence people's motivation, well-being, health and success. We theorize that these distal conditions are represented by the cultures of horizontality and verticality that relate differently to people's basic psychological needs satisfaction, to their autonomous motivation and, as a result, to their psychological and physical flourishing.

We hypothesize that social capital, mainly in its horizontality dimension, is beneficial to people's functioning because it creates an atmosphere where people's autonomy, agency and self-determination can flourish and grow (Chirkov, 2006, 2007; Chirkov, et al., 2003; Chirkov, et al., 2005; Kasser, 2010). This flourishing effect takes place because of three factors. First, the culture of horizontality provides nutrients – trust, respect, tolerance, equality and psychological security – for people's basic psychological needs to be autonomous, competent and interpersonally related agents. Second, it creates relative freedom to gratify these needs in the best possible way. Third, it creates a context where these nutrients, human tendencies and the freedom to practise them are expected from people and viewed as morally positive virtues that require encouragement, facilitation and constant care. As a result of these



conditions, in the culture of horizontality, people have a high probability of forming autonomous, rational and responsible actions in all spheres of life (including the health domain) and exercising them with few constraints. Consequently, their health, well-being, prosperity and creativity will thrive in this culture.

Contrary to this, the culture of verticality will diminish people's freedom of exercising their powers to gratify their basic psychological needs in the best possible ways, there will be a deficit of the nutrients for fundamental psychological needs and these nutrients will be considered morally wrong. Following those conditions, people in a culture of verticality will be deprived from healthy satisfaction of their fundamental needs, they will be unable to exercise their freedom and self-determination, and, as a result, they will lead impoverished, dull, unhappy and unhealthy lives.

There are several important assumptions about humans and their social environments that underlie these hypotheses (Chirkov, 2006). First, they accept the notion of human nature that inherits several fundamental cognitive, motivational, and emotional functional capabilities and needs (Alkire, 2002; Nussbaum, 2000; Ryan & Deci, 2000; Ryan, Kuhl, & Deci, 1997). One basic human capability is the ability to experience one's actions either emanating from oneself or being controlled by external forces (Brown, 1991). Based on this ability comes the capacity to make free choices that are driven by one's own goals, free will and rationality (Chirkov, 2010; Martin, Sugerman, & Thompson, 2003).

Our second assumption states that cultures of horizontality and verticality are socially constructed intentional<sup>1</sup> realities of various communities. These two cultures are negotiated worlds of these communities wherein existence is real and forceful, but only as there is a collectivity of people whose beliefs, values, purposes and other mental representations are directed at, and thereby influenced by, these realities (Shweder, 1991). The cultures of horizontality and verticality would not exist independent of people's involvement with and reactions to social interactions that promote understanding, cooperation, sharing, respect, trust, equality and individuality together with the relations regarding hierarchy, status, power and wealth distribution. These interactions are responsible for constructing the cultural realities that provide meaning for people's personal worlds, actions and relationships (Shweder, 1991). These cultural realities are shared collectively by the members of the communities, but each individual may perceive them as an external force that guides his or her life (Hollis, 2002). These social interactions also serve as an engine that enables people's agentic power and thus allows them to reflect on the existing cultural meanings and practices and create their own understanding of them (Chirkov, 2010; Cote & Levine, 2002; Martin, et al., 2003).

Our third assumption states that some cultural communities are more conducive to enabling and exercising people's capabilities and gratifying their basic psychological needs. As a result of this, some cultures may be considered healthier and more humanistic than others (Fromm, 1947/1990; Maslow, 1971). In our case, we hypothesize that the culture of horizontality is more humane and beneficial with regard to promoting and facilitating people's powers and potentialities.

In order to be healthy and stay well, individuals need to exercise their capabilities, inherited needs and potentials. The realization of these potentials depends on the nature of the cultural reality within which they function. If people are involved in

social interactions within the culture of horizontality, these interactions evoke positive tendencies, enabling people to exercise their potentialities to be autonomous, competent, rational and socially related individuals to the fullest extent. In this culture, people's basic psychological capabilities are not only nurtured but also morally evaluated as good and right things to do, and, as a result, they are motivated to exercise them even more. When they are involved in interactions with one another within the culture of verticality, people with the same capabilities and basic psychological tendencies will experience different sentiments and motivations. As we stated before, the vertical culture is constructed around striving for a higher position within various hierarchies (power, status, wealth, fame). In this culture, each individual is valued according to his or her position in the hierarchy and is treated accordingly. If a person is considered to occupy a high position, then it is expected that other people should demonstrate obedience, conformism and loyalty to him or her. If a person is evaluated as having a low status, then other people will be driven to control him or her, and arrogant and disrespectful attitudes can be anticipated. Following these mutual evaluations, it is possible that people can be involved in competitive relations towards one another that border on hostility, antagonism, distrust and potential aggression. This culture not only thwarts people's fundamental human capabilities by not providing the basic nutrients for their growth, but also restricts their freedom to choose the lifestyle that is best for them; if they chose one, it could be negatively evaluated. Therefore, it is natural to expect that people in this culture will gradually deteriorate in their autonomous functioning.

This hypothetical model involves different levels of analysis: cultural analysis of the intentional realities of verticality and horizontality, socio-psychological analysis of interpersonal interactions within each culture and psychological analysis of people's fundamental functional capabilities and their psychodynamics. In our empirical study, we focus on the psychological level of analysis, which includes people's motivation for health-related behaviours and their perception of different cultural communities within which they function.

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## An Empirical Study

### Objectives

The main goal of our empirical study is to explore the relations between perceived horizontality and verticality and social capital (SC), young people's motivation for health-risky and health-maintenance behaviours and their health outcomes. We consider this study to be a continuation of our research exploring the above-mentioned relations in the context of different national cultures (Chirkov, 2006, 2007; Chirkov, Lebedeva, Molodtsova, et al., 2007; Lebedeva, et al., 2007). We did this exploration in a comparative mode, comparing students from Canadian and Russian universities. Based on the above-presented analysis, we expected that horizontality would be directly associated with various positive health outcomes and be positively related to autonomous motivation for health behaviour, which would be a significant factor of

health promotion. We also expected that verticality would have no or negative relations with autonomous motivation and health.

## Method and Participants

College students from the University of Saskatchewan in Saskatoon, Canada (209 participants, 105 men and 103 women; one participant did not report gender) and the Higher School of Economics in Moscow, Russia (182 participants, 76 men and 106 women), participated in the study. The average age of the Canadian students was 19.9 years ( $SD = 3.2$ ; range = 18–44), and of the Russians, it was 18.7 ( $SD = 1.48$ ; range = 16–24). Data were collected during the 2005–2006 and 2006–2007 academic years in Canada and during the 2005–2006 academic year in Russia. Questionnaires and scales were back-translated from English to Russian and back to English.

## Design and Measures

We implemented a cross-sectional one-time paper-and-pencil survey. The Perceived Cultural Context Scale (Chirkov et al., 2003) was used to assess the perceptions of four dimensions of the participants' sociocultural context: Horizontality (H), Verticality (V), Individualism (I) and Collectivism (C), which were measured by six items that represent each dimension. The Cronbach's alpha coefficients were (Canadian data first): HC (.65; .55), HI (.74; .73), VC (.74; .65) and VI (.80; .74). This measure has been used in several cross-cultural studies and has demonstrated its reliability, validity and cross-cultural invariance (Chirkov, 2007; Chirkov, et al., 2003; Chirkov, et al., 2005; Lebedeva, et al., 2007). The horizontal (HI and HC) and vertical (VI and VC) dimensions were combined together creating the indicators of Perceived Cultural Horizontality (the perception of equality, willingness to share and support for individuality among citizens) and Perceived Cultural Verticality (the perception of obedience and loyalty together with competitiveness among citizens). National identity, which in many studies (e.g., Berger-Smith, 2000) has been considered to be an indicator of social cohesion and capital, was assessed by one question concerning the feeling of pride about being Canadian or Russian. Attitude of trust was measured by two items taken from the World Values Survey (Inglehart, et al., 1998): "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?" and "Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?" These items correlated significantly with each other in both samples and were combined into one indicator of trust. The Radius of Trust (Trust towards Social Institutions) Scale asked about the level of trust towards seventeen different social institutions, ranging from church and school to police, a national leader and government on a five-point scale. The Cronbach's alpha coefficients for this scale were (Canadian data first) .87 and .85. The overall index of social capital was calculated by summing up the standardized scores of these five indicators: perceived horizontality, national identity, attitude of trust, radius of trust and perceived verticality (entered with a minus sign). The means, standard deviations, Cronbach's

alphas and significance of differences, together with the effect sizes for two samples, are presented in table 10.3.

The level of perceived social capital is higher in the Canadian sample than in the Russian one. Canadian participants see their fellow citizens as more willing to share, more equal and more willing to support individuality; they have a higher national identity, and they are more trusting towards other people and of various institutions. The results also indicate that verticality is higher in the Canadian sample.

Health Attitudes were measured by four single-item measures: How important is health for you? How much does health depend on people's behaviour? How much are people responsible for their health? How typical is a healthy lifestyle among people around you? The means and SD for these questions are presented in table 10.4.

TABLE 10.3

Means, Standard Deviations and *t*-tests of the Differences Between the Indicators of Social Capital in the Canadian and Russian Samples

Country	Statistics	Perceived Cultural Horizontality	Perceived Cultural Verticality	National Identity	Attitude of Trust	Radius of Trust (Trust to Social Institutions)
Canada	M	5.00	4.49	6.04	4.3	3.13
	SD	.56	.66	1.22	1.36	.61
	Cronbach's Alphas	.70	.74			
	<i>t</i> -test and effect size	$t(364) = 8.29$ , $p < .001$ ; $d = .43$	$t(370) = 2.74$ , $p < .01$ ; $d = .29$	$t(371) = 7.18$ , $p < .001$ ; $d = .74$	$t(376) = 4.69$ , $p < .001$ ; $d = .48$	$t(378) = 14.19$ , $p < .001$ ; $d = 1.46$
Russia	M	4.51	4.32	5.18	3.65	2.5
	SD	.62	.70	1.10	1.36	.61
	Cronbach's Alphas	.70	.72			
	<i>t</i> -test and effect size					

TABLE 10.4

Means, Standard Deviations and *t*-tests of the Difference Between Health Attitude Indicators in the Canadian and Russian Samples

Country	Statistics	Importance of health	How much health depends on people's behaviour	How much people are responsible for their health	How typical is a healthy lifestyle
Canada	M	6.06	5.36	5.81	3.86
	SD	1.05	.96	1.15	1.10
Russia	M	6.09	5.18	5.72	3.12
	SD	.91	1.11	1.07	1.42
	<i>t</i> -test and effect size	<i>n.s.</i>	<i>n.s.</i>	<i>n.s.</i>	$t(334) = 5.68$ , $p < .001$ ; $d = .62$



TABLE 10.5

Means, Standard Deviations and *t*-tests of the Difference Between the Indicators of Health Behaviours and Health Outcomes in the Canadian and Russian Samples

Country	Statistics	Health Status	PWB	Nonsmokers (%)	Nondrinkers of Alcohol (%)	Regularity of Health Care	Health-Maintenance Practices
Canada	M	5.36	5.26	80.00	19.00	5.27	6.11
	SD	1.13	.66			1.27	2.32
Russia	M	5.30	5.07	67.60	32.80	4.54	4.39
	SD	1.03	.55			1.78	2.22
	<i>t</i> -test and effect size	<i>n.s.</i>	<i>t</i> (386) = 3.10, <i>p</i> < .001; <i>d</i> = .32			<i>t</i> (317) = 4.59, <i>p</i> < .001; <i>d</i> = .52	<i>t</i> (381) = 7.45, <i>p</i> < .001; <i>d</i> = .76

Canadian students see more people around them practising healthy lifestyles in comparison to Russian students. Other indicators do not differ between the two samples.

Self-reported health status was assessed by one item about participants' health today. The Scale of Psychological Well-being (Ryff, 1995) with eighteen items that measure self-acceptance, positive relations, autonomy, environmental mastery, purpose in life and personal growth was used to assess participants' psychological well-being (PWB). Cronbach's alpha for the Canadian sample was .82 and for the Russian sample it was .65. Self-reported frequency of tobacco smoking and alcohol drinking during the previous thirty days was used to measure these health-risky behaviours. Regularity of personal health care was represented by one item: "How regularly do you take care of your health?". A list of ten health-maintenance practices that students may perform, such as exercise, dieting, taking vitamins and using dental floss, was presented to the participants, and they were asked to respond with *yes* or *no* answers. The scores of health-maintenance (HM) (physical exercise and dieting) and health-risky (HR) (smoking and alcohol use) practices were calculated. The means, standard deviations and the test of differences for these indicators are presented in table 10.5.

Although the self-reported health status for our young participants is relatively similar in both samples, the PWB and regularity of health care are higher for Canadians than for Russians. Canadian students also smoke less but drink more than Russian students.

The motivation for HR and HM behaviours were assessed by the modified self-regulation questionnaire, which included external, introjected, identified and integrated regulations and intrinsic motivation, based on the propositions of SDT (Ryan & Connell, 1989; Ryan & Deci, 2002). Students were asked about their reasons for performing the above-mentioned health-related behaviours (exercising, dieting, smoking and drinking alcohol), and they were provided with answers arranged according to the above-mentioned forms of motivational regulation. *External regulation*: Behaviour is performed because of external rewards

TABLE 10.6

Means, Standard Deviations and *t*-tests of the Differences Between the Indicators of Health Behaviours Motivation in the Canadian and Russian Samples

Country	Statistics	HR-CM	HR-AM	HR-IM
Canada	M	1.84	2.18	3.30
	SD	.85	1.01	1.10
Russia	M	1.30	2.28	2.88
	SD	.64	1.33	1.50
	<i>t</i> -test and effect size	<i>t</i> (355) = 6.95, <i>p</i> < .001; <i>d</i> = .74	<i>n.s.</i>	<i>t</i> (322) = 3.06, <i>p</i> < .01; <i>d</i> = .34
Country	Statistics	HM-CM	HM-AM	HM-IM
Canada	M	2.20	3.63	2.89
	SD	.97	.93	1.10
Russia	M	1.76	3.69	3.73
	SD	.90	1.12	1.21
	<i>t</i> -test and effect size	<i>t</i> (381) = 4.62, <i>p</i> < .001; <i>d</i> = .47	<i>n.s.</i>	<i>t</i> (364) = -7.09, <i>p</i> < .001; <i>d</i> = .75

HM – health-maintenance behaviour; HR – health-risky behaviour; CM – controlled motivation; AM – autonomous motivation; IM – intrinsic motivation

or punishments; *introjected regulation*: Behaviour is motivated by a desire to meet expectations of others and to avoid feelings of anxiety or guilt; *identified regulation*: Health practices are executed because a person believes in their importance; *integrated regulation*: A person executes behaviour after thorough thinking and considering different options; and *intrinsic motivation*: Behaviour is implemented because it is fun, interesting and enjoyable to do. The following indicators were created for each group of health-related behaviours: controlled motivation (CM) (external and introjected regulations combined) under which health-related behaviours are driven by external forces; autonomous motivation (AM) (identified and integrated regulations combined) when health-related behaviours are motivated by self-determined rational and responsible choices; and intrinsic motivation (IM), when behaviour is driven by pleasure-seeking, enjoyment, curiosity and hedonism. We use the term *self-determined motivation* to describe both autonomous and intrinsic forms of motivation. The means, SDs and test of differences for these indicators are presented in table 10.6.

There is no consistent pattern of differences in health motivation between the samples. Canadians are stably higher in the controlled motivation of HR and HM behaviours. They are also higher in the intrinsic motivation for HR behaviours but lower on the same motivation for HM behaviours when compared to Russian students.



## Results

To test our hypotheses about the relations of social capital, horizontality and verticality to motivation and health-related outcomes, we conducted a correlational analysis among four groups of indicators: associations of the indicators of social capital with the indicators of health and health attitudes, relations of the indicators of motivation with the health and health attitudes indicators, and correlations of social capital with the indicators of motivation. This analysis was complemented by regression analysis to test the hypothesis of the mediational role motivation plays in relations between social capital and health outcomes. These correlations are presented in tables 10.7, 10.8 and 10.9.

Based on the correlation analysis, social capital and its components are more closely associated with behaviour frequencies and attitudes about health in Canada than they are in Russia. There are sixteen significant correlation coefficients in the Canadian sample (out of a possible thirty coefficients) in comparison to only eight in the Russian one. However, all these correlations are in the same direction across both groups. In the Canadian sample, all indicators of social capital are positively associated with PWB, with the frequencies of health-maintenance behaviours, with the feeling of responsibility for one's health, and with the opinion that health depends on one's behaviour (marginally). The radius of trust in this sample also correlates with the overall self-reported health status, and national identity is associated with PWB and the frequencies of HM behaviours. These correlations mean that, as expected, social capital has positive relations with a diverse array of health and well-being indicators. Verticality has positive relations with the students' health status and frequencies of their HM behaviours as well, which may not be that surprising for this sample because young people may identify good health and physical fitness as factors that support their striving for status and acceptance. In Russia, SC has negative associations with HR behaviours and several positive correlations with health attitudes. The radius of trust associates negatively with health-risky behaviours in both countries, meaning that the more these young people trust their institutions, the less they are involved in HR practices. The strength of the correlations in both samples vary from small to medium.

TABLE 10.7

Correlations Between Perceived Social Capital Indicators and Health-Related Behaviours and Health Attitudes

	HM Behaviours	HR Behaviours	PWB	Responsibility for Health	Health Depends on Behaviour	Health Status
Social capital	.14*	-.15*	.34**	.15*	.22**	
Radius of trust	.14*	-.21**	.26**	.16*		.20**
National identity	.15*		.24**		.13*	
Horizontality	.17*		.20**	.14*	.18*	
Verticality	.14*				.12*	.15*
						.21**

Note: Canadian data are located on the left side of the cells and are in bold. HM – health-maintenance behaviours; HR – health-risky behaviours; PWB – psychological well-being

\* $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$ .

TABLE 10.8

Correlations Between Motivation Indicators and Health Behaviours and Health Attitudes

Motivation Indicators	HM Behaviours	HR Behaviours	PWB	Importance of Health	Health Status
HM_CM		.16*	-.20**		
HM_AM	.37* .27**	-.19*	.17* .25**	.31** .32**	.21**
HM_IM	.29* .29**	-.15*	.35**	.27** .25**	.13* .26**
HR_CM					-.21**
HR_AM			-.15*		
HR_IM	.25**	.23*			

Note: The legend for motivation indicators is the same as for Table 6; PWB = psychological well-being; Canadian data are located on the left side of the cells and are in the bold. HM – health-maintenance behaviour; HR – health-risky behaviour; CM – controlled motivation; AM – autonomous motivation; IM – intrinsic motivation

\* $p < .05$ . \*\* $p < .01$ .

The correlations of the indicators of motivation with health and health attitudes measures are presented in table 10.8.

In both countries, the motivation for HM behaviours is a powerful correlate of various health indicators. Self-determined motivation (both autonomous and intrinsic) for HM behaviours associated positively with the frequencies of healthy behaviours, PWB and positive cognitions about health in both countries. This means that the more self-determined the young people are in their motivation to promote health, the better their well-being, the more positive their attitudes about their health, and the more frequently they engage in HM behaviour. In the Russian sample, this type of motivation also correlates negatively with the frequencies of HR behaviours, so the more the Russian students self-determine to stay healthy, the less they are involved in health-risky behaviours. In both samples, the intrinsic motivation for HM behaviours correlated positively with self-reported health status. In the Canadian sample, intrinsic motivation associates positively with the frequency of HM behaviours, whereas in the Russian sample, it correlates positively with HR behaviours. This means that in the Canadian sample, those who are involved in HM practices might also be involved in HR behaviours because of hedonic reasons, whereas in the Russian sample, this type of motivation (intrinsic motivation for HR behaviours) correlates exclusively with the frequencies of HR behaviours. The controlled motivation for HR behaviours correlates negatively with health status in the Russian sample, and the autonomous motivation for HR behaviours associates negatively with PWB in the Canadian sample. These correlations mean that, for Russian students, coercion to smoke or drink alcohol is associated with low health status. For Canadian participants whose well-being status is low, they prefer to smoke or drink for volitional reasons.

The last set of correlations between social capital indicators and health behaviours motivation is presented in table 10.9.

The correlations in this table can be summarized as follows. In the Canadian sample, the index of social capital and all its components (except for perceived verticality) are associated with self-determined motivation for HM behaviours. In the Russian sample, these correlations are in the same direction. These correlations

TABLE 10.9

Correlations among Social Capital Indicators and Health Behaviours Motivation in Canadian and Russian samples

	HM_CM	HM_AM	HM_IM	HR_CM	HR_AM	HR_IM
Social capital		<b>.26**</b>	<b>.14*</b>	<b>.21**</b>		
Radius of trust		<b>.18**</b>	<b>.21*</b>	<b>.14*</b>		
National identity		<b>.18*</b>	<b>.16*</b>		<b>-.16*</b>	<b>-.15**</b>
Horizontal		<b>.17*</b>				
Verticality	<b>.12*</b>	<b>.18*</b>		<b>.21**</b>	<b>.21**</b>	

Note: Canadian data are located on the left side of the cells and are bold. HM – health-maintenance behaviour; HR – health-risky behaviour; CM – controlled motivation; AM – autonomous motivation; IM – intrinsic motivation

\* $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$ .

mean that in both samples the horizontal component of social capital has a tendency to be associated with self-determined forms of motivation. The indicator of national identity is associated positively with the motivation for HM behaviours in Canada and negatively with the motivation for HR behaviours in Russia. These correlations mean that the higher the pride for their national identity, the more our Canadian participants maintain their health for self-determined reasons and less our Russian subjects are engaged in health-risky practices for controlled reasons. The perception of verticality is associated with controlled forms of motivation for HR and HM behaviours in both countries. These correlations indicate that the more these young people perceive their societies to demand status and competition, the more their motivation to both maintain and risk their health is based on searching for rewards and meeting others' expectations. Based on these results, our hypotheses about relations among social capital, health-related behaviours and their motivation received some support.

To test our hypothesis about the mediating role of motivation in relations between SC and health-related outcomes, we conducted a mediation analysis (Baron & Kenny, 1986; MacKinnin, Fairchild, & Fritz, 2007). We conducted this analysis only on the Canadian sample because the level of SC and the number of its correlations with the outcome variables is higher in this sample. As the outcome variables, we used the frequencies of HM behaviours and PWB, and the summary score of SC served as the predictor variable. We calculated the relative autonomy index (RAI), which served as the mediation variable, by subtracting the score for controlled motivation from the score for autonomous motivation. We discovered that SC positively predicted both PWB ( $\beta = .34$ ,  $p < .001$ ) and frequencies of HM behaviours ( $\beta = .14$ ,  $p < .005$ ). RAI predicted them as well: for PWB ( $\beta = .22$ ,  $p < .001$ ) and for frequencies of healthy behaviours ( $\beta = .19$ ,  $p < .001$ ). When RAI entered the equation as the mediation variable, the relations of SC with HM behaviours disappeared, whereas the relations of SC with PWB remained intact. This analysis demonstrated that both SC and motivation predict well-being, whereas frequencies of healthy behaviour are predicted by SC only through autonomous motivation. These results partially supported our hypothesis that SC provides its benefits through autonomous motivation. This holds true for frequencies of healthy behaviour but not for PWB.

## Discussion

This exploratory study sheds light on the possible psychological mechanisms of the positive role that social capital and horizontality play in health behaviour. We hypothesized that the positive relations of social capital and the culture of horizontality with people's health and well-being would be partly explained the self-determined motivation that these relations promote in people. We hypothesized that verticality would have negative or no relations with self-determination motivation and health.

Our data confirm that Canada is perceived as having higher social capital through than Russia, which correspond closely to the data from other sources. Canadian students reported a higher level of trust towards other people and official institutions, a stronger national identity and more horizontal attitudes among their fellow citizens than Russian students did. The level of perceived verticality is also higher in Canada, although we expected it to be higher in Russia.

Second, our study uncovers that self-reported indicators of the horizontal component of social capital have stable positive associations with various aspects of health-related functioning in two countries with different levels of SC. These results are not surprising, as numerous studies have discovered that social capital relates to and statistically predicts health, well-being and happiness (Almedom, 2005; Campbell, et al., 1999; Franco, Alvarez-Dardet, & Ruiz, 2004; Gundelach & Kreiner, 2004; Hawe & Shiell, 2000; Helliwell, 2005; Kunitz, 2004). This means that independent of the level of social capital, as it is perceived in a society, the relationships that are built on the values of trust, high identity, respect and tolerance associate positively with the frequencies of health maintenance behaviours, psychological well-being, more responsible health attitudes and overall health. Despite the same direction of these correlations, it is noticeable that in Russia – the country with a lower level of SC – the effect sizes and number of significant correlations between these two sets of variables are lower than in Canada – the country with a higher SC. It is highly probable that in countries with a higher level of the horizontal indicators of social capital, the role of these parameters in people's behaviour is more pronounced than in countries with a low level of horizontality. Two positive correlations of perceived verticality with frequencies of health-maintenance behaviours and health status were discovered in the Canadian sample, which may mean that when Canadian students perceive their society as vertical, they may still behave in a healthy manner and have a high health status. There are no such relations in the Russian sample. These relations indicate to us that verticality within a highly horizontal society may have a positive impact on people's health. They can also be interpreted to show that, in the culture of verticality, people may feel a need for good health and actually be involved in healthy behaviours because it is prestigious, advantageous in fighting for status and looks appealing to others. On a more general note, we want to acknowledge that the question of the role of verticality and its balance with horizontality are unexplored issues and should be addressed in future research.

Third, our data show that the self-determined motivations for health-related behaviours have almost identical positive correlations with the frequencies of



health-maintenance behaviours, psychological well-being, understanding of the importance of health and self-reported health status in both samples. These correlations mean that the more the participants report having self-determined reasons for caring about their health, the better their attitudes and overall experiences of health are.

Remarkably, these correlations are nearly identical in two countries with different levels of social capital. We interpret this consistency as supporting the SDT proposition that autonomous motivation is a universally positive predictor of the indicators of people's functioning in different domains, including health. Thus, SDT health researchers have discovered that autonomous motivation has positive relations with more efficient participation in weight-loss programmes (Williams, Grow, Freedman, et al., 1996), predicts smoking cessation (Williams, Gagné, Ryan, et al., 2002) and predicts the dietary self-care of diabetes patients (Senecal, Nouwen, & White, 2000). Not many studies have addressed the motivation of health-risky behaviours. Knee and Neighbors (2002) discovered positive relations between extrinsic (controlled) motivation and the drinking behaviour of university students, but unfortunately the researchers did not elaborate on the role of self-determined motivation in health-risky behaviour. We discovered some interesting trends. HR behaviours such as drinking alcohol and smoking cigarettes can be done for extrinsic reasons, related to expectations of others or direct pressures, or for self-determined reasons, mostly for enjoyment and pleasure. Canadians show higher levels of both of these types of motivations (controlled and intrinsic) for risky behaviours in comparison to Russians. Overall, these results are in a full concordance with the health research guided by self-determination theory, which discovered that self-determined motivation is universally important for health maintenance and promotion (Williams, et al., 2010; Williams, McGregor, Sharp, et al., 2006; Williams, Minicucci, Kouides, et al., 2002)

Is the intrinsic motivation for health-risky behaviour beneficial? This is hard to say. In the Canadian sample, this motivation relates positively with the frequencies of health-maintenance behaviours, meaning that the students who perform risky behaviours for pleasure also have a tendency to take care of their health. However, if Canadians are involved with health-risky behaviours after thoughtful considerations (autonomous motivation), they tend to report less positive well-being. In the Russian sample, intrinsic motivation for HR behaviours related positively with the frequency of health-risky behaviours; in other words, the more people get pleasure from risky behaviours, the more frequently they do them. The Russians who are involved with health-detrimental behaviours for controlled reasons tend to report lower health status. All these data mean that the motivation for risky behaviours could be as complex as the motivation for the healthy behaviours that range from self-determined to controlled. This motivation should be studied more thoroughly and more data are needed.

Fourth, this study provides some evidence that the horizontal component of social capital could work through the mechanism of motivation for health-related behaviours. There is a tendency for positive relations between social capital and self-determined motivation for health-maintenance behaviours in both samples. The national identity indicator associates negatively with the controlled and intrinsic motivation for risky behaviour in the Russian sample. These are interesting relations that

require more inquiry into them, as it appears that being proud of one's own country may prevent people from being involved in harmful behaviours. Verticality is related to the controlled forms of motivation for both health-maintenance and health-risky behaviours in the Russian sample and marginally with healthy behaviours in the Canadian sample. This means that competitiveness and hierarchy orientation in one's social environment could be motivating for health-related behaviours. Being fit and strong without avoiding a glass of wine or a puff of a cigarette may promote one's prestige, meet the expectations of others and be advantageous for fighting for status. Still, this is an extrinsic motivation and the questions are: How long-lasting is its effect, and is it healthy in the long run to be extrinsically motivated? The differentiation between the controlled motivation for healthy and risky behaviours and their consequences is also worthy of further exploration. Finally, our further analysis reveals the mediating role that autonomous motivation plays in predicting the frequency of health-maintenance behaviours by social capital. Psychological well-being is predicted by both social capital and autonomous motivation.

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## Implications

In our opening sentence, we stated that people want to be happy, healthy and successful. Correspondingly, every society needs healthy and productive members. If this is true, then why do millions of people suffer from misery, poverty and disease? Why are so many countries incapable of providing their citizens with decent conditions for healthy living and a productive existence? Our thinking about these questions from the positions of sociocultural psychologists led us to the conclusion that one of the fundamental concerns could be the correspondence between human natural functional capabilities and needs and the characteristics of the sociocultural environment where people exercise these capabilities and gratify their needs. More specifically, our concern is regarding the extent to which these sociocultural characteristics – basic values; norms of what is right, moral and good; rules of social interactions; expectations about other people's behaviours; social institutions – provide support and facilitate the development and optimal functioning of people's fundamental needs and capacities. Societies that facilitate these fundamentals of human existence are more productive, and they are typically inhabited by more happy and healthy members in comparison to societies that match poorly with what constitute the essentials of human nature. What are these essentials? What conditions support them, and why?

Our main point is that in order to have positive attitudes towards health, and in order to behave and stay healthy, people need to feel themselves free – free in their thoughts, actions and ability to choose what is best for them. One of the ways to achieve this freedom is to nurture people's self-determined motivation, autonomous thinking and responsible behaviour and then, through them, cultivate healthy living. We suggested that societies' social capital (and its horizontal dimension) is the primary source of facilitating people's autonomous and self-determined motivation with regard to their health. Our empirical data support our hypotheses about the

role that social capital plays in people's autonomous motivation of health behaviour and, as a result, in promoting their health; people's self-determined motivation for health behaviour is important for their well-being and healthy practices, and social capital and horizontality both contribute to health behaviour through this type of motivation.

Each society consists of a mixture of horizontal and vertical relations, and its social capital is comprised of a mixture of horizontality and verticality. Horizontal relations and the culture of horizontality could be presented as a network of people who have equal opportunities to associate with one another, who treat each other as equal and respected individuals and, based on this respect, who tolerate the differences among individuals and build relations based on trust. This type of arrangement allows and supports people's individual choices, giving them an opportunity to find the best possible way to satisfy their needs and achieve their personal goals. Disputes and conflicts are resolved through dialogues and negotiations. This network of equal, trustful and respectful relations encourages people to be thoughtful about their actions, including health-related behaviour, and to support healthy choices based on their own self-determined considerations. Because of this autonomous motivation, people's engagement in healthy behaviours becomes more frequent and, as other research demonstrates (Ryan, Patrick, Deci, et al., 2008; Williams, Rodin, Ryan, et al., 1998), more persistent and enduring. The bottom line of this chain of events is that in horizontal societies, people are healthy, live long, feel happy and feel self-confident and content.

Vertical relations may be presented as a ladder upon which people with different statuses and power are distributed. On top are people with high status levels and the power to control other people's lives, whereas at the bottom are individuals with low status levels and minimal power to manage their own and other's lives. The culture of verticality is built under the expectation that, if a person is higher in a social hierarchy, he or she should direct and control other people's lives, and if an individual is lower in a social hierarchy, he or she should be obedient and loyal to those in power. It is evident that this social arrangement and such a culture could not support people's autonomous and responsible behaviour, as those in power will always try to tell others what to do and how to run their affairs. Competition for status and higher positions in a culture of verticality promotes competitiveness, hostility and aggression, which may be accompanied by distrust and disrespect. Under these conditions, people may feel a need for good health and actually be involved in healthy behaviours; this could be prestigious, advantageous in fighting for status and appealing to others. The bottom line is that verticality may promote healthy behaviour through extrinsic and controlled motivation, which has been shown to be a less advantageous form of motivation, in comparison to an autonomous one, for people to be happy and healthy in the long run (Ryan, Frederick-Recascino, Lepes, et al., 1997). Similarly, this culture may force people to smoke and drink alcohol, as these practices could be seen as a means to approach higher status levels and help individuals "look cool".

In the exploratory mode, we studied the motivational dynamics of health-risky behaviours – tobacco smoking and alcohol drinking – under the conditions of low and high social capital. There is some evidence that horizontality is not supportive for detrimental health practices and that if people are self-determined in their

pursuit of a healthy lifestyle, they tend to avoid unhealthy practices. Thus, it looks like autonomous motivation is health beneficial not only because it facilitates healthy behaviour but also because it may discourage health-detrimental habits. Young people may be involved in HR behaviour because of pure hedonic reasons – excitement, fun, pleasure and enjoyment. These hedonic reasons may be accompanied by strong social motivations, which we did not study here. Interestingly, intrinsic type of motivation is associated in our study with the frequencies of both detrimental (in the Russian sample) and health-maintenance practices (in the Canadian sample). Social capital in the form of high national identity is associated negatively with this hedonic motivation (among Russian students), and the radius of trust related negatively to health-detrimental practices in both samples. It is possible to conclude that horizontality is beneficial not only in promoting healthy practices but also in discouraging unhealthy practices and, when combined, this gives people in horizontal societies a substantial health advantage compared to people in vertical cultures.

People's psychological well-being is consistently shown to be higher under conditions of horizontality and autonomous motivation. Egalitarian, respectful and trustful relations nurture people's well-being through the gratification of their needs for competence and relatedness, whereas autonomous motivation satisfies their fundamental need in autonomy; altogether, these conditions make people feel good, happy and self-sufficient.

In conclusion, we may say that if we are right in our conclusions, the deterioration of health and well-being of Russians could be partly explained by a low level of social capital and by the dominance of verticality over horizontality both on political and interpersonal levels in this country. This tendency of the relations between the authoritarian organization of power in Russia and the unprecedented decrease in life expectancy of its citizens has already been reported in the literature (Cockerham, 1999). Our research and the theories that supported it provide some hope for an antidote to this malaise: Russians need to develop social capital and, especially, a culture of horizontality, first in their communities and then on the political level through real democratic reforms of their political establishment. Canada is a good example of a relatively harmonic balance of horizontality with verticality at different levels of social arrangements, which, as we suggest, builds a high social capital and brings substantial benefits to its citizens in the forms of prosperous, healthy and happy lives. Our study tried to connect the social and political levels of the countries' functioning with the psychological level of individuals' performance, and it showed that such connections are not only possible but crucially important and necessary if we want to understand how and through what mechanisms individuals and social structures interact.

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## Future Directions

This project could be extended along several directions. The first is a conceptual one. Most of the concepts used and introduced in this project – human basic psychological needs, functional capabilities, autonomous motivation, agency, the cultures



of horizontality and verticality and others – require more theoretical elaboration. The presented study was done in a traditional quantitative exploratory mode, where, through statistical analyses, we tried to find the regularities of relations among variables and, based on these correlations, get insight and explain the underlying forces. Although the effect sizes of these correlations range from medium to small, the effects are worthy of further investigation. If one were to continue this direction of research, better operationalizations of all the variables would be needed, based on a more elaborated conceptualization. This may include non-self-report measures of social capital and health, more refined measurements of psychological constructs and more diverse groups of people (age, ethnicity, education) in the samples.

The third direction to continue this project would be to try to uncover the experience of people in different sociocultural settings with regard to their health and health behaviours and to understand the meaning of this experience and their behaviours. Phenomenological and interpretative analyses of the practices and narratives of people from different sociocultural settings involved with different health practices would be required in this case. This kind of analysis could be complemented by the cultural analysis of the horizontal and vertical dimensions in participants' societies. One of the options within this interpretative direction is to conduct an ethnographic study with different groups of people and to describe and interpret their health practices within the context of their interactions with fellow citizens. Participant observations and interviews could add an insightful twist to this project. Another option is to conduct interviews with young people of different health statuses and different health motivations to understand their perception of their lives in their social environments.

Notes

1. By *intentional*, we mean the phenomenological interpretation of being dependent on the presence of conscious observers and not “purposeful” or “goal oriented”.

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## Section 4

# Influence of Social Situation