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Neighborhood Social Capital as Differential Social Organization

Resident and Leadership Dimensions

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This article treats social capital as a multidimensional phenomenon along which neighborhoods are differentially organized. The authors assess this notion by linking two original surveys carried out in Chicago based on community residents ($N = 8,782$) and positional leaders ($N = 2,822$) representing six organizational dimensions. These data are used to examine both the dimensionality and structural predictors of neighborhood social organization. Results show that the social capital of Chicago communities encapsulates four distinct dimensions at the residential level and two at the leadership level. Moreover, dimensions of leadership-based social capital are for the most part inversely related to resident-based social capital and differentially predicted by concentrated disadvantage, residential stability, and racial/ethnic diversity. Based on multidimensional scaling and clustering of the communities, the authors derive a conceptual typology highlighted by four distinct groups—Cosmopolitan Efficacy, Urban Villages, Institutional Alienation, and Conduct Norms. The authors discuss implications and suggest new directions for exploration of community differentiation.

Keywords: *neighborhood; efficacy; organization; leadership; networks*

Social capital has come to mean many things to many people, so much so that critics are increasingly asking what social capital is not. Even if we can agree on a reasonably precise definition of social capital, scholars disagree about what level of analysis the concept refers to. Is it the individual? Family? Neighborhood? Nation? This article tackles one slice of the debate by probing the neighborhood-level dimensions of social capital and, by implication, what may be a more appropriate higher order construct—neighborhood social organization. We thus set aside legitimate and perhaps more fundamental questions about how individuals appropriate social capital to achieve intended outcomes (Coleman, 1988; Portes, 1998). We

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also set aside debates over causality and aggregate outcomes thought to flow from neighborhood social capital.

Instead, we focus on the idea that social capital is endogenous and consists of multiple dimensions by which neighborhoods are differentially organized (Browning, 2009 [this issue]; Matsueda, 2006; Sampson, 2002; Sampson, Morenoff, & Earls, 1999). We assess this notion at the neighborhood level by employing a variety of measures that tap different aspects of social capital and social organization more generally. We examine the "ecometric" measurement properties of between-neighborhood variations, with a focus on how different measures hang together (or not) across communities. Is there one big dimension or many? Furthermore, we examine the structural predictors of neighborhood social capital and beyond to determine whether there is a general pattern of results versus dimension-specific predictors.

Another goal of this article is to assess the link of concepts with measures while comparing two very different methodologies—surveys of community residents and surveys of institutional leaders. We exploit a unique community-level design that entails a random sample of residents in neighborhoods of Chicago who were studied at the same time as a random sample of positional leaders in education, business, law enforcement, politics, religion, and community organizations. Both leaders and residents were asked about a key dimension of social capital—organizational involvement. In addition to an analysis of neighborhood measurement properties, we examine the convergent and discriminant validity of social capital by method. Do leaders of the community and residents give us the same picture of organizational involvement? If not, how are resident-based and leadership-based dimensions related? Answers to these and other questions lay the groundwork for future studies of the effects of neighborhood social capital.

Defining Neighborhood Social Capital

The intellectual tradition of community-level research has been revitalized by the increasingly popular idea of "social capital." Although there are conflicting definitions, social capital is typically conceptualized as embodied in the social ties among persons and positions (Coleman, 1990). Putnam (1993b) defined social capital as "features of social organization, such as networks, norms, and trust, that facilitate coordination and cooperation for mutual benefit" (p. 36). Whatever the specific formulation, the sources of social capital in this view stem not from the attributes of individuals but rather the structure of social organization. Sampson (2002) thus argued that neighborhood social capital may be profitably conceptualized in terms of the differential ways in which communities are socially organized (also see Matsueda, 2006).

A large literature has emerged in the social sciences that has centered its attention on social capital (Paxton, 1999; Portes, 1998; Putnam, 1993a, 1993b; Woolcock, 1998). However, the empirical base of studies remains quite limited when we consider

variations in dimensions of social capital at the neighborhood level (Sampson et al., 1999; Sampson, Morenoff, & Gannon-Rowley, 2002). The reason is that governments collect very little information on the collective properties of administrative units for which they routinely report information. Neighborhood-level research is thus dominated by correlational studies of poverty rates and other sociodemographic characteristics drawn from census data and government statistics. Such correlations are important as an initial step, but they fail to identify the social interactional mechanisms that may intervene or help explain the salience of community attributes: Social capital is not about mere population composition or aggregated individual characteristics. The strategy of this article is therefore to link key concepts with measures that directly tap neighborhood-level variance in social capital and its theoretical affiliates. Synthesizing extensive reviews and our own reading of the literature (e.g., Borgatti, Jones, & Everett, 1998; Portes, 1998; Putnam, 2000; Sampson et al., 1999; Sampson et al., 2002; Subramanian, Lochner, & Kawachi, 2003; Woolcock, 1998), we focus initially on four constructs that we hypothesize have independent validity but yet are frequently grouped under or loosely associated with the idea of "social capital"— Ties or Networks, Collective Efficacy, Organizational Involvement, and Conduct Norms.

Let us first consider the conceptual distinction between network ties and collective efficacy. The tendencies for residents to be connected to multiple and various others (e.g., friends, relatives, coworkers), to establish strong reciprocal ties, or to draw on resources and information flowing through multiple, diverse, or dense social networks (e.g., neighborhoods, schools, workplace, organizations) have traditionally been considered critical aspects of social capital (Burt, 2000; Granovetter, 1973, 1985; Portes & Sensebrenner, 1993). In many urban communities, however, strong ties among neighbors are no longer the norm because friends and social support networks are decreasingly organized in a parochial, local fashion (Fischer, 1982; Wellman, 1979). As Granovetter (1973) argued in his seminal essay, "weak ties"—that is, less intimate connections between people based on more infrequent social interaction—may be critical for establishing social resources, such as job referrals, because they integrate the community by bringing together otherwise disconnected subgroups.

To address these changes in the nature of contemporary personal relationships, Sampson and colleagues (1999; Sampson, Raudenbush, & Earls, 1997) proposed a focus on mechanisms that facilitate social control without requiring strong ties or associations, highlighting the combination of a working trust and shared willingness of residents to intervene in social control. This linkage of trust and cohesion with shared expectations for control was defined as neighborhood "collective efficacy." Just as self-efficacy is situated rather than global (one has self-efficacy relative to a particular task), a neighborhood's efficacy exists relative to specific tasks such as maintaining public order. Viewed through this theoretical lens, collective efficacy is a task-specific construct that highlights shared expectations and mutual engagement by residents in civic control. Consistent with the original ideas

of Bandura (1997), the meaning of efficacy is captured in expectations about the exercise of control, elevating the "agentic" aspect of social life over a perspective centered on the accumulation of stocks of resources. This conception is also consistent with the redefinition of social capital by Portes and Sensebrenner (1993) as "expectations for action within a collectivity."

Distinguishing between the resource potential represented by personal network ties, on one hand, and the shared expectations among neighbors for engagement in social control represented by collective efficacy, on the other, helps clarify disputes about neighborhood social capital. Social networks may affect social capital indirectly by fostering the conditions under which collective efficacy flourishes but network ties are not sufficient for the exercise of control (Bursik, 1999). The neighborhood and networks approach to social capital does not account appropriately for the "collective good" nature of social capital, nor does it explicitly include institutions and their capacity to both affect and be affected by communities (Woolcock, 1998). Our expectation is therefore that the density of ties and local network connectivity are not redundant with the collective efficacy of a neighborhood. Both are related to the idea of social capital, but the specific dimensions are hypothesized to be distinct empirically and theoretically.

A third construct that we focus on revolves around organizational capacity. Most neighborhood studies have focused on social ties and local interactions to the exclusion of the role that formal and informal organizations play in the community (Peterson, Krivo, & Harris, 2000). Connections between residents and organizations are important to theories of social capital because communities can exhibit intense private ties (e.g., among friends, kin), and perhaps even shared expectations for control, yet still lack the institutional capacity to achieve socially desired outcomes (Hunter, 1985). The institutional component of social capital includes the resource stock of neighborhood organizations and their linkages with other organizations and with residents. Similar to the idea of "bridging" social capital, Bursik and Grasmick (1993) also highlighted the importance of public control, defined as the capacity of community organizations to obtain extralocal resources (e.g., police protection, block grants, health services) that help sustain neighborhood stability and control. It may be that high levels of collective efficacy come about because of such controls, such as a strong institutional presence and intensity of residents' involvement in voluntary associations. Or it may be that the presence of institutions directly accounts for the social health of a community. Relatively few studies have examined residents' involvement in voluntary associations in relation to social outcomes (Simcha-Fagan & Schwartz, 1986; Taylor, Gottfredson, & Brower, 1984) and almost none have examined a community's institutional base (Bursik & Grasmick, 1993; Morenoff, Sampson, & Raudenbush, 2001; Peterson et al., 2000).

Perhaps more important, studies of community social capital have tended to neglect the relevance of community power elites and their latent capacity to mobilize collective resources from within and outside the community and to translate resident-based

social capital into desired policy outcomes. Although numerous case studies of community power structures were conducted in the 1950s, 1960s, and 1970s (Knoke, 1990), there are to this day very few systematic comparative studies of the community leadership structure or of its collective capacity to broker internal and external actors or resources relevant for community well-being. We begin to address this gap by simultaneously examining dimensions of institutional leadership and the intensity of local voluntary associations as reported by residents. Our major goal is primarily descriptive: How do resident-based social capital and institutional-based social capital covary, and what are their distinct dimensions? What are their predictors—are they the same or different?

Finally, we investigate cultural aspects that have been less visible in the neighborhood effects literature but that still bear potential as distinct properties of social capital, including attachment to neighborhood and normative climate. Perhaps the biggest understudied concept in this area of research from a quantitative perspective is normative climate. Although collective efficacy incorporates a distinct norm-based component (shared expectations), moral or legal cynicism and subcultural tolerance have been shown to vary by neighborhood too (Sampson & Bartusch, 1998). For example, Sampson, Morenoff, and Raudenbush (2005) showed that neighborhood-level legal cynicism accounted for much of the Black–White gap in violence. Other scholars have proposed that cultural norms of tolerance vary by community, but the evidence is mostly qualitative in nature and based on one or two neighborhoods, preventing comparative analysis (Anderson, 1990).

In an attempt to address this issue, we measure variations across a large number of neighborhoods in norms about delinquency and deviance among youth, with the aim to assess how normative climate relates to the more traditional forms of social capital and social organization. Is legal or moral cynicism lower where social capital is higher, as Putnam (1993a) argued with his Italian data? Under what social conditions is tolerance of deviance low or high?

Sources of Neighborhood Social Organization

Most studies of social capital have sought to assess its explanatory power with respect to some outcome. Here we step back and examine the structural sources of neighborhood social capital. A guiding theoretical framework may be found in social disorganization theory in both its classical (Bursik, 1988; Shaw & McKay, 1942/1969) and more recent formulations (Sampson et al., 1997). Under this framework, a number of studies have linked community-level social disorganization to population turnover, concentrated disadvantage, and racial or ethnic heterogeneity. Shaw and McKay (1942/1969), for example, hypothesized that a community's capacity for formal and informal social control is undermined by rapid turnover, heterogeneity, and poverty. Indeed, Sampson et al. (1997) found that concentrated

disadvantage and racial exclusion foster a climate of economic dependency alienation, fear, and distrust that obstructs collective efficacy even in the potential presence of strong personal ties (Ross, Mirowsky, & Pribesh, 2001). Similarly, in a study of 238 British communities, Sampson and Groves (1989) found a significant negative effect of disadvantage on organizational involvement.

Migration and residential instability as reflected in the flux of population in and out of the neighborhood might create disruption of institutional continuity, existing social networks, and social cohesion (Coleman, 1990). Consistent with this notion, Sampson and Groves (1989) found that residential instability was linked to higher violence, mainly by weakening local friendship networks. Tittle and Paternoster (1988) also suggested that residential mobility reduces commitment to conventional norms and, indirectly, criminal behavior. On the other hand, higher rates of home ownership, in part because of financial interests, promote more vigorous efforts to maintain social control (Bursik & Grasmick, 1993; Kornhauser, 1978).

Diversity of the population has been hypothesized to undermine the emergence and maintenance of certain types of social capital because of difficulties of communication in a context of linguistic or cultural isolation and lack of trust. Sampson and Groves (1989) and Sampson et al. (1999) confirmed negative associations between indicators of population heterogeneity and different measures of community social control across communities.

We investigate these and other issues by drawing on a major study of community social processes in Chicago. Grounded in a systemic notion of community, we treat neighborhoods and communities as ecological units; the extent of social organization (and for what) is treated as an empirical question (also see Tilly, 1973). This theoretical perspective is broader than just social capital, focusing on the ways in which neighborhoods are socially constituted and differentially organized across a number of dimensions (Matsueda, 2006; Sampson, 2002). When formulated in this way, dimensions of social organization are variable and analytically separable not only from potential sources of variation (e.g., resources, stability) and possible consequences (e.g., crime, child health) but also from the definition and operationalization of the units of analysis.

To summarize, our goal in this article is threefold in nature: We first identify the major empirical dimensions whereby neighborhoods are differentially socially organized. Second, these analyses are used to derive a theoretically based typology of community clusters. Third, we examine the structural and spatial predictors of variations in both dimensions and clusters.

Data Sources

This study employs data from the Project on Human Development in Chicago Neighborhoods (PHDCN). The extensive racial and ethnic diversity of the population

was a major reason Chicago was selected for the study. In this article we examine local community areas, a collection of both people and institutions occupying a spatially defined area influenced by ecological, cultural, and sometimes political forces (Park, 1916). Although larger than what are traditionally considered neighborhoods, these areas often have well-known names and borders such as freeways, parks, and major streets. In particular, Chicago has 77 local community areas, averaging about 37,000 persons each, that were designed to correspond to socially meaningful and natural geographic boundaries (Suttles, 1990). Although some boundaries have undergone change over time, these areas are widely recognized by administrative agencies, local institutions, and residents alike and thus prove important when considering organizational aspects of social capital. Some have also underdone name changes over the years, but the distinctiveness of the areas and their borders have remained remarkably stable.

The community survey of the PHDCN was carried out in 1995. To gain a complete picture of the city's neighborhoods, 8,782 Chicago residents representing all Chicago community areas were interviewed in their homes. Consistent with the idea of a local community area larger than just one's immediate block, by "neighborhood," the survey protocol stated,

> we mean the area around where you live and around your house. It may include places you shop, religious or public institutions, or a local business district. It is the general area around your house where you might perform routine tasks, such as shopping, going to the park, or visiting with neighbors.

The survey also asked all respondents to name and draw their self-defined neighborhood using ecological referents. More than 70% of respondents reported that their neighborhood had a name, and the mean number of blocks reported in the neighborhood was approximately 25.

The community survey had three stages. At Stage 1, city blocks were sampled within each neighborhood cluster; at Stage 2, dwelling units were sampled within blocks; and at Stage 3, one adult resident (18 or older) was sampled within each selected dwelling unit. Abt Associates carried out the screening and data collection in cooperation with the research staff of PHDCN, achieving a final response rate of 75%. The plan was designed to yield a representative probability sample of Chicago residents and a large enough within-cluster sample to create reliable between-neighborhood measures. The samples within neighborhood clusters were designed to be approximately self-weighting, and thus the between-neighborhood analysis is based on unweighted data (see Sampson et al., 1997). We rely on geocoded data on individuals to assign them to one of the 77 community areas in the city.

The key informant (KI) study is a second component of the community design that we exploit in the current research. The KI method was designed to ask systematic questions of multiple neighborhood informants ("experts" or "elites") who were

expected, based on their position, to have specialized knowledge of local action and neighborhood social structure. The KI design was based on a systematic sampling plan that targeted six institutional "domains": educational, religious, business, political, law enforcement, and community organizations. Within each domain, a list of positional leaders was constructed from public sources of information. Matched to areas already randomly selected for intensive investigation in other parts of the PHDCN study, the KI design focused on 47 of Chicago's 77 community areas. In Chicago, most organizations representing the six institutional domains recognize the official boundaries of the city's community areas, and many rely on them to provide services (Suttles, 1990).

It is important that the sampled areas were stratified by socioeconomic status (SES) and race/ethnicity to represent a wide diversity of Chicago's communities, ranging from ethnically diverse Rogers Park on the far north side to Black working-class Roseland on the far south, from exclusive Lincoln Park to the devastated ghetto of Garfield Park, from Mexican American (Little Village, South Lawndale) to Puerto Rican (Humboldt Park), and from White middle class (Clearing) to Black middle class (Avalon Park). The downtown (Loop) was also included.

The design required the construction of a geocoded list of more than 10,000 positional leaders in Chicago from public sources of information. Of these, 5,716 were located in the 47 sampled communities. Target informants were defined by nature of who they were, what they did, and where they were located. Examples of KIs by domain include: (a) education: public or private school principal, local school council president; (b) business: community banking officer (banking), realty company owner; (c) religion: Catholic priest, Protestant pastor, mosque imam, synagogue rabbi; (d) law enforcement: district commander, neighborhood relations sergeant; (e) political: alderman, ward committeeman, state representative, state senator; and (f) community organization: housing organization president, service director. Approximately 2,500 cases were stratified by community and domain before random release for study, with 10% turning out to be ineligible (e.g., moved, business closed). The National Opinion Research Center at the University of Chicago carried out data collection in 1995—the same time as the community survey—completing 1,713 interviews with sampled leaders in official positions.

Following the research tradition established in cultural anthropology and social network analyses of community influence structures (Knoke, 1990), a "snowball sample" was also incorporated as an important addition to the KI design. We suspected that many of the key actors in a community were new to the position or did not appear on official lists and hence were not sampled. Moreover, some of the influential actors in a community may hold nontraditional positions. To capture the full range of community informants, the KI interview asked respondents to nominate knowledgeable or influential persons in each of the six core domains of business, law enforcement, religion, education, politics, and community organizations. For the

more nontraditional persons who might be able to report on the community, we asked each respondent,

> Now, other than the people and organizations that we've already discussed, is there any one else in [COMMUNITY NAME] that we should speak with, to really understand this community? This could include a long time resident, a leader of a youth club or gang, a mentor of youth in the community, and so on. Who else would you recommend we talk to?

The sampled positional leaders generated 7,340 reputational nominees, about 3,500 of whom were duplicate nominations—the same individual nominated more than once or a nominee already in the sample. This finding in itself serves as an important validation of the design. In all, 1,105 reputational interviews were completed, bringing the final sample size to 2,822. The interviews averaged just less than an hour in length, and the overall completion rate was a healthy 87% of eligible cases.

Constructing Measures

Using the community survey and focusing on local residents, we first define several dimensions of neighborhood social organization. The goal is to see if there is a higher order structure to a number of scales that have previously been defined and shown to vary significantly by community and to test the specific hypothesis presented earlier that social network ties and collective efficacy are conceptually distinct and therefore will yield independent constructs.

Collective efficacy was defined in Sampson et al. (1997) as the combination of two scales—cohesion and social control. Based on neighborhood clusters of adjacent census tracts, collective efficacy has been shown to exhibit excellent "ecometric" properties that define the ability of a measure to capture between-area as opposed to between-individual variations (Raudenbush & Sampson, 1999). Specifically, collective efficacy yielded a reliability of .85 and a intraclass correlation of .20.[1] In the present study, we step back to examine its constituent scales and test how they vary together across community areas and with other constructs.

Control is a scale composed of the following items: "If a group of neighborhood children were skipping school and hanging out on a street corner, how likely is it that your neighbors would do something about it?"; "If some children were spray-painting graffiti on a local building, how likely is it that your neighbors would do something about it?"; "If a child was showing disrespect to an adult, how likely is it that people in your neighborhood would scold that child?"; "If there was a fight in front of your house and someone was being beaten or threatened, how likely is it that your neighbors would break it up?"; and "Suppose that because of city budget cuts the library

or fire station closest to your home was going to be closed down by the city. How likely is it that neighborhood residents would organize to try to do something to keep the fire station or library open?" The Cohesion scale includes the following items: "This is a close-knit neighborhood"; "People around here are willing to help their neighbors"; "People in this neighborhood generally get along with each other"; "People in this neighborhood can be trusted"; and "People in this neighborhood share the same values." All items were coded on a 5-point scale such that a higher value signifies higher cohesion and control. The Cohesion scale has a community-area reliability of .92 and the Social Control scale, .87.

Neighborhood activism is defined by a scale that summarizes responses to five questions. Respondents were asked, "Sometimes people in a neighborhood do things to take care of a local problem, or to make the neighborhood a better place to live. Please tell me if you have/if any member of your household has been involved in the following activities since you lived in this neighborhood. Have you (or any member of your household) . . ." "Spoken with a local politician like your Ward committee-person or an elected local official like your alderperson about a local problem?"; "Talked to a person or group causing a problem in the neighborhood?"; "Attended a meeting of a block or neighborhood group about a neighborhood problem or neighborhood improvement?"; "Talked to a religious leader or minister to help with a neighborhood problem or improvement?"; "Gotten together with neighbors to do something about a neighborhood problem or to organize neighborhood improvement?" These questions balance activism to address a problem and to improve the neighborhood, and they include multiple vehicles for collective participation (e.g., political, community organization, religious leaders) that closely match the domain structure for the KI study. The ecometric properties of the Activism scale are moderate compared to collective efficacy: The aggregate reliability is .66.

Moral/Legal Cynicism is a scale based on answers to the following questions: "Laws were made to be broken"; "It's okay to do anything you want as long as you don't hurt anyone"; "Fighting between friends or within families is nobody else's business"; "To make money, there are no right and wrong ways anymore, only easy ways and hard ways"; "Nowadays a person has to live pretty much for today and let tomorrow take care of itself." All answers were coded from 1 to 4, with a high value signifying greater cynicism. The community-level reliability is .73.

Intergenerational Closure includes the following items: "Adults in this neighborhood know who the local children are"; "There are adults in this neighborhood that children can look up to"; "You can count on the adults in this neighborhood to watch out that children are safe and don't get in trouble"; "Parents in this neighborhood know their children's friends"; and "Parents in this neighborhood generally know each other." All items were coded from 1 (*disagree strongly*) to 4 (*agree strongly*). The Closure measure yields excellent measurement properties, with a community-level reliability of .87.

Reciprocal Exchange is a scale composed of answers to the following questions: "About how often do you and people in your neighborhood do favors for each other?

By favors we mean such things as watching each other's children, helping with shopping, lending garden or house tools, and other small acts of kindness"; "When a neighbor is not at home or on vacation, how often do you and other neighbors watch over their property?"; "How often do you and other people in the neighborhood ask each other advice about personal things such as child rearing or job openings?"; "How often do you and people in this neighborhood have parties or other get-togethers where other people in the neighborhood are invited?" and "How often do you and other people in this neighborhood visit in each other's homes or on the street?" The community-level reliability of Reciprocal Exchange is .82. All items were recoded from 1 (*never*) to 4 (*often*).

Density of Friend/Kinship Ties ($\alpha = .79$) is a scale composed of the following questions: "Not counting those who live with you, how many of your relatives or in-laws live in your neighborhood?" and "How many friends do you have who live in your neighborhood?" All items were recoded such that 1 = *none*, 2 = *one or two*, 3 = *three to five*, 4 = *six to nine*, 5 = *ten or more*.

Organizational participation taps involvement by residents in (a) local religious organizations, (b) neighborhood watch programs, (c) block groups, tenant associations, or community councils, (d) business or civic groups, (e) ethnic or nationality clubs, and (f) local political organizations. Organizational density is very reliable at the community level ($\alpha = .85$).

Tolerance of Deviance is composed of the following items: "How wrong is it for teenagers around 13 years of age to smoke cigarettes?"; "How about using marijuana?"; "Drinking alcohol?"; "Getting into fist fights?" This set of items was repeated for "teenagers around 19 years of age." The reliabilities at the between-community level are .67 and .78 for intolerance of deviance (highest response category of *very wrong*) for the behavior of 13 and 19 year olds, respectively.

Police Efficacy reliably taps the institutional aspect of public control ($\alpha = .92$) with the following items: "The police in this neighborhood are responsive to local issues"; "The police are doing a good job in dealing with problems that really concern people in this neighborhood"; "The police are not doing a good job in preventing crime in this neighborhood"; "The police do a good job in responding to people in the neighborhood after they have been victims of crime"; and "The police are not able to maintain order on the streets and sidewalks in the neighborhood."

We also introduce three single-item measures—Anonymity (how easy it is to spot strangers in neighborhood; $\alpha = .82$), Attachment to Neighborhood (how much respondents like living in neighborhood; $\alpha = .87$), and Intentions to Move (how likely respondents will move in next 5 years; $\alpha = .66$).

KI Measures

Leaders in the KI study were asked to name up to three of the most important institutions in each of the six domains (cf. Laumann & Pappi, 1976). Respondents

were then asked about their personal involvement in community organizations, religious organizations, and schools. We examine the prevalence of elite involvement in each of these institutional domains.

In addition, positional (or organizational) networks were measured by asking all informants to report on direct contact they had in the past year with persons in each of more than 30 positions (Heinz & Manikas, 1992). The list included both contacts with positions inside the community (including religious leaders, real estate officials, bank officers, school principals, local school council chairs, chamber of commerce officials, editors of local newspaper, aldermen, ward committeemen, district police commanders, neighborhood relations sergeants, beat officers, directors of community development corporations) and outside ties with city and statewide agencies (including the mayor's office, the state senator, Chicago Housing Authority, county health department). This module is used as a fairly direct proxy for the horizontal and vertical (extralocal) network structure of organizational contacts. For our main measures we constructed the average number of local (horizontal) and extralocal (vertical) political contacts and the percentage of involvement by KIs in local churches, schools, and community organizations.

Structural Predictors

We focus on three dimensions of a community's structural position that have been shown to be important in previous research predicting neighborhood dimensions of social capital using the Chicago community survey (Sampson et al., 1999). Concentrated Disadvantage is a scale that represents economic disadvantage in racially segregated urban neighborhoods. The scale is defined by the percentage below the poverty line, the percentage receiving public assistance, the percentage unemployed, and the percentage of female-headed families with children. These variables are highly interrelated and load on a single factor using principal components analysis with a varimax rotation. This result reflects neighborhood allocation mechanisms that concentrate the poor, the unemployed, and single-parent families (Massey & Denton, 1993; Wilson, 1987).

We do not include racial composition in the disadvantage factor as did Sampson et al. (1997), choosing instead to examine a separate dimension of racial and ethnic diversity. Specifically, we measure racial and ethnic diversity as a Herfindahl concentration index (Blau, 1977; Massey & Denton, 1988) equal to one minus the sum of squares of the proportions of the neighborhood population made up by a racial/ethnic group: non-Hispanic Whites, non-Hispanic Blacks, Hispanics, Asians, Native Americans, and Others. The index has higher values the more racially/ethnically diverse a neighborhood is and reflects the probability of any two randomly drawn individuals from a neighborhood to belong to different subgroups.[2] The composite diversity measure is a factor score of racial diversity and additional indices of diversity

based on the same concentration formula as described above: language diversity, Hispanic diversity, Asian diversity, regional diversity, and immigrant diversity.

Consistent with a long line of urban research (Bursik & Grasmick, 1993; Kornhauser, 1978), the third major scale captures neighborhood residential stability, defined as the percentage of residents 5 years old and older who resided in the same house 5 years earlier and the percentage of owner-occupied homes. Both scales are based on the factor-weighted scales.

Analyses and Results

One of the major problems in analyzing neighborhood characteristics in multivariate models is that they tend to be strongly correlated with each other, inducing multicollinearity. This is not just a technical problem, however, because different items may be tapping the same underlying dimension. Attempting to estimate unique effects would in this situation be highly misleading conceptually. To address this problem we first identify the principal underlying dimensions that indices of social capital tend to reflect. Second, we examine how, if at all, these dimensions associate with each other via a cluster analysis. Third, we analyze patterns in the location of Chicago communities relative to each other in a multidimensional structural space based on a large initial set of social capital indices. Finally, we examine possible parallels in the ways that disadvantage, stability, and diversity predict the derived components of social capital.

To examine the pattern of interrelationships among neighborhood social capital indices and the latent underlying axes of covariance, we performed a set of principal components analyses with varimax rotation (Kim & Mueller, 1978) using both the resident community survey and the KIs survey. The community survey yielded four major factors (Table 1). Based on the main conceptual commonalities of the indices bearing the highest loadings on each, we label these Collective Efficacy, Local Networks, Organizational Involvement, and Conduct Norms. The indices of cohesion, social control, cynicism, neighborhood satisfaction, and police efficacy yielded the highest loads on the Collective Efficacy factor. Social control and cohesion have been previously conceptualized as part of the higher order concept of collective efficacy (Sampson et al., 1997). Five indices load significantly on the second factor of Local Networks: density of friends and kin in the neighborhood, reciprocal exchange, intergenerational closure, anonymity, and the reported likelihood that residents will move out of the neighborhood. The major indices loading on the Organizational Involvement factor are residents' participation in various organizations, involvement in neighborhood organizations, and active involvement in neighborhood-related problems. The fourth factor of Conduct Norms yields two indices with the strongest coefficients: condemnation of deviant behavior by 13-year-olds and condemnation of deviant behavior by 19-year-olds.

Table 1
Resident-Based Social Capital Dimensions and Indices -Principal Component Analysis (Varimax Rotation) for 16 Community Survey Indices

Residents-Based Social Capital	Subcomponents	Principal Components 1	2	3	4
Collective Efficacy					
	Cohesion	.787	.419	.358	.161
	Social Control	.757	.429	.316	.203
	Moral/Legal Cynicism	–.853	.151	–.044	–.120
	Neighborhood Dissatisfaction	–.907	–.236	–.195	.069
	PoliceEfficacy	.883	.229	.183	–.005
	Eigenvalue	7.821			
Local Networks					
	Friends and Kin Density	.310	.712	.249	–.055
	Reciprocal Exchange	.421	.692	.439	.017
	Intergenerational Closure	.491	.729	.258	.219
	Anonymity	.322	–.818	–.195	–.157
	Unlikely to Move Out	.259	.707	.136	.224
	Eigenvalue	2.210			
Organizational Involvement					
	Organizational Involvement	.320	.163	.804	.298
	Neighorhood Activism	.048	.353	.812	.017
	Involvement in Neigh Organiz.	.468	.288	.705	.196
	Eigenvalue	1.554			
Conduct Norms					
	Conduct Norms for 13-year olds	–.017	.063	.173	.915
	Conduct Norms for 19-year olds	.148	.189	.084	.901
	Eigenvalue	.923			

A second principal components analysis was conducted in the 47 communities covered by the KI study. Two major factors emerged, which we label as Positional Contacts and Organizational Involvement (Table 2). The first factor has highest loadings from three indices: leaders' positional contacts within the community, positional contacts outside the community, and leaders' participation in community organizations. The second factor is mainly composed of indices reflecting leaders' involvement in religious organizations and schools.

Based on the factor scores from both analyses, we then constructed higher order indices to reflect the distinct dimensions of resident-based social capital and leadership-based social capital. The dimensions based on resident reports and those based on community leader reports do not covary as one might think. Contrary to common assumptions, resident involvement and leader involvement components of social capital are only weakly associated with each other (Table 3). Even more

Table 2
Leadership-Based Social Capital Dimensions and Indices-Principal Component Analysis (Varimax Rotation) for 5 KI Indices

	Principal Component	
Leadership-Based Social Capital	1	2
Positional Contacts		
Positional Contacts within Community	.851	.161
Positional Contacts outside Community	.858	.003
% Involved in Community Organizations	.729	.101
Eigenvalue	2.168	
Organizational Involvement		
% Involved in Religious Organizations	.057	.833
% Involved in School Organizations	.117	.807
Eigenvalue	1.390	

Table 3
Correlations between Resident-Based and Leadership-Based Social Capital Dimensions

	Leadership-Based Social Capital	
Residents-Based Social Capital	Positional Contacts	Organizational Involvement
Collective Efficacy	–.443	–.451
	(.002)	(.001)
Local Networks	–.029	.349
	(.847)	(.016)
Organizational Involvement	–.126	.108
	(.398)	(.469)
Conduct Norms	–.210	.393
	(.156)	(.006)

Note: Significance levels in parentheses. $N = 47$.

surprising, collective efficacy associates negatively with both dimensions of leadership-based social capital. These findings suggest an unexpected yet substantial distance between residents and leaders in their pattern of community involvement.

To probe the dimensionality of neighborhood social capital further, we conducted a multidimensional scaling (MDS) analysis of all Chicago communities based on their dyadic similarity on all 15 initial indices of social capital according to reports by Chicago residents. Through MDS, we converted data on pairwise similarities in social capital into spatial distances and generated a geometric configuration of the

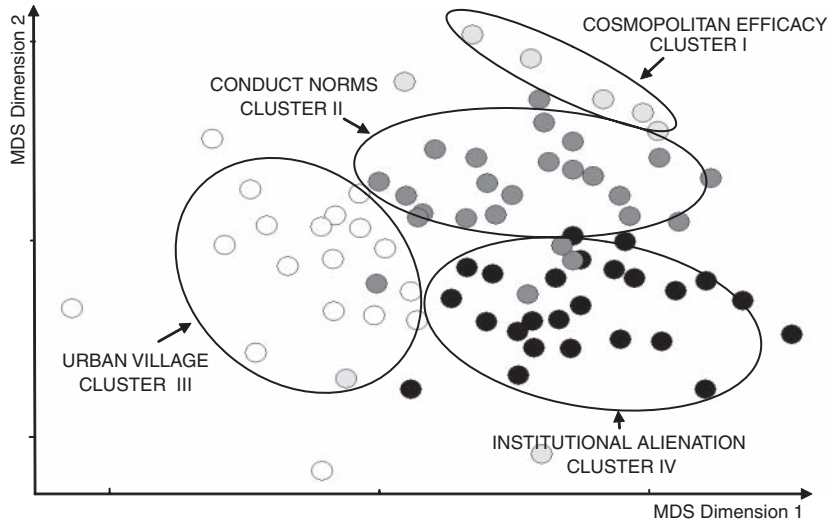
Chicago communities relative to each other in a multidimensional space that reflects these distances simultaneously across all communities. By design, the MDS solution reduces the dissimilarity between indices via Euclidean distances to a lower number of dimensions that are easier to interpret (Shepard, 1980). The advantage of MDS over other multivariate analyses, including factor analysis, is that it accounts for all the characteristics of the neighborhoods included in the model simultaneously and does not assume a linear relationship among variables or normal distributions.[3] For a two-dimensional solution, a metric MDS solution yields a final stress of .191, and a nonmetric MDS yields a stress value of .137.[4]

For a general identification and interpretation of the analytical arrangement patterns of the MDS stimulus units (i.e., communities), we then conducted a cluster analysis, a complementary way to understand how neighborhoods are situated closer or farther from each other along the axes of the multidimensional space of social capital. The cluster analysis of Chicago community areas is also useful for examining patterns of the community grouping in relatively homogenous clusters according to their scores on the social capital dimensions. As input in the cluster analysis, we constructed a community-by-community matrix of dissimilarities based on the four higher-order dimensions of residential social capital dimensions: collective efficacy, local networks, organizational involvement, and conduct norms.[5] We based the cluster analysis on the four composite indices of social capital rather than the initial 15 indices to account for the strong correlations within the four main groups of indices and to equally weigh each of the four latent dimensions of social capital. (Had we used the 15 original indices the cluster analysis would have weighed each of the four dimensions more or less depending on the number of main items that loaded on them.)

After a set of tests, a four-cluster solution yielded the most distinct patterning for a relatively few number of clusters.[6] Both clustering and MDS have the limitation that they can produce different solutions from the same data depending on the method used or on the starting configuration.[7] We thus verified the consistency of the MDS and cluster solutions against each other, by overlaying the cluster membership information of each neighborhood on the MDS configuration. Figure 1 shows the results. The small circles represent the communities. Different grey shades and large loops around the communities denote membership in one of the four structural clusters. As the diagram reveals, the cluster assignment yielded by the hierarchical cluster analysis overlaps considerably with the spatial location of communities relative to each other as identified by the MDS analysis, indicating that there is a relatively good correspondence between the MDS and the cluster results (Kruskal & Wish, 1978).[8]

To aid in theoretical interpretation, we present in Table 4 a qualitative typology that arrays the four higher order constructs by their associations with the resident- and leadership-based dimensions and structural predictors. The assessments in Table 4 (denoted Hi, M+, M-, Lo, etc.) are based on the rank of each cluster's index score compared to the other clusters. The cluster score for any index is the average score on that index across all communities within that cluster.

Figure 1
Metric Multidimensional Scaling Configuration of Chicago Communities as a Function of Euclidean Distances Based on 15 Community Survey Indices of Social Capital and Hierarchical Cluster Analysis of Four Higher Order Indices of Differential Community Social Organizations



Notes: The small circles represent communities arranged in space according to an MDS analysis based on 15 community social indicators. The shades of the circles (and the larger loops) represent a cluster of communities. The cluster assignment is based on the Ward method and squared Euclidean distance, using as input four higher order social capital dimensions: collective efficacy, network ties, active involvement, and norms. The cluster labels reflect the combination of indices on which its member communities score highest.

Communities in what we call the Institutional Alienation Cluster (IV) have the lowest ranked average scores on collective efficacy and residents' organizational involvement. In stark contrast, however, leaders of communities in this cluster show on average highest levels of active involvement, general involvement in organizations, and positional contacts. These communities also have the highest level of disadvantage, lowest affluence scores, and lowest diversity levels. Although leaders are thus active in trying to secure community resources, residents and leadership nonetheless appear distant, and there is a low degree of collective efficacy and organizational affiliation by residents. We therefore view these communities as institutionally alienated at the level of the collective even though leaders are, perhaps because of this, busily seeking outside aid.

Table 4
Rank Scores of Average Community Social Capital Scores and Structural Characteristics across Clusters of Neighborhood Social Organization

	Clusters of Neighborhood Social Organization			
Residents Social Capital	Institutional Alienation Cluster (IV)	Conduct Norms Cluster (II)	Cosmopolitan Efficacy Cluster (I)	Urban Village Cluster (III)
Collective Efficacy	Lo	M-	Hi	Hi
Local Networks	M	M-	Lo	Hi
Organizational Involvement	Lo	M	M	Hi
Conduct Norms	M-	Hi	Lo	M+
Leadership Social Capital				
Positional Contacts	Hi	M	Hi	Lo
Organizational Involvement	Hi	M-	Lo	M+
Structural Characteristics				
Disadvantage	Hi	M	M-	Lo
Residential Stability	M-	M+	Lo	Hi
Racial Diversity	M-	M+	Hi	Lo
Composite Diversity	Lo	Hi	M+	M-

Note: $N = 77$, except for Leadership Social Capital with $N = 47$.

Communities in the Conduct Norms Cluster (II) have high agreement about conduct norms for youth (conservative in direction) but medium to low levels of resident-based social capital on all the other dimensions. Their scores on leadership contacts or involvement are also medium to low compared to the average community in the rest of the clusters. Similarly, they show on average medium scores on poverty, disadvantage, and residential stability and highest scores on language diversity, immigrant diversity, and percentage foreign born. This cluster comports with past research showing immigrant communities to be conservative in family values regarding youth (also see Sampson & Bartusch, 1998).

Communities included in what might be considered the Cosmopolitan Efficacy Cluster (I) have on average high collective efficacy—strong shared expectations for social action—but low local networks. Organizational involvement is medium, and the positional contacts by elites, a proxy for vertical and horizontal network ties, are highest. This configuration appears to be an interesting example of how community efficacy can be achieved in the contemporary city, absent "strong ties." What seem to matter are strong shared expectations coupled with efficient organizational and leadership contacts. Note as well that there are low levels of active involvement by elites in schools and religious organizations, perhaps because many children of the community are in private schools and churches play less significant roles in secular

environments. Indeed, these communities have low scores on disadvantage and residential stability, higher racial diversity, and medium to high scores on the other diversity indices.

The Urban Village Cluster (III) is the social capital cluster par excellence, Robert Putnam's ideal configuration. It includes communities with the highest levels of social capital on all dimensions, except for norms where they fare second after the Conduct Norms Cluster. People in these urban villages are bowling together, talking together, and busy in local organizations. Yet the leaders in the Urban Village communities show the lowest levels of positional contacts and medium involvement in religious or school organizations. The fact that these communities exhibit on average the highest stability levels, lowest disadvantage levels, and medium to low scores on all diversity indices indicates that their elites may simply not need to expend much effort to maintain community well-being. Preliminary research on the structural properties of the leadership networks (Sampson & Graif, 2007) indicated that in these communities leaders' efforts may be invested instead in maintaining a cohesive and centralized structure.

Multivariate Predictions and Spatial Processes

A closer examination of the neighborhoods and their structural distance clustering reveals that the structurally proximate neighborhoods tend also to be close in geographical space or spatial proximity (see also Sampson et al., 1999). This illustrates the important role of spatial processes in Chicago communities and suggests that a more complex analysis of the patterns of association between structural characteristics and social capital needs to account for autocorrelation among the characteristics of spatially proximate neighborhoods (Anselin, 1988).[9]

We thus present in this section results from a set of regression models that identify and account for spatial autocorrelation in examining the patterns of association among diversity, disadvantage, residential stability, and social capital (Tables 5 and 6). Based on a maximum likelihood estimation method, the spatial regression models adjust for spatially correlated errors and estimate the spatial autoregression coefficient to indicate if the spatial dependence is significant. The model makes use of a community-by-community spatial weight matrix based on a Rook definition, in which the matrix cells take a value of 1 when two communities are contiguous (i.e., share a boundary together) and a value of 0 if they are not.

The spatial autocorrelation coefficient in Table 5 reveals that spatial proximity plays a significant role in all dimensions of resident–based social capital.[10] Although proximity does not seem to play a significant role in the distribution of leadership based social capital across Chicago communities in Table 6, this is likely because of the fact that the sampled communities for the KI study were not always contiguous to other sampled communities.

Table 5
Maximum Likelihood Estimates of Resident-Based Social Capital Dimensions on Neighborhood Structural Indices, across Chicago Communities (N = 77)

	Collective Efficacy		Organizational Involvement		Local Networks		Conduct Norms	
Disadvantage	–.791***	-.894***	–.298*	–.315*	.045	.012	.030	.035
	(.096)	(.070)	(.153)	(.133)	(.130)	(.112)	(.151)	(.124)
Residential	.127	–.130	.131	.059	.597***	.528***	.401**	.518***
Stability	(.103)	(.080)	(.162)	(.153)	(.137)	(.129)	(.159)	(.142)
Racial/Ethnic	–.329		–.724		.042		1.505m	
Diversity	(.562)		(.917)		(.779)		(.912)	
Composite		–.473***		–.317m		–.141		.574***
Diversity		(.096)		(.180)		(.153)		(.169)
Spatial	.535***	.270m	.392**	.395**	.389**	.353*	.359**	.309*
Dependence	(.117)	(.148)	(.135)	(.135)	(.136)	(.140)	(.139)	(.144)
Constant	.088	–.107	.206	–.036	–.017	–.033	–.392	.097
	(.187)	(.077)	(.278)	(.166)	(.236)	(.134)	(.273)	(.142)
R-Squared	.708	.750	.204	.229	.439	.441	.219	.288
Log-Likelihood	–61.6	–53.4	–100.1	–98.9	–87.6	–87.2	–100.1	–96.2
AIC	137.3	114.8	208.3	205.9	183.2	182.5	208.6	200.8

Note: Standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$, m = marginal. Composite Diversity is a factor score of Racial Diversity, Immigrant Diversity, Linguistic Diversity, Hispanic Diversity, Asian Diversity, and Regional Diversity. Spatial Dependence refers to the spatial autoregressive coefficient.

Once we adjust for spatial processes, we see that disadvantage predicts lower levels of resident-based social capital such as collective efficacy and organizational involvement, as expected, net of other indices of social organization and of spatial error. However, for local networks and conduct norms, disadvantage is not a significant predictor. Moreover, contrary to assumptions common in the literature on social capital, the leadership-based social capital dimensions show a pattern of association with disadvantage that is opposite in direction to the association of resident-based social capital with disadvantage. The leadership levels of contacts and involvement are positively linked to disadvantage, likely because of resource dependence.

Residential stability has a positive impact on network ties and strict norms, net of disadvantage and population diversity. Less expected is the insignificant association between stability and the other two dimensions of resident-based social capital—collective efficacy and organizational involvement. Residential stability does work as expected in predicting leadership involvement in schools and religious organizations. The link between stability and leadership-based social capital also parallels the link between stability and resident-based social capital.

Contrary to theoretical predictions of negative associations between diversity and various aspects of community social organization, community racial diversity is mostly a nonfactor in resident-based social capital. Moreover, racial diversity seems

Table 6
Maximum Likelihood Estimates of Leadership-Based Social Capital Dimensions on Neighborhood Structural Indices, across Chicago Communities (N = 47)

	Positional Contacts		Organizational Involvement	
Disadvantage	.617***	.597***	.424**	.407***
	(.153)	(.133)	(.154)	(.128)
Residential Stability	–.258m	–.264*	.551***	.587***
	(.141)	(.124)	(.141)	(.119)
Racial/Ethnic Diversity	.550		1.004	
	(.926)		(.920)	
Composite Diversity		.126		.323*
		(.170)		(.162)
Spatial Dependence	–.111	.108	.049	–.091
	(.169)		(.169)	(.169)
Constant	–.141	.013	–.133	.162
	(.258)	(.111)	(.258)	(.107)
R-Squared	.331	.333	.364	.398
Log-Likelihood	–56.84	–56.75	–55.58	–54.31
AIC	121.69	121.49	119.16	116.62

Note: Standard errors in parentheses; * $p < .05$, ** $p < .01$, *** $p < .001$, m = marginal. Composite Diversity is a factor score Racial Diversity, Immigrant Diversity, Linguistic Diversity, Hispanic Diversity, Asian Diversity, and Regional Diversity. Spatial Dependence refers to the spatial autoregressive coefficient.

to have a positive impact on leadership-based social capital. When substituting racial diversity for a more encompassing index of diversity that includes ethnic, linguistic, and immigrant status dimensions, diversity of the population predicts lower collective efficacy and organizational involvement. However, just like racial diversity, the composite index becomes nonsignificant in predicting residents' network ties and leadership-based contacts. Even more interesting, diversity becomes positive and significant in predicting residents' strict norms and leadership involvement. Apparently, population diversity does not undermine neighborhood social capital.

Discussion

The results from three distinct methods of analysis in this study converge in suggesting that the social capital of communities in Chicago encapsulates distinct, and even divergent, dimensions of social organization at the resident level and at the leadership level. The distinctiveness of these dimensions results from an analysis of the pattern of interrelationship among all the raw indices of social capital, from distinctiveness in the role that structural characteristics play in predicting each of the broad

dimensions we identified, and from community-level MDS and cluster analyses of resulting dissimilarities. The findings show that social organizational dimensions are differentially separable not only from the structural sources of variation, such as disadvantage, mobility, and diversity, but also from each other and across the generating social stratum of residents versus community leadership.

Drawing on Raudenbush and Sampson (1999) and a measurement strategy that focuses on "ecometrics," we capitalized on information from a rich set of indices of social organization and condensed it in a parsimonious and hopefully more meaningful representation of variation at the neighborhood level. Four dimensions of social capital—collective efficacy, local networks, organizational involvement, and conduct norms—emerge at the residential level and two at the community leadership level—positional contacts and organizational involvement. These dimensions appear quite distinct from each other; they also cluster differently across Chicago communities and are differently influenced by structural disadvantage, residential instability, and diversity of the population. For example, perhaps reflective of the ways cities are evolving, collective efficacy clusters across communities in a different pattern than local networks and conduct norms. Our analyses suggest that communities with high scores on collective efficacy have surprisingly low scores on residents' networks in the neighborhood, conduct norms, and leadership involvement in traditional religious and school organizations—leading to what we called "cosmopolitan efficacy." These findings suggest that shared expectations for social control on one hand and the personal resources, attitudes, and behaviors on the other, although potentially influencing each other, are independent constructs, with potentially independent social processes of formation and consequences (Bursik, 1999; Woolcock, 1998).

A second strand of support for our argument about the need for differentiation among dimensions of social capital comes from our findings of considerable variations in the role that structural characteristics play in predicting these dimensions. The diversity of population does not necessarily associate as expected with low residents' or leaders' social capital. Disadvantage also does not work as expected in predicting all dimensions of social capital. For local networks and conduct norms, disadvantage appears not to be a significant predictor net of other structural indices (also see Sampson et al., 1999; Sampson & Groves, 1989). The implication is that, to the extent that network ties and conduct norms are positive predictors of community well-being, interventions to improve such dimensions of social capital may not be impeded by the level of community disadvantage or racial/ethnic heterogeneity in a significant way. Furthermore, the nonsignificant associations between stability and collective efficacy or organizational involvement also suggest that migration flows and population turnover may not be as harmful to community cohesion and social control as some may fear.

It is worth noting that these findings are consistent with results from a study of 238 British communities in 1982 (Sampson & Groves, 1989) that used an index of unsupervised peer groups to reflect aspects of social control and presumably

collective efficacy. Even though dimensions of social organization were operationalized differently in the British study, the pattern of structural differentiation in three dimensions of social capital—local networks, organizational participation, and social control—parallels what we find in this article. Similarly, a recent study comparing communities in Chicago and Stockholm (Sampson & Wikström, 2008) found that disadvantage and stability predicted collective efficacy in similar ways in the two otherwise dissimilar cities. That these differential associations of the structural characteristics with three of the four dimensions of social capital are robust to tests in different countries and with slightly different measures speaks to the generalizability of these patterns across settings, cultures, and even time.

Equally important, we find that there are clear distinctions in the structural patterning of resident-based social capital and leadership-based social capital. Unlike what most would probably predict, these two types of social capital simply do not converge. On the contrary, collective efficacy associates negatively and moderately to strongly with leadership involvement and contacts. Moreover, contrary to most assumptions in the literature on social capital, the leadership-based social capital dimensions show a pattern of association with disadvantage that is in opposition to resident-based social capital. In particular, leadership contacts and involvement are positively predicted by disadvantage. This finding suggests that although residents seem to disengage and are more cynical in disadvantaged communities, community leaders become more intensely involved in seeking resources, often from afar. The failure of synchronization at the two levels of the community hierarchy probably reflects differences in the means and resources that actors (i.e., residents and leadership, respectively) can mobilize to respond to, or to counteract, various structural disruptions (Knoke, 1990). It would be valuable for future studies using longitudinal data to examine the effectiveness of community leaders' activism in improving the fate of some of the most disadvantaged communities over time.

A highly relevant dimension of social organization that is rarely measured in quantitative studies is the network structure of community leadership (Knoke, 1990). In a separate investigation of questions beyond the scope of this article, we analyze data that permit community-level comparisons of actual leadership networks (Sampson & Graif, 2007). Preliminary work shows that structural properties of leadership networks covary negatively with indices of leaders' contacts and involvement. This finding points to leadership networks as yet another distinct dimension that needs to be accounted for in studies of community social capital.

Conclusion

The findings in this article caution future research against the notion that there is one or even a small number of indices of neighborhood-level social capital that can coherently reflect all of its relevant and yet simultaneously distinct facets. Although

scholars have theoretically recognized and empirically addressed the multidimensionality of social capital (e.g., Portes, 1998; Putnam, 1993b; Woolcock, 1998), to our knowledge this is the first study to simultaneously operationalize, examine the underlying dimensions and predictors of, and formulate a typology of social capital at two different levels of a community's social hierarchy—residents and leaders. The nature of the Chicago data also permitted a systematic comparison of reliable (ecometric) patterns of association across a reasonably large number of ecologically distinct communities.

More theoretical and empirical work is needed, however, to explain the differential interdependencies in the formation of social capital at the community level as well as processes of social and spatial interaction between these distinct dimensions in shaping aspects of community well-being. Although we have emphasized the role of structural differentiation in shaping social capital, future research should also take into account differences in the potential reciprocal effects that distinct dimensions of social capital may have on social structures themselves.

Notes

1. The neighborhood reliability (denoted α) of the estimate of collective efficacy is defined as: $\Sigma\,[\tau_{00}/(\tau_{00} + \sigma^2/N_j)]\,/\,J$, the average of neighborhood-specific reliabilities across the set of J neighborhoods ($N = 77$). Thus, neighborhood reliability is a function of (a) the sample size (N) in each of the j neighborhoods and (b) the proportion of the total variance that is between neighborhoods (τ_{00}) relative to the amount that is within neighborhoods (σ^2).

2. The advantage of using the Herfindahl index over other measures of diversity is that it captures two diversity dimensions: its *richness*, or the number of different groups coresiding in a neighborhood, as well as its *evenness*, the extent to which groups are evenly distributed.

3. Multidimensional scaling (MDS) entails a minimum set of assumptions: mainly, that the distances between points are monotonically related to the dissimilarities between stimuli (variables or areas, respectively).

4. In additional analyses allowing for three dimensions, the stress value decreased, signaling a better fit, as expected. Nonetheless, we chose to present the two-dimensional solution to make the interpretation and presentation of the results more straightforward.

5. As input in the cluster analysis, we used the dyadic squared Euclidean distance across all pairs of communities (Ward procedure), which minimizes the sum of squared errors.

6. Formal tests indicated that an eight-cluster model might be justified, but on closer inspection and also based on the dendrogram and in the interest of parsimony, we decided that the four-cluster solution yielded the most distinctive and theoretically interpretable clusters.

7. Using the metric MDS yielded a slightly different geometric arrangement compared to the nonmetric solution. However, overlaying the cluster solution on top of both the metric and the nonmetric MDS showed a similar positioning of clusters relative to each other. We retained the metric MDS because it illustrates more clearly the distinctiveness of the clusters.

8. The advantage of supplementing MDS analysis with cluster analysis is also to verify if the representation of variables in a two-dimensional solution is appropriate or if a higher dimension solution would make for a better fit.

9. The indices tend to strongly correlate with the index scores of their neighbors.

10. For the resident-based social capital models, significant Moran's *I* also indicates significant spatial dependence. Lagrange multiplier and robust diagnostics of spatial dependence indicate that specifications of the maximum likelihood models with spatial errors are in most cases more appropriate than specifications of spatial lags.

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