# SELF-REPORTS ABOUT PLACE: THE APPLICATION OF SURVEY AND INTERVIEW METHODS TO THE STUDY OF SMALL AREAS

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**Abstract:** This *paper argues for more frequent use of surveys and interviews to advance the criminology of place, and to improve current evaluations of place-specific crime prevention interventions by police, community groups, and others. Interview methodologies can produce reliable information about critical social processes and perceptions—data that are not obtainable through other methods. However, because survey researchers have placed too much emphasis on "sampling error," this paper encourages the adoption of a "total survey error" perspective. Also recommended is the use of other interview methods, including place-intercept surveys and focus groups to capture data from specific types of place users. The concept of "mental mapping" is proposed to enrich our understanding of users' fears and perceptions about the target area. A multi-method approach is recommended that will yield diverse types of information about place, and wiU. allow for triangulation and convergent validation of information.*

The criminology of place is a vital and growing area of research within the field of criminology. This paper argues, however, that continued advances in knowledge will be constrained unless researchers pay greater

attention to the social processes that encourage or inhibit location-specific crime and begin to employ methodologies that can directly tap these processes. We propose a more central role for survey research and other self-report methods designed to advance our understanding of crime and disorder at specific locations and to assess the effects of various interventions by police, community groups, and other agencies. In essence, good survey research can provide reliable and information-rich data about social behavior—data that are simply not obtainable from police records or other sources. In the context of the unique challenges that small areas pose for traditional survey research methods, this paper explores the strengths and weaknesses of the survey approach, offers a new perspective on survey error and proposes additional interview methods.

## HISTORICAL CONTEXT

Environmental criminology, with its long history, has played a significant role in shaping the field of criminology/criminal justice, and provides a context for understanding the current interest in the criminology of place. Brantingham and Brantingham (1981), in reviewing this history, argue that environmental criminology has undergone three distinct waves of research over the years. The first wave of studies was conducted by nineteenth- century French and British statisticians, who generally described spatial patterns of crime within large jurisdictions of their respective countries, without any theoretical focus. The second wave of research was conducted in the U.S. during the twentieth century and, because of its strong theoretical orientation, became known as the social ecology of the Chicago School of sociology. Using methods developed by Burgess (1916), Shaw and McKay (1931) mapped the residences of delinquents in Chicago and compared rates of delinquency for different areas of the city. The social ecology models were heavily criticized in the 1960s and 1970s for a wide variety of problems, ranging from conceptual and operational ambiguity to the misapplication of statistical inference (e.g., the ecological fallacy).

The third wave of environmental research began in the 1970s, influenced heavily by the writings of Jeffery (1971) and Newman (1972), who focused on how changes in urban design and urban architecture would influence crime and perceptions of safety. As Brantingham and Brantingham (1981) note, this work helped shift the emphasis in environmental criminology from offender motivation to criminal events, and from sociological analysis to geographic analysis. They argued that "most criminological research conducted between 1870 and 1970 focused on the origins of criminal motivation" (Brantingham and Brantingham, 1981:19).

Given that crime has four basic dimensions—the law, the offender, the target and the place—this third wave of research gave needed attention to the fourth dimension—physical place. Indeed, Brantingham and Jeffery (1981) suggest that environmental criminology did not advance for half a century because of an obsession with offender motivation and the failure to attend to the crime location.

## Recent Trends

In the 1980s and 1990s, other trends would emerge that have changed the landscape of criminology, and to a large extent, these trends provide the foundation for the approach being proposed in this chapter. First, the emergence of victimization surveys at the citywide and national levels during the late 1960s helped shift the spotlight away from offenders and onto the victims of crime (Bidermanetal., 1967;Ennis, 1967;Reiss, 1967). Within this new "victimization" and "crime prevention" perspective, a critical series of "reaction to crime" studies were conducted in the late 1970s and early 1980s that sought to understand how victims and non-victims *who reside in particular neighborhoods* experience, perceive, and respond to local crime and disorder (Greenberg et al., 1982; Lewis and Salem, 1986; Podolefsky and DuBow, 1981: Skogan and Maxfield, 1981; Taubetal., 1984: Taylor et al., 1981).

These studies brought the unit of analysis down to the community level, thus providing case studies of fairly large community or neighborhood areas. Similarly, Pointer (1992) describes the "second-generation of victimization surveys" or "small-area studies" that were carried out in the U.K. during the late 1980s. These surveys, however, "emphasized the importance of analyzing spatial, social, and temporal factors as interdependent, rather than independent variables in the geography of crime and policing" (Pointer, 1992:170). Although the British surveys gave more attention to victimization experience, and the American surveys focused more on individual and collective reactions to crime, both research efforts shared a concern for measuring citizen experiences within specific geographic areas, recognizing the potential for different experiences and perceptions among different subgroups who use the local environment.

These studies illustrate the application of survey research at the neighborhood- and community-level, but not at smaller levels. Here, the definition of a "small area" might include one or two city blocks, a street corner, a strip mall, a single building, a small cluster of buildings or some

other limited geographic configuration. These small areas can be viewed as a challenging laboratory for the application of self-report methods.

Another recent trend in criminology is noteworthy and relevant to the study of place. The Chicago school—or at least social disorganization theory—has made a strong comeback, and this time the proponents have begun to specify the (heretofore missing) intervening social variables and to offer more sophisticated methods of data analysis (Bursik and Grasmick, 1993; Sampson and Groves, 1989). These studies have helped to refine our thinking about the role of informal social control processes and community-based institutions in maintaining order and preventing neighborhood decline. Again, however, the unit of analysis is typically a larger community area.

Finally, we have learned from tests of "crime prevention through environmental design" and "defensible space" theories that the social and demographic characteristics of local residents are generally stronger predictors of criminality at specific locations than are the physical characteristics of the environment, and that design improvements will have little impact when the social environment is dominated by poverty, a disproportionate number of youths and /or ethnic heterogeneity (see Rosenbaum, 1988; Taylor and Gottfredson, 1986).

Collectively, these trends in community survey research suggest that studies of place will have limited explanatory value unless researchers examine the social processes that occur within these physical environments. This chapter proposes that environmental criminology is not just about the study of geography and crime, but also about the perceptions and behaviors of persons who frequent the places in question, including the offenders, victims, and other users of the environment. Essentially, we argue that the social reality of these places makes a critical contribution to the definition of local opportunities for crime and disorder. Although the rediscovery of geography and the physical environment was refreshing and very attractive to researchers in the early 1980s, Brantingham and Brantingham (1981) were still able to see beyond the "bricks and mortar" in their job description for the new environmental criminologist:

> Environmental criminologists set out to use the geographic imagination in concert with the sociological imagination to describe, understand, and control criminal events. Locations of crimes, the characteristics of those locations, the movement paths that bring offenders and victims together at those locations, and people's perceptions of crime locations all become substantively important objects for research from this shifted perspective. Moreover, overt policy choices

which create or maintain crime locations or areas of criminal residence also become important objects of research (p. 21].

Despite this idealized picture, environmental criminology today draws its strength from a focus on the spatial distribution of criminal activity at the expense of other variables in the crime equation. This orientation is certainly useful for describing patterns of crime, but offers less in the way of explanation. Hence, this paper will continue to develop the argument for an expanded, integrated view of crime—one that encourages researchers to *define the social and physical reality of place from the viewpoint of persons who frequent the area.* This suggestion is not a complaint that the individual has been lost in modern criminology. To the contrary, the study of offender motivation is stronger than ever under the auspices of developmental criminology (Loeber and Le Blanc, 1990), and the study of crime victims continues to expand into new areas (see Lurigio et al., 1990).

The problem is that these bodies of work have grown independently, and are not connected to *the place of crime* in a way that would advance our understanding of the forces that contribute to criminal behavior. An integrated perspective is often lacking. Research on routine activities models (Cohen and Felson, 1979; Lynch, 1987; Maxfield, 1987)) and on social disorganization theory (Sampson and Groves, 1989) stands as a refreshing exception to this conclusion, but these studies have generally relied on national survey data which are problematic for understanding the dynamics that occur within neighborhoods or within smaller geographic areas (cf. Garofalo, 1990).

One trend in the field that has contributed to the renewed interest in the criminology of place is the attention given to new forms of policing. In the U.S., traditional reactive policing strategies are currently being overhauled and supplemented by a new paradigm for policing known as "community policing" or "problem-oriented policing" (Eck and Spelman, 1987; Greene and Mastrofski, 1988; Goldstein, 1990; Rosenbaum, 1994; Skogan, 1990). With its focus on identifying and addressing specific community problems, the problem-oriented policing model has forced police administrators and researchers to pay special attention to the location of crime, including: residential addresses with serious domestic violence problems (Sherman et al., 1989); parking lots with theft-from-vehicle problems (Eck and Spelman, 1987); housing units and streets with drug trafficking (Uchida et al., 1990); neighborhoods or blocks with serious crime/drug problems (Hope, 1994; Maltz et al., 1990; Rosenbaum et al., 1994a); public housing developments with a wide range of social problems (Annan and Skogan, 1993; Popkin et al., 1994), and other "hot spots" or "high-call" locations. In a few cases, evaluators have collected

survey data from local residents to assess their perceptions of the community policing initiatives and of the physical and social environment within the target area. However, most researchers continue to rely on data from calls for service, incidents and arrests to measure program impact.

Arguably, we are entering a new era in crime control theory and policy, where the limits of aggressive enforcement tactics have been realized and the promise of community-based crime prevention strategies is being explored with unprecedented enthusiasm. [1] Community policing epitomizes this new orientation, where efforts are being made to prevent or solve local problems through the formation of partnerships with other city departments, social service agencies, grassroots community organizations, the media, local schools, churches, and other neighborhood institutions (see Rosenbaum, 1994). The roles of each of these institutions in establishing and maintaining social order in the target area is the likely focus of future research attention. Promising prevention models should be based on good social science research—studies that identify the key social variables operating in specific environments to either facilitate or inhibit criminal and antisocial conduct. To achieve this end, however, environmental criminologists will need to expand their repertoire of methodologies, as discussed below.

## THE CONTRIBUTION OF SURVEY RESEARCH

There are two basic ways that survey research can contribute to the criminology of place: (1) by advancing our knowledge of the social processes that operate in specific locations; and (2) by contributing to the development and evaluation of new anti-crime policies and programs directed at these locations. Both contributions are discussed briefly.

## Understanding Social Perceptions and Behavior

As noted earlier, we are suggesting that the study of place will advance more rapidly to the extent that it moves beyond "bricks and mortar" and the mapping of criminal incidents to examine in greater detail the many social forces at work in a particular locale. The use of official crime data has emerged as the dominant methodology in the criminology of place. While such data are critically important to the study of place, we caution against an *exclusive* reliance on this methodology for two primary reasons.

First, this archival approach encourages researchers to put the spotlight back on the offender, while giving insufficient attention to other actors in the criminological theater (e.g., the victim and other users of the local environment). Existing police records simply do not contain the types

of data that are needed to draw a complete picture of the criminological forces at work in specific locations. Second, these spatial analyses are based on police records, which can suffer from a number of shortcomings. These limitations include: a significant problem with unreported crime; changes in citizen reporting patterns over time; changes in the record-keeping practices of police agencies as a function of political pressure, training, etc.; human error in recording and inputting data; low-quality database management in general; police discretion in determining what will be reported by location and type of offender; and a host of other factors. These limitations of official data *may* lead to biased conclusions about where offenders live, where crimes occur and the nature of criminal events. The reliability and validity of police statistics is a seriously debated issue (see Lowman, 1992, for a review), but the problems are sufficient to recommend caution. The extent to which crime statistics reflect the true geographic and social distribution of crime—as opposed to the selective application of the law, the behavior of local residents or other extra-legal factors—will depend on the specific jurisdiction and specific locale.

The use of small-area surveys is proposed here not so much as an alternative to official police data for measuring the extent of criminality, but as a complementary approach that can generate a new set of environmental data to supplement and triangulate official statistics. The strength of the interview/survey approach is that it can provide up-to-date information about human perceptions of, and reactions to, the social and physical environment of interest. Interviews are uniquely capable of measuring perceptions, beliefs, opinions, attitudes, behavioral intentions and self-reported behaviors vis-a-vis the local environment. This strength is critical for understanding the relationship between the social and physical environment and for validating theories of criminality that are concerned with the total observable crime scene—the victim, the offender, and the place (including other actors).

Our own theoretical bias, for example, is that "social place" is important for understanding opportunities for crime as well as criminal motivation. Social control and social disorganization theories suggest that criminality results from neighborhood instability and heterogeneity which undermines informal social control processes (see Bursik and Grasmick, 1993, for a review). While large-scale secondary analyses of national crime surveys and census data have been important for documenting how community characteristics such as residential instability, population heterogeneity, and socioeconomic status are related to delinquency or victimization rates, these existing data sets do not contain the measures

needed to examine the social dynamics implied by social disorganization models.

As Bursik and Grasmick (1993:40) note, "the acquisition of data pertaining to relational networks and the processes of control is generally only possible through an intensive series of interviews, surveys, and/or field work within each of the local neighborhoods of a city." For example, the U.S. National Crime Survey or local police records will not (for obvious reasons) include measures of "private" and "parochial" (Hunter, 1985) social control networks. At the parochial level, for example, surveys or interviews are needed to measure the extent to which users of the environment supervise the behavior of those in the target area, especially youth. Do users engage in informal surveillance of the neighborhood or intervene directly to question residents or strangers about suspicious or criminal behavior? (cf. Greenberg et al., 1985). If a researcher is interested in "private" social control, self-report methods become especially import-ant to capture the extent and nature of affective networks among those who frequent the target area. Intimate, primary ties among friends and family members can be a strong means of social control and will vary as a function of the social groups who use the target area, but their existence and strength is a private matter that is most efficiently disclosed via self-report methods. Surveys also allow the researcher to directly measure control-related activities within the family, such as the extent of supervis-ing and monitoring children's" activities, rewarding or punishing various behaviors by offspring and functioning as a role model. The extent to which parents are able to accept responsibility for their children's socialization and supervision has been posited as a critical set of intermediate processes for establishing social control at the neighborhood level (Sampson, 1987). More generally, the informal social control models have identified a number of variables that are believed to influence both prosocial and antisocial behavior in a particular geography (see Bursik and Grasmick, 1993; Greenberg et al., 1985; Rosenbaum, 1988).

Looking at place from the viewpoint of criminals, our understanding of criminal and antisocial behavior in specific locations has been advanced by some important opportunity theories, including the routine activities models (e.g., Cohen and Felson, 1979) and offender decision-making or rational choice models (e.g., Brantingham and Brantingham, 1984; Corn-ish and Clarke, 1986; Rengert. 1989). Routine activities theory suggests that crimes are more likely to occur in places where there is a convergence of "motivated offenders," "suitable targets" and the absence of "guardians" who can prevent these offenses. The limited rational choice decision-mak-ing theories look at how offenders select particular neighborhoods, plan their offense and select their target. Research testing these theories often

tries to estimate or approximate the offenders' thinking process by examining victimization patterns in large areas. While this approach is acceptable for studying large communities, such data cannot be disaggregated to study small places, where a researcher is interested in a criminal's thoughts about a *particular* environment.

Moreover, the argument is made here that if a researcher wants to learn more about how offenders think about criminal activity, then one of the best ways to find out is to *ask them.* There is a growing body of research that involves interviews with known robbers and burglars (e.g., Bennett and Wright, 1984; Gabor et al., 1987). Unfortunately, data on imprisoned offenders from different neighborhoods do not inform us about specific target areas. Nevertheless, it would be possible to identify and interview criminally minded individuals who frequent the target area. Although this is not an easy task, interviews and focus groups[2] with such persons, encouraged by monetary incentives, could yield valuable information about the perceived costs, benefits and sequencing of criminal decisions in specific target areas. In addition, noncriminals who affiliate with criminals and/or engage in similar routine activities could be nearly as informative.

At the core of opportunity models of crime is the notion that crime and disorder are more likely in environments where motivated offenders can commit crimes without the surveillance, intervention and/or punishment of bystanders. Research has established that environmental opportunity or risk will influence criminal activity (e.g., Clarke. 1992; Cohen and Felson, 1979; Mayhew, 1990; Rengert, 1980), but for specific areas, user-defined assessments of risk would be quite useful for understanding patterns of crime and planning crime prevention programs. For example, offenders' perceptions of local guardians—including police, local residents, business owners, and other users of the environment—would be quite interesting for understanding perceptions of risk and decision making. Their views of the social control process in general would be informative.

## Evaluation of New Interventions

One of the major advantages of using surveys and other self-report methods is that they yield information that is extremely useful for evaluating new crime prevention programs and other place-focused interventions. Local residents and other users of the target area can inform evaluators about the visibility of new anti-crime initiatives, be they physical or social changes. They can also describe their attitudes about these changes and the extent to which these modifications in the target

area have affected them on a variety of dimensions. Whether the introduction of situational crime prevention measures (cf. Clarke and Mayhew, 1980; Clarke, 1983) actually changes the perceived criminal opportunities in the target area is an important policy question. Also, if users of the target area are unaware of changes to the environment (e.g., street lighting) or do not engage in the desired crime prevention behaviors (e.g., property marking or greater surveillance of the target area), then the absence of program effects can be explained by such self-report findings (e.g., Lavrakas and Kushmuk, 1986; Rosenbaum et al., 1986).

Surveys are especially useful for estimating the effects of community mobilization programs or police interventions. Whether community mobilization can stimulate citizen participation, strengthen neighborhood self-regulation and improve perceptions of the area is most efficiently answered through self-reports. Constructs of interest might include: level of social interaction among target area users; usage or avoidance of specific areas; territoriality and surveillance behaviors; perceived efficacy and control over activities in the area; crime prevention awareness and participation; perceived levels of crime and disorder; fear of crime; and overall assessments of the quality of life in the area. Similarly, enforcement programs and other visible police initiatives (e.g., foot patrol and door-to-door contacts) can be evaluated by querying residents about their awareness of, and satisfaction with, specific police actions, and by asking them questions that serve to estimate the impact of the program on individual respondents and on the social and physical conditions of the target area (e.g., Pate and Annan, 1989; Rosenbaum etal., 1994b; Uchidaetal., 1990; Wycoff and Skogan, 1986; 1993).

## THE SURVEY RESEARCH PROBLEM

The field of survey research is heavily populated with statisticians who spend much of their time worrying about sample size in the context of sampling theory, while giving relatively little attention to other survey error issues. This focus has caused many researchers to avoid the use of surveys in small areas, as they mistakenly assume that a small sample necessarily produces a large amount of error, and that sampling error is all that matters when evaluating the quality of self-report data.

The argument posited here is that survey research methods, when applied to small geographic areas with relatively small samples, can still yield important perceptual and behavioral data. Because the sample size problem has been oversold, we propose a broader framework for conceptualizing survey research and for assessing the limitations of these methods. First, the concept of "total survey error" will be introduced to

give the reader a new way of thinking about survey research. Then, this framework will be expanded by proposing that researchers of place conduct interviews with small samples of informants, both individually and collectively, to enhance understanding of small areas.

## Total Survey Error and Surveying in Small Areas

*The Total Survey Error" Perspective*

When designing and executing survey research, one of the fundamental objectives is to minimize the amount of error in the data. Recently, survey methodologists such as Groves (1989), Fowler (1993) and Lavrakas (1993) have called attention to the disproportionate emphasis (by survey researchers) on the size of a survey's sampling error, in contrast to the inadequate attention they accord to potential non-sampling errors. In many cases, however, the size of the latter dwarfs that of the former.

This underutilized approach—termed the "total survey error" perspective (TSE)—makes it explicit that, in addition to considerations of sampling error, a careful researcher should attend to methods that control and/or measure the potential effects of coverage error, non-response error and measurement error. Together, all potential sources of survey imprecision and survey bias define the TSE. Ideally, each potential source of error should be considered separately when planning, implementing and interpreting a survey. These major sources of error are briefly described below.

*Sampling Error*

The size of the sampling error in a survey that uses a probability sample is a function of: (1) the heterogeneity of what is being measured, (2) the size of the sample, and, to a lesser extent, (3) the size of the population. This source of variance in survey statistics is used because researchers often study only a sample of all elements in a population rather than a census in which measurement is taken from all elements (e.g., all households in a neighborhood). If a survey is based on a probability sample (i.e., a set of elements generated using a sampling design in which all elements of the population have a known non-zero probability of being sampled), one can calculate a confidence interval (i.e., a range based on the sampling error) for survey statistics (e.g., means and percentages) with a certain degree of confidence, traditionally set at 95%. Without a probability

sample, probability theory cannot be applied and a sampling error cannot be calculated.

When studying small areas, several points should be made. First, a researcher may be entirely capable of conducting a census of the total population (e.g., 30 residents of a particular block face or building), in which case sampling error is not a relevant consideration. Second, when the total population is quite small, and the sample being drawn is relatively large (e.g., more than one-fifth of the population), the standard error may not be as problematical as expected. In these situations, Blalock (1979) recommends the use of a sampling correction factor that, in effect, decreases the standard error. Weisburd and Green (1991) used this correction procedure in designing their study of local drug markets, showing that a survey sample of 15 residents drawn from a total population of 32 has a smaller standard error than a sample of 30 residents drawn from a sample of 400. Hence, the size of the population is not always associated with the stability of estimates in the way that one might expect.

Finally, in the context of sampling error, researchers should guard against concluding that because a probability sample was employed, a survey has validly measured a construct (e.g., citizen satisfaction with police services) within the sampling error's level of precision. There are many other potential sources of bias and imprecision beyond sampling error. Hence, the typical concern with sampling error can give a false sense of security about the quality of the findings.

## Coverage Error

Before a conclusion can be reached about how accurately a survey's findings generalize to the population, one must consider whether all elements in the population had at least some chance of being sampled. For example, in all telephone surveys of residents within a three-block radius of the bus station, the homeless and those households without a telephone have zero probability of being sampled. Thus, all telephone surveys are subject to the potential effects of coverage error if an attempt is made to generalize the findings to the entire citizenry in the area. To the extent that the phenomenon being studied is correlated with coverage/noncoverage, the accuracy of the survey's findings may be reduced. In the case of telephone surveys, since those citizens who cannot be reached via telephone have, as a group, lower incomes than the population with telephones, a telephone survey is likely to find somewhat higher levels of income and income-related behaviors. For example, owning indoor timers, installing bars on windows and installing special locks on doors are income-related crime prevention behaviors and, therefore, should be

more prevalent among telephone owners than among non-telephone owners.

One implication of this bias is that if the researcher is interested in studying homeless, transient or extremely low- income individuals who frequent a particular area or building, other modes of interviewing should be pursued that do not rely on access to a telephone. However, we should emphasize that approximately 93% of households nationwide have a telephone, including 84% of all African American families and 71% of the poorest households with incomes less than $5,000 (Thornberry and Massey, 1988).

In addition to the issue of unit coverage error explained above, a survey may suffer from within-unit coverage error. If one person per household is interviewed, as is the case in many surveys, it is possible that a biased within-unit respondent selection procedure would be employed. For example, any survey that merely interviews the first person in the household contacted will undoubtedly underrepresent males and younger adults. Were this to happen, the findings may reflect biased measures of the true population parameters.

*Non-response Error*

Hardly any survey achieves a 100% response rate. Instead, almost all surveys will sample elements (e.g., people or households) from which no data are gathered due to refusals, vacations, illness, otherwise busy schedules, language barriers, etc. A survey's findings will be subject to non-response error to the extent that the sampled elements without data are systematically different from the sampled elements with data. For example, if young adult males disproportionately refuse to participate in a survey and/or are less likely to be interviewed because they are rarely at home when interviewers call, then any measure that correlates with age and gender (e.g., using neighborhood parks; being an assault victim; fear of crime) would be a less accurate (i.e., more biased) measure of the total population due to non-response error.

In addition to unit non-response, the problem of item non-response may result in biased survey measures. If, for example, a series of fear-of-crime items were worded in a manner that caused female respondents to become upset with the interviewer and unwilling to answer certain questions, the survey is likely to yield biased data on measures such as the actual proportion of neighborhood residents who are afraid to leave their homes at night. This conclusion is based on the fact that fear levels are

substantially higher for females than for males (e.g. Lavrakas, 1982; Skogan and Maxfield, 1981).

*Measurement Error*

Not all data collected through surveys are accurate measures of the phenomenon of interest. These inaccuracies may be due to errors associated with the questionnaire, the interviewers, the respondents and/or the mode via which the data are gathered (cf. Biemer et al., 1991).

First, a survey question may be worded poorly or the questions may be ordered in a way that biases or distorts the respondent's answers; for example, asking victimization questions immediately prior to asking about fear of crime is likely to bias the individual's responses to the fear items. The reverse order is less likely to affect responses.

Second, interviewers may behave in ways that bias the answers given by respondents. For example, when community residents are used as interviewers to gather survey data from fellow residents, special care must be taken to ensure that interviewers appreciate the importance of not influencing their neighbors' answers by communicating their expectations about what the "right" answer may be. Unfortunately, the motivation to "help the community" that is felt by many local resident-interviewers creates tension that leads to unintended bias. These situations call for special training. In the final analysis, the many benefits of using local residents may outweigh the potential costs.[3]

Third, respondents may be unwilling or unable to accurately respond to a question. For example, if a door-to-door survey is conducted in which an interviewer queried respondents about possible problems associated with a local drug house on the block, some may be fearful of responding honestly to these questions in a face-to-face context. This example also illustrates a fourth possible bias associated with the mode of interviewing: in-person versus telephone versus self-administered mail. The more sensitive questions about illegal drug activity in the neighborhood may be more accurately answered over the telephone or via an anonymous mail questionnaire rather than in-person.

*Survey Costs*

Efforts to reduce and/or measure the potential effects of survey error have real cost implications.[4] This is of special concern to anyone planning a survey within a small geographic area, such as a few square blocks. Typically, these surveys are conducted with limited funds, and the researcher is, therefore, challenged to allocate resources in a way that is

likely to yield the most reliable and valid data. Although sampling error considerations have traditionally driven decisions about resource alloca- tion, the TSE perspective suggests that this orientation may be inappro- priate. All things being equal, a researcher is justified in wanting to maximize a survey's sample size. However, TSE highlights the folly of this mentality in many survey designs. We anticipate that small-area surveys will become more common in the field of criminology, as researchers and funding agencies seek to allocate resources to reduce and/or measure likely sources of non-sampling error (rather than merely invest in larger sample sizes), and seek to gather more in-depth information about small groups.

A good reason to think this will happen is the fact that sample size is typically increased for the purpose of "detecting" and then labeling rela- tively small differences between groups as "statistically significant." The limits of this social science tradition are readily apparent in the public policy arena, where politicians and other decision makers want to know about meaningful findings, not merely or necessarily significant findings.[5] If, for example, an anti-drug program decreased cocaine usage among neighborhood residents by 20 percentage points, one does not need a large sample to reliably detect whether or not the program led to much of a change, at least not if the only error in a survey was sampling error. However, we know there are likely to be other types of error beyond sampling. Thus, we find greater wisdom in the decision to allocate resources, so that the validity of any conclusion about the effectiveness of the anti-drug program will be based on a broad array of validity considerations and not simply on sample size.

Many scholars with a more traditional statistical orientation may be uncomfortable with what we are recommending under the TSE perspec- tive. However, most would agree that the conventional emphasis on issues regarding sampling error is "incomplete and unsatisfactory" (Groves, 1989:13). For this reason, we recommend that criminal justice and criminology scholars consider using the TSE mindset when planning survey research for small areas or specific places. The objective is to produce the best possible data (i.e., the richest, most valid and most policy-relevant information) given the resources available. Unfortunately, the needs of policymakers and statisticians are not always the same. Furthermore, statisticians and conventional quantitative researchers may

not see the merit of using surveys to generate, rather than test, theoretical models (cf. Glaser and Strauss, 1967).

## The Unit of Analysis in Small Area Surveys

By their very nature, many anti-crime programs are targeted to specific, and often small, geographic areas. For many years, criminal justice scholars and administrators have argued that crime is a local problem—one that requires local solutions (see U.S. President's Commission on Law Enforcement and Administration of Justice, 1967). Consequently, much anti-crime research and program evaluation is directed at gathering data from individuals who reside in relatively small geographic areas.

Defining the target area for survey respondents is always problematical. For place-focused surveys, we may need to modify the conventional language used to describe the geography. Community survey researchers have typically asked respondents to evaluate their "community" or their "neighborhood." For smaller areas, the reference may be to their "block," "the street corner where streets X and Y intersect," "the bus station" or "the building in which you live." For example, as part of an ongoing evaluation of anti-drug and violence initiatives implemented by the Chicago Housing Authority, the principal author and his colleagues developed a survey that focuses residents' attention on the inside of their building (e.g., halls, elevators, stairwells) and on the area around the building (see Popkin et al., 1994). Thus, the building provides the primary social context for the study of crime-related behaviors and perceptions.

To the extent that theory and resources permit, the data can be analyzed at more than one level. For example, survey data on residents satisfaction with police services can be investigated using the individual resident as the unit of analysis. Alternatively, the resident might provide information about his or her household (i.e.. serve as a "household informant"), thereby allowing for the use of the household as a unit of analysis in the event that a theoretical rationale exists to examine police services at this level. Assuming there is a reliable way to categorize each respondent according to his or her location within the geographic area, data at the individual or household level could be combined to yield a database at the level of the housing complex, block, neighborhood, community or some other meaningful aggregate.

Determining the appropriate unit of analysis is an important issue in the study of places. It will depend on the focal point of the study. The perceptions and behaviors of individuals who frequent small areas may be the focal point, or the area itself or specific structures within the area may be the important unit. Small areas and small social units have been

largely ignored by community researchers, but this may be the level at which informal social processes are most powerful. Assuming that the social ecology of small places is the primary focal point, the researcher has the option of examining multiple areas and exploring differences between them, or studying a single area in depth.

In either event, the application of the case study approach, as delineated by Yin (1989), provides an ideal framework for data collection and analysis. This approach encourages the use of multiple methods (both quantitative and qualitative) to understand the processes and effects of the case(s). However, if the researcher decides to examine a large number of cases, with individual survey respondents nested within each case, some type of multi-level analysis would be most appropriate to control for "intraclass correlations" (see Hedeker and Gibbons, 1994; Murray and Hannan, 1990).

One might argue that because models of social disorganization have been developed and applied at the neighborhood or community level, they do not apply to small places. To the contrary, we would argue that certain intervening variables are most visible and most powerful as the unit of analysis decreases in size. The ability to exercise social control over group members, for example, should be strengthened as the size and diversity of the reference group declines. Thus, one could argue that households, multi-family dwellings, residential blocks, and small neighborhoods are the units where much of the social influence process takes place, rather than large, impersonal, heterogeneous, and poorly defined "communities." This does not mean that larger differences among communities or neighborhoods should be ignored, as they play an important role in explaining criminality. Furthermore, there is a need for multi-level analysis whenever possible to determine how the different levels of social groupings operate individually and in combination to influence behavior. The point here is simply that social processes occur at many levels and that the dynamics of socialization and social influence deserve close scrutiny in specific environments. The prosocial or antisocial influence of family members, friends, neighbors, anonymous residents, school teachers, church leaders, social service agents, etc. remains uncertain from extant research on social control.

## Geographic Screening, Coverage Error, and Small-Area Surveys

Local anti-crime surveys must be carefully designed and conducted to yield reliable information about a resident's "geographic location." Surveys that utilize the telephone mode to sample residents at their households

must employ rigorous techniques to minimize the chance that they will create coverage errors through "errors of omission" (i.e., false negatives} and "errors of commission" (i.e., false positives). This concern does not disappear with in-person and mail surveys, although the potential threat it poses is greatly reduced given that these two modes typically utilize household addresses as their sampling frame.

When faced with surveying residents in a small area, especially when conducting a telephone survey, one must try to avoid both gathering data from sampled people who do not live within the target area boundaries and missing people who do live within the eligible boundaries. This is often not as straightforward as it may appear. The average citizen does not readily know how to describe (or may be unwilling to report) over the telephone where he or she lives so that an interviewer can make an accurate decision about whether this person is eligible for inclusion in a small area survey. Instead, a carefully constructed geographic screening sequence must be devised that leads the potential respondent through a series of easily understood and non-threatening questions which, in turn, will lead to an accurate categorization of "in" or "out" (cf. Lavrakas, 1993).

Even with telephone surveys that sample from reverse (or criss-cross) telephone directories, which list households ordered by address rather than alphabetically, geographic eligibility must be verified because telephone numbers may no longer ring at the same location printed in the directory. Furthermore, with the growing usage of "call forwarding," the telephone number that is dialed may reach someone at another number outside the target area. Although screening questions at the beginning of an interview are likely to increase slightly the survey's non-response rate, they cannot be avoided if the goal is to minimize the potential threat of coverage error, which may be a serious threat.

A more specific sequence of geographic questions can be used to home in on those individuals who live within the eligible area: e.g., questions such as, "Do you live between Kedzie Avenue and Lake Michigan?" or "Do you live between the train tracks and the river?" An extensive pilot test for a recent evaluation of community policing found that fewer than 5% of the people screened with such a sequence responded in a way that incorrectly screened them "in" or "out," suggesting that a simple screening question can be very effective (Schejbal and Lavrakas, in press).

Coverage errors can be further minimized by gathering information needed to perform a post-hoc validation of respondents' geographic eligibility. This is done by asking a relatively simple two-item sequence near the end of the interview: (1) "What street so you live on?" and (2) "What street crosses it at the nearest corner?" While these data are not perfectly

accurate, we have conducted many surveys which show that they work very well.

A final consideration related to telephone surveys is whether or not to employ random-digit dialing (RDD), which can reach a household regardless of whether its telephone number is listed. The alternative is to draw the sample from a published directory. Research suggests that persons who choose not to list their telephone numbers (and, therefore, will not be "covered" in a directory-based sample) are more likely to be exposed to crime-related problems than those who do list their telephone number (Lavrakas, 1993). Therefore, one starts with a potentially biased sample whenever a telephone survey of the public does not employ RDD sampling.

The research literature provides very little assistance regarding the nature and extent of bias introduced by the use of non-RDD samples. In one study that deals directly with this issue (Schejbal and Lavrakas, in press), residents in nine relatively small areas of Chicago were sampled using both RDD and reverse-directory sampling procedures. This data set (derived from an anti-crime evaluation project) contained interviews with approximately 1,300 residents sampled via RDD and another 1,300 residents of the same nine areas sampled via the Chicago reverse directory. Several statistically significant differences between the two types of samples were apparent. Compared to the reverse directory sample, the RDD sample was younger and included more renters, adults who had never married, children in the household, adults who were employed, adults who had lived in the neighborhood fewer years, and adults of Hispanic origin. However, with the exception of the Hispanic difference, the other differences between the directory-based and RDD sample were of relatively small absolute size and not considered relevant to the public policy focus of this particular evaluation.

More importantly, when comparing the differences between the two samples on a wide range of attitudinal, perceptual, and experiential variables germane to the anti-crime evaluation, no meaningful difference in conclusions would have been reached had only one type of sampling been used. That is, the choice of RDD or directory-based sampling would not have changed the results of the evaluation on a wide range of outcome variables. Therefore, a preliminary recommendation for researchers interested in the application of telephone sampling in small geographic areas is that the less costly reverse directory sampling appears to have a clear competitive advantage over RDD sampling. By providing names, addresses and telephone numbers at the block level, reverse directories allow the researcher to focus on small geographic areas and draw random samples at minimal cost. The screening process required by the RDD methodology adds significantly to the cost of the research, but without comparable

sampling gains—at least in this field of inquiry. For studies of larger geographic areas, however, the benefits of RDD sampling often outweigh the costs.

When telephone interviewing is not considered the most cost-effective and reliable approach under the circumstances (e.g. low phone coverage in some public housing developments), then in-person, door-to-door surveys should be considered. If the area is relatively small, the higher cost of in-person interviewing may not be prohibitive, and the response rate can be increased through repeat visits. Having interviewers walk through the area insures that households will not be missed. Furthermore, this mode of interviewing allows the researcher to collect types of data that cannot be gathered over the telephone. For example, the interviewer can ask the respondent to pinpoint on a map locations in the target area that are considered unsafe, where youths hang out, where drug transactions occur, where noise is a problem, etc. This type of data gives the researcher an opportunity to compare perceptions of danger at specific locations with official police data. Telephone surveys can also be used to ask residents about areas of fear or danger, but this approach will generate a different type of data and, if not carefully designed, will be less reliable.

## Other Design Trade-Offs in Small Area Surveys

In addition to the issue of coverage error, there are other trade-offs that should be considered when sampling in small areas and/or working with small sample sizes. First, a researcher should keep in mind that sampling error is not simply a function of sample size. In particular, sampling statistics allow the researcher to calculate a "design effect" that varies for different types of probability samples (cf. Henry, 1990). For example, if a random sample can be stratified, a survey will have less sampling error than a simple random sample, all other things being equal. Although one gives up the ability to calculate sampling error without a probability sample, a quota sample may be the most cost-effective decision in a given research study, especially when the study objectives do not involve producing exact point estimates (e.g., the percentage of citizens whose homes have been burglarized in the past year). A variety of purposive samples can also be considered, depending on the main objective of the study (see discussion below).

Another consideration in crime-related surveying of the general public is the "fear factor" as it relates to potential non-response and measurement error. When research is conducted in "high-crime" areas, one can anticipate a less cooperative public for several reasons, including legitimate concerns for one's safety related to, for example, being interviewed by an

unknown person. Furthermore, when interviewing people about unpleasant and upsetting topics (such as those frequently asked in community anti-crime surveys), some respondents are inclined to paint a picture of their lives as more positive than they really are. Hence, survey researchers need to make a greater effort to collect information that will help to estimate the size of possible non-response and measurement-error effects.

Finally, there has been a growing movement toward the use of "mixed - mode" surveys (cf. (Dillman and Tarnai, 1988; Groves, 1989; Lavrakas, 1993). TTie creative combination of mail, telephone and/or in-person surveys can yield substantial gains for researchers interested in the study of small areas or specific locations. When taken advantage of, the strengths of one mode may compensate for the weaknesses of another. Our experience over the years suggests that, when all factors are considered, telephone surveys are the most cost-effective mode for gathering data from citizens regarding anti-crime measures and community-based actions. Yet we have also learned that an unconditional endorsement of this survey mode would be unwise. The challenge that the researcher faces is to balance the available resources with the research methods that are likely to produce the "best bang for the buck." Sometimes this balance might involve, for example, sending a mail survey to local residents and then following it with a telephone survey to only those residents who did not respond to the initial mailings.

## BEYOND CONVENTIONAL SURVEYS AND RANDOM SAMPLES

As noted earlier, if the place of interest is quite small, obtaining a probability sample may not be a primary concern, either because a complete census of the target population is possible or because some type of purposive sampling is more appropriate to the researchers' needs. The smallness of the area and the need for specific types of place information opens the door to explore other self-report methods that may provide useful information about the target area. This takes us beyond the conventional survey format and geo-based random sampling to suggest that multiple methods be employed that can gather self-report data from various groups who frequent the environment of interest.

First, non-probability samples can be drawn of persons who use a single target place or, if resources allow for multiple target areas, samples can be drawn from a pool of target places. The advantage of purposive sampling is that it allows the selection of "information-rich cases for study in-depth" (Patton, 1987:52). Patton (1987) describes ten different types of purposive sampling: deviant case, maximum variation, homogeneous,

typical case, critical case, snowball, criterion, confirmatory, politically important, and convenience sampling. If, for example, a researcher wants to interview local prostitutes, then snowball or chain sampling may be the most appropriate. If the researcher wishes to interview persons who use the environment most frequently, then criterion sampling might be appropriate to select individuals who spend more than x number of minutes per day in the target area or visit the area more than x times.

If a researcher wants a "typical" or representative sample of place users (and random sampling or a census is not possible), then some type of quota sampling may be appropriate wherein interviews are conducted with specific numbers of persons in each relevant category of age, race, gender, education, and other defining variables. The "mall intercept" method that has been employed by market research groups for many years could be a useful technique for interviewing users of small places and for generating "typical samples" or other types of samples (e.g., homeless users). However, this approach to in-person interviewing has been abused in the market research field because of a lack of attention to sampling procedures and interviewing techniques. This methodology could be strengthened by using professional interviewers who have been carefully trained in selecting respondents and conducting interviews in public places. A serious attempt to sample persons by time of day, day of the week, geographic location within the target area, and characteristics of the place user would increase our confidence that a reasonably "typical" sample of place users has been selected (assuming that the viewpoint of "typical" users is a primary research objective). The big challenge here is to complete the interview without differential attrition and with data that contain minimal validity problems.

We believe that more useful and valid data about a specific environment can be obtained when place users are in a setting that is more conducive to self-report data. Other than the conventional survey (where the respondent is typically at home during the interview), another promising methodology that is used "off the street" is the focus group interview. The focus group methodology—another technique borrowed from nearly 40 years of consumer research (Merton et al., 1956)—has become a popular tool in social science research (see Stewart and Shamdasani, 1990). The focus group interview, which can run from 30 minutes to two hours, typically involves a relatively small, homogeneous group of six to eight people who are asked some general questions by the interviewer/facilitator (Patton, 1987). This method has several strengths, including efficiency (interviewing a group of individuals all at once), validity of responses (participants can serve as checks on each other), and a focusing on key issues and concerns. But its value to the social sciences will depend on how much

effort is expended to select a good sample, and how much skill is demonstrated in facilitating and recording responses. Also, only a limited set of topics can be covered in this setting. The facilitator is often restricted to no more than ten questions, and, more typically, the group will end up focusing on three or four key issues.

For the study of places, the focus group interview could be a very useful tool for understanding the place-related perceptions and behaviors of specific groups. Possible homogeneous groups of place users might include: nearby residents, youths who hang out, local business owners, the homeless, prostitutes, users of public transportation, beat officers, streets and sanitation workers, postal workers, and other employees who work in the area. Each of these groupings could constitute a potential sample for a focus group interview, and each could provide rich information about the social dynamics that define the place in question. Historical information and specific changes that have taken place over time in the area could be collected as well.

## SUMMARY AND CONCLUSION

This paper has argued that the criminology of place can be advanced by employing surveys and other self-report methods to supplement the data from official police records that researchers have come to rely on. Interviews are ideally suited to tap the perceptions, attitudes, and behaviors of persons who use the environment of interest and, therefore, can inform researchers about the social ecology and physical conditions of a specific area. In addition to generating data that may be helpful in testing place-related theories of crime—including routine activities, limited rational choice and informal social control—self-report data can provide a basis for planning and evaluating anti-crime interventions, such as situational crime prevention measures, community mobilizing efforts, and various police-initiated actions.

We recognize that the use of surveys in small areas will require a non-conventional perspective—one that reflects more concern with non-sampling sources of error and less concern with sampling error. In addition, we encourage the use of street-intercept interviews and focus group interviews for circumstances where there is a need to purposefully sample specific types of place users (other than local residents). Although these proposals have not been fully developed, we envision a multi-method, multi-measure framework that would include data from the census, police records, interviews, fieldwork observations, and other geo-coded indicators of behavior (e.g., records from hospitals and other agencies on injuries, car accidents, drug overdoses). These data could be

analyzed to develop a detailed case study, based on both quantitative and qualitative information.[6] While the generalizability of the findings would be limited by the very nature of case studies, this type of research, nevertheless, opens new avenues for testing specific hypotheses and generating new models of place-related crime.

Finally, we believe that interviews with place users can yield useful information about the psycho-social geography of small places. The relationship between actual criminal activity and disorder on the one hand, and public perceptions of these events on the other, is an important issue in modern criminology. Despite the renewed interest in mapping crime, little attention has been given to the possibility of mapping residents' perceptions of danger, stress, disorder and criminality. The idea of using "mental maps" (Springer, 1974) to illustrate the spatial distribution of residents' perceptions and feelings about crime-related matters is not a new concept (Gould and White, 1974; Ley, 1972; Springer, 1974), but it has yet to be exploited in the context of recent theoretical and empirical advances over the past 20 years. A comparison of official statistics on crime and disorder incidents with the perceptions and fears of persons who use the environment may reveal some important discrepancies and consistencies. Such pattern matching may help to explain why people use (or do not use) the target environment in predictable ways. In essence, the list of questions and hypotheses that can be examined is virtually endless if we are willing to explore the use of old methods in new combinations and settings.

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## NOTES

1. Although the current administration in Washington is quite supportive of these new prevention programs, we would be remiss not to mention the opposition to these strategies among conservatives in Congress who would prefer to strengthen the present "get tough" policies on crime.

2. The focus group methodology typically involves bringing together persons with similar characteristics or experiences to discuss a specific topic of interest. Additional details about this methodology are provided later in the chapter.

3. We have employed local residents as interviewers on previous survey projects focusing on community responses to crime (e.g. Lavrakas and Bennett, 1989). This activity not only provided temporary employment for

these individuals, but also helped to empower the community in its anti-crime activities. The survey results were fed back to community organizations so that crime prevention programs could be tailored to local concerns.

4. The reader should note the basic distinction between approaches intended to reduce potential errors vs. approaches intended to measure their potential effects. Researchers may find it too expensive to implement procedures to eliminate (or substantially reduce) a potential source of error, but may be able to measure its approximate size and. thus, take it into account when interpreting the survey's findings (cf. Groves, 1989; Lavrakas, 1993).

5. For a discussion of other problems that develop from our obsession with statistical significance, see Maltz (1994).

6. The apparent emphasis of this chapter on quantitative survey methods should not be construed as a lack of support for qualitative self-report methodologies. To the contrary, there is no substitute for good depth interviews with key informants when sufficient resources are available, although sampling issues are still relevant in this situation. In fact, we also would strongly encourage ethnographic observations of small places, in which the researcher spends considerable time "hanging out" and interacting with place users, even though a discussion of this approach is beyond the scope of this paper.

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