The Importance of Different Forms of Social Capital for Health

Article *in* Acta Sociologica · June 2007

DOI: 10.1177/0001699307077654

CITATIONS
386

READS
240

1 author:

Sara Ferlander
Södertörn University
20 PUBLICATIONS **754** CITATIONS

SEE PROFILE

Acta Sociologica
http://asj.sagepub.com

The Importance of Different Forms of Social Capital for Health

Sara Ferlander

Acta Sociologica 2007; 50; 115
DOI: 10.1177/0001699307077654

The online version of this article can be found at:
http://asj.sagepub.com/cgi/content/abstract/50/2/115

Published by:
SAGE Publications
http://www.sagepublications.com

On behalf of:
Nordic Sociological Association

The Importance of Different Forms of Social Capital for Health

Sara Ferlander
Södertörn University College, Sweden

abstract: The aim of this article is to provide an overview of the concept of social capital and to distinguish its different forms, focusing on their potential effects on health. According to many scholars, social capital comprises social networks, norms of reciprocity or social support and social trust. In this article the core element, the social network, has been further distinguished by the direction of ties and levels of formality, strength and diversity. In the past few years there has been increased interest in social capital in the health field and a great deal of research has suggested that social capital is generally positively related to health. However, little research has been conducted into how different forms of social capital or social networks influence health. What is the difference, for instance, between bonding and bridging social capital in terms of health outcomes? It is important to distinguish the different forms because they imply different resources, support and obligations. More research needs to be conducted into the different forms of social capital and their effects on health. A special focus should be placed on the health impacts of cross-cutting – or bridging and linking – forms of social capital.

keywords: bonding social capital ◆ bridging social capital ◆ cross-cutting social capital ◆ health ◆ linking social capital ◆ medical sociology ◆ social networks

Introduction

In recent decades, 'social capital' has become one of the most popular terms in the social sciences, particularly across the disciplines of sociology, economics, education and public health. Interest in social capital is often related to the work of Bourdieu (1985), Coleman (1988) and Putnam (1993). The term is generally described as a resource accessed through social networks. Putnam (2000) writes: 'the core idea of social capital is that social networks have a value . . . social contacts affect the productivity of individuals and groups' (pp. 18–19).

Although explicit use of the concept is recent, recognition of the phenomenon is not. Sociologists have long been discussing ideas relating to social capital, even though the term itself has not been used. Social cohesion and community, for instance, were studied over a hundred years ago (Tönnies, 1887; Durkheim, 1897). Although closely related and often used interchangeably (e.g. Putnam, 1993; Wilkinson, 1996; Kawachi et al., 1997; Lomas, 1998; Kawachi and Berkman, 2000), social capital is not synonymous with these two older concepts. Social capital comprises several dimensions, while social cohesion and a sense of community can be regarded as outcomes, as well as sources, of some of them (Ferlander, 2003).

In addition to the social dimension of the term, it is important to consider its capital dimension. It may be argued that the notion of capital constitutes a conceptual distinction

Acta Sociologica ◆ June 2007 ◆ Vol 50(2): 115–128 ◆ DOI: 10.1177/0001699307077654

between social capital and sociological terms such as 'community' and 'social integration'. In economic terms, capital refers to monetary investments with expected profitable returns in the future. Likewise, Lin (2001) describes social capital as an 'investment in social relations with expected returns in the marketplace' (p. 19). The question in this article is what health returns can be expected from various forms of social relations.

Variations in social capital have been used to explain educational achievement (e.g. Coleman, 1988), democracy (e.g. Putnam, 1993) and levels of crime (e.g. Walberg et al., 1998). According to Putnam (2000), however, in none of the outcomes 'is the importance of social connectedness so well established as in the case of health and well-being' (p. 326). Although it is generally accepted that social capital has a positive value, it is important to acknowledge that its consequences may also be negative (Portes and Landolt, 1996). Coleman (1988) argues that social capital can be valuable in facilitating certain actions, but 'may be useless or even harmful for others' (p. S98).

Despite the widespread attention social capital has received, much confusion remains. Its popularity could lead to an overloaded concept with confusion about its meaning, measurement and outcome (Nyqvist, 2005). In the public health field, the concept has been criticized for being too vague to lead to new insights (Hawe and Shiell, 2000). In particular, most studies are unclear as to which forms of social connections are the most beneficial for health (Cattell, 2001). As put by Szreter and Woolcook (2004), public health needs a more comprehensive theory of social capital, one that distinguishes its different forms. In this article, I seek to clarify the complex concept of social capital by providing an overview and distinguishing its different forms, while focusing on the potential effects on health.

Social capital

Definitions and elements of social capital

Although the concept of social capital has been defined in various ways, most definitions include two aspects: one structural the other cognitive, i.e. the social connections and their more subjective elements. Most definitions revolve around three elements: social networks, norms of reciprocity and trust. The social network can be seen as a structural aspect of social capital, and participation in the network characterizes a behavioural trait. Norms of reciprocity and trust, however, are more cognitive aspects of social capital, characterizing values or attitudes (Ferlander, 2003). Like most scholars, Putnam (1995) defines social capital as a combination of these aspects: 'features of social organization such as networks, norms, and social trust that facilitate co-ordination and co-operation for mutual benefit' (p. 67).

Most scholars (e.g. Woolcook, 1998; Putnam, 2000, Ferlander, 2003) view the social network as the core element of social capital. Bourdieu (1985), for instance, defines social capital as 'the actual or potential resources which are linked to possessions of a durable network . . .' (p. 248). However, many scholars also regard its content – the more cognitive aspects of social capital – as crucial to the concept (e.g. Putnam, 1993; Wellman and Frank, 2001). It is argued that the network would collapse without reciprocal norms and trust.

Although norms of reciprocity are seldom defined, it is often assumed that they refer to a variety of forms of exchange of social support (Blanchard and Horan, 1998). Social support can be further divided into emotional, instrumental and informational support and social companionship (Weiss, 1974; Cohen and Wills, 1985). Emotional support involves the provision of empathy, trust and caring; instrumental support refers to practical help, e.g. in relation to money or labour; and informational support to the provision of advice and information leading to a solution to problems. Companionship involves spending social time with others, i.e. leisure time. Putnam's (1995) final element, social trust, means having confidence in other people. However, institutional trust or trust in the formal system, e.g. the political, tax or

judicial system, is also a significant indicator of social capital. Trust, social and institutional, can be further divided into generalized and specific trust (Ferlander, 2003).

Levels of social capital

Two main schools of social capital can be identified in the literature. The first focuses on how *individuals* gain returns through access to social networks, e.g. in terms of job opportunities, emotional support and good health. This is most common in sociology (e.g. Bourdieu, 1985; Wellman and Berkowitz, 1988; Coleman, 1990; Portes, 1998; Lin, 2001). At the individual level, social capital is often measured through questions about social connections and social support. This school is often labelled the network approach. However, by equating social capital with social networks and social support, it has been argued that one may simply be 'pouring old wine into new bottles' (e.g. Kawachi et al., 2004).

Over time, social capital has expanded to include elements at a more *collective* level, such as generalized social trust (e.g. Putnam, 1993; Fukuyama, 1995; Kawachi et al., 1997). The focus of such studies is to explore how networks, norms and trust are vital in the creation and maintenance of the collective asset. At this level, social capital measurements often rely on survey questions about trust. This school of social capital is often labelled the social cohesion – or communitarian – approach. Portes (1998) has criticized this view, arguing that social capital, as a property of collectives, is simultaneously a cause and an effect: 'if your town is "civic", it does civic things' (p. 20). According to Woolcook (1998), social capital should be defined by its sources, the social ties, rather than its effects, e.g. trust.

Despite an ongoing debate whether social capital is a property of individuals or collectives, many scholars argue that it can be both. As pointed out by Lin (2001), social relations can be beneficial (or harmful) to both the individual and the collective. Kawachi (2006) similarly writes that 'it would be a mistake to view social capital in mutually exclusive terms, as either an individual or a collective asset; clearly, it can be both' (p. 2). In this article, social capital is seen as a resource, individual or communal, accessed via various forms of social networks.

Forms of social networks

In addition to the different elements and levels of social capital, it also has different forms, which can be described as different types of social networks, the structural and core element of social capital. Here, social networks have been conceptually distinguished by the direction of their ties and their levels of formality, strength and diversity, yielding horizontal and vertical, formal and informal, weak and strong, and bridging, bonding and linking networks. Although the dimensions are conceptually different, in reality there is, of course, much overlapping between them.

The first distinction concerns horizontal and vertical connections. The significance of horizontal networks has long been emphasized in the literature (e.g. Coleman, 1990). Putnam (1993) has focused on voluntary associations, claiming that they bring 'equivalent status and

Table 1 *Examples of different forms of network ties: horizontal and vertical, formal and informal*

Level of formality and direction of ties	Formal ties	Informal ties
Horizontal ties	Voluntary associations	Family, relatives, friends, neighbours and colleagues
Vertical ties	The Church, work hierarchies and network ties between citizens and civil servants	Criminal networks, clan relations and street gangs

power', facilitating cooperation and the creation and maintenance of a civil society and social capital. On the other hand, he has argued that vertical networks, such as those characterizing the Church and even organized crime, link 'unequal agents in asymmetric relations of hierarchy and dependence' (Putnam, 1995: 173). In his Italian study, Putnam (1993) found that social life in the northern, more democratic regions tends to be based on horizontal relations; and in the southern, less democratic regions on vertical ties. The argument is that horizontal networks are crucial for building up and maintaining social capital because the interaction within them is equal. However, as discussed later, the significance of vertical ties for social capital has been discussed recently (Woolcook, 1998).

The second distinction is that between formal and informal connections. The former are, again, exemplified by contacts within voluntary associations, but also between citizens and civil servants; the latter take the form of contacts among friends, family, neighbours and colleagues. In his early writings, Putnam (1993) concentrated on formal networking, arguing that it builds civic skills and provides access to formal support, such as informational support and support from agencies such as childcare and medical services. However, it has been suggested that more informal networks, such as those involving neighbours, friends and family, should also be taken into account when analysing social capital (Lin, 2001). These networks generally do not build civil society as effectively as involvement in voluntary associations, but are still vital in sustaining social networks and providing sources of emotional support (Newton, 1997). For example, they are seen as the main source of social capital in the former Soviet Union, where more formal forms of social capital tend to be lacking (Åberg, 2000; Rose, 2000).

In addition to the direction of ties and level of formality, networks can also be classified by their strength. One of the most familiar classifications of social networks is the distinction between strong and weak ties (Granovetter, 1973). The former are intimate ties, e.g. with immediate family and close friends, and tend to be multi-stranded and regularly maintained. Coleman (1990) tends to equate social capital with these forms of strong ties, portraying the family as the typical form of social capital. Weak ties, on the other hand, are non-intimate ties, e.g. with acquaintances, and tend to be single-stranded and maintained infrequently. Unlike Coleman, Putnam has focused more on weak ties in voluntary associations[1] and less on the role of the family. In his well-known article *The Strength of Weak Ties*, Granovetter (1973) stresses the role of weak ties in finding a new job.

A more recent distinction is that between bonding and bridging social capital (Gittel and Vidal, 1998; Narayan, 1999; Putnam, 2000). Bonding social capital is based on networks that are similar in terms of certain demographic factors, such as age, ethnicity and/or education.

Table 2 *Examples of different forms of network ties: bonding, bridging and linking, strong and weak*

Level of strength and diversity	Strong ties	Weak ties
Bonding (horizontal) ties	Close friends or immediate family with similar social characteristics, e.g. social class or religion	Members with similar interests or social characteristics within voluntary associations
Bridging (horizontal) ties	Close friends or immediate family with different social characteristics, e.g. age, gender or ethnicity	Acquaintances and members with different social characteristics within voluntary associations
Linking (vertical) ties	Close work colleagues with different hierarchical positions	Distant colleagues with different hierarchical positions and ties between citizens and civil servants

These homogeneous networks tend to be inward-looking and strengthen exclusive identities. Bourdieu (1985), for instance, views social capital as based on homogeneous networks in terms of social class, and as an asset of the privileged only. Bonding networks may also include negative features, such as localism, exclusion, bullying and mistrust of outsiders (Portes and Landolt, 1996; Portes, 1998). An example of this could be the strong bonds within the two main religious groups in Northern Ireland, enabling cooperation *within* them, but hindering it *between* them (Field, 2003). Bridging social capital, however, is based on heterogeneous and outward-looking connections that include people across social groups. As Putnam (2000) writes: 'bridging social capital can generate broader identities and reciprocity, whereas bonding social capital bolsters our narrow selves' (p. 23).

Bonding and bridging networks are often used synonymously with strong and weak ties (e.g. Lin, 2001; Islam et al., 2006; Van Oorschot et al., 2006). Although the distinctions are closely connected, they are not synonymous. While strong ties refer to people who are emotionally close to oneself, bonding ties refer to people similar to oneself. Weak ties refer to people who are emotionally distant from oneself, whereas bridging and linking ties refer to people who are different from oneself (Ferlander, 2003). A family, for instance, often constitutes a social network of strong ties, but tends to be bridging in terms of gender and age. Although conceptually different, the impacts of the two sets of ties are similar: the value of networks of strong and bonding ties lies in their tendency to provide emotional and instrumental support. Moreover, as mentioned earlier, negative effects of social capital tend to be linked with these forms too. The value of weak and bridging ties lies in the provision of wide informational support. As put by Briggs (1998), bonding social capital is vital for 'getting by', while bridging social capital is crucial for 'getting ahead'.

In addition to bonding and bridging social capital, Woolcook (1998) adds a third dimension to the concept: linking social capital. This form of social capital can be seen as a sub-dimension of bridging social capital, because both forms refer to ties that cut across different groups: so-called cross-cutting social capital. However, whereas bridging (and bonding) social capital refers to horizontal ties; linking social capital refers to vertical ones. Linking social capital connects people across vertical differentials up and down the social scale (Woolcook, 2001), constituting a mix of informal and formal links. Like bridging connections, linking ties enable people to access resources and information outside their own social network (Field, 2003). However, as noted by Putnam (1993) and later by Szreter and Woolcook (2004), vertical or linking social capital can also be used for negative purposes, such as nepotism, corruption and suppression.

Measuring social capital

Along with the increased popularity of the theoretical aspect of social capital, there is also a growing discussion of how to measure the concept (e.g. Lochner et al., 1999; Stone, 2001; Ferlander, 2004; Lillbacka, 2006). In general, however, the theoretical debate surrounding the conceptualization is more developed than are existing tools for measurement.

Although social capital is seen as a multidimensional concept, most empirical studies rely on one-dimensional measures. The two most common indicators of social capital are membership of voluntary associations and generalized social trust (e.g. Putnam, 1993; Kawachi et al., 1997; Knack and Keefer, 1997). These are also the most commonly used indicators in studies of health outcomes. There are, however, few existing instruments with which to measure the various forms of social capital. As Kawachi and colleagues (2004) have stated, new instruments including various dimensions of the concept must be developed.

There has recently been a debate about our ability actually to measure bonding, bridging and linking social capital empirically (Szreter, 2002; Baum and Ziersch, 2003), but a few recent attempts to measure these and other forms of social capital have already been made (e.g.

Mitchell and LaGory, 2002; Ferlander, 2003; Kim et al., 2006). It should be noted, however, that Mitchell and LaGory (2002) operationalized bonding social capital as formal participation – political activities, participation in voluntary associations, community involvement and volunteering – are focusing on networks based on similar interests rather than on networks based on similar social characteristics. Bridging social capital, on the other hand, was measured through questions about connections across different social groups, such as race, gender and level of education. In contrast to this study, Van Oorschot and colleagues (2006) used participation in voluntary associations as an indicator of bridging social capital rather than of bonding social capital. Moreover, in the study by Van Oorschot et al., bonding social capital was measured through questions about contact with family and friends, which is an indicator of *strong* rather than *bonding* social ties.

Distribution of social capital

Like other forms of capital, there is considerable evidence to suggest that there is an uneven distribution of social capital in society, organized along such dimensions as social class, gender, age, ethnicity and locality (e.g. Wacquant and Wilson, 1989; Briggs, 1998; Campbell and Wood, 1999; Ferlander and Timms, 2001). One of the strongest correlates of social capital is education: well-educated people tend to possess more social capital than those who are poorly educated (Field, 2003). The various forms of social capital are also unequally distributed. Poorer people and poorer areas tend to have much bonding, but little bridging and linking – or cross-cutting – social capital (e.g. Briggs, 1998; Woolcook, 1998; Putnam, 2000). Privileged groups tend to possess higher levels cross-cutting social capital than more marginalized ones (Wuthnow, 2002). Baum and Ziersch (2003) warn that this unequal distribution of different forms of social capital may have the potential to reinforce existing health inequalities.

Social capital and health

Definitions and levels of health

In the past few years there has been increased interest in social capital in the field of health. Before moving on to that, however, I will briefly discuss the concept of health. The World Health Organization (1948) defines health as 'a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity'. This is a broad and vague definition which has often been criticized for being a utopian rather than a realistic goal.

In most empirical studies, health is indirectly defined as absence of ill-health. It is often operationalized through questions or data about morbidity or mortality. The most common survey indicators measuring individual health are self-rated (general, physical and mental) health and limiting long-standing ('chronic') illness. Self-rated general health is usually measured through the following question: 'All in all, how would you describe the state of your health these days? Would you say it is excellent, very good, good, fair, poor.' Health of populations, including health in comparative studies, is often measured using mortality-based indices: life expectancy or total and cause-specific mortality rates, variously standardized. Longitudinal studies have shown that there is a link between general self-rated health and mortality (Welin et al., 1985; Kaplan et al., 1996; Idler and Benjamini, 1997). Theories of social capital are not restricted to any specific definition of health, but have been linked to numerous health outcomes.

Empirical studies of social capital and health

Studies of social capital and health are often traced back to the work of Durkheim (1897), who showed that social integration was inversely related to the suicide rate in societies. Since then, social capital has been linked to mental as well as physical health (for reviews, see e.g.

Almedom, 2005; Nyqvist, 2005; Islam et al., 2006), at both individual (e.g. Rose, 2000; Hyyppä and Mäki, 2001) and societal levels of analysis (e.g. Wilkinson, 1996; Kawachi et al., 1999; Putnam, 2000). A further development is the recognition that social capital may operate at both levels of analysis (e.g. Subramanian et al., 2002; Kim et al., 2006).

The concept of social capital was introduced to the public health field by Wilkinson (1996). Wilkinson and colleagues (1998) found that social trust was closely connected with mortality in the United States. Kawachi and colleagues (1997) also found a relationship between social capital at the aggregated level and health in the United States. They demonstrated that greater inequality reduces trust and participation in voluntary associations, both of which affect health (mortality) negatively. At the individual level of analysis, Rose (2000) showed that social capital was related to better self-rated health in Russia. Hyyppä and Mäki (2001) similarly found a positive link between individual-level social capital and self-rated health in Finland.

Social capital has thus been empirically linked to both reduced mortality (e.g. Kawachi et al., 1997; Kennedy et al., 1998; Wilkinson et al., 1998) and increased self-rated health (Kawachi et al., 1999; Rose, 2000; Subramanian et al., 2002; Lindström, 2004). Social capital has also been linked to various health-related behaviours, such as smoking, leisure-time physical activity and dietary habits (e.g. Trieber et al., 1991; Lindström et al., 2000; 2001; Poortinga, 2006) and to the prevalence of various diseases, such as the common cold (Cohen et al., 1997), coronary heart disease (Kawachi et al., 1996), HIV (Williams et al., 1999), depression (Lin et al., 1999) and dementia (Fratiglioni et al., 2000).

It has also been suggested that social capital is significant in the case of people who are already ill. There is, for example, a better chance of survival among post-stroke and post-myocardial infarction patients with high levels of emotional support (Berkman et al., 1992; Glass and Maddox, 1992). However, it is important to remember that illness may also reduce social contacts in the long run, in some cases even leading to social isolation. In such scenarios, the causal process is reversed. This occurrence is often ignored or overlooked in much of the literature on health and social capital. In general, causality is an important, but seldom discussed, topic within the field of social capital and health. This warrants further investigation.

Health effects of strong and bonding social capital

In health research, social capital has mainly been viewed as horizontal, informal and strong social networks (Lynch et al., 2000; McKenzie et al., 2002). There is a vast amount of research demonstrating a positive relationship between dense and strong horizontal networks and health, especially mental health (e.g. Cobb, 1976; Berkman and Syme, 1979; House et al., 1988; Berkman et al., 2000). In their classic work, Brown and Harris (1978) found that women who have a close confidant, i.e. a strong informal tie, to turn to during traumatic life events are less likely to become depressed. The dominant view is that dense informal social networks are invariably good for health. As Putnam (2000) maintains: 'Strong ties with intimate friends may ensure chicken soup when you're sick' (p. 323).

However, it has been suggested that strong bonding networks can also be a source of strain, leading to conflicts, envy and disappointments, and resulting in negative effects on health (e.g. Thoits, 1985; Due et al., 1999). Social relations may be especially damaging in relation to poverty. Living in poverty, with limited access to formal services such as health care, means that the importance of an informal social network increases (Granovetter, 1973; Wellman and Wortley, 1990). As Kunitz (2004) writes: 'Under such circumstances, people have little choice in those upon whom they must depend, and social relations can become oppressive as well as supportive, a hindrance as much as a help' (p. 69). Mitchell and LaGory (2002) found that bonding social capital appears to increase the individual's level of mental distress. These authors conclude that obligations placed on active participants in a deprived community may serve as another source of stress and burden for them.

It has been suggested that strong bonding social networks may affect health through psychological mechanisms. These networks tend to provide emotional support, affecting individual health through mechanisms such as promotion of self-efficiency (a sense of personal control) and reduction of stress (e.g. Berkman and Syme, 1979; Mendes de Leon et al., 1996; Veenstra, 2001). However, strong ties can also be a strong emotional burden for the support provider. This may perhaps be one reason why women generally report more health problems than men do. It has been found that women with large networks are often highly involved in the stress of others, and thus experience more stress themselves than women with smaller networks or than men do (Sarason et al., 1997 in Kunitz, 2004). Vågerö and colleagues (submitted), for instance, found that among women in Russia with a low education, marriage might impose a burden of care and increase the risk of ischaemic heart disease.

Strong bonding social networks may also affect health negatively through behavioural mechanisms. Social networks, where little external information is added and the level of social influence is high, can promote unhealthy norms of behaviour, such as tobacco and alcohol consumption, illicit drug use, unhealthy dietary patterns, physical inactivity and damaging sexual practices (Berkman et al., 2000). The idea that suicidal behaviour may be imitated within social networks dates back to the late 1960s (Kreitman et al., 1969). It has later been shown that socially integrated individuals in 'wet cultures' drink more (Skog, 1991) and that smoking by peers is among the best predictors of smoking for adolescents (Landrine et al., 1994). It has also been found that members of drug injection networks are much more likely to engage in risky behaviours than those who inject alone (Lovell, 2002), increasing the risk of spreading diseases like HIV (Neaigues et al., 1994). There is hence a human tendency to follow one's peers. Whether this is beneficial or harmful to one's health depends on the particular norms that prevail in the network and on the extent of external information added to it.

Health effects of weak and cross-cutting social capital

The importance of examining various forms of social capital has recently been stressed in the health literature (e.g. Szreter and Woolcook, 2004; Kim et al., 2006). As Erickson (2003) writes: 'People are healthier and happier when they have intimates who care about and for them. But they also do better when they know many different people casually' (p. 25). In the public field, the importance of taking both informal and formal social relations into account has been emphasized (Kaplan and Lynch, 1997; Putnam, 2000; Rose, 2000). Putting social networks in a context of vertical structures makes deployment of resources and the power vested in them, factors important for public health, more visible.

Recently, there has been a particular focus on the significance of cross-cutting – bridging and linking – social capital for health (e.g. Narayan, 2000; Whitehead and Diderichsen, 2001; McKenzie et al., 2002). Cattell (2001) found that membership of more restricted networks is associated with poorer self-rated health. Mitchell and LaGory (2002) illustrated that bridging social capital seems to have a positive impact on mental health. In a similar vein, Erickson (2003) found that people with more diversified networks were less depressed. Weitzman and Kawachi (2000) found that the level of social capital accessed through membership in student associations – weak ties – might be important in preventing binge drinking in American colleges.

Cross-cutting ties – bridging and linking social capital – may improve the chances of having the right kind of contacts for various purposes, thus providing access to new information and resources, enhancing people's actual control and improving their ability to solve various problems. For example, it has been found that members of wide networks are well informed about health issues (Erickson, 2003). At the societal level, there might be positive health effects of social capital, especially cross-cutting, through health promotion, healthy norms spread and adopted in society, and social control over deviant behaviour (Kawachi et al., 1999). For instance, high levels of trust in society can facilitate faster and wider diffusion of information,

which may, in turn, promote healthier behaviours (Yip et al., 2007) and control unhealthy behaviours, such as smoking and alcohol abuse (Subramanian et al., 2002).

Moreover, communities with high levels of bridging and linking social capital may also have the power to influence political decisions in society. It has been argued, for instance, that socially cohesive communities are more successful in fighting potential budget cuts of local services and therefore have better access to local services (Sampson et al., 1997; Kawachi et al., 1999), which may also include access to health services. Societies with strong linkages across social divisions – high levels of bridging and linking social capital – are more likely to provide better access to schooling, housing and medical care for their citizens, thus producing better health on average. Hence, some mechanisms linking social capital to health may be 'opportunity-based' rather than solely of a psychological and behavioural nature.

Summary and discussion

The aim of this article has been to discuss different forms of social capital and their potential effects on health, individual or public. Social capital as a concept is still in its infancy and the confusion surrounding it is likely to persist unless its different forms are clearly identified. In this article, a classification has been achieved by conceptually distinguishing various forms of social networks, the core element of social capital. The networks are characterized according to the direction of ties and the levels of formality, strength and diversity, yielding horizontal and vertical, formal and informal, weak and strong, and bonding, bridging and linking ties.

Although overlapping in reality, it is vital to distinguish between these different forms of social capital, theoretically and empirically, because their impacts on health are likely to vary. Different types of social capital imply different kinds of resources, support, influence and obligations, differences that are highly relevant in terms of their health consequences. Strong bonding ties, for instance, tend to provide emotional support, which has positive impacts on health, especially mental health, mainly via psychological mechanisms, such as personal control and stress reduction. For the provider, however, it can be stressful and, thus, have negative health effects. The mutuality of social relations, their unilateral or bilateral nature, is hence an important dimension of social capital which has seldom been discussed in relation to health. Moreover, strong social bonding may also create demands for conformity and restrict access to contacts and information from other sources. Such a consequence would not allow network members to reflect their views against those from outside their immediate social network, leading to – or confirming existing – unhealthy behaviours.

Bridging and linking social capital, on the other hand, are important for health in terms of the control of deviancy and reinforcement of positive health norms in society. The informational exchange and 'opportunity-based' mechanisms are important features within weak and cross-cutting networks. Weak, vertical connections may, for example, have indirect health benefits by facilitating access to career opportunities. Communities with high levels of linking social capital may have the power to influence political health issues. Vertical ties, on the other hand, may restrict control over individuals or communities positioned at the subordinate end of the connection. Hence, vertical connections can lead to different outcomes depending on one's position. This dimension of social capital – linking social capital – is related to power, which is another theme relatively little explored in social capital research, especially in relation to health. As put by Kunitz (2001), social capital might be a part of both the problem and the solution to health problems.

A differentiated approach to social capital will lead to a better understanding of its mixed health effects. The distribution of different forms of social capital may help us better understand the underlying reasons for good or poor health. A society with high levels of bonding social capital and few bridges or links between different social groups may be described as

socially segregated. Wilkinson (1996) argues that such social division tends to undermine social cohesion, leading to poor health performance. A balanced distribution of different forms of social capital, however, would most likely benefit both individuals and public health overall. For example, a wide range of social capital is likely to be beneficial for the individual's health in that access to wide resources helps in dealing with numerous situations. A healthy society can also be characterized by a balanced distribution of different forms of social capital, including high levels of support, information exchange, tolerance, accessibility and empowerment. As suggested by Szreter and Woolcook (2004):

> Without such a . . . balanced development of all three forms of social capital [bridging, bonding and linking], however, social capital, in any of its three forms, may easily be used as a resource for exclusionary and sectional interests, which may have an ambivalent or even negative consequence for the overall population health of society. (p. 661)

More research is needed on the impact that different forms of social capital have on health. There is a lack of theoretical discussion. The development of theoretical concepts and empirical indicators for the various forms of social capital has to be a priority. Special focus should be placed on bridging and linking – or cross-cutting – social capital. It is crucial to include these significant aspects of social capital, which so far have been relatively little explored, if we are to fully understand health outcomes. The role of informational support and so-called 'opportunity-based' mechanisms, as potential mediators between cross-cutting social capital and health, need further investigation. Future discussions should thus focus on how bridging and linking social capital are related to various health outcomes.

Acknowledgements

This research was financed by the Swedish Foundation for Baltic and Eastern European Studies. I thank Associate Professor Ilkka Henrik Mäkinen for commenting on an earlier version of the draft. I also thank Professor Denny Vågerö, Centre for Health Equity Studies, Stockholm University, and Dr Mall Leinsalu, Södertörn University College, for their comments.

Note

1. Stronger and more informal friendship ties can, of course, also develop within voluntary associations.

References

Åberg, M. (2000) 'Putnam's Social Capital Theory goes East: A Case Study of Western Ukraine and L'viv', *Europe-Asia Studies* 52: 295–317.

Almedom, A. M. (2005) 'Social Capital and Mental Health: An Interdisciplinary Review of Primary Evidence', *Social Science and Medicine* 61: 943–64.

Baum, F. and Ziersch, A. (2003) 'Social Capital Glossary', *Journal of Epidemiology and Community Health* 57: 320–3.

Berkman, L. and Syme, S. L. (1979) 'Social Networks, Host Resistance and Mortality: A Nine-Year Follow-up Study of Alameda County Residents', *American Journal of Epidemiology* 109: 186–204.

Berkman, L., Leo Summers, L. and Horwots, R. I. (1992) 'Emotional Support and Survival After Myocardial Infarction: A Prospective, Population-based Study of the Elderly', *Psychosomatic Medicine* 58: 459–71.

Berkman, L., Glass, T., Brissette, T. and Seeman, T. E. (2000) 'From Social Integration to Health: Durkheim in the New Millennium', *Social Science and Medicine* 51: 843–57.

Blanchard, A. and Horan, T. (1998) 'Virtual Communities and Social Capital', *Social Science Computer Review* 16: 293–307.

Bourdieu, P. (1985) 'The Forms of Capital', in J. G. Richardson (ed.) *Handbook for Theory and Research for the Sociology of Education*, pp. 241–58. New York: Greenwood.
Briggs, X. S. (1998) 'Brown Kids in White Suburbs: Housing Mobility and the Many Faces of Social Capital', *Housing Policy Debate* 9: 177–221.
Brown, G. and Harris, T. (1978) *Social Origins of Depression. A Study of Psychiatric Disorder in Women*. London: Tavistock.
Campbell, C. and Wood, R. (1999) *Social Capital and Health*. London: Health Education Authority.
Cattell, V. (2001) 'Poor People, Poor Places, and Poor Health: The Mediating Role of Social Networks and Social Capital', *Social Science and Medicine* 52: 1501–16.
Cobb, S. (1976) 'Social Support as a Moderator of Life Stress', *Psychosomatic Medicine* 38: 300–14.
Cohen, S. and Wills, T. A. (1985) 'Stress, Social Support, and the Buffering Hypothesis', *Psychological Bulletin* 98: 310–57.
Cohen, S., Doyle, W. J., Skoner, D. P., Rabin, B. S. and Gwaltney, J. M. (1997) 'Social Ties and Susceptibility to the Common Cold', *Journal of American Medical Association* 277: 1940–4.
Coleman, J. (1988) 'Social Capital in the Creation of Human Capital', *American Journal of Sociology*. Supplement: 95–120.
Coleman, J. (1990) *Foundations of Social Theory*. Cambridge, MA: Belknap Press.
Due, P., Holstein, B., Lund, R., Modvig, J. and Avlund, K. (1999) 'Social Relations: Network, Support and Relational Strain', *Social Science and Medicine* 48: 661–73.
Durkheim, E. (1897) *Suicide: A Study in Sociology*. Glencoe, IL: Free Press.
Erickson, B. (2003) 'Social Networks: The Value of Variety', *Contexts* 2: 25–31.
Ferlander, S. (2003) *The Internet, Social Capital and Local Community*. Doctoral Dissertation. Stirling: University of Stirling. Available at: http://www.crdlt.stir.ac.uk/Docs/SaraFerlanderPhD.pdf. Accessed November, 2006.
Ferlander, S. (2004) 'Elearning, Marginalised Communities and Social Capital: A Mixed Method Approach', in M. Osborne, J. Gallacher and B. Crossan (eds) *Researching Widening Access to Lifelong Learning: Issues and Approaches in an International Context*, pp. 180–94. London: Routledge.
Ferlander, S. and Timms, D. (2001) 'Local Nets and Social Capital', *Telematics and Informatics* 18: 51–65.
Field, J. (2003) *Social Capital*. London: Routledge.
Fratiglioni, L., Wang, H.-X., Ericsson, K., Maytan, M. and Winbland, B. (2000) 'Influence of Social Network on Occurrence of Dementia: A Community-Based Longitudinal Study', *The Lancet* 355: 1315–19.
Fukuyama, F. (1995) *Trust: The Social Virtues and the Creation of Prosperity*. London: Hamish Hamilton.
Gittel, R. and Vidal, A. C. (1998) *Community Organizing: Building Social Capital as a Development Strategy*. Thousand Oaks, CA: Sage.
Glass, T. and Maddox, G. L. (1992) 'The Quality and Quantity of Social Support: Stroke Recovery as Psycho-Social Transition', *Social Science and Medicine* 34: 1249–61.
Granovetter, M. S. (1973) 'The Strength of Weak Ties', *American Journal of Sociology* 78: 1360–80.
Hawe, P. and Shiell, A. (2000) 'Social Capital and Health Promotion: A Review', *Social Science and Medicine* 32: 148–55.
House, J. S., Landis, K. R. and Umberson, D. (1988) 'Social Relationships and Health', *Science* 241: 540–5.
Hyyppä, M. T. and Mäki, J. (2001) 'Individual-Level Relationships between Social Capital and Self-Rated Health in Bilingual Community', *Preventive Medicine* 32: 148–55.
Idler, E. L. and Benjamini, Y. (1997) 'Self-Rated Health and Mortality. A Review of Twenty-Seven Community Studies', *Journal of Health and Social Behaviour* 38: 21–37.
Islam, M. K., Merlo, J., Kawachi, I., Lindström, M. and Gerdtham, U.-G. (2006) 'Social Capital and Health: Does Egalitarianism Matter? A Literature Review', *International Journal for Equity in Health* 5: 1–28.
Kaplan, G. A., Goldberg, D. E., Everson, S. A., Cohen, R. D., Salonen, R., Tuomilehto, J. and Salonen, J. (1996) 'Perceived Health Status and Morbidity and Mortality: Evidence from the Kuopio Ischaemic Heart Disease Risk Factor Study', *International Journal of Epidemiology* 25: 259–65.
Kaplan, G. A. and Lynch, J. W. (1997) 'Whither Studies on the Socio-Economic Foundations of Public Health?', *American Journal of Public Health* 87: 728–9.
Kawachi, I. (2006) 'Commentary: Social Capital and Health: Making the Connections One Step at the Time', *International Journal of Epidemiology* 35: 989–93.

Kawachi, I. and Berkman, L. (2000) 'Social Cohesion, Social Capital, and Health', in L. Berkman and I. Kawachi (eds) *Social Epidemiology*, pp. 180–4. Oxford: Oxford University Press.
Kawachi, I., Kennedy, B. P. and Glass, R. (1999) 'Social Capital and Self-Rated Health: A Contextual Analysis', *American Journal of Public Health* 89: 1187–93.
Kawachi, I., Kennedy, B. P., Lochner, K. and Prothrow-Smith, D. (1997) 'Social Capital, Income Inequality, and Mortality', *American Journal of Public Health* 87: 1491–8.
Kawachi, I., Kim, D., Coutts, A. and Subramanian, S. V. (2004) 'Commentary: Reconciling the Three Accounts of Social Capital', *International Journal of Epidemiology* 33: 1–9.
Kawachi, I., Sparrow, D., Spiro, A. and Vokonas, P. S. (1996) 'A Prospective Study of Anger and Coronary Heart Disease: The Normative Age Study', *Circulation* 5: 2090–5.
Kennedy, B. P., Kawachi, I. and Brainerd, E. (1998) 'The Role of Social Capital in the Mortality Crisis', *World Development* 26: 2029–43.
Kim, D., Subramanian, S. V. and Kawachi, I. (2006) 'Bonding versus Bridging Social Capital and their Associations with Self-Rated Health: A Multilevel Analysis of 40 US Communities', *Journal of Epidemiology and Community Health* 60: 116–22.
Knack, S. and Keefer, P. (1997) 'Does Social Capital have an Economic Pay-Off? A Cross-Country Comparison', *Quarterly of Economics* 112: 1251–88.
Kreitman, N., Smith, P. and Tan, E.-S. (1969) 'Attempted Suicide in Social Networks', *British Journal of Preventive Social Medicine* 23: 116–23.
Kunitz, S. J. (2001) 'Accounts of Social Capital: The Mixed Health Effects of Personal Communities and Voluntary Groups', in D. A. Leon and G. Walt (eds) *Poverty, Inequality and Health. An International Perspective*, pp. 159–74. Oxford: Oxford University Press.
Kunitz, S. J. (2004) 'Social Capital and Health', *British Medical Bulletin* 69: 61–73.
Landrine, H., Richardson, J. K., Klonoff, E. A. and Flay, B. (1994) 'Cultural Diversity in the Predictors of Adolescent Cigarette Smoking: The Relative Influence of Peers', *Journal of Behavioral Medicine* 17: 331–6.
Lillbacka, R. (2006) 'Measuring Social Capital: Assessing Construct Stability of Various Operationalizations of Social Capital in a Finnish Sample', *Acta Sociologica* 49: 201–20.
Lin, N. (2001) *Social Capital. A Theory of Social Structure and Action*. Cambridge: Cambridge University Press.
Lin, N., Ye, X. and Ensel, W. M. (1999) 'Social Support and Depressed Mode: A Structural Analysis', *Journal of Health and Social Behaviour* 40: 334–59.
Lindström, M. (2004) 'Social Capital, the Miniaturisation of Community and Self-Reported Global and Psychological Health', *Social Science and Medicine* 59*:* 441–51.
Lindström, M., Hanson, B. S., Östergren, P.-O. and Berglund, G. (2000) 'Socioeconomic Differences in Smoking Cessation: The Role of Social Participation', *Scandinavian Journal of Public Health* 28: 200–8.
Lindström, M., Hanson, B. S. and Östergren, P.-O. (2001) 'Socioeconomic Differences in Leisure-Time Physical Activity: The Role of Social Capital in Shaping Health-Related Behaviour', *Social Science and Medicine* 52: 441–51.
Lochner, K., Kawachi, I. and Kennedy, B. P. (1999) 'Social Capital: A Guide to its Measurement', *Health and Place* 5: 259–70.
Lomas, J. (1998) 'Social Capital and Health: Implications for Public Health and Epidemiology', *Social Science and Medicine* 47: 1181–8.
Lovell, A. M. (2002) 'Risking Risk: The Influence of Types of Capital and Social Networks on the Injection Practices of Drug Users', *Social Science and Medicine* 55: 803–21.
Lynch, J., Due, C., Muntaner, A. and Davey Smith, G. (2000) 'Social Capital – Is it a Good Investment Strategy for Public Health?', *Journal of Epidemiology and Community Health* 54: 404–8.
McKenzie, K., Whitley, R. and Weich, S. (2002) 'Social Capital and Mental Health', *British Journal of Psychiatry* 181: 280–3.
Mendes de Leon, C., Seeman, T. E., Baker, D., Richardson, E. and Tinetti, M. (1996) 'Self-Efficiency, Physical Decline, and Change in Functioning in Community-Living Elders: A Prospective Study', *American Journal of Geriatric Psychiatry* 51: S183–90.
Mitchell, C. U. and LaGory, J. (2002) 'Social Capital and Mental Distress in an Impoverished Community', *City & Community* 1: 195–216.
Narayan, D. (1999) *Bonds and Bridges: Social Capital and Poverty*. Policy Research Working Paper 2167. Washington, D.C.: Worldbank.

Narayan, D. (2000) *Voices of the Poor*. New York: Oxford University Press.
Neaigues, A., Friedman, S. R., Curtis, R., Des Jarlais, D. C., Furst, R. T., Jose, B., Mota, P., Stepherson, B., Sufian, M., Ward, T. and Wright, J. W. (1994) 'The Relevance of Drug Injectors' Social and Risk Networks for Understanding and Preventing HIV Infections', *Social Science and Medicine* 38: 67–78.
Newton, K. (1997) 'Social Capital and Democracy', *American Behavioral Scientist* 40: 574–85.
Nyqvist, F. (2005) 'Social Capital and Health – A Research Overview', *Socialvetenskaplig tidskrift* 1: 75–89.
Poortinga, W. (2006) 'Perceptions of the Environment, Physical Activity, and Obesity', *Social Science and Medicine* 63: 2835–46.
Portes, A. (1998) 'Social Capital: Its Origins and Applications in Modern Sociology', *Annual Review of Sociology* 24: 1–24.
Portes, A. and Landolt, P. (1996) 'Unsolved Mysteries: The Tocqueville Files II. The Downside of Social Capital', *American Prospect* 7. Available at: www.prospect.org/archives/26/26-cnt2.html. Accessed July 2005.
Putnam, R. (1993) *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton, NJ: Princeton University Press.
Putnam, R. (1995) 'Bowling Alone: America's Decline in Social Capital', *Journal of Democracy* 6: 65–78. Available at: http://muse.jhu.edu./demo/journal_of_democracy/v006/putnam.html. Accessed April 2002.
Putnam, R. (2000) *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon Schuster.
Rose, R. (2000) 'How Much Does Social Capital Add to Individual Health? A Survey Study of Russians', *Social Science and Medicine* 51: 1421–35.
Sampson, R. J., Raudenbush, S. W. and Earls, F. (1997) 'Neighborhoods and Violent Crime: A Multilevel Study of Collective Efficacy', *Science* 277: 918–24.
Sarason, B. R., Sarason, I. R. and Gurung R. A. R. (1997) 'Close Personal Relationships and Health Outcomes: A Key to the Role of Social Support', in S. Duck (ed.) *Handbook of Personal Relationships: Theory, Research and Interventions*, 2nd edn, pp. 547–73. New York: John Wiley.
Skog, O.-J. (1991) 'Implications of the Distribution Theory for Drinking and Alcoholism', in D. J. Pittman and H. Raskin White (eds) *Society, Culture and Drinking Patterns Reexamined*, pp. 576–96. New Brunswick, NJ: Rutgers Centre of Alcohol Studies.
Stone, W. (2001) *Measuring Social Capital. Towards a Theoretically Informed Measurement Framework for Researching Social Capital in Family and Community life*. Research Paper no. 24, Australian Institute of Family Studies.
Subramanian, S. V., Kim, D. J. and Kawachi, I. (2002) 'Social Trust and Self-Rated Health in US Communities: A Multilevel Analysis', *Journal of Urban Health* 79: S21–34.
Szreter, S. (2002) 'The State of Social Capital: Bringing Power, Politics, and History Back', *Theory and Society* 31: 573–621.
Szreter, S. and Woolcook, M. (2004) 'Health by Association? Social Capital, Social Theory and the Political Economy of Public Health', *International Journal of Epidemiology* 33: 1–18.
Thoits, P. (1985) 'Social Support and Psychological Well-Being: Theoretical Possibilities', in I. G. Sarason and B. R. Sarason (eds) *Social Support: Theory, Research and Applications*, pp. 51–72. Dordrecht: Martinus Nijhoff Publishers.
Tönnies, F. (1887) *Community and Society*. New York: Harper Torchbooks.
Trieber, F., Batanowski, T., Broden, D., Strong, W., Levy, M. and Knox, W. (1991) 'Social Support for Exercise: Relationship to Physical Activity in Young Adults', *Preventive Medicine* 20: 737–50.
Vågerö, D., Koupil, I., Plavinskaya, S., Parfenova, N. and Shestov, D. B. (submitted) 'Educational Differences in Cardiovascular Mortality 1975–2000 are Explained by Risk Factors among Men but Not Women – Evidence from the St Petersburg Cohort Study.'
Van Oorschot, W., Arts, W. and Gelissen, J. (2006) 'Social Capital in Europe: Measurement and Social and Regional Distribution of a Multifaceted Phenomenon', *Acta Sociologica* 49: 149–68.
Veenstra, G. (2001) 'Social Capital and Health', *ISUMA Canadian Journal of Policy Research* 2: 72–81.
Wacquant, L. J. D. and Wilson, W. J. (1989) 'The Cost of Racial and Class Exclusion in the Inner City', *Annals of the American Academy of Political Science* 501: 8–25.
Walberg, P., McKee, M., Shkolnikov, V., Chenet, L. and Leon, D. A. (1998) 'Economic Change, Crime, and Mortality Crisis in Russia: Regional Analysis', *British Medical Journal* 317: 312–18.

Weiss, R. S. (1974) 'The Provisions of Social Relationships', in Z. Rubin (ed.) *Doing Unto Others*, pp. 17–26. Englewood Cliffs, NJ: Prentice Hall.
Weitzman, E. R. and Kawachi, I. (2000) 'Giving Means Receiving: The Protective Effect of Social Capital on Binge Drinking on College Campuses', *American Journal of Public Health* 90: 1936–9.
Welin, L., Tibblin, G., Svardsudd, K., Tibblin, B., Ander-Reciva, S., Larsson, B. and Wilhelsen, L. (1985) 'Prospective Study of Social Influences on Mortality. The Study of Men Born in 1913 and 1923', *Lancet*, 20: 915–18.
Wellman, B. and Berkowitz, S. D. (1988) *Social Structures: A Network Approach*. New York: Cambridge University Press.
Wellman, B. and Frank, K. (2001) 'Network Capital in a Multi-Level World: Getting Support from Personal Communities', in N. Lin, K. Cook and R. Burt (eds) *Social Capital: Theory and Research*, pp. 233–74. New York: Aldine De Gruyter.
Wellman, B. and Wortley, S. (1990) 'Different Strokes from Different Folks: Community Ties and Social Support', *American Journal of Sociology* 96: 558–88.
Whitehead, M. and Diderichsen, F. (2001) 'Social Capital and Health: Tiptoeing Through the Minefield of Evidence', *The Lancet* 358: 165–6.
Wilkinson, R. (1996) *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.
Wilkinson, R., Kawachi, I. and Kennedy, B. P. (1998) 'Mortality, the Social Environment, Crime and Violence', *Social Health Illness* 20: 578–97.
Williams, B., Campbell, C. and MacPhail, C. (1999) *Managing HIV/AIDS in South Africa: Lessons from Industrial Settings*. Johannesburg: CSIR.
Woolcook, M. (1998) 'Social Capital and Economic Development: Towards a Theoretical Synthesis and Policy Framework', *Theory and Society* 27: 151–208.
Woolcook, M. (2001) 'The Place of Social Capital in Understanding Social and Economic Outcomes', *ISUMA – Canadian Journal of Policy Research* 2: 12–22.
World Health Organization (1948) Website of World Health Organization. Available at: http://www.who.int/about/en. Accessed January 2007.
Wuthnow, R. (2002) 'Bridging the Privileged and the Marginalized?', in R. Putnam (ed.) *Democracies in Flux: The Evolution of Social Capital in Contemporary Society*, pp. 59–102. New York: Oxford University Press.
Yip, W., Subramanian, S. V., Mitchell, A. D., Lee, D. T., Wang, J. and Kawachi, I. (2007) 'Does Social Capital Enhance Health and Well-being? Evidence from Rural China', *Social Science and Medicine* 64: 35–49.

Biographical Note: Sara Ferlander, PhD in psychology, is a researcher and lecturer at the Stockholm Centre on Health of Societies in Transition, Södertörn University College, Sweden. Currently, her main research interest is the relationship between social capital and health in Russia. She is involved in a project on social relations, social inequalities, crime and health in Moscow. Another field of interest is the social impacts of the internet with a focus on social capital and social inclusion.
Address: Stockholm Centre on Health of Societies in Transition, Södertörn University College, SE-141 89 Huddinge, Sweden. [email: sara.ferlander@sh.se]