

10 Networks as Social Capital

Introduction

Social capital is a fitting topic for summarizing the field of social networks. Central to the concept are the consequences of social networks, mainly positive but sometimes negative.¹ To oversimplify, social capital implies that “social networks have value” (Putnam 2008). It brings us back to the fundamental premises of social networks, the tradeoff between the comfort and support individuals derive from dense networks of social relationships and the benefits achieved by going beyond local circles and forging bridges to wider universes. Characteristic for a social network-based idea, social capital operates on several levels. Networks in social systems may be nested, for example, organization networks within industry networks. There are also individual actor networks. At each level, social capital has two main consequences: social capital investment and individual social capital. Social capital investment, as is the case for financial capital, can lead to even greater social capital. For example, high voluntary organization participation increases community voter turnout. Individual social capital increases individual well-being—typically, physical and/or mental health, or adjustment and a sense of well-being. Individual social capital can also lead to financial well-being and social and/or occupational upward mobility. Further, social capital has cross-level consequences. For example, high community-level social capital can lead to individual well-being. These are impressive claims and social capital is a complex concept. In this chapter, we will unpack the concept, raise measurement issues, and review data on the consequences of social capital at different levels. We will discover

that although the idea seems relatively straightforward, once explored, the concept raises a host of issues.

According to Putnam (2000, 19) the concept of social capital was introduced as early as 1916. Yet the term “social capital” has come into widespread use relatively recently. Whereas the Web of Science retrieved seven “social capital” citations for the year 1990, a search for social capital articles in 2010 revealed over 12,000 (see figure 10.1).

The inclusiveness of the phrase “social networks have value” has aided this outpouring, and many recent articles on social capital begin by noting the varied definitions of the term. While praising Putnam’s *Bowling Alone* (2000) as putting an important issue on the agenda (as of June 2011, the Web of Science shows well over 700 citations to the book), Claude Fischer noted that social capital “is not much different from saying that social capital is everything psychological and sociological about a person.” As a past editor of the American Sociological Association’s journal *Contexts* he put “social capital” on his do-not-use style-sheet (Fischer 2005). But there are precedents for poorly defined key sociological concepts, for example, anomie. In some ways, anomie as a negative concept is the mirror image of positive social capital and is also a two-level concept. Anomie at the societal level is sometimes defined as a lack of moral standards in a society, or at the individual level, as a personal state of isolation and anxiety resulting from a lack of social control and regulation. Anomie was introduced into social analysis by Émile Durkheim (1951 [1897]) over 100 years ago. His argument, put in modern network terms, was that anomie occurs when network ties are loosened, either at the individual or the societal level or both. Nonetheless, exactly what anomie means, its implications, how is it measured, and its causes remain controversial. Subject to almost endless definitions and reconceptualizations, the concept has

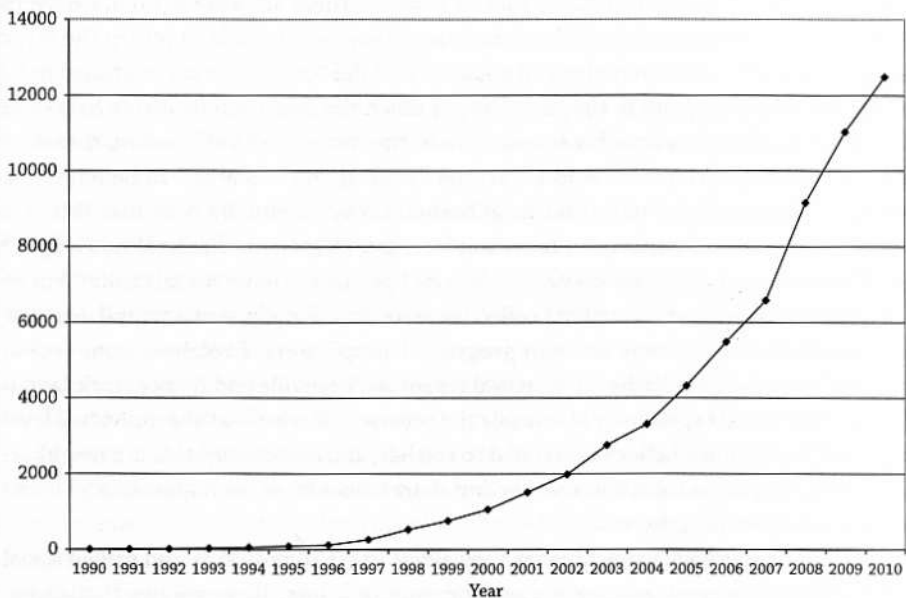


FIGURE 10.1 Number of Social Capital Citations in the Web of Science

generated an outpouring of research and garnered the attention of leading minds in social science. Anomie is cited in introductory sociology texts, yet the concept remains difficult and subject to a variety of interpretations and conflicting evidence.²

Before we enter into the definitional complications of social capital, I offer a story about social capital that illustrates many aspects of the concept.

THE GENERAL IDEA OF SOCIAL CAPITAL

In the midst of baking a cake, I run out of sugar. I can, however, go to my neighbor next door to get some. It was worth being nice to that neighbor even though I did not particularly fancy her. Do I have to give back to her an equivalent amount of sugar? Maybe she can borrow my lawn mower the next time she needs to mow her lawn and that will count as a return of the favor. Maybe the value of the sugar is trivial enough not to require repayment. Now I need a recipe for a new cake. My neighbor has just the right recipe for me. But there is really nothing to return except for good will because in giving me a copy of the recipe my neighbor retains one for herself. The same day a guy three houses down the street who I do not know has heard from my neighbor that I know something about computers and asks me to help him. I am busy but feel obligated to at least try to help because we all live in the same neighborhood. Someday I may have to ask that neighbor, maybe a different one, for help in fixing that darn lawnmower. What goes around comes around. In fact, I am really in a bad mood because the cake wasn't very good, the new recipe was of no great help, and besides, my lawnmower is broken. A long-term friend just happened to call me up on the telephone, and I let loose some of my frustration on him. He told me a bunch of silly jokes and made me feel much better.

The concept of "social capital" is said to cover all these situations. I don't have to have the sugar because my neighbor has some. I may even be able to return the favor not with sugar but with something of equal value. I did "invest" in that relationship by being nice to my neighbor in the past. The guy down the street counts on my help even though he hardly knows me because we live in the "neighborhood," and we therefore have something in common. And I "cast my bread upon the waters" in helping him, because I believe someone in the neighborhood may eventually help me. This is a neighborhood rich in resources—for example, sugar, recipes, mechanical knowledge of small engines, and computer savvy. Not only do I personally have "social capital" but so does the neighborhood through its collective resources. Finally, social capital does not have to be accessible solely through geographic propinquity. I received some "social support" long distance. Other than actual resources, Glanville and Bienenstock (2009) suggest that social capital may also imply the presence of trust—at the individual level my neighbor does not believe I intended to rob her, and collectively, this is a neighborhood in which people trust one another and share values from the importance of home baking to respect for others.

Social networks have value because they allow access to resources and valued social attributes such as trust, reciprocity, and community values. There are two fundamental types of access to resources: the first is illustrated by my borrowing a cup of sugar

when I did not have one. These are resources that could be available to an individual as a product of her or his social network. The second type, with a long tradition in social science, are the resources created by "community." The resources of my neighborhood in the story were made available by the sense of community that the neighborhood seemed to have. Sadly, community resources are often most appreciated when they are taken away, when communities are destroyed through natural or human-made disasters (Erikson 1976).

Community is as diffuse a term as social capital and is itself the subject of a plethora of definitions.³ I shall describe the phenomenon of social capital as community after I investigate how individual social capital resources (e.g., wealth, power, or reputation) are embedded in the social networks from which an actor may borrow.

Most sociologists define social capital as resources made available through social relations. "[R]esources and relations facilitate information flow, influence flow, rendering of social credentials and affirmation of self-identity... which in turn can be used to generate returns in the marketplace" (Lin and Erickson 2008b, 4). They conclude that "A theory of social capital... focuses on the production and returns of social capital and explicates how individual and collective actors invest in social relations through which they gain access to diverse and rich resources for expected returns" (ibid.).

Putnam observes (personal communication) that, in addition to the social resources that accrue to those who invest in them, community-level networks benefit from "the shadow of neighbors." Reputations, actions, and benefits (a neighbor raking his lawn so that the leaves do not now blow over onto mine) become visible and available to others who have not necessarily themselves invested in social relations. Collective problem solving is thereby facilitated.

SOCIAL CAPITAL AS AN INVESTMENT

Since social capital is an analogue to financial capital, we will briefly review the principles of capital as used by economists. Marx's theory of "surplus value" represents the price of the product extracted by exploitation of workers, minus the cost necessary to keep them alive. It has two components: the current revenue that can be used to repeat the current production process and sustain the consumption style of the capitalists, and one that is saved for future investment, thereby incrementing the valued resources. The first of these is called "capital." Adam Smith also had the general idea but did not actually use the term "capital." However, he had reservations about the relationship of labor to capital creation. He considered "productive" labor as that which augments the stock of "capitals" versus "unproductive" labor which does not.

To be sure, modern economists do not cite Marx on capital, though of course the other "giant" upon whose shoulders he stands, Adam Smith, is still referenced. This is not the place to enter into theories of capital—for that would take us from Adam Smith, John Stuart Mill, the "Austrian School," John Maynard Keynes, and Joan Robinson, to the post-Keynesians. That would be the subject of another book. At the minimum, everyone agrees that entrepreneurs try to estimate what they can earn if they

hold back current resources and invest them in factors that aid production of still more resources rather than consume them immediately.

There are endless debates about calculating this "surplus value," determining its sources and who should be the recipient of it, evaluating how surplus value relates to labor and consumption, and identifying the entrepreneurs. There are also differing views about how investments are discounted, who sets the discount rates, and the consequences of different savings rates for the total economy. If all this were clear, we might not have had the financial meltdown of 2008, and we would have better ideas about how to quickly create a turnaround. The crisis reminds us that the investment process is embedded in a social system, for like social capital, financial capital depends on social structure.

For the moment, we will ignore the subject of the financial or social capital of nations, communities, and organizations and concentrate on individual persons as "entrepreneurs." The idea of denying immediate gratification in favor of an eventual return is clear in the concept of "human capital," a term developed by economist Gary Becker (1964) who was awarded a Nobel Prize, in part for this idea. According to his theory, workers can invest in skills and education that would enable them to negotiate for higher wages and thus gain for themselves some of the surplus value created in the production process. The social capital analogue to human capital is that investment in networked resources gives an actor advantages in the market. Acquiring general education or technical or manual skills can be arduous and costly. While these human capital accumulations are being acquired, an actor puts off immediate returns in favor of future gains. The extent to which individuals actually invest in social relations in anticipation of future gains is more problematic. In my example, I was nice to my neighbor not because I might eventually get something from her, but because of general social norms. Social climbers, those engaged in office politics and civil politics, may consciously invest in social relations in the anticipation of eventual personal gain. This investment is sometimes regarded as *gauche*, as the pejoratively tinged "social climber" suggests.

Recently, as a consequence of the popularization of social network ideas, the noun "networking" has been added to the lexicon. The *Oxford English Dictionary Online* (June 2011) offers a fourth usage: "The action or process of making use of a network of people for the exchange of information, etc., or for professional or other advantage." It finds the first examples in the late 1970s. In the introduction to this book, we noted the rapid development since 2002 of social networking websites to make connections between people. But the social capital implications of these sites, as of this writing, have not been extensively researched.⁴ The extent to which most individuals consciously invest in social relations in anticipation of some material or symbolic gain may be limited. The analogue to financial capital of deferred gratification may also be somewhat overstated in human capital theory. Many people consider education a pleasurable experience in itself, regardless of its long-term market value, as liberal arts advocates often maintain. As for social capital, most people probably derive immediate gratification from making friends.

Actual demonstrations of the effectiveness of investment strategies in social capital are rare. As Fernandez and Castilla observe, "if the term 'social capital' is to mean

anything more than 'networks have value,' then we will need to demonstrate key features of the analogy to 'real' capital. If 'social' capital is like 'real' capital, we should be able to isolate the value of the investment, the rates of return, and the means by which returns are realized" (Fernandez and Castilla 2001, 85). They investigated a firm that gave bonuses to existing workers for referring potential employees: "The firm's \$250 investment (in the form of a referral bonus [for persons hired]) yields a return of \$416 in reduced recruiting costs" (ibid., 101). The referrals did get an applicant who was more appropriate for the job, thus saving screening costs. On the other hand, over the long term, once a person was hired, having come from a referral did not reduce turnover. From the employee's perspective, persons with better jobs were more likely to refer others and thereby reap the benefit of the bonus. The authors argue that it is likely that the instrumental value of getting the bonuses was discovered after employees discovered themselves in these better positions, hence "it is misleading to think of occupancy of these positions as *investments*" (ibid.; authors' italics). There are also qualitative studies of investment in social capital. In *Friends of Friends*, Boissevain (1974) devotes an entire section to "brokers" (his term) who reap a profit from their investments in their networks. The subtitle to the book includes the word "manipulators." In popular literature, we are familiar with the Mafia capo who invests in favors for people in the expectation that at some point he will make them "an offer you can't refuse." There are still not enough studies of investment strategies in social networks and their possible payoffs, though ongoing work on social network sites may yield better information.

The analogy of social to financial capital may be limited,⁵ but this limitation has not prevented the widespread application and use of the term social capital. Deficiencies of the analogy notwithstanding, the implications of networked resources and improved capability of collective action are enormous. Tapping into the evidence behind the theory of the value of social networks to individual or collective actors has proven to be an interesting challenge and one we have met before. Assessing an individual's or a community's networked resources requires mapping the full network, ascertaining the resources available in various domains to each member of the network, and finding the ways that these resources are or are not made available to various individuals and to the community as a whole. Because of the potential number of connections in a total community, mapping an entire community is at this point not feasible, nor in some ways desirable because of the lack of focus and clarity that such a project entails. However, some ingenious ideas and tools that focus on key aspects of social capital and how to measure it have been developed. Because the devil is in the details, in this chapter more than in the previous ones, we will pay attention to the relations between the basic concepts involved in social capital and the indicators that are used to measure that concept.

The salience and importance of investment in social capital is another key issue that lurks behind all the analyses that follow. Some individuals and communities have more social capital than others. How did this come about? Did the individuals or the communities consciously invest in the creation of social capital or were they structurally situated so that they had more social capital but not as a result of their

own investment strategies? Rich people often claim the rewards of wealth as their due because of wise investments. In reality, they inherited their wealth or benefited from a structural location that allowed them to accumulate more wealth. The unequal distribution of wealth is generally an unfair distribution. As has been often said in this book, social networks are essentially unfair. We can work to improve our connections, but those who gain entry to elite colleges, for example, and thus a ticket to a better life, have had the benefit of cascading connections that they themselves have not made. Communities vary enormously in their resources: being well connected in an African village is certainly helpful, but being well connected in New York City certainly conveys greater material advantages. Assessing and accounting for “the wealth of nations” is a task that has baffled economists ever since Adam Smith (1778) raised the topic.⁶

The analyses that follow are divided into two parts: those that concern the social capital of individuals and those that examine the social capital of social systems, communities, or organizations. The division is necessary for exposition, but the two are necessarily related. Individuals within social systems having significant social capital tend to have more social capital themselves. Analyses that move from one level to another will be presented in the section on social system social capital. Within each section we will take up problems related to conceptualization and measurement, and the importance, or lack of it, of investment in social capital.

Individual-Level Social Capital

SOCIAL SUPPORT

One important aspect of social capital is social support. As the Beatles song framed it, social support entails “a little help from my friends” (1967). Social support was one of the first practical matters studied by network researchers and others who did not think of themselves as students of social networks. Initially, social support was not called social capital, and those who study social support do not necessarily invoke the concept. More popular than social capital, in 2011 the term “social support” retrieved from the Web of Science over 28,000 citations.

Indicators of social support favored by social network researchers mainly rely on “name generators.” A name generator is a question used in a survey that asks respondents to name people they are related to in particular ways, people whom they feel close to, people they can call upon for particular help. Most famously the question, “Who are the people with whom you discussed an important matter with?” has been used in the General Social Survey (Bailey and Marsden 1999; Burt 1984). With the names in hand—usually just initials or a first name—the survey asks about the characteristics of those named, such as gender, age, education, how the respondent came to know them, and which of those named know one another. The last question can be used to construct a network of those persons who surround the respondent, technically called the ego network.

Social support is as fuzzy a concept as its relative, social capital. Support can include the perception that one's friends, relatives, partners, or community feel positive toward one or, using a name generator, can include a count of the number of individuals a person believes could or would provide support for general or specific matters (lend you a cup of sugar, help with computers). Finally, social support includes the structure of the network within which the person ("ego") is embedded.

Much of the research literature on support concerns illness and other stressors affecting a person who might need help. Studies of stress raise the issue of whether a person has a support network in place before confronting a stressful situation. A support network might be something like an inoculation, making stress less likely to occur among those who are socially supported. This is known as the "buffer" hypothesis. Alternately, support might follow the experience of stress, thus helping a person to cope with it. Both kinds of support can occur. The literature on social support is so extensive reviews of the reviews have been published.

Most of the recent work on social support tends to be in the health and mental health fields, although there are reviews about workplace issues such as adjustment on the job and financial help. A recent review in the health field (Smith and Christakis 2008) draws a distinction between social network studies, which tend to be structural and extend beyond a person's direct contacts, and studies of direct social support. As the review reports, "[s]ocial support studies assess the quality or quantity of a person's social ties, social network studies treat the ties themselves as objects of study potentially relevant to outcomes of interest, and thus draw them explicitly" (*ibid.*, 407). The authors favor a two-level analysis in which the structure of social relations has outcomes for individuals. The authors note that recent work shows that individual-level social support, as traditionally defined, not only has a "feel good" aspect, but even affects basic biological mechanisms related to morbidity and mortality: "For example, higher levels of social support improve global immune functioning, as evinced by a fourfold relative risk reduction in susceptibility to experimental rhinovirus inoculation" (*ibid.*, 406). They report that "in the case of spouses, there is compelling evidence that the health of one member of a dyad can affect the health of the other" (*ibid.*, 409). Recent reviews of reviews conclude that the evidence on the effects of individual-level social support and networks (now read social support as social capital) is more robust than other individual psychosocial factors. The reviews decry the often fuzzy definitions of the independent and the dependent variables as well as the quality of some of the research. The more robust reviews point to strong evidence that both the quality of social support as well as the size of the networks of support may be associated with lower risk of coronary heart disease (see below) and cancer. For elderly populations, support from a spouse and wider community social networks may be associated with better health (Egan et al. 2008).

Does social support reduce the likelihood of "catching" a disorder, as in the case of global immune function, ameliorate the effects of a disorder once it is experienced, or both? In most studies, the timing and relationship of support to stress and illness is difficult to determine. It is easier in studies of Post Traumatic Stress Disorder (PTSD), especially combat-related PTSD where the timing of the stressor is relatively easy to

determine. Social network factors prior to combat, including the much cited but erroneous "finding" that group cohesion in combat reduces the probability of combat-related PTSD, have little effect on the incidence of PTSD on combat veterans (Lerer and Kadushin 1986), but many studies show that social support, variously measured, ameliorates the longer-term effects of post-combat PTSD (Charuvastra and Cloitre 2008). This meta-review also reports that social support was one of the stronger correlates of PTSD, with more social support correlated with fewer effects of PTSD, though the precise timing of support was apparently not studied (*ibid.*). The review data also suggested that subjective accounts of being supported are more likely to have positive effects than structural network measures. The authors suggest that a sense of social bonding and safety following the trauma may account for the observed effects.

The technique of name generators has a number of drawbacks. First, there is a limit to the number of names one can ask for—often no more than five, especially if some additional data on the reported supporters are solicited. Further, since support can entail personal costs to the supporters, the names elicited tend to be close ties rather than weak ties. As noted earlier, one of the major impetuses for research on social capital derived from the finding that white-collar jobs were more often found through weak ties rather than strong ties (Granovetter 1973). Weak ties may therefore be important in social support. Finally, in terms of concept-indicator theory (Klausner 1964), social support is just one example of social capital. There are of course many others.

INDIVIDUAL NETWORKED RESOURCES: POSITION AND RESOURCES GENERATORS

Another way of measuring aspects of social capital is to utilize a rule or theoretically derived indicator and combine it with inductive empirical testing. A classic example from physics is the measurement of temperature. The theory, developed over two hundred years with many observations by many different scientists, is that matter, if not confined, expands as the temperature rises because of the increased molecular activity that accompanies a rise in temperature or energy. Alternately, if a gas is confined so that expansion is not possible, the pressure rises as the temperature rises. But how empirically should we observe the expansion? We are familiar with the column of mercury confined in a glass tube, though many other materials that expand have been proposed. Scientists sought to find the constants in the equation, and decided to set measurement points, such as the freezing point, which is zero degrees, and the boiling point of water, which is 100 degrees (Gillies 2008).

The "position generator" is both a theoretically and empirically derived indicator of access to networked resources. As developed by Lin and Dumin (1986), the theory begins with the proposition that given the nature of social stratification, valued resources are more likely to be found in the higher reaches of the occupational structure. Second, the success of an instrumental action is more likely if higher valued resources can be accessed by an actor. Therefore, third, the higher the position one is able to reach, the greater the likelihood of accessing valuable resources, such as recommendations for a job. Hence, those who can access higher positions either through inheritance or

achievement should be able to secure better jobs. (The classic: "It isn't what you know it's whom you know.") Further, the strength of weak ties proposition suggests that those whose relatives or close ties do not have high status can nonetheless achieve higher status through mere casual acquaintanceship with high status individuals. A corollary to the theory developed later was that a wide range of positions could also lead to positive instrumental gains because lower statuses might have access to skills and knowledge that higher statuses might not possess (such as repairing lawn mowers in the story with which we began), and thus an acquaintanceship with a wide range of statuses may result in cultural cosmopolitanism which could prove valuable in some higher status occupations (Erickson 1996). It was further hypothesized that even potential access could result in valuable instrumental consequences. It was not necessary to demonstrate that these resources were actually used. In the original 1986 formulation, access to valued networked resources was not called "social capital." Only later was it reconceptualized as social capital.

This theory rests on the foundation of the functional theory of stratification (Davis and Moore 1945). Higher status persons have more resources because "the collectivity, or the community, promotes its self-interest by conferring relatively higher statuses on individual actors who possess more valued resources" (Lin 2001, 31). Hence if an actor knows high status persons, the actor can utilize the more valuable resources of those individuals. While the functional theory of stratification has been widely criticized (Hauhart 2003), the utility of its application to the position generator rests first on measurement issues and then on its predictive value. We will now address these issues.

The same kinds of calibration challenges faced by efforts to measure temperature are also characteristic of the "position generator." The challenge is to find a wide range of occupations (but not so many as to tire out respondents—20 turns out to be the efficient number) about which to inquire and which are immediately recognizable by respondents in various societies. The formulation of the question depends on the goals of the study. For example, the question, "Among your relatives, friends, or acquaintances are there any in the following kinds of work?" elicits a wide range of ties from weak to close. Whereas the request, "Please think of people you know by name and by sight well enough to talk to" concentrates on strong ties (Lin and Erickson 2008b, 10). In addition to the position generator, a "resource generator" has been developed (in a Dutch version) that asks, "Do you know anyone who... Is handy repairing household equipment... Can work with personal computers... Who can babysit for your children" and 30 other items (van der Gaag, Snijders, and Flap 2008). In this study, respondents are asked about relatives, friends, or acquaintances. In addition, a number of scales were developed in this study that used a standard position generator. For the position generator, the maximum prestige, the range in prestige, the number of positions accessed, the gender mix of an occupation, and the total accessed prestige were developed. In most populations, all these were highly correlated. Several reliable scales were derived from resource generator items such as a personal support or a personal skills scale. The authors conclude that "whether there is any effect of the presence of social networks on an outcome of interest can be answered with any instrument"

(*ibid.*, 44), but that for specific inquiries into potential accessed resources, different scales might be useful. The position generator is more effective for instrumental effects (e.g., getting a job), but less so for expressive actions (e.g., understanding other people's values).

Lin and Erickson (2008b) further point out that position and resource generators can (and should be) adapted to different social contexts. The same occupations in different societies have different meanings. Some important occupations such as "lama" in Mongolia, mine manager in coastal British Columbia, or Communist party official in China do not exist in other societies or are not prestigious. Gender stratification, however, exists in all known societies, and each prestige level may have different valences by gender. Access to these resources will therefore differ by gender. In multicultural settings, knowing people in occupations both in one's own and other ethnic groups may be important.

CORRELATES OF INDIVIDUAL SOCIAL CAPITAL

Social capital, defined as access to networked resources, has many observable correlates. Getting a good job, the original hypothesized outcome of the position generator set of indices, has been widely confirmed as a correlate of network diversity and/or the prestige of the positions an individual can access (with appropriate controls for an individual's prior social prestige). The way this works may differ by society. Strong ties, for example, are more useful in China than the weak ties found by Granovetter in the United States. In the Netherlands, "The better a person's access to occupations rich in economic capital, the higher the economic capital (but not cultural capital) of the person's occupation" (Lin and Erickson 2008b, 6). More diverse networks lead to a wider range of interests and information, which is in turn related to political activities, as well as different opinions. Diverse networks are associated with membership in voluntary organizations, though the direction of causality is not clear.

A persistent finding in social network research is often ignored in the excitement about the utility of social networks and "networking." Social networks are exclusionary and unfair. Since people tend to associate with others like themselves (the homophily principle; see chapter 2), the networks that they form tend to be with people who have the same characteristics. If people have lower prestige, socio-economic status, or are the target of discrimination, then their networks will tend to be composed of people with lower prestige, socio-economic status, and who are otherwise disadvantaged. It stands to reason, then, that the networked resources available to the disadvantaged in any society will be less potent than the networked resources that can be accessed by the advantaged. This can be put in a positive way that lends further credence to the utility of the concept of social capital: "We find that, even after controlling for demographic characteristics, including supervision, occupational class, and income, access to social capital still significantly contributes to current status. 'Who you know' adds to status attainment over and above one's prior status" (Cross and Lin 2008, 377). But it is also true that who you know is constrained by disadvantage. The same authors found in their U.S. data that racial/ethnic homophily led to a deficit in

social capital among the disadvantaged that limited their opportunities and chances for upward mobility and integration into the wider U.S. society. The same considerations should hold for women. They are historically disadvantaged and, based mainly on strong tie evidence, have less social capital (Marsden 1987; Marsden and Hurlburt 1988). They are also, like racial/ethnic minorities, disadvantaged in the kinds of networks they can form in the workplace (Ibarra, Kilduff, and Wenpin 2005). Yet, in a careful analysis of their own data and a review of other North American position-generated social capital data, Cross and Lin (2008, 378–379), do not find substantial evidence that men and women have unequal access to social capital. Perhaps, as they suggest, activation rather than mere potential is the issue, since resource generators measure only potential but not actual access. They also note that at present there are few studies that follow the full access to resource mobilization as a factor in status attainment.

OTHER INDICATORS OF NETWORKED RESOURCES

Position and resource generators attempt to ascertain the extent and range of networked resources available to individuals. The idea can be extended and varied by using other indicators of networked resources. Here is an example to suggest the kinds of extensions to the basic idea of networked resources that can be developed. The 2000 Social Capital Benchmark Survey (<http://www.cfsv.org/communitysurvey/index.html>) analyzed by Son and Lin (2008) included 11 items that asked, "Thinking now about everyone that you would count as a PERSONAL FRIEND, not just your closest friend—do you have a personal friend who . . . Owns their own business?; Is a manual worker?; Has a different religion than you?; Is a community leader?"; and similar targets covering a wide range of social statuses. Son and Lin suggested that "[a]lthough the items are apparently not systematic indices of individual social capital, they capture a variety of characteristics in friendship ties (i.e., bridging and bonding aspects of social capital), including some occupations, economic status, and race of a respondent's friends. In other words, the items represent both diversity and richness of embedded resources residing in the friendship networks in terms of socioeconomic status." Since the research went beyond close friends, some weak ties were included. Summing the 11 items gives a measure of individual diverse access to social resources.

Another kind of networked resources is an individual's connection with voluntary organizations. Earlier, we noted that diverse networks are related to membership in voluntary organizations. The number of voluntary organizations to which a person belongs may therefore indicate the extensiveness of resources available to them. Further, the larger the number of types of organizations to which a person belongs (for example religious, political, sports, etc.), the greater the indication of network diversity. Similarly, the demographic, gender, and ethnic character of the organization can be another indicator of diversity. Organizations also access different degrees of resources. Factor analysis suggested these several indexes can be combined into a single one indicating the total networked resources that an individual can access through membership in a voluntary organization.

Diversity of organizations, and the number of organizations to which an individual belonged, predicted the individual's involvement in expressive civic affairs (such as preserving values or standard of living). Diversity, but not the number of organizations, was a predictor of individual involvement in instrumental activities (gaining specific advantages). In general, indicators of individual social capital other than organizational memberships were a consistent predictor of instrumental civic activity.

Indicators of access to resources tested the theory that information provided by former migrants to prospective migrants decreased the latter's costs of moving (Garip 2008). Looking at both the village and household level and using longitudinal surveys, focus groups, and field work observation, Garip examined the distribution of the occupations and destinations of those who migrated from rural villages to urban settings in Thailand. As with the more quantitative studies of the utility of networked resources, she found that the patterns of migration depend on a variety of factors. As she wrote, "The diversity of resources by occupation increases the likelihood of migration, while diversity by destination inhibits it. Resources from weakly tied sources, such as village members, have a higher effect on migration than resources from strongly tied sources in the household."

The Son and Lin and the Garip examples show how the general concept of networked resources can be applied to investigations of the consequences of these resources to gaining valued outcomes. Standardized instruments are useful, but so are applications that use the idea in novel ways to develop new indicators built on the standard instruments.

There are a variety of other studies that found networked resources work in different ways depending on the context. Some examples are:

- Teams working in exploratory product development completed their projects more quickly if they had a social network structure composed of many non-redundant external ties; teams exploiting existing knowledge took longer to complete with this same type of network structure mainly because external ties not needed for the task had nonetheless to be maintained (Hansen, Podolny, and Pfeffer 2001).
- In investment clubs, the number of instrumental ties that members had with one another prior to joining the club were positively and directly related to a club's financial performance (with appropriate controls). Exactly why is not clear: in these clubs task orientation was improved, organizational heterogeneity was increased as might be expected, and this led to a greater task orientation. However, heterogeneity was negatively related to performance (Harrington 2001). This is a cross-level analysis in which the social capital of the individuals increases the group-level social capital.
- In the emerging software industry in Israel, both network centrality and geographic propinquity were related to engaging in similar strategies (Gabbay, Talmud, and Raz 2001).
- In a large health organization in Finland, employees with sparse networks (structural holes) were more likely to name a person who could solve a problem for them who was not directly connected to them. Employees thus acquired some

instrumental benefits from sparse networks, but work units benefited from internally cohesive networks by having greater trust. Indirect networks attenuated the flow of information critical in triage decisions. Neither maximally sparse nor maximally dense social networks lead to optimal outcomes. Developing an optimal level of cohesion appears to be complicated (Johanson 2001).

- And from (Lin, Cook, and Burt 2001, 228): "Forms of social capital that are valuable in one environment may be useless or even harmful in another." Individuals with more education generally have access to more resources. But this relationship does not hold in all situations. For example, in a hurricane, the less educated relied more on kin and received more informal support (Hurlbert, Beggs, and Haines 2001).

Social Capital as an Attribute of Social Systems

Social capital has also been viewed as an attribute of social systems themselves. The network structure of the social system may endow the system with important benefits, though it may also have negative consequences. This "focuses on social capital at the group level, with discussions . . . on (1) how certain groups develop and more or less maintain social capital as a collective asset, and (2) how such a collective asset enhances group members' life chances" (Lin 2001, 22).

At the group level, there are propositions about how one aspect of social capital enhances other assets of the group. In other words, social capital can create more social capital. Group-level social capital is an idea specified in various ways by such great theorists as Tönnies, Marx, Weber, Durkheim, Pareto, Simmel, Kroeber, Parsons, Lévi-Strauss, and Merton. It should be obvious that a very wide range of concepts and theoretical orientations and propositions as well as empirical findings are involved. The broad sweep of connotations and denotations of social capital as an attribute of social systems has led to a vast range of propositions as well as to problems in measurement. Here we will review some of the major contributions to the theory.

THEORISTS OF SOCIAL SYSTEM SOCIAL CAPITAL

Pierre Bourdieu was the first social scientist who presented definitions of social capital that were structural. He interpreted them as networked resources both for collectives and individuals. As he stated, social capital is "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition" (Bourdieu 1985, 248).⁷ Bourdieu further explained that social capital is "made up of social obligations ('connections') which are convertible in certain conditions to economic capital and may be institutionalized in the form of a title of nobility" (*ibid.*, 243). In a seminar discussion of the concept of capital (including economic and cultural or informational capital), he added to his earlier definition that social capital resources might accrue to either groups or individuals (Bourdieu and Wacquant 1992, 119).

James Coleman offered this functional definition: "Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of social structure, and they facilitate certain actions of the individuals who are within the structure" (Coleman 1990, 302). In Coleman's view, social structure consists of relationships. Social structure becomes social capital when it is appropriated to further an actor's goals. Sandfleur and Laumann (1998) identify three kinds of benefits in Coleman's social capital theory: information; influence and control; and social solidarity. Though analytically distinct, they can operate together.

Group-level social capital provides individuals with information that is timely and trustworthy. Coleman offered examples of trust generated by closed network systems. In New York's Diamond District, cheating would be immediately visible because of the tight networks of the Hassidic Jews who dominate 47th Street. This environment allows handshake deals over gems worth thousands of dollars. Surveillance by friends and neighbors over children in tight-knit neighborhoods allows children to play safely even when their parents are not available. The ethnic enclave gives immigrants social capital advantages in helping one another and offers employment. The enclave also has negative consequences: outsiders are barred, there are serious consequences for individual freedoms, and there is a tendency to try to keep individuals from joining the mainstream or be "too white" (Portes and Sensenbrenner 1993; Waldinger 1996). Tight networks can also lead to a loss of privacy. Another odd disadvantage, at least to the public, is that tight-knit neighborhoods can protect criminal elements from outside prosecution in a "negotiated co-existence" (Browning 2009).

We saw in chapter 7, "Organizations and Networks," how a system that has structural holes allows key players to make rapid use of information from diverse sources. Because social networks are exclusive and "unfair," systems with many structural holes give advantages to those who can manipulate access to information.

Influence and control, in Sandfleur and Laumann's view, can be regarded as legitimate (see chapter 7) when people accept directives because the authors of the directives are worthy of being obeyed. Trust is a foundation of such authority and is an attribute of social capital that allows for various social actions to take place—some desirable but others not so desirable. Thus the influence and control aspect of social capital promotes decision-making and action.

Social solidarity is the most general aspect of social capital at the group level. The theory is that mutual trust and commitment arise from group norms, from repeated interaction, or both. Since the development of trust and values is a process that takes place over time and feeds back into the development of social networks, it is a process that generally cannot be directly observed. Simulation, however, can offer clues as to how this takes place (Glanville and Bienenstock 2009). In Glanville and Bienenstock's simulation, indirect or generalized reciprocity tends to increase over time. Generalized reciprocity means that helpful acts to others are performed as a collective obligation, not in the expectation of an immediate reward (see chapter 5). Generalized reciprocity is an important consequence of social solidarity and the development of trust. Frontier

society barn raising is a typical example. Social capital is therefore seen as the basic glue of society and community.

BOWLING ALONE

Social capital as a social system attribute is an idea popularly associated with Robert Putnam's *Bowling Alone*. Putnam, who builds on Coleman, begins by saying,

[T]he core idea of social capital theory is that social networks have value . . . social contacts affect the productivity of individuals and groups. [Further,] social capital refers to connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them. In that sense social capital is closely related to what some have called "civic virtue." The difference is that "social capital" calls attention to the fact that civic virtue is most powerful when embedded in a dense network of reciprocal social relations. (Putnam 2000, 19)

Putnam's accessible prose is responsible in part for the widespread impact of his book. At the same time, his style makes the formal relations between his concepts and indicators difficult to trace. Here is an effort to unpack some of the ideas.

His basic argument is that participation in political, civic, religious, workplace activities, volunteering and informal networks leads to a culture of social trust and to networks with generalized reciprocity that bridge different groups. This is social capital. The outcomes of social capital are democracy, tolerance, and civic community participation. Social capital also results in low crime, safer neighborhoods, less tax evasion, better schools, and economic growth. But communal participation in the United States has been declining (hence the metaphor—people do not bowl in teams and leagues, they bowl alone) and so the amount of social capital is on the decline, and this leads to less positive outcomes.

Social capital and social networks in this argument are latent concepts, that is, they are not directly observable. Networks are both indicators of social capital and also are a process that leads to social capital. Networks in the sense used by Putnam are a latent variable, because as was noted earlier, while in principle one might draw all of the social networks in a community, in practice this is impossible; no one could make sense of the result even if one were able to do it. As in Coleman's theory, what concerns us not just any network but those characterized by reciprocity and trust. Reciprocity is best when it is generalized as in net generalized exchange (see chapter 5). One does something for another person but does not expect something directly in return. Rather, one trusts that the social system or the group will eventually reciprocate. Since these kinds of networks are almost impossible to measure in a large social system, there are a series of indicators for them, most of them referring to some kind of social participation. As noted, in Putnam's theory, social participation produces social networks. Participation also leads to trust and to a general culture of trust which in turn promotes participation in a virtuous circle. Trust is thus an attribute of social capital. Participation and a culture of trust are indicated by such actions as working for a political party, entertaining at home, or the attitude—believing that most people can be

trusted. The consequences of a high level of community social capital lead to various positive outcomes, such as lower community crime rates. That is, if *individual* people in a community are, in the aggregate, politically active, entertain at home, and think most people can be trusted, community crime levels tend to be lower. In statistical terms, this is a two-level model: *individuals* who do various things or believe in them, and, at second level, *community* crime. In *Bowling Alone*, all the outcome variables are community variables, but most of the predictors are individual-level variables or aggregated individual-level variables.

Putnam's conceptualization has some problems. Some of the indicators, such as those involved in democracy, are both causes of democracy and also outcomes of the social capital process, which has led to an accusation that the arguments are circular (Portes 1998). But the relationship can also be interpreted as saying social capital can produce more social capital in a virtuous spiral, and the reverse, less social capital can lead to less social capital. This important point is not made sufficiently clear in *Bowling Alone*, though Putnam has said this elsewhere (Putnam, Leonardi, and Nanetti 1993). Some of the outcomes of social capital, such as greater health, are not tautological, however. Health per se is not an indicator of social capital. Thus some of the concepts and indicators are circular while others can be empirically tested. Putnam cannot be both tautological as has been claimed and also empirically wrong. In *Bowling Alone*, the extensive tests of the outcomes of social capital are suggestive. Since they are at the aggregate state level but also imply individual attributes and outcomes, they suffer, however, from an "ecological fallacy." An ecological fallacy attributes correlations among attributes of individuals to the correlations between those attributes at the aggregate level. For example, individuals who live in states with more social capital (as indexed by Putnam) are supposed to be happier. The implication is that individuals with more *individual* social capital are also happier. This may or may not be true. Statisticians have long held this kind of correlation to be a fallacy (Robinson 1950). There is a cure for this problem: multi-level analysis that Putnam has employed in later work, but which is not evident in *Bowling Alone*.

RECENT FINDINGS ON SOCIAL SYSTEM SOCIAL CAPITAL AND ITS CONSEQUENCES

Research since the influential *Bowling Alone* has tried to unpack the community-level social capital syndrome with varying degrees of success. The Social Capital Community Benchmark Survey, used by Son and Lin, is a useful example because it includes a number of separate individual- and aggregate-level indicators that are subjected to various types of scale analyses with the selection of key independent and dependent variables. But as they and others have pointed out, conclusions about aggregate community-level consequences of social capital, based on the consequences of various indicators of social capital for individuals, requires complex multilevel analyses such as HLM (Raudenbush and Bryk 2002). Such analyses simultaneously examine both aggregate and individual data—something *Bowling Alone* and most of the studies based on it did not do.

Some research has built directly on James Coleman's ideas. One of Coleman's hypotheses about social capital was that "closure" among parents and children

promoted the well-being of the children (Coleman 1990, 590–600). Using indicators similar to those of Coleman in data from the Mother-Child Data of the National Longitudinal Survey of Youth (NLSY79), Dufur, Parcel, and McKune (2008) examined the effect of family social capital investment in their children as compared with the effect of school social capital on the behavioral problems of first- through eighth-grade children. Family investment in social capital included how many of their children's friends they knew by name, how often they knew who their children were with when they were not at home, child church attendance, and parental usual hours of work per week. The principal of each school judged additional measures such as the extent to which the child's parents were involved in advising the school, participated in program design, engaged in policy decisions, and volunteered in after-school programs. Note that these are different kinds of indicators than networked individual resources. Rather, they are indirect indicators of investment in two kinds of aggregate social capital with a return to individuals. With these measurements indicating the two latent variables—family social capital and school social capital, and with appropriate controls—family social capital was negatively related to behavioral problems, but school social capital was not. The study findings seem to back Coleman's original claim about the importance of family social capital, though other studies favor school social capital over family social capital. The issue is not yet resolved.

"Generalized trust" is often measured with the survey question, "Generally speaking, would you say that most people can be trusted or that you can't be too careful in life?" (General Social Survey since 1972) or similar variations dating back to 1950.⁸ Trusting people appears to be an ambiguous item since, to paraphrase Abraham Lincoln, "You can trust all of the people some of the time, some of the people all of the time but you cannot trust all of the people all of time." It appears that the generalized trust question, with Lincoln's reservations, is not as unreliable and invalid a survey instrument as it might appear to be. It is fairly reliable on the aggregate country level. The validity of the measure as a correlate of civic virtue as hypothesized by Putnam is another matter: "Most empirical studies have not been kind to the civic society [voluntary organization activity either as cause or consequence] explanation of generalized trust" (Nannestad 2008).

Part of the problem with trust is that it is taken as synonymous with access to resources. But some environments are rich in resources and others are not; some are high in reciprocity and trust while others are not. Glanville and Bienenstock (2009) show that both dimensions can vary and suggest some outcomes of these situations, as illustrated in table 10.1, based on their figure 10.1 (*ibid.*, 1518).

TABLE 10.1

Typology of Reciprocity and Trust

		Reciprocity/Trust	
Low	High		
High Resources	High transaction costs		Efficient Markets, Social Support
Low Resources	Job information but poor jobs		Revolving credit, Social Support

Reprinted from Glanville, Jennifer L., and Elisa Jayne Bienenstock. 2009. A typology for understanding the connections among different forms of social capital. Copyright © 2009 SAGE Publications. Reprinted by permission of SAGE Publications.

If the social system is characterized by low levels of trust but high resources, there will be much trade and many transactions but high transaction costs, meaning there are plenty of goods but both buyer and seller must be wary. If both reciprocity/trust are low and there are also few resources, then whatever jobs are passed on (in Granovetter's weak tie situation) are likely to be not very good jobs. Social support accompanies high levels of trust but is of little help in an environment with low resources. Markets are useful and efficient when trust is high and there are lots of resources (Coleman's example of the Diamond District). But when resources are low and trust is high, poor people's revolving credit associations are common.

The World Bank has been much taken with the idea of building aggregate social capital (Feldman and Assaf 1999). For example, there are social funds: "multi-sectoral programs that provide financing (usually grants) for small-scale public investments targeted at meeting the needs of the poor and vulnerable communities, and contributing to social capital and development at the local level." However, recent work suggests that social funds, rather than building new social capital, utilize existing social capital and build on existing relationships rather than creating new ones (Vajja and White 2008). On the other hand, a randomized intervention in rural South African villages found "higher levels of structural and cognitive social capital in the intervention group than the comparison group, although confidence intervals were wide" (Pronyk et al. 2008). The jury is out.

There have been a large number of studies in the past few years that attempt to connect community-level social capital to individual health. The findings are mixed. "The association between community social capital and health differs . . . [by] health outcome, study population and location. This underlines the need to take such diversity into account when aiming to conceptualize the relation between community social capital and health" (van Hooijdonk et al. 2008). Part of the variance in findings is caused by different definitions and measures of community social capital, measures of individual-level health and the absence of true multi-level modeling.

The following recent study of the relationship between heart attacks and membership in voluntary organizations is an exemplar of "how to do it." The study illustrates the improbable, far-fetched "magic" of network theory: how the number of people employed in voluntary organizations affects the probability of heart attacks. The empirical question is the association between community-level social capital and the recurrence of coronary heart disease. Community-level social capital is distinguished from individual-level social capital, which is conceptualized as individual-level access to resources embedded in his/her own social networks. The authors (Scheffler et al. 2008) note that individual-level social capital overlaps with the idea of social support, as we discussed earlier. The model hypothesizes that community-level social support (1) increases the level of available information on treatment and preventive measures; (2) lowers the effort required to organize politically and therefore to bring more health facilities into the community; and (3) makes social support more accessible. These three outcomes of community-level social capital, which is not directly measured but implied, in turn lead to better health (see figure 10.2).

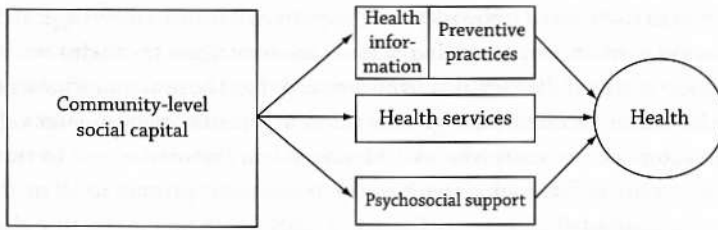


FIGURE 10.2 Pathways between social capital and health

Reprinted from *Social Science & Medicine* 66 (7):1604, figure 1. Scheffler, Richard M., Timothy T. Brown, Leonard Syme, Ichiro Kawachi, Irina Tolstykh, and Carlos Iribarren. Community-level social capital and recurrence of acute coronary syndrome. Copyright © 2008, with permission from Elsevier.

One aspect of community social capital in Putnam's theory is the vibrancy of voluntary organizations. Rather than aggregate individual-level voluntary organization participation, the study by Scheffler and colleagues uses the Petris Social Capital Index (PSCI). It is derived from the Census County Business Patterns (CBC) report on the number of persons employed in voluntary agencies. The voluntary organizations selected for the index are those listed in the index of Putnam's Social Capital Community Benchmark Survey. The index computes the number of persons employed in these organizations per county population (Brown et al. 2006). This is therefore a theoretically derived indicator that points to, but does not directly measure, community networked resources. It is clearly on a different level from individual measurement. The individual-level dependent variable is derived from Kaiser Permanente records, as reported by medical personnel, and none is based on individual self-reports.⁹ A number of individual attributes were controlled as well as other medical conditions. Census block-level attributes such as income, income disparity, and racial concentration were also examined. Thus, three-level statistical analyses were employed. The essential point of this complex study is that community-level social capital is associated with a 9% reduction in the relative risk of acute coronary syndrome recurring. There is an interaction effect because this holds true only for individuals living in areas with less than median household income, even after controlling for a number of key factors in coronary risk (Scheffler et al. 2008, 1611). The authors point out that although the association is not large, it nonetheless has potentially important public health implications, since acute coronary syndrome is the leading cause of mortality in the United States, affecting almost 14 million people. The fact that the effect occurs mainly in low-income areas is an important part of the debate in the United States about health care.

Where We Are Now

Social capital is a diffuse concept. At the heart of the idea is the hypothesis that "social networks have value." Unlike financial capital, the analogue, in which money is the value that one invests in order to have more money, social networks do not have a universal coin. They have many forms and the values they produce are extremely varied. The two underlying assumptions of the theory of social capital—(1) that actors

actively invest in their social networks in anticipation of future advantage; and (2) that social networks contain resources that actors can draw upon for their own benefit—are rarely directly tested. Rather, it is hypothesized that those actors whose networks, whether achieved or ascribed, have greater value, as a result, enjoy greater valued outcomes than actors whose networks are of lesser value. *Potential* access to resources is the key. Very rarely is there an account of the investment process itself or the actual activation of the needed resources. The story with which we began this chapter remains just a story. Nonetheless, the claim that social networks have utility is obviously very attractive and has garnered much attention, research, and support. There is substantial evidence that, when adequately defined, some network structures and attributes can dependably be associated with some valued outcomes.

As usual, the devil is in the details. There are two levels of networks: community or group and individual. The latter is easier to handle so we began with it. The most successful and widely tested specifications of social capital are those of Nan Lin and his colleagues who found that people who have a large number and/or a wide range of friends in different occupations, or who have friends in high-ranked occupations, have improved occupational outcomes. The implication, not directly tested, is that they are able to draw on the resources provided by their network of friends to gain better occupations. Given that the intervening mechanism—actually accessing these networked resources—is not typically measured, these are impressive findings. There is also some cross-level analysis, suggesting that individuals whose communities are richer in occupational resources tend to have better occupational outcomes. The studies of migration and immigrant enclaves show the two faces of tight social networks as a resource. In some cases, the individual or community network helps migrants find jobs in a new country or region. Once an immigrant community becomes established, members typically find jobs through their close tied ethnic networks. On the other hand, the ethnic network's very focus on the ethnic community can limit connections to the outside world. The same double-edged sword occurs in organizational networks in which a tight network gives access to internal resources but also limits access to wider spread resources.

In the health field, social capital may be conceptualized as social support given or potentially made available by one's social network. There is such a large literature on social support, much of it predating the widespread use of the concept of social capital, that we have had to resort to meta-analyses of reviews to keep track of the findings. The reviews point to problems in the conceptualization of individual support networks—just what kinds of networks offer the best support. There are also varied health-related dependent variables. They can range from self-definition of being in good health or relatively free of worries to very particular physician-specified diagnoses. There is also the issue of timing: does social support prevent a disorder or alleviate it? On the whole, the findings show positive outcomes for social support, however defined. Problems in conceptualization and measurement of the independent and dependent variables, support and health, seem not to deter researchers and scientific journals. Articles showing the utility of social support in different circumstances and under varying conditions continue to be regularly published.

Community-level social capital research has been dominated by Putnam's *Bowling Alone*. His contention is that communities in the United States have increasingly experienced a reduction in social capital as indicated by decreased voluntary organization activity, political participation, trust in others, and other indicators of civic virtue and that this trend has had many unfortunate social consequences. While some observers claim circularity of argument, the analogue to financial capital in Putnam's argument may be apt: the rich get richer and the poor get poorer. Social capital can create more social capital, or the reverse, declining social capital leads to even less social capital. Despite what many feel is Putnam's inadequate formal conceptualization and measurement of community social capital, the concept has attracted much attention. The attractiveness of the basic idea has led to some new interesting multi-level research. For example, communities with greater diversity tend to be those in which there is less interpersonal and inter-ethnic trust. Counties with less social capital have a greater number of recurring coronary heart attacks in low-income neighborhoods.

There is one glaring lack in social capital network research. Community-level social capital has been much bemoaned as increasingly suffering from a deficit, though if true, it is not clear what to do about it. More directly staring us in the face is the unequal distribution of individual social capital, whether by race, ethnicity, gender, or income. The touted use of social networking sites and the internet as sources of social capital has generated a "digital divide" that has merely increased the advantages of those who have versus those who have not. Social capital inequality has serious consequences, which remain largely unexplored. Perhaps social capital research could use some of the Marxist zeal that has characterized some of the research in social stratification.

As noted in the introduction to this chapter, social capital has much in common with the concept of anomie developed long before the concept of social network was invented. Without the concept of anomie, one would not even think of relating the percentages of Protestants or being not married to higher levels of suicide as did Durkheim (1951 [1897]). (Whether the association has proven correct in the long run is another matter). Controversial and difficult to pin down, anomie nonetheless generated a great deal of theory and research. Social capital seems to be doing the same thing. There is more work to do. Recent specifications of the concept are promising in that they point to further ways of unpacking the concept and examining the relationships between the various indicators of social capital.

To begin with, while almost all network analyses could have a social capital interpretation, not all social capital propositions necessarily involve networks either explicitly or implicitly: "Only 4.5% of abstracts for articles [reviewed in their study] on social networks mention social capital, and just about 2% of those on social capital explicitly mention social networks" (Moody and Paxton 2009, 1491). There are cultural and psychological aspects of social capital as well as network aspects. Baker and Faulkner (2009) propose the concept "double embeddedness" to express the idea that economic, political, and social actions in communities, organizations, and markets are simultaneously embedded in social structural networks and culture. They argue that sometimes culture and social structure feed back upon one another, but sometimes they operate

at cross purposes. There is much further to explore in pinning down this double embeddedness. The macro-micro aspects of social networks and social capital deserve much more analysis. Glanville and Bienenstock call attention to the fact that, for example, macro dense social networks lead to norm enforcement while micro dense networks are associated with individual social support. It is all well and good to talk about neighborhood social capital in general, but a careful survey of Chicago neighborhoods suggested that the concept had at least four dimensions, themselves composed of a number of specific survey items (Sampson and Graif 2009). Mere contact with others is not an exact enough indicator of general social capital because it depends upon whom the contact is with, because contact not only indicates social solidarity but social influence as well (Cote and Erickson 2009). The effect of network structures on social capital needs further investigation. For example, many of the advantages of social capital occur when resources flow between subgroups and accrue to the larger social system (Frank 2009). While this may appear to be a familiar epidemiological contagion mechanism, Frank suggests that the flow can occur as a result of a "quasi-tie" which results from cognitive or psychological identification with the larger system rather than a direct network phenomenon.

The upside to the diffuseness of the concept of social capital is therefore its very richness. This richness, however, means that much further conceptual exploration and empirical research are required further to develop and ground the implications of social capital. There is much to which we can look forward