NEW DIRECTIONS IN SOCIAL DISORGANIZATION THEORY

CHARIS E. KUBRIN
RONALD WEITZER

Social disorganization theory focuses on the relationship between neighborhood structure, social control, and crime. Recent theoretical and empirical work on the relationship between community characteristics and crime has led to important refinements of social disorganization theory, yet there remain some substantive and methodological deficiencies in this body of work. This article addresses these problems and charts some promising new directions in social disorganization theory.

Keywords: social disorganization; social control; neighborhood crime

Unlike theories centered on "kinds of people" explanations for crime, social disorganization theory focuses on the effects of "kinds of places"—specifically, different types of neighborhoods—in creating conditions favorable or unfavorable to crime and delinquency. *Social disorganization* refers to the inability of a community to realize common goals and solve chronic problems. According to the theory, poverty, residential mobility, ethnic heterogeneity, and weak social networks decrease a neighborhood's capacity to control the behavior of people in public, and hence increase the likelihood of crime. The theory was first advanced by Clifford Shaw and Henry McKay (1969/1942), who discovered that high delinquency rates persisted in certain Chicago neighborhoods for long periods of time despite changes in the racial and ethnic composition of these communities—a finding that led to the conclusion that neighborhood ecological conditions shape crime rates over and above the characteristics of individual residents.

The theory fell out of favor in subsequent years, but it has experienced a revival in the past two decades beginning with the seminal works of Kornhauser (1978), Stark (1987), Bursik (1988), Sampson and Groves

(1989), and Bursik and Grasmick (1993). Since the appearance of these works, the social disorganization literature has grown tremendously. Key causal processes have been reformulated into a more sophisticated "systemic model" that incorporates both intraneighborhood and extraneighborhood factors and more clearly specifies the relationships among these factors (Bursik and Grasmick 1993:39). There remain, however, some substantive and methodological deficiencies in this body of work, which we examine in this article. Among the substantive issues addressed are the explanatory power of certain variables hypothesized to mediate the relationship between exogenous structural conditions and neighborhood crime (i.e., *informal control*, *social ties, social capital, and collective efficacy*). Also discussed are other variables that have received almost no attention in the social disorganization literature but, we argue, deserve to be examined by researchers studying neighborhood crime and disorder. These include *neighborhood culture*, *formal social control*, and the *urban political economy*.

We also describe several recent methodological innovations that enhance researchers' ability to test key propositions and to refine causal models relevant to social disorganization theory. In this vein, we discuss (1) *dynamic models* that allow for the measurement of changes over time in neighborhood ecological structures and crime, (2) *reciprocal effects* between social disorganization and crime (how community organization shapes crime and how crime shapes community organization), (3) neighborhood *contextual effects* on individual outcomes, and (4) *spatial interdependence* (e.g., how adjacent neighborhoods may affect each other's level of disorganization and crime). In discussing these issues, the article charts some promising new directions in social disorganization theory and research. We begin by analyzing advances in the conceptualization and testing of key mediating variables.

SUBSTANTIVE DIRECTIONS

Informal Control, Social Ties, Social Capital, and Collective Efficacy

Central to social disorganization theory are the neighborhood mechanisms that reduce crime and disorder. Foremost among these are residents' social ties and the degree to which people exercise social control in their neighborhoods. Social ties and informal control are theorized as mediating the effects of exogenous sources of social disorganization (e.g., poverty, residential instability, ethnic heterogeneity) on neighborhood crime. Examples of informal control include residents' efforts to prevent or sanction disorderly and criminal conduct through informal surveillance of the streets and direct

intervention in problems, such as questioning persons about suspicious activity, admonishing individuals who are misbehaving, and informing parents about their children's misconduct. Examples of social ties are local friendship networks, recreational activities between neighbors, and attendance at local community meetings. These ties may increase residents' capacity to engage in social control over individuals in the community, thus reducing crime and disorder. As Bursik (1988:527) writes, the "breadth and strength of local networks directly affect the effectiveness" of "community social control."

For the most part, early social disorganization studies *assumed* that social ties and social control shaped neighborhood crime rates. Rigorous empirical examination of these assumptions began only recently, with Sampson and Groves (1989), who find that local friendship networks, participation in formal and voluntary organizations, and a community's ability to supervise and control teenage peer groups explain much of the effect of exogenous characteristics on crime and victimization. Subsequent work provides further evidence that social ties and social control help to lower neighborhood crime rates (Bellair 1997, 2000; Elliott et al. 1996, Markowitz et al. 2001; Sampson 1997). Unfortunately, many studies fail to examine the *relationship* between social ties and informal control, despite the fact that informal control has been traditionally theorized as an outcome of social ties (Bursik 1988:527). Social ties and social control are usually tested as separate mediating variables, ignoring possible interactions. Recent advances, discussed below, have begun to address this deficiency.

While informal control's importance in shaping neighborhood crime rates is widely accepted, the role of social ties has recently been rethought by scholars. One issue is the need to disaggregate social ties, which may take very different forms. It seems plausible that different types of ties vary in their potential for enabling social control. One might expect, for instance, that simple friendship or recreational ties between neighbors would have less potential for crime control than more organized or institution-based networks, yet this proposition has rarely been tested. Another problem is the almost exclusive focus on networks among law-abiding residents. Pattillo's (1998) ethnographic study of a Black neighborhood in Chicago finds that some networks (among law-abiding residents) facilitate informal supervision of neighborhood youth, while others undermine the neighborhood's efforts to fight crime (because they include both law-abiding residents and gang members and drug dealers). Hence, social ties can help or hinder social organization, depending on the actors involved and their interests. Most of the literature, however, focuses on ties that are thought to enhance social control, not weaken it.

That social ties vary in character may explain why some studies find little or mixed evidence that they affect neighborhood crime rates (e.g., Elliott et al. 1996; Warner and Rountree 1997). These and other studies indicate a need to further investigate how social ties can differentially affect neighborhood crime rates.

Some argue that social ties are only important in terms of their resource potential, which is captured by the concept of social capital. Although it has been defined in various ways (Portes 1998), social capital generally refers to intangible resources produced in "relations among persons that facilitate action" for mutual benefit (Coleman 1988:S100). It is the resources transmitted through social ties, not the ties per se, that are key to facilitating social control. Such resources include obligations, information, trust, and norms. Ties between neighboring parents, for example, may lead to the sharing of information or mutual obligations (resources) that may serve as a basis for monitoring and controlling children's behavior. Unfortunately, few studies have focused on the relationship between social capital and crime, but those that do, find support for this relationship (Rose and Clear 1998; Rosenfeld, Messner, and Baumer 2001).

Both social ties and social capital appear to have limitations, however, in accounting for residents' capacities to confront neighborhood problems (Taylor 2002). Networks and resources may be necessary, but not sufficient, for social control. What is missing is the key factor of purposive action (i.e., how ties are activated and resources mobilized to enhance social control). For the latter to occur, according to Sampson, Morenoff, and Earls (1999; Sampson 1997), residents must develop a willingness to take action, which depends, in large part, on conditions of mutual trust and solidarity among neighbors. Sampson's construct of collective efficacy captures this linkage of trust and intervention for the common good (Sampson 1997; Sampson et al. 1999).[1] His multilevel analyses in Chicago show that collective efficacy is negatively associated with neighborhood rates of violence, after controlling for individual-level characteristics and prior violence. Moreover, collective efficacy largely reduces the effects of concentrated disadvantage and residential instability on violence.

Additional support for the role of collective efficacy in shaping crime is found in Morenoff, Sampson, and Raudenbush (2001), who show that collective efficacy and concentrated disadvantage in Chicago neighborhoods influence homicide. Moreover, social networks appear to be salient only insofar as they promote the capacity of residents to achieve social control and cohesion. Thus, even neighborhoods with weak social ties can have low crime rates if they have high levels of collective efficacy, which again suggests that social ties per se do little to mediate the relationship between

structural characteristics and crime. Networks among law-abiding residents are a necessary but not sufficient condition for informal control of crime.

Collective efficacy has been shown to be an important variable not only in predicting crime but also neighborhood disorder (Sampson and Raudenbush 1999). Early studies portrayed the effects of disorder in various ways: (1) as increasing both fear of crime and crime (R. Taylor 2001), (2) as reducing informal social control and thereby increasing crime (Wilson and Kelling 1982), and (3) as mediating the effects of neighborhood conditions on crime (Skogan 1990). While some evidence exists in support of these claims (R. Taylor 2001; Taylor and Covington 1993), other research questions the causal connections between disorder and crime. Rather than conceive of disorder as a cause of crime, it is has been argued that both disorder and crime should be treated as outcomes: "A reasonable hypothesis is that public disorder and predatory crimes are manifestations of the same explanatory process, albeit at different ends of a 'seriousness' continuum" (Sampson and Raudenbush 1999:608). Sampson and Raudenbush find that neighborhood disorder is not an essential link in the ecological pathway that leads to crime but rather that neighborhood characteristics and collective efficacy account for both crime and disorder. Additional research is needed to corroborate this finding.

While recent work has begun to rethink concepts such as social ties and social capital, further reconsideration is necessary both conceptually and methodologically. We need more precise definitions, clearer distinctions, and better operationalization of these concepts. Social ties may take many forms and thus may vary in their capacity for informal control. Some ties facilitate crime control while others hinder it, yet most writers fail to make this distinction. In addition, social capital has been defined and operationalized in ways that have "stretched the concept" and thereby weakened its distinct meaning and explanatory potential (Portes 1998:2-3). One recent study, for instance, measures social capital not only by citizens' perceptions of social trust but also by their voting rates and membership in the Elks Club (Rosenfeld et al. 2001). The latter is indicative of social ties, not social capital per se (Taylor 2002).

Methodologically, researchers should pay particular attention to developing indicators of concepts that are clearly distinguishable from each other, and should incorporate all measures into their research designs. In this way, the effects of social ties, capital, and efficacy can be directly compared. This would require closer attention to ecological assessment (e.g., reliability and validity of measurement), which is not yet standard in neighborhood research. Raudenbush and Sampson (1999:2) note that "collective processes such as neighborhood social control and cohesion have rarely been translated

into measures that directly tap hypothesized constructs," and present a number of useful standards and statistical methods for ecological assessment.

Although social ties, capital, and collective efficacy have been shown to have some effect on community crime rates, they do not fully account for it. Other factors—rarely examined by social disorganization researchers—warrant attention. One such factor is neighborhood culture.

Reconsidering Culture

Shaw and McKay (1969/1942) argued that subculture was an important component of neighborhood organization, but later work downplayed cultural influences, and most writers focus exclusively on structural factors (Kornhauser 1978). Cultural explanations have been resurrected in some recent work, however, and we argue that this is a positive development.

Cultural explanations have a long tradition in criminology and they come in several varieties, which can be differentiated in terms of (1) the content and distribution of shared values in a community and (2) whether those values are theorized as linked to social structure. In the *oppositional subculture* model, lower class communities generate distinctive values and beliefs that endorse aggressive behavior and law violation. These subcultures are relatively insulated from and largely contradict conventional, middle-class values, which generally support conformity to legal norms;[2] the values and norms supportive of crime are fairly widespread in these communities; and criminogenic subcultures are relatively independent of structural factors (Cohen 1955; Miller 1958; Wolfgang and Ferracuti 1967).

A second perspective on the role of culture inverts the first version: residents of high-crime neighborhoods are portrayed as sharing *conventional values*, including the desire for a crime-free community. Kornhauser (1978) takes the most strident position, insisting that criminogenic subcultures simply cannot exist.[3] Rather than condoning crime, members of these communities instead have a degree of fatalism or "moral cynicism" about crime (Kornhauser 1978:224-44; Stark 1987). Crime is viewed as inevitable in disadvantaged and high-crime neighborhoods, and is thus less vigorously condemned by residents. High crime rates exist, therefore, not because oppositional values are anchored in the community but because limited opportunities make it difficult for residents to pursue conventional goals and because they lack the willingness or capacity to prevent deviance.[4] In neighborhoods where conventional values are attenuated, residents have weaker cultural support for exerting social control over others. As Warner and Rountree argue, "It is simply less likely that people will informally punish or denigrate people for inappropriate behavior if it is unrealistic to expect

otherwise" (Warner and Rountree 2000:46). This perspective links neighborhood values to structural sources of inequality, and the value system is portrayed as undifferentiated—a weak version of the conventional value system.

A third approach questions the notion of a singular neighborhood value system and asserts the existence of *diverse and competing subcultures*. A neighborhood may contain several subcultures that can undermine ties between residents and, hence, their capacity to reach consensus on norms regarding appropriate behavior (Shaw and McKay 1969). Whereas low-crime areas display a "uniformity, consistency, and universality of conventional values and attitudes" with respect to conformity to the law, high-crime areas contain "conflicting moral values," both conventional and deviant, and residents are exposed to both law-abiding and criminal lifestyles (Shaw and McKay 1969:170; cf. Sellin 1938). These values and lifestyles are nurtured by diverse reference groups and local organizations, whether conventional (church, family, voluntary associations) or deviant (gangs, rackets). Aside from these neighborhood-organizational sources of competing values, this perspective largely neglects structural influences.

The empirical evidence points to a model of the cultural order in disadvantaged neighborhoods as both structurally conditioned and diverse. Concentrated disadvantage not only deprives neighborhoods of resources that may be mobilized to control crime, but also increases social isolation among residents, which impedes communication and interferes with their capacity to pursue common values (Bruce, Roscigno, and McCall 1998; Sampson and Wilson 1995). At the same time, some residents, who lack conventional opportunities for economic advancement and status attainment, embrace unconventional values and pursue alternative routes to gaining status and prestige, which may include criminal acts. Research indicates that neighborhood disadvantage is linked to cynicism regarding legal norms (Sampson and Bartusch 1998) and to the emergence of street values that condone deviant behavior (Anderson 1999; Fagan and Wilkinson 1998; Horowitz 1983; Kubrin and Weitzer 2003). The latter studies document a "code of honor" or "street code" that shapes residents' values and behavior, for instance, by encouraging a disputatious attitude and aggressive sanctions against individuals who show disrespect. The street culture supplies a normative "rationale allowing those who are inclined to aggression to precipitate violent encounters in an approved way" (Anderson 1999:33). These studies reveal intra-neighborhood variation in residents' attachment to local cultural codes: A segment of the community remains attached to conventional values, while another segment embraces the street culture. More generally, this research shows that structural conditions and subcultural and normative responses to these conditions jointly shape neighborhood crime, indicating that cultural factors deserve greater attention in social disorganization theory.

There is a clear need for more research on subcultural influences on social control and crime. Several issues require further attention: (1) What are the appropriate measures of "street culture" and "oppositional values"? Anderson (1999) suggests some indicators (e.g., disregard for neighbors, suspension of legal norms, violence as a means of gaining respect and prestige) but further attention to the identification and measurement of cultural variables is warranted. (2) What are the mechanisms linking cultural factors to disorderly or criminal behavior? Researchers frequently make the inference that the existence of oppositional values in a neighborhood contributes to crime, yet they rarely document this causal connection. The latter is admittedly difficult, but some recent work has attempted to show how offenders justify their criminal acts by invoking street-cultural codes (Fagan and Wilkinson 1998; Kubrin and Weitzer 2003). (3) How widespread are oppositional values in disorganized neighborhoods? It is often asserted that most residents accept conventional values (Anderson 1999; Warner and Rountree 2000), but there is likely to be significant variation between neighborhoods in the ratio of persons who hold conventional versus street values, and in the degree to which those who live by the street code are able to dominate others. To what extent are conventional values and norms rejected by residents? To what extent are they instead suspended or attenuated because people have learned to expect deviant behavior on the street and thus avoid intervening to enforce conventional norms? Are there neighborhoods where a majority of residents believe it is acceptable to take the law into their own hands—for instance, to assault or otherwise retaliate against those who have offended or attacked them? By addressing these questions, researchers will be better able to theorize the role of cultural factors in social disorganization theory.

Formal Social Control

While social control is absolutely central to social disorganization theory, virtually all writers focus on *informal* control, which includes "private control" (within primary groups) and "parochial control" (exercised through interpersonal networks and local community groups) (Bursik and Grasmick 1993). What is largely missing is examination of *formal* control, which refers here to practices of the authorities to maintain order and enforce legal and regulatory codes. Informal control has been privileged because it is community-based and thus more central in mediating the effects of neighborhood characteristics on crime, whereas formal control is often exercised by institutions based outside the neighborhood. Informal control is also seen as more likely to prevent crime than is formal control by the authorities, which often takes place after the fact. But the neglect of formal control is problematic for social disorganization theory. Formal control may be

important in two ways: (1) by directly influencing crime and disorder and (2) by influencing residents' informal control practices.

Regarding the first point, the amount and quality of police activity in a neighborhood can significantly affect its crime rate. Disadvantaged neighborhoods are typically the least able to secure needed police protection and services, as indicated in residents' complaints and in data on police practices. In Chicago, for instance, residents of poor communities were significantly more likely than residents of other areas to report that officers were not responsive to local issues, performed poorly in preventing crime and maintaining order on the streets, and responded poorly to crime victims (Sampson and Bartusch 1998). Other recent studies similarly document dissatisfaction with police services in poor neighborhoods (Reisig and Parks 2000; Velez 2001; Weitzer 1999, 2000). In Rochester, St. Louis, and Tampa, an average difference of 18 percentage points separated low and extremely disadvantaged areas in terms of residents' satisfaction with the quality of police services to the neighborhood; likewise, there was a 14-percentage point difference on the question of whether police provide the kind of services community members desire (Velez 2001). Similar disparities exist with regard to residents' perceptions of police misconduct; residents of disadvantaged Black neighborhoods are much more likely than residents of middle-class Black communities to report that the police engage in unwarranted stops, verbal abuse, and excessive force in the neighborhood (Weitzer 1999, 2000).

Surprisingly little research has been done on police practices at the community level, but the few existing studies suggest that police activity varies significantly from one neighborhood to another (Smith 1986), which lends support to residents' varied assessments of policing in their communities. Police tend to see residents of high-crime communities as "deserving victims," whose lifestyles invite victimization; in such neighborhoods, officers normalize residents' victimization and, hence, respond less vigorously to calls than in more affluent areas (Klinger 1997; cf. Liska and Chamlin 1984). Coupled with this "underpolicing" are patterns of police abuse in poor communities. Studies based on police records and street observations of officer behavior indicate that misconduct is higher in disadvantaged areas than in more affluent areas (Fagan and Davies 2000; Kane 2002; Mastrofski, Reisig, and McCluskey 2002; Smith 1986). Police misconduct can drive a wedge between officers and residents and trump efforts to establish mutually supportive ties that might help to reduce crime.

Further evidence of how police practices can directly influence levels of crime is indicated in research on vigorous law enforcement. Cities and neighborhoods vary in the aggressiveness of the police in enforcing the law, and this "may directly affect the crime rate by influencing perceptions in the community regarding the probabilities of apprehension for illegal behavior"

(Sampson 1986:281). When police vigorously enforce the law, this may send a message to potential offenders that they risk apprehension if they commit crime, whereas more lenient law enforcement sends the opposite message (that restraints are weak), which may invite criminal activity and attract an influx of deviants into the neighborhood (Stark 1987). Empirical support for this proposition is found in Sampson and Cohen's (1988) study of arrests for disorderly conduct and driving under the influence in 171 cities. Robust arrests for disorderly conduct and drunk driving had a deterrent effect on an unrelated crime—robbery. Sampson and Cohen argue that such visible proactive policing influenced residents' perceptions of the probability of arrest for illegal acts. Similarly, at the neighborhood level, Velez (2001) finds that increases in police activity in a community reduced residents' risk of crime victimization, after controlling for other factors. These effects were strongest for residents of highly disadvantaged neighborhoods but weaker in more affluent neighborhoods.

In addition to formal control having a direct effect on crime, it may also have significant indirect effects—by influencing residents' informal control practices—though very little research has addressed this formal-informal control relationship. Formal control by the police may, first, enhance residents' capacities to fight crime and disorder. Crime reduction is arguably most likely when the police are engaged not only in routine responses to calls from residents but also in proactive, community policing. In theory, community policing involves residents and police in mutual problem solving and the coproduction of order. Residents and police officers work together to identify and resolve neighborhood problems. While it should not be assumed that community policing necessarily lowers crime or disorder (Grinc 1994), it may do so (Chicago Community Policing Evaluation Consortium 2000; Greene 1999; Skogan 1990; Skogan and Hartnett 1997). Community policing thus illustrates one way in which formal and informal social control can reinforce each other, helping to reduce crime.

Second, where police control of crime is limited, this may deflate law-abiding residents' sense of collective efficacy and their willingness or ability to engage in informal control. Residents who view the police as unresponsive or ineffective may feel vulnerable when considering whether to try to stop street deviance. When police are not seen as a supportive resource, community members will be reluctant to take the risk of intervening in neighborhood problems. Unfortunately, no studies have tested this particular relationship between formal and informal control.

Third, inadequate formal control can create a vacuum in which local offenders administer their own form of informal control or "justice" to others in the community. An example is the finding that retaliatory killings are more common in disadvantaged neighborhoods than in other types of neighbor-

hoods, in part because residents have little confidence that the police are willing or able to deal with problems in these communities, which leads some residents to take the law into their own hands (Kubrin and Weitzer 2003). Inadequate policing may therefore invite illegal retributive practices by some community members, just as it may undermine law-abiding residents' desire or capacity to intervene in local problems.

If *too little* police intervention in crime may weaken a neighborhood's capacity to engage in informal control, the same may result from *excessive* law enforcement. An overreliance on formal controls may have the unintended consequence of weakening family and community structures as sources of control. Some recent work examines this dynamic by exploring the effect of one type of formal control—incarceration—on community organization. Incarceration is obviously linked to policing (i.e., police aggressiveness in a community increases arrest and incarceration rates) but incarceration is important in its own right insofar as it has consequences for family and community cohesion and social control. Incarceration of community members may have multiple effects on neighborhood self-regulation, particularly in neighborhoods that are already deficient in social ties and social control. If offenders

> are resources to some members of the community and if they occupy roles within networks that form the basis for informal social control, their removal is not solely a positive act [in reducing crime], but also imposes losses on those networks and their capacity for strengthened community life. (Rose and Clear 1998:451)

When a critical mass of community members spend significant time in jail or prison, this may (1) disrupt family cohesion and financial resources, (2) reduce the supply of marriageable partners, (3) deplete labor markets, thus undermining the socioeconomic vitality of the neighborhood, (4) decrease the number of adults available to supervise neighborhood youth and intervene in neighborhood problems, and (5) compound neighborhood problems after these incarcerated offenders are released into the community. Regarding the latter, incarceration can undermine the ability of released inmates to reestablish positive ties with family members, friends, and neighbors, and may make these individuals a liability for their families insofar as they are unable to secure a job. Indeed, one study found that when the number of residents incarcerated reaches a "tipping point," this has the unintended consequence of weakening neighborhood organization and thereby increasing crime (Clear et al. 2003).

Social disorganization theory has been deficient in its consideration of both formal control and the formal-informal control nexus. The theory would

be greatly enhanced by studies of the ways in which formal control may directly shape community crime and disorder, and how it may affect a neighborhood's informal control capacities. We have described several ways in which formal control may independently influence neighborhood crime and also several variants of the formal-informal control relationship, but much more research is needed to document the effects of different types of control and to help refine our theoretical understanding of the role of social control in community social organization. The question remains: How important is formal control in reducing crime and disorder, and how important are formal control practices in shaping the informal control capacities of neighborhood residents?

Urban Political Economy

It is axiomatic that the priorities and decisions of municipal government officials and business interests can have major effects on a neighborhood's quality of life and that neighborhoods vary in their capacity to secure valued city services, but we are only beginning to understand how this influences crime and disorder. Most social disorganization studies focus exclusively on intraneighborhood influences on crime, without considering the larger urban political and economic context (Bursik and Grasmick 1993:52). Political and economic decisions may have direct effects on community crime rates (e.g., when a halfway house is introduced into a neighborhood and its members commit crime) and indirect effects on crime, by increasing the level of joblessness and poverty (through deindustrialization, disinvestment), residential instability (via housing, construction, demolition policies), and population density (through public housing or zoning policies) (Bursik 1989; Skogan 1986; Stark 1987; Wilson 1996).[5] Deindustrialization of inner-city areas has depleted the number of blue-collar jobs, which increases economic deprivation and, in turn, homicide rates (Shihadeh and Ousey 1998), just as it has led to the growth of illegal drug markets in disadvantaged neighborhoods, further exacerbating homicide rates (Ousey and Lee 2002). Urban economic reorganization thus indirectly increases neighborhood violent crime rates. Another consequence of these macro-level changes is the outmigration of residents with sufficient resources to relocate, leaving behind the most disadvantaged residents and disrupting preexisting networks and control capacities.

Neighborhoods differ greatly in their ties to external decision makers (Guest 2000) and hence in their capacity to lobby city government and businesses to keep or create jobs, repair the local infrastructure, invest in the community, and so forth. Velez (2001) finds that residents' ties to local government officials—measured by residents' ratings of the degree of officials'

"concern" about the neighborhood and the amount of "satisfaction" residents have when they talk to officials about community matters—are associated with residents' victimization rates. In areas where residents had positive relations with government officials, personal and household victimization was low, controlling for other factors. Increases in ties to government officials had modest effects in reducing victimization in affluent neighborhoods but much larger effects in disadvantaged neighborhoods.

One example of the importance of external decision making involves government decisions on the location of public housing projects. Public housing tends to be located in disadvantaged minority areas, which further concentrates poverty in those areas. Bursik's (1989) study of Chicago from 1970 to 1980 reveals that construction of public housing increased the rate of residential instability, which contributed to rising crime rates. Political decisions regarding the location of public housing thus indirectly amplified crime by "introducing a new source of instability . . . that decreased the community's ability to regulate itself" (Bursik 1989:117). Public housing also appears to limit the growth of social networks among residents, thereby reducing the level of surveillance and control over individuals and making these areas more attractive targets for offenders (Newman 1972). An Atlanta study finds that public housing projects increased crime in the host neighborhoods, independent of other factors. Black communities with public housing exhibited the highest crime rates, but Black neighborhoods without such projects had low crime rates, similar to White neighborhoods without public housing (McNulty and Holloway 2000).

The impact of many other types of external decision making on neighborhood crime and disorder has yet to be examined. One example is a community's access to capital, or more specifically, home mortgage lending. The lending practices of banks and other institutions are particularly relevant today given substantial increases in lending to minority and disadvantaged households following enforcement of the 1968 Fair Housing Act and the 1977 Community Reinvestment Act. During the 1990s, for example, the share of mortgage loans going to low and moderate-income borrowers increased from 18 percent to 30 percent, and between 1993 and 1999, lending to African Americans and Hispanics increased 91 percent and 121 percent, respectively, while total lending grew by just 52 percent (J. Taylor 2001). These changes resulted in unprecedented levels of minority homeownership; in 2000, African American homeownership climbed to 48 percent and Hispanic homeownership reached 46 percent—both record highs. The likely effects of increased homeownership on the social organization of urban areas are numerous. Social disorganization theory would predict that access to mortgage capital and increased homeownership in distressed communities reduces residential instability and thus crime. Despite important changes in

lending practices and the assumption that such practices are related to crime, no one has verified whether increased access to capital has lowered neighborhood crime rates, either directly or indirectly.

Neighborhoods are shaped by urban political and economic forces. But compared to the large number of studies on the effects of intraneighborhood factors on crime, surprisingly little attention has been given to the role of exogenous determinants, and very little is known about the connections and interactions between internal and external factors. This would be a fruitful avenue for future research, and would rightly expand the scope of social disorganization theory in a more macro direction.

METHODOLOGICAL DIRECTIONS

Shaw and McKay's (1969/1942) research on Chicago neighborhoods nearly seven decades ago predated the existence of multivariate data analysis. They, and other scholars at the time, tested social disorganization theory by plotting the spatial distribution of criminal behavior and drawing correlations between neighborhood characteristics and crime rates, but they were not able to directly measure the mediating effects of social disorganization. Recent methodological advances have enhanced researchers' ability to test key propositions and to refine causal models relevant to social disorganization theory. These advances—as well as continuing methodological challenges—are discussed below.

Dynamic Models

One of Shaw and McKay's (1969/1942) most important findings is that the changing spatial distribution of delinquency in a city is the product of "larger economic and social processes characterizing the history and growth of the city and of the local communities which comprise it" (Shaw and McKay 1969/1942:14). But social disorganization researchers have not adequately examined change and long-term processes of urban development (Bursik 1988:524), despite the fact that the very concept of social disorganization is grounded in the human ecology theory of urban dynamics, where change is central. Changes in neighborhood ecological structures can strongly influence levels of social control, social ties, and collective efficacy.

The full set of dynamics that may lead to disorganization can only be discerned when long-term processes of urban development are considered, yet the majority of studies that test social disorganization theory are cross-sectional. This is understandable considering the difficulty and costs associated with compiling information over an extended period of time. Still, there are

major drawbacks to relying on cross-sectional data. It is impossible to study change in such a design, and the effects of processes such as gentrification and segregation on the distribution of crime and delinquency are impossible to detect without longitudinal data. Findings from a small but important literature illustrate the importance of considering dynamic models of social disorganization (Bursik and Grasmick 1992; Bursik and Webb 1982; Chamlin 1989; Kubrin 2000; Miethe, Hughes, and McDowall 1991; Morenoff and Sampson 1997).

What has hampered research on neighborhood change are the methods typically used to model change. The studies cited above employ residual change scores or the cross-lagged correlation approach; some researchers believe that these approaches have limitations, the most notable of which is that the information provided in these models centers on the between-variable relations rather than changes in the neighborhood over time (Bursik and Grasmick 1992:251; Rogosa 1995:60). Moreover, such approaches are relatively cumbersome when analyzing multiple waves of data, and for this reason, applications of these techniques have generally focused on two-wave trends, providing a truncated sense of neighborhood patterns of change. While these methods provide a useful description of short-term trends, they are limited; one cannot draw conclusions about complex changes over time without examination of long-term neighborhood development.

An attractive alternative for modeling change comes from the social psychological literature on life course turning points that affect the escalation, stabilization, or desistance of criminal behavior. Studies of this nature track individuals over time with an attempt to link individual characteristics and significant life events to changes in offending. Researchers studying individual growth have typically employed growth-curve models and these models have considerable promise for the analysis of change at the neighborhood level (Bursik and Grasmick 1992:252). Growth-curve models and, in particular, hierarchical growth-curve models, offer a number of advantages. First, it is often the case that both the intercepts and slopes in the regression model differ between cases (e.g., neighborhoods). A random coefficient model, or one in which each case is allowed to have its own unique solution, provides a valuable approach. Thus, a major strength of growth-curve models is the ability to model first level regression coefficients as random variables at the second level.

Second, this method is able to examine the effects of nonlinear trends. Changes in community crime patterns can be curvilinear. Crime may increase or decrease in a neighborhood, but the rate of change can also accelerate or decelerate over time. Modeling nonlinear trends is not possible with traditional measurements of change, yet by not specifying a nonlinear model, the resulting intercept and slope parameters may be misspecified. These

strengths relate to a third advantage of growth-curve models: their focus on neighborhood development (Rogosa 1995). Growth-curve models utilize information pertaining to all years during a period of time rather than being restricted to studying 10-year intervals (traditional change models use only the years that correspond to census data intervals and thus ignore nuanced changes in crime rates). Traditional change models focus on the correlations between neighborhood factors and crime rates at different points in time whereas growth-curve models describe the full breadth of crime trends and facilitate a more complete analysis of their determinants.

Only two studies have applied growth-curve techniques to studying neighborhood change over time (Bursik and Grasmick 1992; Kubrin and Herting, 2003), yet we believe that dynamic models should be a central consideration in social disorganization theory and that future studies should use growth-curve models. One research question ideally suited for this modeling technique stems from work by Wilson (1996), Shihadeh and Ousey (1998), and others, on economic restructuring in the United States over the past several decades. As noted earlier, rapid expansion in technology and the service industry coupled with the decline in blue-collar jobs has particularly affected the uneducated young Black male population in a number of adverse ways—by increasing joblessness, poverty, and family disruption in the inner cities, by fueling the migration of middle-class Blacks to the suburbs, and by widening the gap in wages between low-skilled and college-educated workers. It follows that these changes have consequences for crime in inner-city neighborhoods and likely explain, in part, rising violent crime rates in the 1980s. Despite the plausibility of these claims, we are unaware of any study that has tested these ideas. Given the nature of the issues, a longitudinal analysis is the best approach for understanding how macro-economic changes are associated with changing neighborhood crime rates, and growth-curve models are well suited for such analyses.

Reciprocal Effects

An important related issue involves the analysis of reciprocal effects of crime on community organization. Just as we find that neighborhood structure influences crime, there is mounting evidence that crime and violence shape neighborhood conditions themselves. Like such resources as good schools, access to jobs, or a clean environment, safe neighborhoods with little crime are highly valued, and safety becomes part of the calculus in determining where people seek to live—an example of how crime may influence residential mobility.

Unfortunately, most social disorganization models are incomplete by failing to consider reciprocal effects between crime and neighborhood structure,

though some studies that adopt a nonrecursive approach underscore the necessity of doing this (Bellair 2000; Liska and Bellair 1995; Liska and Warner 1991; Markowitz et al. 2001; Morenoff and Sampson 1997). These studies show that crime influences changes in neighborhood structure and organization, but also point to a complex relationship between community structure, neighboring practices, and crime.

One way in which crime has influenced neighborhood dynamics is by increasing residents' fear of crime. High levels of fear often decrease levels of neighborhood cohesion and participation in community life, and drive out those who can afford to leave (Liska and Warner 1991; Skogan 1986). These conditions can reduce residents' willingness to engage in social control over disorderly individuals, and thus foster crime. Markowitz et al. (2001:293) observe that burglary and disorder reduce social cohesion, and that part of the effect of burglary and disorder on cohesion is mediated by fear. These findings suggest a feedback loop in which decreases in neighborhood cohesion increase crime and disorder, thus heightening fear, which further decreases cohesion. A more complex relationship between crime and neighborhood organization is described in Bellair (2000). Simultaneous equations indicate that robbery/stranger assault has a moderately strong inverse effect on informal surveillance, and that it is mediated by residents' perceptions of risk. On the other hand, Bellair finds that burglary rates increase surveillance, suggesting that some types of crime serve positive control functions, a dynamic rarely considered in social disorganization studies.

As the number of studies that employ nonrecursive models of social disorganization continues to grow, we can confidently move beyond Bursik's (1988:543) warning that the results from such studies be accepted only tentatively. While some work has been done concerning the identification of these models, appropriate methods of estimation, and the selection of instrumental variables, much remains to be known. For example, one unexamined issue is whether certain types of crime influence community structure more so than others. It is more likely that personal victimization (e.g., robbery, assault) than property victimization (e.g., burglary, auto theft) increases fear, lowers social control, and weakens involvement of community members. Likewise, frequent personal victimization is more likely to cause residents, who can afford to leave their community, to settle elsewhere.

Crime subtype may also be important. For example, while high homicide rates likely influence residential mobility patterns in general, certain types of homicide may especially influence mobility; street-level homicides between strangers are more likely to affect neighborhood structure than domestic homicides. As domestic killings generally occur in the home and are more private affairs (Kubrin 2003; Miles-Doan 1998), residents are less likely to be effected by these killings. Residents are more likely to change their

behavior in the community or relocate in the presence of frequent killings between strangers that appear to occur more randomly. Reciprocal effects models are ideal for addressing these issues.

Contextual Effects on Individual-Level Outcomes

Another methodological issue is the examination of neighborhood effects *in conjunction with* individual-level effects to predict crime and delinquency. Until recently, very few social disorganization studies were able to simultaneously investigate both, given the difficulty in obtaining individual-level data.

A basic premise of contextual analyses is that individuals' rates of offending (or risks of victimization) are determined to some extent by social forces in their wider environment. There are at least two ways that contextual effects may matter for social disorganization theory. First, neighborhood characteristics may have a significant direct impact on individuals' rates of offending, after controlling for individual-level factors. Second, the relationship between individual-level factors and crime rates may be conditioned by, or vary with, the broader social context. This type of contextual effect consists of an interaction between individual- and aggregate-level characteristics.

Contextual effects models address the issue of individual self-selection versus generative neighborhood effects (Bursik and Grasmick 1993; Elliott et al. 1996:395; Tienda 1991). One criticism of social disorganization theory is the claim that people make residential choices that are related to their education, income, race/ethnicity, as well as characteristics of the neighborhood. This selection process produces a compositional effect that is independent of the organizational and cultural factors postulated in a neighborhood model. It is thus necessary to control for self-selecting individual characteristics when estimating neighborhood effects.

The number of contextual analyses has proliferated, beginning with Simcha-Fagan and Schwartz (1986) who find that after controlling for individual-level factors, community-level characteristics—the level of organizational participation and the extent of disorder and criminal subculture—shape delinquency rates in New York City communities. Other studies examine how neighborhood characteristics interact with individual-level factors to influence a variety of outcomes, including victimization (Miethe and McDowall 1993; Rountree, Land, and Miethe 1994; Velez 2001), adolescent development (Elliott et al. 1996), delinquency (Wikstrom and Loeber 2000), and violence (Silver 2000).

This growing attention to neighborhood contextual effects reflects two significant methodological advances. First, greater efforts have been targeted toward the collection of individual-level survey data. A number of large-

scale surveys (e.g., the Project on Human Development in Chicago Neighborhoods, the Neighborhood Project in Denver, Chicago, and Philadelphia, and the Victimization Survey in Seattle) have provided researchers with individual-level measures of neighboring practices and offending/victimization levels. Second, advances in methodological techniques have allowed social disorganization researchers to more precisely measure contextual effects. The most important advance is the application of hierarchical linear modeling (HLM) to assess both the direct impact of neighborhood characteristics (controlling for individual-level factors) and the interactions between neighborhood and individual-level factors (Elliott et al. 1996; Rountree et al. 1994; Sampson, Raudenbush, and Earls 1997). A major strength of HLM is that it controls interdependence among observations. In neighborhood survey research, each resident in a given community is influenced by the same neighborhood environment, and as a result, there exists a potential interdependence among observations. This dependence is not controlled in traditional regression models but is in hierarchical linear models where both the between- and within-neighborhood (individual) levels are specified and the corresponding equations estimated simultaneously (Bryk and Raudenbush 1992). HLM also permits a partitioning of the variance into between- and within-neighborhood components to allow separate estimation of the effects at each level, another major strength (Elliott et al. 1996:404).[7]

Concurrent with these methodological advances is the use of more refined neighborhood level measures, and in particular "concentrated disadvantage," to capture socioeconomic aspects of neighborhood context. The development of this new measure reflects arguments by Wilson (1987), Sampson and Wilson (1995), and others who posit that neighborhood "concentration effects" (i.e., overwhelming poverty, family disruption, and joblessness) contribute to structural social disorganization. In many inner-city communities, as a result of macro-economic changes that have disproportionately affected the urban poor, it is the *combined* effect of poverty, unemployment, and family disruption that defines the neighborhood socioeconomic context for residents. Cognizant of this argument, social disorganization researchers have begun to measure the multiple disadvantages that characterize inner-city neighborhoods by incorporating several measures into an overarching "concentrated disadvantage" index.[6] One drawback of this approach is that such an index confounds attempts at untangling each characteristic's distinct influence on crime. Still, combining these measures is often justified as the concentrated disadvantage index reflects neighborhood segregation mechanisms that concentrate the poor, unemployed, and single-parent families with children (Morenoff, Sampson, and Raudenbush 2001).

Whether the study uses hierarchical linear modeling, findings from recent research underscore the importance of examining contextual effects in social

disorganization models (Elliott et al. 1996; Rountree et al. 1994; Sampson et al. 1997; Silver 2000). In most studies, however, the magnitude of neighborhood effects on individual offending or victimization rates remains modest. Understanding why this is the case represents a significant challenge for social disorganization researchers. Recent work suggests that one problem may lie in the current conceptualization of "context." To date, contextual analyses have been largely limited to the neighborhood-level, but this may not constitute the relevant context for all residents, such as juveniles who spend much of their time in schools located outside the neighborhood. As Oberwittler (2002:4) points out, "the school constitutes an ecological context of its own right which cannot simply be subsumed to the community context."

We therefore suggest a number of issues to be considered in future studies: first, researchers need to identify the various contexts (beyond the immediate neighborhood) that are relevant for community residents; second, researchers should determine to what extent these multiple contexts are diverging or overlapping; and third, researchers should consider whether each context influences individual-level criminal behavior or victimization differently. In addressing these issues, researchers will face a methodological challenge. While HLM allows one to examine multiple levels embedded within each other (e.g., individuals within block groups within census tracts), it does not allow one to test "competing" contexts simultaneously (e.g., the neighborhood versus the school). What is needed is the development of appropriate methods to address these issues.

Modeling Spatial Dynamics

Social disorganization researchers have been slow to address the problem of modeling social processes in data that have been aggregated for officially defined areas such as census tracts (Land and Deane 1992:221). This is problematic, as geographic units are seldom spatially independent and levels of crime in one neighborhood likely influence levels of crime in adjacent neighborhoods. A related issue is the potential clustering of neighborhood characteristics linked to crime, such as poverty or residential mobility, that crosscut geographic areas (Baller et al. 2001:566). These patterns are formally indicated by the concept of spatial autocorrelation, or the coincidence of similarity in value with similarity in location (Anselin et al. 2000:14). In analyses using spatial data, estimates and inferences from regression analyses must include an adjustment for spatial autocorrelation; ignoring spatial dependence in the model may lead to false indications of significance, biased parameter estimates, and misleading suggestions of fit (Messner et al. 1999:427).

Spatial interdependence is theoretically important on a number of grounds. First, spatial dependence is expected as a result of the inexact correspondence between census tract boundaries and the ecological factors that shape social interaction. An oft-debated issue is whether census tracts—the unit of analysis used most frequently in social disorganization studies—are sufficient proxies for neighborhoods. Residents who live across the street from one another are likely to identify themselves as living in the same neighborhood, yet if they reside in different census tracts, they are not counted as "neighbors." Spatial models address this problem by recognizing the possible interdependence of neighborhoods (Morenoff et al. 2001).

Second, spatial dependence is implicated by the fact that many interpersonal crimes (such as assault and homicide) are based on social interactions that may cross neighborhood boundaries (Kubrin 2003; Morenoff et al. 2001). Acts of violence can generate a sequence of events that lead to further violence in a spatially diffused way. In their study of gang-motivated, gang-affiliated, and nongang youth homicide in St. Louis, Rosenfeld, Bray, and Egley (1999) find that, after controlling for neighborhood context, spatial autocorrelation in the homicide distributions remains in the gang-motivated category where diffusion processes are most likely to operate. In another study based on the St. Louis data, Kubrin and Weitzer (2003) find that retaliatory killings are clustered almost exclusively in the most economically disadvantaged areas of the city—areas that are adjacent to one another. Crimes or homicides that occur in one neighborhood may lead to retaliatory killings in a nearby neighborhood. In essence, interpersonal crimes that are subject to diffusion processes are likely to exhibit spatial dependence.

Spatial dependence can be controlled for using either a spatial lag or spatial error model (Baller et al. 2001). The spatial error model evaluates the extent to which the clustering of crime rates not explained by independent variables can be accounted for with reference to the clustering of error terms. In this sense, it captures the spatial influence of unmeasured independent variables. The spatial lag model, in contrast, incorporates the spatial influence of unmeasured independent variables but also stipulates an additional effect of neighbors' crime rates (i.e., the lagged dependent variable). This is the model most compatible with notions of diffusion processes because it implies an influence of neighbors' crime rates that is not simply an artifact of measured or unmeasured independent variables. Rather, crime in one place may increase the likelihood of crime in nearby locales.

For both models, the first step in the process involves determining whether spatial autocorrelation exists. A number of tests have been developed, the most common of which is Moran's I (Baller et al. 2001)—a cross-product coefficient similar to a Pearson correlation coefficient and scaled to be less than 1 in absolute value. Significant positive values for Moran's I indicate

positive spatial autocorrelation or clustering. Researchers often use the Spacestat software (Anselin 1992) to carry out the Moran's I test for spatial autocorrelation.[8] Assuming that spatial dependence is observed, researchers then include spatial lag or error variables in the regression analyses. These variables capture the spatial dependence of crime in a given area on crime in surrounding areas, and the significance of their coefficients in the regressions provides a test for spatial autocorrelation.[9]

Although there is strong justification for analyzing spatial dependence when testing social disorganization theory, few researchers have done so. The findings from a number of recent studies, however, suggest that the issue can no longer be ignored. To date, *every* study that estimates the effects of neighborhood characteristics on crime rates with adjustments for spatial autocorrelation finds significant spatial interdependence in the models (e.g., Kubrin 2003; Miles-Doan 1998; Morenoff et al. 2001).

Baller et al. (2001) provide the most complete analysis of spatial dependence to date by comparing findings from a spatial lag and spatial error model in their analysis of structural correlates of county homicide rates from 1960 to 1990. They use Exploratory Spatial Data Analysis to confirm the presence of spatial autocorrelation in the data. As expected, they find that the Moran's I statistics for homicide rates in all years are positive and statistically significant, and that spatial clustering persists after controlling for a number of structural predictors.

Further analysis reveals a distinctive regional imprint for this spatial autocorrelation. After disaggregating the sample into Southern and non-Southern counties, Baller et al. (2001) show that in the South, a spatial lag model—implying a diffusion process—fits the data well for all decades. In the non-South, in contrast, the spatial patterning is more consistent with a spatial error model—implying that homicide rates cluster because of the clustering of unmeasured variables. These findings not only suggest that the South and the non-South constitute two distinct geographical regimes in the way homicides cluster, but that future studies should take precautions to properly model spatial dependence.

This body of research underscores the importance of considering the spatial patterning of crime rates. Findings from the most recent studies demonstrate striking, substantively meaningful spatial patterns of crime (e.g., regional differences). As social disorganization researchers aim to sort out the nature of the relationship between place and crime, they must incorporate spatial effects into their analyses. Failure to do so will result in false indications of significance and biased parameter estimates. More important, spatial effects models offer promising opportunities for extending our understanding of the social forces that contribute to crime.

CONCLUSION

Bursik's (1988) seminal article on social disorganization theory examined a number of problems related to the theory's normative assumptions, the conceptualization of neighborhood disorganization, and the measurement of crime and delinquency. His work also discussed attempts to rectify these problems and outlined some future directions for the theory. A decade and a half later, we have witnessed significant advancements. Substantively, certain variables are being reconsidered. The concept of social ties deserves to be disaggregated into various types of ties and types of effects. The concept of social capital, by contrast, requires some narrowing, given the proliferation of definitions and myriad measures of it. The recent introduction of the concept of collective efficacy offers a fresh way of investigating the intersection of social ties and social control. Evidence exists for the effects of social ties, social capital, and collective efficacy, but these variables do not fully account for variation in neighborhood crime and disorder. Other factors may be important predictors, some of which have only begun to be included in explanatory frameworks. We have argued that social disorganization theory would be greatly enriched by empirical examination of the role of culture, formal social control, and urban political-economic forces in influencing the amount of neighborhood crime. Findings from a growing number of studies underscore the relevance of neighborhood cultural factors, and since neighborhoods do not exist in a vacuum, it is crucial to assess external influences—such as policing policies and the decisions of urban political and economic elites—along with intraneighborhood structures and processes.

Methodologically, researchers have begun to better model spatial dynamics and interdependence, reciprocal effects between community structures and crime, and contextual influences on individual-level behavior. Methodological innovations allow for more thorough and rigorous testing of social disorganization theory's propositions. Yet, a continuing challenge facing researchers is the proper measurement of central concepts. First, more attention should be devoted to developing appropriate and refined indicators of the key variables, as well as determining their interrelationships. Second, the methods used in most studies (e.g., surveys, analysis of secondary data) do not necessarily yield the best data with which to measure concepts, test propositions, and examine complex relationships, such as contextual versus individual effects and reciprocal effects between disorganization and crime. In addition to some of the innovative quantitative procedures outlined here, such as hierarchical growth-curve modeling and tests of spatial autocorrelation, more neighborhood ethnographic research is needed—a return to the approach employed by Shaw and McKay (1969/1942) in Chicago. Ethnographic research would provide rich data on residents' own interpretations of

neighborhood conditions as well as their networking and social control activities.

Social disorganization theory has experienced a renaissance in recent years. Given increasing deindustrialization of central cities, heightened middle-class mobility, growing segregation and isolation of the poor, and the growth of immigrant populations in most American cities—with implications for disrupting or revitalizing social networks, community cohesion, neighborhood subcultures, and social control—the theory's relevance is perhaps even stronger today than when it was first proposed many decades ago. Unfortunately, few studies have examined the possible effects of these developments. In addition, most social disorganization work has focused on urban areas without considering the applicability of the theory to nonurban areas (cf. Osgood and Chambers 2000). In short, there are several other new directions of scholarship that need to be pursued, complementing the substantive and methodological advancements highlighted in this article.

NOTES

1. Social cohesion/trust is defined by how strongly respondents' agreed that residents are willing to help their neighbors, can be trusted, generally get along with each other, share the same values, and believe that theirs is a "close-knit neighborhood."

2. Cohen (1955:129) writes, "The hallmark of the delinquent subculture is the explicit and wholesale repudiation of middle-class standards and the adoption of their very antithesis."

3. Kornhauser (1978:229, 244) writes, "a delinquent subculture does not exist because delinquent activities cannot be collectively endowed with value by human beings whose fate it is to live with one another." "There is no culture known to man" in which crime is valued because humans' very "existence depends upon their safe association with one another." Here we see a sweeping assumption about human nature, without supporting evidence. While this conclusion may be accurate for an entire neighborhood, it does not appear valid for subgroups within a neighborhood, whose members may indeed condone criminal activity.

4. Differences exist, for instance, both between and within communities, in residents' ability to socialize children to accept and abide by conventional norms. Poor neighborhoods, with greater numbers of single, less-educated parents, may have a lower capacity socialize children to conform and punish them for misbehavior (Markowitz et al. 2001).

5. This section focuses primarily on the decision making, policies, and practices of urban political and economic elites, not on the macro-level effects of structural conditions such as segregation, unemployment, and deindustrialization. Rather than focus on these larger factors themselves, we highlight the purposive decision making that tends to reinforce these conditions.

6. Another benefit of this approach has been to reduce multicollinearity among the independent variables, a problem common to tests of social disorganization theory.

7. One important limitation of using HLM to model contextual effects is the rigid requirement concerning the size of the nested files. For HLM to operate successfully, the number of individual-level cases per aggregate unit must be sufficiently large; small numbers of cases makes it difficult to obtain reliable measures and aggregate units with too few cases must be dropped in the analyses. Determination of the number of individual-level cases necessary for each aggregate

unit, however, depends on a variety of factors, including the extent of missing data at the individual level and the number of independent variables employed. Raudenbush and Sampson (1999) discuss this and related issues in their recent work on ecological assessment.

8. Moran's I is usually computed using a first power inverse distance weights matrix (row standardized) based on the distance between census tract centroids for all tracts, excluding the one under consideration. Here, greater weight is given to tracts that are closer than to those that are further away. Researchers then multiply the spatial weights matrix by predicted values of the dependent variable (see Note 7). This potential indicates the influence of neighboring crime, with the influence decaying as the distance between tracts increases (Land and Deane 1992:228).

9. Land and Deane (1992:228) assert that in spatial-effects models, the spatial diffusion or interaction processes are determined simultaneously with the dependent variable. This produces a nonzero correlation between the potential (spatial lag) variable and the error term, which violates the assumptions under which OLS produces unbiased (and therefore consistent) estimates of the regression coefficients. As a corrective method, they propose a two-stage least squares (2SLS) technique to derive consistent estimators in spatial effects models with potential variables. For a full description of this technique see Land and Deane (1992).

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Charis E. Kubrin is an assistant professor of sociology at George Washington University. Her research addresses neighborhood correlates of crime, with an emphasis on race and violent crime. She has received funding (with colleagues) from the National Science Foundation and the National Consortium on Violence Research to study racial change and victimization in Seattle neighborhoods. Charis' most recent publication is Structural Covariates of Homicide Rates: Does Type of Homicide Matter?

Ronald Weitzer is a professor of sociology at George Washington University. He has conducted extensive research on police relations with minority groups in the United States, Northern Ireland, and South Africa. His most recent books are Current Controversies in Criminology *and* Deviance and Social Control. *A current NIJ-funded project will examine determinants of attitudes toward the police in the United States.*