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Toward a neighborhood resource-based theory of social capital for health: Can Bourdieu and sociology help?

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Abstract

Within the past several years, a considerable body of research on social capital has emerged in public health. Although offering the potential for new insights into how community factors impact health and well being, this research has received criticism for being undertheorized and methodologically flawed. In an effort to address some of these limitations, this paper applies Pierre Bourdieu's (1986) [Bourdieu, P. (1986). *Handbook of theory and research for the sociology of education* (pp. 241–258). New York: Greenwood] social capital theory to create a conceptual model of neighborhood socioeconomic processes, social capital (resources inhered within social networks), and health. After briefly reviewing the social capital conceptualizations of Bourdieu and Putnam, I attempt to integrate these authors' theories to better understand how social capital might operate within neighborhoods or local areas. Next, I describe a conceptual model that incorporates this theoretical integration of social capital into a framework of neighborhood social processes as health determinants. Discussion focuses on the utility of this Bourdieu-based neighborhood social capital theory and model for examining several under-addressed issues of social capital in the neighborhood effects literature and generating specific, empirically testable hypotheses for future research.

Keywords: Social capital; Social epidemiology; Theory; Social determinants; Neighborhoods; Bourdieu

Introduction

Within the past several years, there has been a rapid emergence of research on social capital within the social epidemiological literature (e.g., Kawachi, Kennedy, & Glass, 1999; Lochner, Kawachi, & Kennedy, 1999; Lomas, 1998; Rose, 2000; Veenstra, 2000). Although offering potential for new insights regarding how socioeconomic factors impact health, particularly at the neighborhood or local area level, this research has also drawn significant criticism for theoretical and methodological shortcomings, leading some to question the relevance of such evidence to individual and population health (see Forbes & Wainwright, 2001; Hawe & Shiell, 2000; Macinko & Starfield, 2001; Muntaner, Lynch, & Davey Smith, 2001; Pearce & Smith, 2003).

In an effort to address these problems, researchers have called for studies that use more incisive theoretical formulations (e.g., Baum, 2000; Fassin, 2003; Muntaner & Lynch, 2002). Existing studies have almost exclusively relied upon Putnam's (1993, 1995, 1996, 1998, 2000, 2001) conceptualization of social capital, which consists of features such as interpersonal trust, norms of reciprocity, and social engagement that foster community and social participation and can be used to impact a number of beneficial outcomes, including health.

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Despite its popularity within public health and other disciplines, this conceptualization has received a variety of criticisms (e.g., DeFilippis, 2001; Muntaner & Lynch, 2002; Portes, 1998). Some have argued that conceptualizing social capital as such informal social relations limits its relevance for public health and understanding health inequalities (Lynch, Davey Smith, Kaplan, & House, 2000). I propose that it would be more useful to conceive of social capital in a more traditionally sociological fashion: as consisting of actual or potential resources that inhere within social networks or groups for personal benefit. When studying neighborhood or local area socioeconomic influences on health—an increasingly popular focus within public health (see Diez-Roux, 2001)—conceptualizing social capital in this way necessitates consideration of its integral link to the socioeconomic conditions of the places in which people live. Consequently, this makes it a more useful concept for public health and social epidemiology because it draws attention to material conditions and the policies that influence them. Concurrently, it helps extend neighborhood effects research on health, which, as argued by Morenoff (2003), tends to focus only on whether neighborhood socioeconomic characteristics are associated with the health outcome of interest, yet fails to consider more proximate mechanisms that may offer insights into why neighborhood environments are associated with health.

This conceptualization is consistent with the social capital theory of Pierre Bourdieu (1986), which emphasizes the collective resources of groups that can be drawn upon by individual group members for procuring benefits and services in the absence of, or in conjunction with, their own economic capital. Nevertheless, almost no health studies to date, whether focused on individuals, neighborhoods, or other levels of analysis, have used Bourdieu's conceptualization (Fassin, 2003), even though researchers have continued to make arguments for the value of his theory for studying health inequalities (e.g., Baum, 2000; Carpiano, 2004; Morrow, 1999; Muntaner & Lynch, 2002).

Despite the potential utility of Bourdieu's theory, introducing such a perspective into the social capital and health research agenda is not an easy endeavor. Like any other social science research, it requires construction of logical theoretical formulations from which hypotheses may be derived. In the following pages, I attempt such a task, drawing upon Bourdieu's theory and sociological research on community and urban processes to construct a Bourdieu-based conceptual model of *neighborhood social capital* for health in the interest of furthering social epidemiological and public health research focused not only on neighborhood effects, but social capital as well. This paper is not intended to be a comprehensive review of either Bourdieu's theory or community and urban sociology research, but rather a theory-building endeavor that is informed by this prior scholarship.

First, I critically review Putnam and Bourdieu's respective theories of social capital in an effort to better understand how social capital might operate, particularly within neighborhoods or local areas. Second, I detail a conceptual model, based on a framework informed by Portes (1998), which incorporates my theoretical integration of social capital into a broader theory of neighborhood social processes as health determinants. This model draws upon existing sociological research on urban, community, and social network processes to support its theoretic assertions. Finally, I discuss the potential utility of this model for generating hypotheses that can be empirically tested in future research and help progress our understanding of these issues.

Social capital: A brief review of two theories

Robert Putnam's social capital

Despite seminal scholarship on social capital by Bourdieu (as well as later work by James Coleman (1988, 1990)), political scientist Robert Putnam has been the most influential social capital theorist within public health and community development (DeFilippis, 2001; Fassin, 2003; Lochner et al., 1999; Macinko & Starfield, 2001). Putnam defines social capital as referring to "features of social organization, such as networks, norms, and social trust, that facilitate coordination and cooperation for mutual benefit" (Putnam, 1995, p. 67). The amount of social capital in a community (e.g., neighborhood, town/city, state, nation), a collective characteristic generated via norms of reciprocity and trust among residents, has implications for a multitude of beneficial outcomes for that community. Essentially, the more social capital a community has, the better off it is reasoned to be. Putnam argues that declining US trends in activities such as voter turnout and social club membership reflect declining trends in civic and social engagement—essentially declines in social capital (see Putnam (2000) for empirical tests that support his theoretical assertions).

While Putnam's theory has attracted significant attention by academic and non-academic audiences alike, it has also been heavily attacked by critics from sociology (e.g., Portes, 1998), public health (e.g., Muntaner & Lynch, 2002), and community development (e.g., DeFilippis, 2001). Three notable criticisms are tautological reasoning, construct validity related to his macro-level of analysis (e.g., city-, state-, and nation-level social capital), and inadequate attention to potentially negative aspects of social capital and power

issues (DeFilippis, 2001; Muntaner & Lynch, 2002; Portes, 1998).

A more fundamental problem concerns Putnam's definition of "social capital," which is inconsistent across his body of work on the subject. For example, Putnam (1995, p. 67) defines social capital as "features of social organization, such as networks, norms, and social trust, that facilitate coordination and cooperation for mutual benefit." However, in a later work, Putnam (1998) uses the following definition:

> …*social capital* refers to the norms and networks of civil society that lubricate cooperative action among both citizens and their institutions. Without adequate supplies of social capital—that is, without civic engagement, healthy community institutions, norms of mutual reciprocity, and trust—social institutions falter. (p. v)

While this second definition bears some similarity to the first one with regard to its mention of norms and networks, it differs with respect to its inclusion of civic engagement and "healthy community institutions" within the social capital construct. Adding to this inconsistency, Putnam (2000, p. 19) specifically defines social capital as "connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them." Despite such confusion, certain ingredients are common across these varying definitions: social networks, norms of reciprocity, and trust. In an effort to synthesize definitions, it can be concluded from his collective works on the subject that social capital is used as an umbrella term that covers a range of social processes related to social connectedness and attachment (or the potential for exhibiting such processes) that can be classified as "social cohesion." While sociological theorists have conceptualized social cohesion and the forms in which it can manifest in a variety of ways (e.g., Durkheim's (1997) "mechanical and organic solidarity" and Tönnies (1996) "gemeinschaft (community) and geselleschaft (society)"), for the present discussion, I use the term more generally in referring to patterns of interaction (e.g., the degree of interaction between neighborhood residents and a community's network ties) and the associated values linked to—or emanating from—these interactions (such as familiarity, interpersonal trust, and norms of reciprocity).

So if Putnam's work focuses on social cohesion while social capital, in a more traditional social science sense, focuses on resources derived from social networks, how might social capital itself be conceptualized in research—particularly public health research that has relied almost exclusively on Putnam's theory? After all, in terms of a neighborhood or local area, residents may be socially cohesive in the sense that they know and trust one another and share similar values. However, they may not necessarily rely on each other for acquiring resources that they are unable to obtain through their own individual means. It is these purposive social ties and practices that are embodied by the concept of social capital—a social process that is distinct from social cohesion. Using Pierre Bourdieu's theory of social capital to emphasize the resource-based nature of social capital may improve our understanding of how neighborhoods or local areas matter for residential well-being.

Pierre Bourdieu's social capital

European sociologist Pierre Bourdieu developed the concept of social capital in thinking about how social class and other forms of inequality are socially reproduced (Bourdieu, 1986; Field, 2003). He conceptualized social capital as "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 and recognition" (Bourdieu, 1986, p. 248). To Bourdieu, social capital can be viewed as a characteristic of groups—the total stock or quantity of resources tied to an institutionalized network. The benefits of (or profits obtained from) being a member of this network serve as the foundation of the solidarity that generates these benefits or profits. Like other forms of capital that he identified as critical for the pursuit of profits and maintenance of social class position, such as economic capital (money) or cultural capital (e.g., education, taste), social capital can be used to obtain resources in tandem with, or in the absence of, other forms of capital (Bourdieu, 1986). Overall, the amount of social capital that one possesses depends on (1) the size of network connections that the individual "can effectively mobilize" and (2) the amount and type(s) of capital (e.g., economic, cultural, or symbolic) possessed by each of those to whom he or she is related (Bourdieu, 1986, p. 249). It is this two-fold conceptualization that makes his theory quite useful for studying neighborhood social capital processes that might matter for health. Bourdieu's theory forces us to consider not only the existence of community social networks, but also the resources (potential or actual) possessed by the network and individual residents' abilities to draw upon the network for those resources in order to pursue a variety of goals.

In theorizing how social capital operates for the benefit of a group and its constituent members in obtaining resources and power, Bourdieu's work also recognizes the potential negative aspects of social capital—particularly the exclusion of specific individuals from obtaining resources tied to a network. Due to his identification of both the social relationships in which a person is embedded (and of which social capital emerges) and the amount and quality of those social

relationships, his social capital theory has been praised by some scholars as being the most refined (DeFilippis, 2001; Portes, 1998).

Bourdieu and Putnam: A comparison of approaches and an attempt at resolving discrepancies

When compared, Putnam and Bourdieu's respective theories of social capital diverge at numerous points. One of the most obvious divergences is apparent in the constitutive elements of their respective theories. While Putnam's theory is explicitly centered on geographic locales such as neighborhoods and even larger communities, Bourdieu's is less geographically rooted, but nevertheless quite applicable to such locations (and is even mentioned in his examples). However, his theory is intended to also extend beyond such geographic-rooted networks and groups.

Although Putnam and Bourdieu discuss the importance of social networks, Putnam emphasizes the social cohesion of networks whereas Bourdieu emphasizes the resources of networks. Bourdieu identifies resources linked to a network of relationships and implies the importance of access to resources through an individual's attachment to the network containing these resources. Similar to Bourdieu, Putnam also identifies social capital as inhered within social networks (although emphasizing more community-focused networks). However, he focuses more on the trust and reciprocity that results from such social networks and the potential this trust and reciprocity have for mutual benefit.

To the casual reader, these differences may be simply viewed as nuances or respective "differences of opinion" that are beneficial for fruitful scholarly debate. However, these issues take on far greater importance when one considers their implications for not only understanding the complexity of social capital as a valid theoretical construct, but also for addressing how social capital is utilized theoretically, operationalized, and ultimately interpreted in research. Therefore, further theoretical refinement is needed—particularly in terms of understanding how social capital manifests and operates within neighborhoods and communities.

In his review of the social science social capital literature, Portes (1998, p. 6) suggests that three aspects are often lumped together in describing social capital: the social processes that lead to social capital (such as collectivity and trust), social capital itself, and outcomes of social capital. I concur with (and applaud) Portes' identification of the need to separate aspects of social capital. However, for the purposes of framing the groundwork for this study's conceptual model (as well as trying to conceptualize the causes, correlates, and consequences of social capital within neighborhoods), it is necessary to slightly modify his approach and separate reviews of research on social capital and related concepts into the following elements:

1. "*Structural antecedents*" *to social cohesion and social capital:* When considering social capital within neighborhoods, these are structural characteristics of a neighborhood and its surrounding area (e.g., inter- and intra-neighborhood socioeconomic conditions) that have implications for the type and strength of social ties and resources available within the neighborhood itself.
2. *Social cohesion:* Patterns of social interaction and values (such as network formation and ties, familiarity, and mutual trust) that lead to social capital, and which serve as intermediaries between structural antecedents and social capital, but are necessary foundations for establishing social capital within neighborhoods. While Putnam classifies these elements as "social capital," I will refer to them as "social cohesion" from this point forward.
3. *Social capital:* I reserve this term to refer *only* to actual or potential resources that are rooted in neighborhood social networks. This construct is consistent with Bourdieu's conceptualization of social capital.
4. *Outcomes of social capital:* Goals or benefits that social capital can provide for neighborhood network members or the neighborhood as a whole. Certainly, not all potential or actual outcomes achieved via social capital are beneficial in a positive manner (e.g., see Altschuler, Somkin, & Adler, 2004 and Portes & Sensenbrenner, 1993), but I reserve this discussion for later in the paper.

By separating social capital from these related factors, we can more clearly conceptualize its causes, correlates, and consequences. Using this approach, Putnam's theory addresses primarily "social cohesion"—networks, trust, and reciprocity that form the basis through which social capital resources can be fostered, accessed, maintained, and even lost. Without these social cohesion factors, none of the aggregate resources possessed by a group (e.g., money, social support, clout or influence, protection) can be accessible to the group's members. Therefore, Putnam's theory (at least in terms of its core elements, social networks, trust, and reciprocity—factors I classify as social cohesion) focuses on social processes antecedent to the *resources* Bourdieu identifies as central in his own definition of social capital. Previous conceptualizations of social capital have conflated social capital with its antecedents and outcomes or consequences (Portes, 1998). I reserve the term "social capital" to specifically refer to resources inhered within a social network.

Is there existing evidence to justify the theoretical conceptualization I have just detailed? In the next section, I utilize these four elements to develop a conceptual model that details the influence of neighborhood social capital on individual health. I support my assertions with social science literature relevant to structural antecedents of social capital, social cohesion processes that lead to social capital, social capital itself, and social capital outcomes.

The study model

The conceptual model is shown in Fig. 1.

Structural antecedents to social cohesion and social capital

Structural antecedents can be organized into inter- and intra-community factors. Consideration of inter-community factors draws upon urban stratification research, which is particularly relevant for understanding how inter-community factors have implications for creating, maintaining, or even inhibiting social attachment, social ties, and, ultimately, social capital. Essentially, this research considers how socioeconomic burden—particularly the declining socioeconomic conditions experienced within many inner-cities over the past several decades—greatly impacts the living conditions of inner-city neighborhoods, as well as the social resources of residents (particularly those of racial/ethnic minority status) (Dreier, Mollenkopf, & Swanstrom, 2001; Logan & Molotch, 1987; O'Regan, 1993; Rankin & Quane, 2000; Wacquant & Wilson, 1989; Wilson, 1987). These socioeconomic conditions serve as strong determinants for not only behavior usually considered threatening and deterioration of the urban landscape (respectively termed as social and physical disorder) (Sampson & Raudenbush, 1999), but also for isolating both residents and communities from mainstream society. Specifically, research has focused on the social isolation and economic segregation of inner-city minority residents (e.g., Jargowsky, 1996; Massey & Denton, 1989; Swanstrom, Dreier, & Mollenkopf, 2002; Wilson, 1987), the neighborhood poverty influences on the extent and quality of their social networks (e.g., Rankin

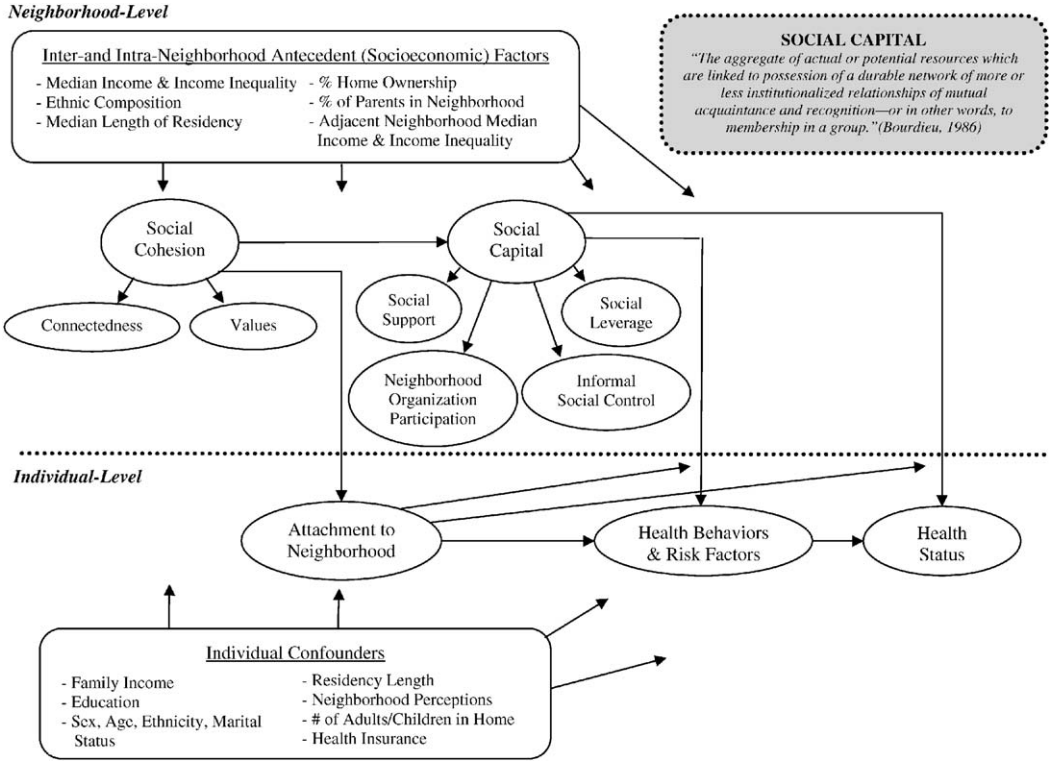

Fig. 1. Proposed conceptual model of neighborhood social capital processes on individual health outcomes. *Note*: Although implicated in the text, arrows directly leading to "Health Behaviors & Risk Factors" and "Health Status" from "Social Cohesion" were intentionally omitted from this figure for the purpose of clarity. In an effort to facilitate the empirical testing of this model, concepts included in "Inter- and Intra-Neighborhood Antecedent (Socioeconomic) Factors" and "Individual Confounders" are potential variables informed by prior research.

& Quane, 2000; Wacquant & Wilson, 1989; Wilson, 1996), and their over-representation (as employees and owners) in a limited range of industry and trade sectors (e.g., Logan, Alba, & McNulty, 1994).

In conceptualizing *intra-community* antecedent factors that impact social cohesion, social capital, and individual health and well being, the model draws upon community sociology research, which has identified important predictors of social engagement, network formation, neighbor relations, and community participation—the foundations upon which social cohesion and social capital can be formed. These predictors include residency length (Gerson, Stueve, & Fischer, 1977; Kasarda & Janowitz, 1974; Sampson, 1988), homeownership (Gerson et al., 1977), race/ethnicity (Lee, Campbell, & Miller, 1991; Logan & Brewster-Stearns, 1981; Logan & Molotch, 1987), and household SES (Campbell & Lee, 1992; Gerson et al., 1977).

Social cohesion

Social cohesion is conceptualized as the degree of trust, familiarity, values, and neighborhood network ties shared among residents—factors that are influenced by area socioeconomic conditions and serve as the basis from which social capital can be formed. While other research has included aspects of social cohesion (as identified in this paper) in their social capital measures (e.g., Sampson, Raudenbush, & Earls (1997) collective efficacy measure) or have used measures of social cohesion as indicators of social capital (e.g., Kawachi, Kennedy, & Lochner, 1997), it is conceptualized here as a distinct, antecedent construct. As I argued earlier, social cohesion represents networks and values from which social capital can be developed (see Granovetter, 1973; Granovetter, 1983; O'Regan, 1993; Portes & Sensenbrenner, 1993), but social cohesion is distinct from the collective resources emanating from these networks that are actually used for action (that is, the social capital). Nevertheless, social cohesion is important in the sense that it is the foundation from which social capital forms arise. Also, the social ties that exist as a result of social cohesion may impact health independently of the resources for which it gives rise. Feelings and sentiments of connectedness and trust among neighborhood residents can certainly have implications for residential quality of life and ultimately health, including participation in local social events, and/or, even at the very minimum, feelings of good faith, mutual respect, and contentment among neighbors (Ross & Jang, 2000).

Social capital and its forms

I explicitly draw upon Bourdieu's theory by conceptualizing social capital as the interaction between (1) amount and type of resources of a group or network and (2) the connection of individuals to the group (or ability to draw on these resources). In an effort to better conceptualize resources and, therefore, social capital, this model considers four "forms" of social capital: social support, social leverage, informal social control, and neighborhood organization participation. These forms are neighborhood network-based resources that have each been identified in prior research as important for achieving a variety of outcomes (e.g., see Briggs, 1998; Dominguez & Watkins, 2003; Saegert & Winkel, 1998; Sampson, 2001) but which, to my knowledge, no studies to date have attempted to assess their relative effects for health and well being.

Social support refers to a form of social capital that individuals can draw upon to cope with daily problems (Briggs, 1998; Dominguez & Watkins, 2003; Thoits, 1995). Social leverage (Briggs, 1998; Dominguez & Watkins, 2003; O'Regan, 1993) is social capital that helps residents access information and advance socioeconomically (e.g., job referrals). Informal social control (Sampson, 2001) refers to the ability of residents to collectively maintain social order and keep the neighborhood safe from criminal and delinquent activity. Community organization participation focuses on residents' formally organized collective activity for addressing neighborhood issues (e.g., block groups) (Saegert & Winkel, 1998; Saegert, Winkel, & Swartz, 2002).

While Bourdieu did not explicitly discuss forms of social capital, certainly, social support, social leverage, informal social control, and community organization participation are quite consistent with Bourdieu's theory, particularly in thinking about his aim to understand how social capital operates in reproducing inequality. It is rather easy to think in terms of Bourdieu's theory how a neighborhood community or some of its residents may use such resources to pursue a variety of goals or outcomes. After all, it is the potential of forms such as these that make social networks useful for action. Distinguishing between the resources of these (and other) forms and the social ties (and the values that govern these ties) helps us conceptually separate social capital from the social networks in which social capital inheres. Focusing on these resources can help us better understand how social relations translate into action and derive potential benefits and harms. This important focus is a core component of why I find Bourdieu's theory so critical for conceptualizing and examining social capital.

The incorporation of a neighborhood attachment measure into my model considers Bourdieu's focus on the importance of being connected to networks that possess resources. It is also consistent with Morrow's (1999) warning to avoid assumptions that certain social classes possess abundant social capital. She posits that incorporating a measure such as neighborhood attach-

ment might improve understandings about social capital that are not necessarily class based. Additionally, integration measures may facilitate insights regarding the acquisition of power via community-based social networks. The benefits provided by social support and social leverage social capital are generally restricted to individuals who are part of the network that generates these resources. Residents who are isolated from this network may not have access to this social capital. Conversely, the two remaining forms of informal social control and community organization participation, while also resources that are network based, can generate benefits that are not necessarily restricted to network members. Those residents who are excluded may also enjoy certain benefits.

While a significant amount of research has either explicitly or implicitly explored the importance of these different forms for a variety of non-health outcomes [e.g., neighborhood stability (Temkin & Rohe, 1998), low income housing conditions (Saegert & Winkel, 1998; Saegert et al., 2002), neighborhood crime reduction (Morenoff, Sampson, & Raudenbush, 2001; Sampson et al., 1997), quality of life and socioeconomic survival issues for low income families (Erikson, 1976; Briggs, 1998; Dominguez & Watkins, 2003)], each form can be theorized to be important for health outcomes as well. *Social support* has been identified as a critical component for health, involving emotional, instrumental, appraisal, and informational components that operate via a variety of direct, mediating, and moderating pathways [see Berkman, Glass, Brissette, & Seeman (2000) and Thoits (1995)]. *Social leverage* offers information that can be used to maintain or improve individuals' quality of life and pursue social mobility. Information pertaining to employment, child care, and other opportunities affords individuals the possibility to minimize or avoid socioeconomic hardships that can negatively impact health and well being.

Informal social control is used to combat social disorder. Therefore, this form can have positive health benefits by generating actual and perceived neighborhood safety. For example, it can be hypothesized that, in neighborhoods with high levels of social control, even if residents do not regularly interact with their neighbors, their "stranger" next door will still react if he/she sees suspicious or threatening activity in the neighborhood (see Sampson, 2001). By contributing to neighborhood safety, informal social control fosters social engagement and activity (physical and social); people are not isolated due to real or perceived threat of personal harm. In turn, this contributes to individual's residential quality of life and ultimately their health. It is important to note that while informal social control may promote health in a number of ways, I intentionally emphasize this specific crime reduction/safety promotion mechanism due to the focus paid to it in the urban and community social science (non-health focused) literature (e.g., Sampson, 2001; Sampson et al., 1997; Sampson, Morenoff, & Earls, 1999).

Community organization participation considers residents' formally organized collective activity for addressing neighborhood issues (e.g., block groups) (Putnam, 2001; Saegert et al., 2002). Such participation can be hypothesized as important for health in several ways. First, these organizations work towards improving the quality of life in the community, whether working outside the neighborhood (e.g., bringing resources into the community by attending local government meetings and lobbying politicians) or within the neighborhood itself (e.g., trash clean-ups, organizing neighborhood social events). Second, membership in such groups provides the opportunity for individual residents to simply be part of a group. Aside from the benefits of socializing and interacting with others, these groups, on the most basic level, provide individuals with activities, which are good for health and well being. Third and finally, the high degree of community participation (or arguably even the *perceived* presence of such participation) may help foster a psychological sense of community as well as a sense of community empowerment from which all residents can benefit. Specifically, residents benefit from the knowledge that they live in a location where people are looking after the concerns of the neighborhood and its residents.

In terms of the overall level of social capital, it is typically argued that the higher the level, the more beneficial it is for most residents. However, in certain cases, high levels of social capital can be detrimental. Portes (1998) and Portes and Sensenbrenner (1993) provide evidence of the detrimental effects of social capital documented within the immigrant studies literature: exclusion of outsiders, excess claims on group members and "free riding" of less diligent members, restrictions on individual freedoms, and downward leveling norms that keep members of a disempowered or discriminated group in their current social position and inhibit or discourage ambitious members from escaping. More directly related to health, Altschuler et al. (2004) detail an excellent example of how neighborhood social capital may potentially lead to unintended, health-hazardous consequences. One community in their study successfully lobbied to prevent the installation of street lighting. Although this was consistent with the residents' goal of maintaining residential quality of life via protecting the neighborhood's natural beauty, it held potential for endangering pedestrian health and safety.

Theoretical implications

With the model now detailed, it is important to discuss the implications of such a conceptualization for

different theoretical points of view and furthering understanding of neighborhood social capital as a potential health determinant.

Neighborhood social capital as a multilevel construct

First, this model is the only one of which I am aware to operationalize social capital as a cross-level interaction between neighborhood social network-based resources and the individual's ability to access those resources via integration into the network (incorporating Morrow's (1999) argument). If this operationalization of social capital were found to be a strong predictor of health, it would bolster the argument that neighborhood social capital cannot simply be measured as an aggregate characteristic or indicator that is assumed to be accessible to, and consequently affect, all residents in equal amounts. Akin to how Bourdieu conceptualized social capital as actual or potential resources linked to a network, these findings would provide support for the argument that variation in access and resources must be considered when studying social capital. Adequate assessments of social capital must account for the available level of a particular social capital form and the ability of individual residents to access that form for benefit.

Neighborhood social capital as differing forms

Second, the model considers different forms of social capital, which may have different relationships to health outcomes, regardless of residents' access to it (although resident access may certainly moderate this relationship). Existing research on social capital and health has tended to overlook specific forms of social capital and their relative value for health, instead consolidating various social and political activity measures to capture an overall or aggregate construct of social capital—and apply it to all communities. Such an approach overlooks the intricacies of different resources for obtaining different goals (e.g., neighborhood-based social support for coping with daily life stress and social leverage for socioeconomic advancement) as well as overlooks how cultural and socioeconomic background shape people's conceptions of social capital and their social capital needs. Examining differential effects among the different social capital forms would further our understanding of exactly how neighborhood social capital affects health (and for who). Again, the benefits and drawbacks of a particular social capital form may depend on an individual's level of attachment to the neighborhood (as well as their personal needs). The benefits of some social capital forms (e.g., social support and social leverage) may depend entirely on how well an individual is integrated into the community network. Residents may be less likely to share valuable job information with or provide assistance to strangers, neighbors perceived as "outsiders" or "undesirables," or newly arrived residents. Conversely, integration may be less necessary for obtaining benefits from other social capital forms. For example, all residents in a community are likely to benefit if a large number of residents are keeping surveillance for criminal activity—everyone who lives in the community itself may enjoy the safety that such monitoring provides. Similarly, community organizations may engage in activities that benefit all residents equally (e.g., organizing neighborhood beautification efforts, community gatherings, lobbying politicians for more police protection) (see Altschuler et al., 2004).

Neighborhood social capital as a mediator of SES–health relationship

Third, the model draws upon extensive social science literature in positioning social cohesion and social capital as intermediate pathways through which area-based socioeconomic conditions are associated with health outcomes. Socioeconomic factors shape the degree of social cohesion within a neighborhood and both consequently pose implications for the forms of social capital that are available in the neighborhood—in terms of both quality and quantity. It argues for research that considers specific neighborhood social resources and the pathways through which such resources may matter for health and well being.

Neighborhood social capital versus social cohesion

Finally, no existing health research on social capital to date has examined the relative effects of social capital (i.e. Bourdieu's theory) alongside social cohesion (i.e., Putnam's theory)—if both have been included at all, they have been combined into a single measure (e.g., interesting studies focused on collective efficacy that combine measures of social cohesion and informal social control (e.g., Browning & Cagney, 2002). This makes it difficult to assess what specific factors are shaping the health outcomes—as well as problematic in understanding which factors are most important for health and where community interventions might need to focus. For example, is focusing attention on promoting social cohesion more important for improving a particular health outcome than placing emphasis on promoting the generation or nurturing of actual collective resources that emanate from residents' ties?

Empirical testing

In order for this model to be useful, it must be empirically testable. One current evaluation (see Carpiano, 2004) involves multilevel analysis of a dataset

with a neighborhood clustered sampling design: structural antecedents are captured with area census indicators; social cohesion and social capital forms are measured using neighborhood-level mean scores of respondents' appraisals of the neighborhood social environment; and individual neighborhood attachment is measured with several items assessing the extent of a respondent's interaction with other residents. Of course, this is but one example (that possesses various strengths and limitations). Certainly, other approaches, methods, and datasets present different possibilities that should be explored. Furthermore, tests of this model must account for the populations they are studying and, when necessary, incorporate appropriate modifications (e.g., in studying only impoverished neighborhoods versus a more socioeconomically heterogeneous sample of neighborhoods or in studying residents who are elderly or single parents versus all adult residents together).

Conclusion

From a theoretical standpoint, health research on social capital has had two crosses to bear. While it has been criticized for conceptual flaws in understanding the possible role of social capital for shaping health inequalities, more fundamentally, it has relied almost exclusively on a widely criticized theory of social capital—that of Robert Putnam. Applications of alternative social capital theories have been virtually absent. In line with the suggestions of critics interested in overcoming these shortcomings, this paper sought to stimulate social epidemiological and public health research on neighborhood social capital by proposing an empirically testable theory and conceptual model of neighborhood social processes rooted in the social capital theory of Pierre Bourdieu and the extensive literature on neighborhood processes found within urban and community sociology.

Utilizing a framework that separates social capital from its antecedent factors and outcomes offers the opportunity for a thorough examination of social capital theory and facilitates theory building via a systematic review of relevant literatures. Engaging in such an exercise is a critical step for strengthening empirical research that may contribute to at least some of the challenges to social capital theorists that Putnam (1998) has put forth: to better understand how social capital is created and how it works, to improve understanding of different social capital forms and the culture in which these forms can be found, and to demonstrate the utility of social capital in new areas of inquiry.

Clearly, this model does not fully capture the complex socioeconomic milieu in which social capital is embedded—particularly the role of bridging social capital (i.e., resources that a neighborhood can draw upon by being networked with other communities, institutions, and political structures) (see Warren, Thompson, & Saegert, 2001). Nevertheless, to my knowledge, it is one of the first to be proposed that explicitly draws upon Bourdieu's social capital theory—a sorely under-utilized, but highly relevant theory. Like the old adage about every long journey beginning with a first step, alternative thinking on social capital has to start somewhere—as does empirical assessment—the results of which will naturally necessitate modifications of the initial model. In conclusion, I welcome discussion regarding this model in the interest of fostering a robust debate on the role of social capital in understanding neighborhood and local area effects on health outcomes and inequalities.

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