National Institute of Justice

Neighborhoods & Crime Research Working Group Meeting

April 4-5, 2011

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Meeting Results — Research Issues, Questions and Gaps

On April 4-5, 2011, the National Institute of Justice (NIJ) convened a meeting with invited participants to discuss research on neighborhoods and crime with the intent of reviewing lessons learned from recent research and identifying methodological considerations and issues in the study of neighborhoods and crime. This report summarizes the discussions and efforts of the Neighborhoods and Crime Working Group (Working Group).

The discussion can be characterized best as an educational session at which NIJ learned from accomplished researchers about where the current literature on neighborhood-focused criminological research stands, and what questions and issues remain. Discussions were not advisory; rather, they represented a current state of affairs. The Working Group identified the following research questions and infrastructure issues in current research, organized by data, methods, substantive questions and contemporary issues.

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Data Challenges and Needs

Law Enforcement: A standardized collection procedure of law enforcement data *at the neighborhood level* (i.e., census block, tract, ZIP code, planning district or X/Y coordinate) would be highly useful to the research community. The group discussed the *National Neighborhood Crime Study* (NNCS; Peterson and Krivo, 2010), which could serve as a framework for such a data infrastructure.

Whereas data on reported crime and arrest at small geographical areas is becoming far more available to researchers, data is presently limited on measures of police capacity and behavior, including: (a) calls for service, (b) allocation of resources across geographic units, (c) the number of police (on the beat, patrol and other assignments), and (d) the amount of time spent on the beat and patrol. Also beneficial to the research community would be data on the timing and location of policing interventions, so that the effects of such interventions could be evaluated. To understand

how neighborhoods affect crime, researchers need to better understand the behaviors and actions of formal agents of social control (police and also parole and probation officers).

Neighborhood Organizations: Research reveals that an organizational presence of social service providers and youth organizations can be highly consequential to neighborhood crime. However, because of a lack of data on (a) the number and quality of neighborhood organizations, and especially (b) the interconnection between organizations within and across neighborhoods in a city, examination of the importance of political economy and public social control remains limited in criminology.

Immigration: Research generally reveals that first-generation immigrants are less likely to be involved in crime than native-born residents, whereas the behavior of second-generation immigrants is more similar to native-born residents. Recent research also demonstrates a negative relationship between the concentration of immigrants in neighborhoods and crime rates. To further examine these and other related topics, data on immigration and immigrants is needed that allows for classification of neighborhood residents by (a) nativity, (b) illegal versus legal status, and (c) reasons for immigration.

Geography: Many of the key repositories of data on neighborhoods and crime, and therefore studies of neighborhoods, are from larger, older cities in the United States, particularly Chicago. For purposes of generalizability, it would be worthwhile for researchers to expand the urban environments that are the focus of criminological research. One key question in this regard is whether the correlates and causal predictors of crime are similar across settings. Additionally, contemporary topics such as immigration and home foreclosures should be examined not only in older northeastern and midwestern U.S. cities, but also in southern U.S. regions likely to be more affected.

Culture: Available neighborhood-level quantitative data on cultural mechanisms is limited in the criminological literature, but recent studies by Working Group members and others demonstrate that an understanding of cultural mechanisms (e.g., code of the street and legal cynicism) is highly useful for understanding why crime concentrates in particular geographical spaces.

Methods

Emerging Technologies and Innovative Data: Can data from internet repositories such as Google Street View and Google Earth be leveraged for assessing conditions of neighborhood disorder, the built environment and gentrification? If they yield valid and reliable data, such innovations may reduce some of the costs of doing neighborhood research.

Spatial and Temporal Units of Analysis: Choosing appropriate spatial and temporal units of analysis remain critical considerations for researchers. The operational definition of "neighborhood" used in any given study may influence inferences about the causes and consequences of crime. Similarly, the length of the temporal unit of analysis used in a study may influence inferences about the relationship between neighborhoods and crime. For instance, the use of annual data may render it impossible to detect short-term effects of neighborhoods.

Velocity of Change: Gradual neighborhood change may have little influence on neighborhood crime, yet rapid change may be difficult to manage, thus leading to escalations in crime. The study

of the velocity, or pace, of neighborhood change has generally been neglected in neighborhood research, yet remains an important area of investigation.

Historical Context: Criminological research of neighborhoods is oftentimes ahistorical, thereby neglecting the importance of the evolution of a neighborhood for current-day behavioral outcomes. The issue is that two neighborhoods may appear equivalent in regard to current sociodemographic characteristics, yet their prior histories may render them drastically different. The result may be diverging patterns of crime.

Substantive Questions

Mechanisms: The Working Group discussed the need for much greater attention on identifying the causal mechanisms by which neighborhood structural characteristics influence crime (and vice versa). Needs include identifying the elements of neighborhood culture related to crime and disentangling the relationship between culture, structural characteristics, and social processes (e.g., is culture independent of structure?).

Heterogeneity: There is a need to investigate the heterogeneity of neighborhood effects—i.e., does the effect of a given neighborhood condition on crime depend upon other qualities of the neighborhood? Example questions include: Are dense neighborly social ties negatively related to crime in some neighborhoods but not others? Does the effect of foreclosures on neighborhood crime depend upon neighborhood characteristics such as disadvantage?

Neighborhood Crime as the Independent Variable: Neighborhood crime is typically studied as an outcome variable. More research is necessary on the effect of neighborhood crime in individual outcomes, neighborhood socioeconomic composition, culture, and social processes.

Displacement *and Population Flows*: What are the repercussions of resident displacement from occurrences, such as public housing demolitions and gentrification on the crime rates of sending and receiving neighborhoods?

Contemporary Issues

The first decade of the 2000s was characterized by widespread changes to U.S. neighborhoods. The Working Group discussed the necessity of understanding the causes and consequences of contemporary changes, such as those below:

- **Crime Trends**: To what extent do changing neighborhood conditions explain the decline in crime that started in the early 1990s?
- **Recession:** How has the "Great Recession" affected neighborhood crime? Will it (eventually) produce a reversal in prevailing crime trends?
- **Policy Interventions:** Are the Choice Neighborhoods and Promise Neighborhoods programs effective in reducing neighborhood crime? What level of investment in these programs is necessary to see an impact on neighborhood crime and other conditions?

- **Mortgage Lending and Foreclosure**: Do foreclosures produce an increase in crime? If so, how and why? Are investments backed by conventional loans negatively related to crime? Conversely, does subprime lending lead to an increase in neighborhood crime?
- **Immigration**: Is the association between immigrant concentration and heterogeneity with crime similar in older U.S. cities (e.g., New York and Chicago) and newer destinations (e.g., Tennessee)? Why is immigrant concentration negatively related to neighborhood crime? Do ethnic enclaves facilitate the social control of crime? Is the immigration-neighborhood crime relationship dependent upon the characteristics of neighborhood immigrants such as country of origin, legal status and reasons for immigration (e.g., labor-oriented moves, or war refugees)?
- **Prisoner Reentry:** How do inflows and outflows of prisoners affect neighborhoods? Does the high level of residential mobility among ex-prisoners undermine neighborhood cohesion and informal social control? Would the provision of greater access to housing for ex-offenders lower recidivism rates? Why is residential change negatively related to recidivism among ex-prisoners? What characteristics of neighborhoods are important for successful offender re-integration? How do community residents perceive re-integrating prisoners, and in what ways do these perceptions influence neighborhood social ties? Does the extreme concentration of ex-offenders in geographic space increase neighborhood crime and recidivism and, if so, why?
- **Forecasting:** Can the state of knowledge about neighborhoods and crime be leveraged to forecast trends and shifting patterns in the future?

Identification of Top Priority Research Issues, Questions and Gaps

Dr. John Laub, Director of NIJ, provided opening remarks, welcoming participants to the meeting. He discussed the National Research Council review of NIJ. He said that one of his highest priorities is to develop a coherent, cutting-edge research agenda for NIJ and that convening topical working group workshops is part of the effort to accomplish this objective. Dr. Laub then reviewed the agenda and remarked that it was designed with the purpose of stimulating discussion among those conducting this type of research but also to identify, for NIJ and the field, what may be priority research issues, questions and gaps.

Dr. Laub noted that the meeting would begin with a discussion led by Dr. David Kirk, using their 2010 *Crime and Justice* article as a foundation for discussing emerging themes and research questions on neighborhoods and crime. This article was distributed to meeting attendees before the meeting.

Dr. Kirk provided an overview of the aforementioned article. The purpose of the article was to present a review of the literature on neighborhoods and crime research from the 1970s to the present, with a focus on the causes and consequences of neighborhood change and, in particular, changes resulting from population migration. The article identifies five thematic areas in neighborhood-crime research (population loss, gentrification, public housing, foreclosure and immigration), which guided much of the ensuing discussion. Within each thematic area, Dr. Kirk provided information on recent and contemporary changes to neighborhoods, and highlighted possible research questions associated with these changes. For instance, he noted that there has been a fundamental change in public housing assistance in the United States over the past two decades, with the declining use of subsidized public housing units and the increased use of housing vouchers. However, he noted that very little research has been done to assess the implications of these changes for neighborhood crime. He asked, how does public housing demolition affect crime rates in a focal neighborhood as well as adjacent areas?

Using a similar approach, Dr. Kirk then described (1) the evolution of mortgage lending in the United States, (2) recent patterns of immigration, and (3) trends in the concentration and distribution of returning prisoners to U.S. neighborhoods. The purpose of this discussion was to reveal the variety of social changes that are impacting U.S. neighborhoods. Dr. Kirk's presentation stimulated much discussion about priority research issues, and the types of data and methods necessary to answer research questions about the causes and consequences of social changes to U.S. neighborhoods.

Methodological Issues, Problems and Considerations

The second day of the meeting began with discussions of several methodological considerations pertinent to studying neighborhoods and crime.

Social Networks

Dr. John Hipp initiated the methodological portion of the meeting agenda by discussing many of the methodological and theoretical challenges to social network research on neighborhoods and crime. He suggested that the resolution of issues using social network analysis to study neighborhoods is only beginning. Core issues include determining what network measures to use in the analysis of crime, and how to measure networks and their boundaries.

Dr. Hipp noted that the sampling of social networks remains a challenge. In this regard, Dr. Hipp reported that the rhetorical question has been asked: If it is possible to gather information on all social networks within a city, what would you do with that information (e.g., to examine the causes and consequences of neighborhood crime)? Dr. Hipp is engaged in research to answer such a question. The issue is to determine if sampling social networks is sufficient for understanding the effect of network properties on crime, or if a full census of a network is required. What added leverage does knowing the precise structure of a social network provide over sample-based summary measures such as degree?

Dr. Hipp agreed with much of the discussion among participants that there is still a question as to how social ties work to affect crime. After the discussion, Dr. Hipp stated that social networks represent a resource potential. More work needs to be done to determine whether and how they matter, but that requires having established methods on how to define boundaries of a social network and measure its relevant properties.

Time-Varying Treatments

Dr. Patrick Sharkey continued the discussion of methodological considerations by addressing the topic of time-varying treatments. Dr. Sharkey noted that much of criminological research on neighborhoods and crime is based upon one time point of data on neighborhood conditions, typically contemporaneous or lagged by a short interval of time (e.g., one year). Yet many treatments of interest do not occur at one single point in time. The sequence or timing of treatments may be important if there are multiple time points at which a treatment can occur. Some treatments may interact over time or begin a process that affects subsequent treatments. Even if a treatment is implemented at a single point in time, mechanisms may vary over time. Most of our current statistical methods preclude the possibility of time-varying treatments.

Dr. Sharkey stated that one important problem with many studies is that they control for confounders that may, in fact, be endogenous to neighborhood characteristics, including such things

as family income or health. This approach has the effect of blocking the indirect pathways by which neighborhoods may influence developmental outcomes. Dr. Sharkey suggested that this problem becomes worse when researchers try to assess pathways that extend across time or generations. He argues that standard measures of family background controlled in typical regression analyses of "neighborhood effects" are potentially endogenous to neighborhood environments in the prior generation.

Dr. Sharkey noted that typical regression methods used to estimate the relationship between neighborhoods and crime prohibit the estimation of time-varying treatments or interventions. He offered the following example to illustrate his points:

- Suppose a researcher is interested in estimating the effect of residential change on a youth's level of violent offending.
- Residential moves during the second wave of a data collection are a function of time-varying characteristics of the family, such as parental employment.
- Furthermore, suppose that parental employment measured at wave 2 of a data collection is influenced by residential moves at wave 1.
- Thus, parental employment is a confounding variable that is affected by the prior residential moves and affects future moves.
- Standard regression estimators will generate biased results about the relationship between residential moves and crime even if all confounders (e.g., parental employment) are measured and included in the statistical model.
- By controlling for parental employment at wave 2, the analysis would ignore the cumulative pathway by which the effect of residential moves on crime persists over time (i.e., from wave 1).

Dr. Sharkey argued for a more appropriate approach to modeling time-varying effects that:

- Uses an expanded counterfactual framework for causality.
- Uses marginal structural models and a new method of sensitivity analysis for selection bias.

After describing the advantages and limitations of this approach, Dr. Sharkey offered specific examples from his own research, including a 2011 article with Felix Elwert published in the *American Journal of Sociology*. In this study, Sharkey and Elwert examined the multigenerational effects of neighborhood poverty (i.e., the extent of poverty the parents resided in as children, and the extent of poverty in which the children reside) on cognitive ability.

Luncheon Discussion: The White House Neighborhood Revitalization Initiative

Mr. Thomas Abt, Chief of Staff, Office of the Assistant Attorney General at the Office Justice Programs, provided an overview of *The White House Neighborhood Revitalization Initiative* (NRI) for a luncheon discussion. This initiative is a White House-led interagency collaborative project designed to support local communities in developing and obtaining the tools they need to revitalize neighborhoods of concentrated poverty into neighborhoods of opportunity. The effort includes the PROMISE grant program in the Department of Education, the Neighborhoods of CHOICE program in thHousing and Urban Development, and the new Byrne Innovations Grant Program in the Department of Justice. Mr. Abt represents the Department of Justice on this initiative.

Mr. Abt first described the motivation for the program, emphasizing that $500 billion is lost in productivity and societal costs because of child poverty. He then described the initiative goals and strategies. The approach taken by the NRI is interdisciplinary, coordinated, flexible and data driven. He said that the approach is to move distressed neighborhoods toward effectiveness by providing coordinated training and technical assistance, streamlining the grant-making process, and thereby building community capacity. Mr. Abt described how the tools offered by the NRI to local communities (e.g., grants vs. technical assistance) is dependent upon community capacity, where "capacity" refers to whether communities can make good use of federal funds. For instance, Choice and Promise neighborhoods have the capacity and therefore qualify for funding. Neighborhoods with little capacity are offered technical assistance (i.e., the Neighborhood Capacity Resource Center). Mr. Abt mentioned that there is not a defined methodology for measuring community capacity.

In terms of funding, Mr. Abt noted that the government is investing a total of $20 million in the NRI. Out of this, $8 million to $10 million is spread across 5 to 10 neighborhood revitalization grants.

Lessons Learned in Conducting Neighborhood Research

The final portion of the agenda of the Working Group meeting was dedicated to addressing the lessons learned from several large-scale research projects conducted in recent years: the National Neighborhood Crime Study, the Project on Human Development in Chicago Neighborhoods, and the Peterborough Adolescent and Young Adult Development Study. These projects each represent an important advancement in data collection and analytic focus, thus paving the way for future studies of neighborhoods and crime.

The National Neighborhood Crime Study

Dr. Ruth Peterson introduced the National Neighborhood Crime Study (NNCS) saying that results from this research served to further establish the relationship between neighborhood poverty, racial composition and crime. The study involved a sample of 91 large cities (population > 100,000) with 9,593 census tracts. Data was collected from police departments on reported crime for all census tracts within each respective city for up to three years, 1999-2001.

Dr. Lauren Krivo discussed some of the methodological challenges encountered when trying to collect data from multiple police departments, which often use differing definitions of crime and differing geographic units. Address-level (point) data on reported crimes, arrests and other indicators is beneficial because it allows researchers to aggregate incidents to whichever geographic unit they desire (e.g., census tract or police beat). There are several drawbacks, however. First, cleaning data from an address file is time intensive. Second, there are potential confidentiality issues with making such data public.

This study showed that it is possible to collect police data at the census-tract level across a large sample of U.S. metropolitan areas. The Working Group, with input from Dr. Jim Lynch of the Bureau of Justice Statistics, discussed the feasibility of standardizing an effort similar to the NNCS, so that annual census-tract-level reported crime and arrest data could be made available to researchers.

The Project on Human Development in Chicago Neighborhoods

Dr. Robert Sampson opened by describing the history of the Project on Human Development in Chicago Neighborhoods (PHDCN). He then briefly outlined the research design. The PHDCN is a

multi-method longitudinal study of Chicago neighborhoods and the inhabitants. The project included several assessments of community conditions, including two waves of a community survey, a key informant network study, and systematic social observations (SSO). It also included a longitudinal cohort survey of Chicago children, adolescents and young adults, along with their primary caregiver. Dr. Sampson described the extent of residential mobility in the cohort sample over the course of the data collection, both within and outside Chicago. He argued that individuals' selection of where to live is a worthwhile topic for examination in its own right, and not merely a confounding statistical nuisance that must be controlled away (as is typical in neighborhood effects research).

Dr. Sampson discussed lessons learned in the collection of observational data. For instance, he suggested that the initial SSO method of videotaping and coding social and physical disorder may have had diminishing returns it was very time consuming and very expensive. He said that they learned very quickly that the reliability of block-level observation for measuring social and physical disorder reached optimum levels with a limited number of face blocks and improved very little thereafter. This led project team members to develop a method of observation used in the second phase of the project, which involved observers walking around blocks recording observations for block faces. He suggested that the walk-around method is a more cost efficient and reliable method of measuring physical and social disorder. Dr. Sampson also initiated a discussion of the usefulness of modern data repositories, such as Google Street View, for assessing the physical and social conditions of a neighborhood.

Another lesson learned from the project was the necessity of more thoroughly measuring organizational and institutional capacity within and across neighborhoods, and especially the network of relationships between organizations.

Dr. Sampson argued that the examination of neighborhood structure and culture as it relates to rates of social behavior is undervalued. He said that, although many contemporary studies are based upon individual-level models, fundamentally macro-level analysis is a legitimate level of explanation. He suggested that the problem of the individual-level method is that it loses appreciation of the importance of social context. A goal of his project was to investigate both the macro- and micro-analytic levels, and their interconnection. Dr. Sampson used James Coleman's "boat" schema to illustrate his points about the importance of investigating neighborhood context.

The Peterborough Adolescent and Young Adult Development Study

Dr. Per-Olof Wikström discussed lessons learned from the the Peterborough Adolescent and Young Adult Development Study (PADS+). He suggested that, to advance the study of environmental effects in crime causation, we need a methodology that allows researchers to:

- Measure the part of the physical and social environment that influences people's acts of crime and development of crime propensity (*the problem of the unit of analysis*).
- Measure relevant aspects of the environment reliably (*the problem of ecometrics*).
- Account for the fact that people move around in space and encounter a wide range of different environments, not only the environment immediately surrounding their home location (*the problem of exposure*).

Dr. Wikström drew upon the concept of "activity fields" in discussing the relationship between environmental influences and behaviors such as crime. Activity fields refer to the variety of social settings to which individuals are exposed during a given time period. Dr. Wikström pointed out that residential neighborhoods are not the only neighborhoods where individuals spend their time, yet the bulk of criminological research on neighborhoods only considers the role of residential neighborhoods. Neighborhood effects may derive from a variety of sources that include former and

current neighborhoods of residence as well as neighborhoods where an individual works, attends school, or otherwise spends his or her time.

Dr. Wikström described a methodology known as "space-time budgets," which he developed for the PADS+. This method is used for assessing the amount of time individuals spend in different neighborhood environments during a given day. A space-time budget is a form of time diary, but it adds a spatial dimension to daily activity patterns. It is designed to obtain a systematic record of a respondent's use of time over a given period, with an indication of the physical location where individuals are spending their time.

References

Kirk, David S. and John H. Laub. 2010. "Neighborhood Change and Crime in the Modern Metropolis." *Crime and Justice: A Review of Research* 39:441-502. Chicago: University of Chicago Press.

Peterson, Ruth D., and Lauren J. Krivo. 2010. The National Neighborhood Crime Study, 2000 [Computer file]. Pub. No. ICPSR27501-v1. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [Distributor].

Sharkey, Patrick, and Felix Elwert. 2011. "The Legacy of Disadvantage: Multigenerational Neighborhood Effects on Cognitive Ability." *American Journal of Sociology* 116:1934-1981.

Meeting Agenda

Office of Justice Programs
810 7th Street NW
Washington, DC
April 4 - 5, 2011

April 4, 2011

1:00-1:30 p.m. Clear Security, Registration, Coffee, Snacks (Please allow 15 minutes to clear security)

1:30-2:30 p.m. Welcoming Remarks: NIJ's Neighborhoods & Crime Research Portfolio

Agenda Discussion and Charge to the Group (John Laub)

2:30-4:30 p.m. Identification of Top Priority Research Issues, Questions andGaps (Daivd Kirk and John Laub)

April 5, 2011

8:00-8:30 a.m. Registration & Continental Breakfast (Please arrive in OJP Lobby by 7:45 a.m.)

8:30-9:30 a.m. Recap & Further Discussion of Research Issues, Questions and Gaps

9:30-11:15 a.m. Methodological Issues, Problems and Considerations
John Hipp and Patrick Sharkey

11:15-11:45 a.m. BREAK

11:45 a.m. -1:00 p.m. Lunch Presentation & Discussion:
Thomas Abt, Chief of Staff, Office of the Assistant Attorney General, OJP; *The White House Neighborhood Revitalization Initiative*

1:00-3:00 p.m. Lessons Learned in Conducting Neighborhood Research
Ruth Peterson and Lauren Krivo (NNCS), Robert Sampson (PHDCN), and Per-Olef Wikström (PADS+)

3:00-3:15 p.m. BREAK

3:15-4:30 p.m. Next Steps in Neighborhoods & Crime Research

Participant List

John Laub
National Institute of Justice

David Harding
Department of Sociology and Ford School of Public Policy
The University of Michigan

John Hipp
Department of Criminology, Law & Society
University of California-Irvine

David Kirk
Department of Sociology
University of Texas-Austin

Lauren Krivo
Department of Sociology
Rutgers University

James P. Lynch
Bureau of Justice Statistics

Jeff Morenoff
Department of Sociology
University of Michigan

Ruth Peterson
Department of Sociology
Ohio State University

Robert Sampson
Department of Sociology
Harvard University

Patrick Sharkey
Department of Sociology
New York University

Eric Stewart
College of Criminology and Criminal Justice
Florida State University

Per-Olof Wikström
Institute of Criminology, University of Cambridge

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