

Measuring What Matters: Crime, Disorder, and Fear

Wesley G. Skogan

This chapter considers two issues: (1) measuring the possible effects of an innovative policing program, and (2) doing so in a framework that could support the inference that the program caused variations that the measurements might reveal. Measurement involves (among other things) the collection of data that represent—sometimes only indirectly—the problems that programs target. These are “outcome” measures, and it is vital that they represent the scope of a program’s intentions as accurately as possible. The framework within which these data are collected is evaluation’s research design, and it is crucial that the design account for as many alternative explanations for what is measured as is possible under the circumstances. Arguing that “the program made a difference” over the past month or year involves systematically discounting the potential influence of other factors that might account for changes in the measures through the use of randomization, matched control groups or time series, and other design strategies.

Measurement issues are a bit more closely related to analytic issues than this distinction suggests. One cannot divorce what is measured from how the measures can be linked causally to programs. What evaluators call the “logic model” of a program—how, exactly, it is supposed to have its desired effect—needs to be specified clearly enough that appropriate outcomes can be identified and their measures specified. For instance, if evaluating a crime prevention program, exactly what kinds of crimes involving what kinds of victims during what periods of the day or night should we examine for evidence of impact?

This essay focuses on measurement issues, but it addresses issues through concrete examples of how measures have been used to make judgments about the impact of programs. It examines some of the experiences the evaluation community has had in taking the vital signs of a community by measuring crime, disorder, and fear. This is far from a complete list of what matters in policing, as other articles in this volume attest. However, in Kelling’s original plea for a

focus on “what matters” in policing, he concluded with a call for a renewed focus on “the grinding, day-to-day incivilities and minor street offenses that erode the quality of urban life, make people afraid, and create the milieu within which serious crime flourishes” (1992: 33). In recompense for the brevity of the list of issues considered in detail in this chapter, I conclude with an inventory of other issues that need to be considered—and appropriately measured—in any thoroughgoing evaluation.

Measuring crime

The development of a new research technology—survey-based measures of victimization—has enabled evaluators to dig deeper into claims about the effects of policing on crime. Although not without their problems (which will be examined below), survey measures of crime bypass two enormous sieves that strain out so many offenses that it can be difficult to interpret official crime statistics. These sieves are citizen reporting and police recording practices. Together, they work to the disadvantage of the poor and residents of higher crime areas, and they can disguise the effects of programs that might otherwise appear promising.

Citizen reporting

Interviews with victims indicate that many incidents are not reported to the police, either by themselves or (as far as they know) anyone else. Among crimes measured by the National Crime Victimization Survey, about 40 percent of all personal crimes and 33 percent of property offenses are reported. Reporting is high for auto thefts (93 percent of successful thefts) but much lower for simple assaults (43 percent), attempted rapes (33 percent) and robberies (36 percent), and pocket pickings (22 percent). Only 52 percent of successful residential burglaries and less than 12 percent of thefts of less than \$50 are reported (Bureau of Justice Statistics, 1996, table 91). Crime reporting by witnesses rather than victims is even lower. In Britain,

only about 12 percent of the instances of shoplifting, 8 percent of serious fights, and 29 percent of thefts from cars observed by the public are reported to anyone (Skogan, 1990b).

Furthermore, the National Crime Victimization Survey reveals that reporting differs by population group. Generally, lower income people, younger victims, and men report victimizations at a low rate, while homeowners report at a high rate. Incidents away from home, those with smaller financial consequences or for which victims had no insurance, and crimes in which victims and offenders know one another well are reported less frequently. Black on white crimes are also more likely to be reported. In some crime categories, fear of retaliation discourages reporting; in others, people do not report because they plan to take action on their own. The belief that police would not want to be bothered or that they are ineffective or biased is responsible for about 10 to 15 percent of nonreporting, depending on the category of crime.

In addition, programs and practices that involve people more intimately with policing also encourage crime reporting when these people are victimized. That is, crime prevention and other programs that ask citizens to “be the eyes and ears” of police, hopefully do increase reporting, but the higher crime figures could make those efforts look counterproductive even if the actual crime rate has not changed or has decreased. It appears this effect has only been documented once—by Anne Schneider (1976) in an evaluation of a residential burglary prevention program in Portland—but the threat of looking worse as a result of doing better has made almost all evaluators aware of the difficulties of using reported crime figures to evaluate programs.

Police recording practices

In addition to the fairly systematic bias introduced by citizen nonreporting, official figures are further confounded by the vagaries of police recording practices. Founded incidents are not the same thing as reported incidents, often for good reasons, but the gap between the two can disguise deceptive recording practices. At several levels, police may act to avoid unpleasant or seemingly unproductive work, forestall complaints about their behavior, or respond to pressure from their supervisors to keep the crime count down. Bona fide reported offenses may be shifted from one category to

another, mostly to downgrade them or so they can be ignored. In numerous well-documented cases, there have been sharp changes in crime rates associated with reform movements, changes in political administration, turnover among district commanders, and the like. In Chicago, detectives were caught “killing crime” at an enormous rate by unounding (determining that a case is unverifiable) rape, robbery, and assault incidents without investigation. The practice was widely understood within the department, which kept two sets of books—one public and one private—on reported offenses (Skogan and Gordon, 1983).

Administrators who want honest accounting have few choices. One is to examine the ratio of recorded crimes to arrests in hope of spotting districts where the two figures are too close together; they can also monitor the crime clearance rates reported by their detectives. Another strategy for encouraging honesty in bookkeeping is to conduct expensive field audits that track the course of 911 calls, beginning with the communication center’s running tape; Chicago’s department did this for a decade in response to the “killing crime” scandal. However, changing technology is undermining the apparent control that centralized complaint-taking and dispatch gave downtown managers over police operations. Police and the public are increasingly communicating with each other directly—using beepers, cell phones, and voice mail—rather than through 911. In addition, community policing strategies almost always involve increasing the frequency of face-to-face meetings and informal encounters between the police and the public for the purpose of exchanging information. The old systems for command and control within police agencies produced a torrent of data on crime and disorderly conditions; these data were sometimes of dubious quality, and now they are becoming increasingly unreliable.

Survey measures of crime

There are alternative measures of crime, however. The most well known are victimization rates based on surveys that quiz respondents about their recent experiences with crime. These measures bypass citizen reporting and police recording practices and typically produce estimates of the crime rate that are two to three times those based on official sources. In the aggregate, they sometimes trend in the same

direction as official figures. This is particularly true at the national level when expansive categories of crime are considered over a period of years and after adjustments are made to account for some of the differences between the two series (Biderman and Lynch, 1991; Mirrlees-Black et al., 1996). However, for small areas, tight timeframes, and detailed categories of crime, it is unwise to expect survey and official figures to point to the same conclusions.

Exhibit 1 presents a fragment of a typical victimization screening questionnaire designed for telephone administration. The original questionnaire (Skogan, 1995) included 18 screening questions that probed for both personal and property victimizations. The questioning strategy was to first elicit yes-no responses about each scenario on the list, and then return to followup questions like those employed in this study (“Was it reported to the police?” “Did this happen in your neighborhood?”). For the respondent, this breaks any apparent link between giving a “yes”

response and the burden of answering additional questions, a link that suppresses the victimization count (Biderman et al., 1967). Information about the location of incidents is frequently required to identify those that took place in the targeted area and those that occurred elsewhere. In personal interviews it is possible to show respondents a map and ask them to identify where specific incidents took place. This is particularly useful if the area under consideration is a police district or administrative unit that does not closely correspond to popular conceptions of local neighborhood boundaries.

Problems with survey figures

Coverage. Not everyone will be included. Interview refusal rates can be high, and they are growing. The problem is compounded in multiwave studies in which respondents are reinterviewed over time. In a mobile society, recontact rates can be low if more than a few months pass between the waves of a

Exhibit 1. Sample Victim Screening Questionnaire Fragment

Next, I would like to ask you about some things which may have happened to you or your family [HOUSEHOLD MEMBERS] during the past year. As I read each one, please think carefully and tell me if it happened during the past year, that is since (March) (April) of 1992.

IF YES, ASK a and b (“most recent” if multiple)

- a. Was this reported to the police?
- b. Did this happen in your neighborhood?

NO YES UNC NO YES UNC NO YES UNC

V1. During the past year has anyone broken into your home or garage to steal something?
 0 1 9 0 1 9 0 1 9

V2. (Other than that), have you found any sign that someone tried to break into your home?
 0 1 9 0 1 9 0 1 9

V3. Have you had anything taken from inside your home by someone, like a visitor, during the past year? 0 1 9 0 1 9 0 1 9

V4. To the best of your knowledge, has anything of value been stolen from your mailbox during the past year or has someone tried to?
 0 1 9 0 1 9 0 1 9

V5. In the past year has anyone damaged or vandalized the front or rear of your home, for example, by writing on the walls, or breaking windows?
 0 1 9 0 1 9 0 1 9

V6. Have you or anyone in this household owned a car or truck during the past year? 0 1 9

[IF “NO” SKIP TO V10]

V7. Did anyone steal that (car) (truck), or try to, during the past year? 0 1 9 0 1 9 0 1 9

V8. Other than that, did anyone take anything from inside your (car) (truck), or try to steal parts of it? 0 1 9 0 1 9 0 1 9

survey, and that loss differs from group to group. In particular, young people, renters, and short-term residents of the community are difficult to reinterview, while women, family members, and homeowners can be found again more easily. Young people (who are at greatest risk) are hard to find at home at any time. Also, many crimes are reported by organizations (such as schools), merchants (Shapland, 1995), and others who will be left out if only households are included in the survey. These groups experience a considerable number of victimizations. The last national commercial victimization survey revealed a burglary rate of 217 per 1,000 establishments, as contrasted to a household rate of 89 burglaries per 1,000 dwellings (National Criminal Justice Information and Statistics Service, 1976). Among crimes reported to the police, one-third of burglaries involve “nonresidential” (largely commercial) targets (Federal Bureau of Investigation, 1995). However, it is common practice to survey only households.

There is a great deal of debate about the relative merits of telephone versus in-person surveys. The latter cost more, but many inner-city homes have no telephones. In Chicago, there are strong links between race, poverty, crime, and the accessibility of people for telephone surveys. At the census-tract level, the correlation between telephone access and the gun crime rate is (-.44). It is (-.67) for families on public aid and (+.50) for homeowners. Among the city’s prototype community policing districts, 10 to 19 percent of households in the two poorest areas did not have a telephone, and more than 20 percent of households in the northern end of another district did not have a phone (Skogan, 1995).

On the other hand, survey refusal rates in big cities are lower for telephone than in-person surveys, partly because respondents are unwilling to let strangers into their homes. The difficulties involved in managing and protecting the safety of interviewers in higher crime neighborhoods are considerable because it is important to conduct interviews during evening hours (Groves and Kahn, 1979). It is not clear what the bottom line is on this issue, and in the end it is usually decided by cost.

Expense. Surveys typically use samples to represent the populations of neighborhoods, districts, or cities. This introduces error in the findings; if that error

is going to be acceptably small, the surveys have to involve fairly large numbers of respondents. The issue of how many respondents are needed is determined by the subject. For example, documenting an anticipated drop in the prevalence of burglary victimization from 15 percent to 10 percent of households (a 33-percent decline) requires interviews with about 340 respondents each time (cf., Kraemer and Thiemann, 1987).

Getting the count straight. One of the most interesting developments in studies of victimization is the analysis of what makes high-crime neighborhoods “high crime.” Research in Great Britain suggests that the key fact is not that *more* people are victimized in these areas; while that percentage is higher in high-crime areas, what distinguishes the worst areas is that some residents are *repeatedly* victimized. Repeat or multiple victims contribute disproportionately to the overall crime count in high-crime areas (Farrell, 1995; Trickett et al., 1992). This is both good news and bad news.

It is good news because it gives us more leverage on the crime rate. It suggests that programs that target first-time victims could have “more bang for the buck” than scatter-shot prevention efforts because once-victims are much more likely than nonvictims to be targeted. This phenomenon presents a cheap and apparently effective way of targeting criminal justice resources and suggests that cities that have invested in security surveys, hardware upgrades, and other support services for victims were on the right track (Anderson et al., 1995; see Spelman, 1995, for another view).

It is bad news because even the best surveys are not very good at measuring repeat victimization. The reasons victim surveys are poor at measuring repeat victimization are complex: A combination of general bounding, telescoping, temporal ordering, forgetting, differential recall, series victimization, estimation, design-effect, and confidence-interval problems pile up on this particular issue (Skogan, 1981). One way of ignoring some of these problems has been to avoid trying to measure victimization *rates*, that is, the number of crimes occurring in an area divided by the number of residents or households. Rates are severely affected by most of the problems listed above because rates involve estimating the number of crimes that have occurred.

Exhibit 2. Three Measures of Crime Trends

Area and Crime Type	Percent Rate a Big Problem	Official Crimes per Month	Survey Percent Victims
Morgan Park Auto Theft			
Before	15	146	8.0
After	10	108	3.2
	p=.02	-26%	p=.02
Austin Robbery			
Before	31	197	9.0
After	18	181	4.0
	p<.01	-8%	p=.03

Note: Official crimes per month average a 17-month period before the program and 17 months following program implementation; tests of significance are for before-after changes in problem ratings and victimization; percentage change is given for monthly recorded crime.

Instead, almost every published evaluation in the police field has examined survey measures of the prevalence of victimization, or the percentage of persons or households who have been victimized once or more. This figure is resistant to some of the problems outlined above: We only need to know that something happened to someone to categorize that person as a “victim.” Prevalence measures are also easier to analyze using multivariate statistics, because whether or not a person was a victim is an experience that easily can be related to the individual’s background, household, and lifestyle factors. Finally, prevalence measures require less questionnaire space and interviewer time because fewer details are required to get a yes-no answer. But we now know that this approach is remarkably insensitive to one of the forces that drives up neighborhood crime rates, and it is not well-suited for evaluating what appears to be a promising crime prevention strategy.

An example

The situation is not as hopeless as the discussion above might suggest. Because they are so difficult to assess when many issues and potential program outcomes compete for evaluation resources, I have found *triangulation* a useful strategy for analyzing multiple, flawed measures of crime rates. Exhibit 2 illustrates

the findings of a recent evaluation of community policing in two of Chicago’s police districts (Skogan et al., 1995). It compares the findings of household surveys and an analysis of 34 months of founded crime incidents. Exhibit 2 reports (1) perceptual measures asking “how big a problem” specific crimes were in the community (see the next section about this); (2) officially recorded crime counts; and (3) survey measures of the prevalence of victimization. These two crimes were selected for close examination because they were among the four top-rated problems in these two districts. The probability figures presented below each of the survey-based figures indicate how likely the changes described were to have arisen by chance. The percentage change is presented for officially recorded crimes.

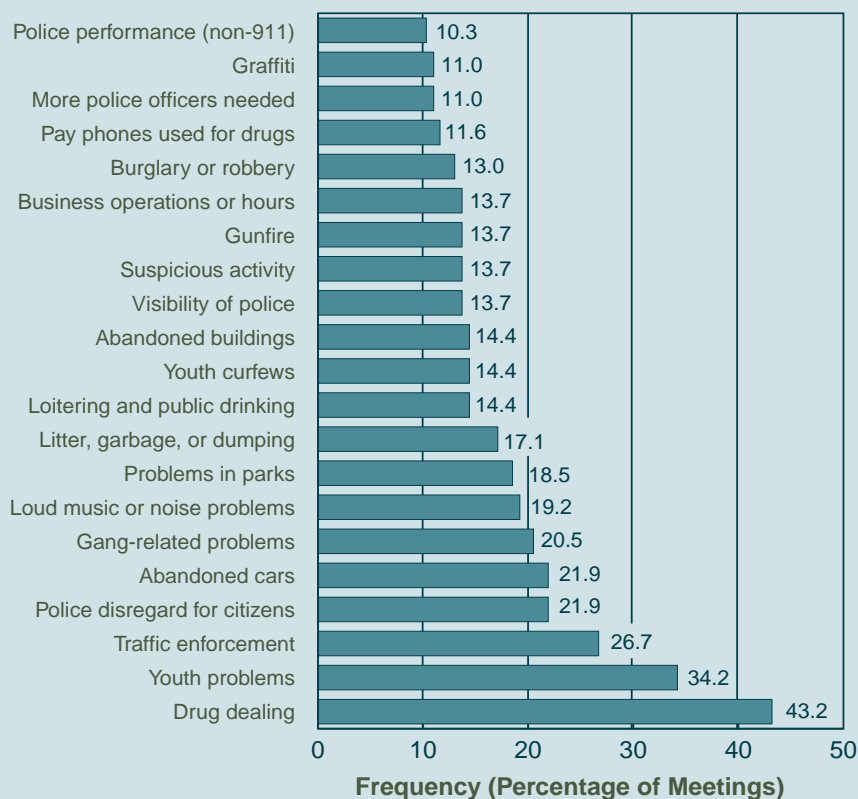
In this example, all of the measures pointed in the same direction, lending more confidence to the conclusion that crime went down substantially in these districts. In Morgan Park, auto theft as measured in the survey was down significantly, as were reports that it was a “big problem” in the area. In Austin, robbery was down in both survey measures. Both districts saw a decline in officially recorded crimes in these categories, especially Morgan Park. In the comparison areas matched to these districts, robbery and auto theft also declined, but only slightly.

Measuring disorder

Important as it is, there is reason to doubt that crime reduction is the sole “bottom line” for evaluating policing. Narrowing their traditionally wider scope of responsibility was one of the strategies reformers used to capture control of police organizations (Kelling and Coles, 1997), but the profession has paid a price for the consequences. To “police” society implies a wider mission, and expanding the police mandate is a fundamental feature of modern problem-oriented policing. Police are the only servants of the people who are available 24 hours a day and continue to make house calls. They also have taken on a wider range of problems because, when given the opportunity, their “customers” demand it. In Chicago, observational studies of small public meetings that are an integral part of the city’s community policing program reveal that neighborhood residents are concerned about a broad range of problems, including traffic enforcement, illegal dumping, building abandonment, and teenage loitering (Skogan and Hartnett, 1997).

One aspect of this new and larger police agenda is an untidy bundle of problems that I have labeled “disorder” (Skogan, 1990a). Disorder is apparent in widespread junk and trash in vacant lots, decaying and boarded-up buildings, vandalism and graffiti, and stripped and abandoned cars in the streets and alleys. It is also signaled by bands of teenagers congregating on street corners, prostitutes and panhandlers, public drinking, verbal harassment of women on the street, and open gambling and drug use. For many purposes, it is useful to think of these problems as falling into two general classes: social and physical. Social disorder is a matter of behavior: You can see it happen or observe direct and tangible evidence that it is a problem. Physical disorder involves visual signs of negligence and unchecked decay: abandoned or ill-kept buildings, broken street lights, trash-filled lots, and alleys strewn with garbage and alive with rats. By and large, physical disorder refers to ongoing conditions, while social disorder appears as a series of more-or-less episodic events. What these conditions have in common is that they signal a breakdown of the local social order. They are violations of what

Exhibit 3. Problems Frequently Mentioned at Beat Meetings



James Q. Wilson (1968) called “standards of right and seemly conduct.”

Of course, to be useful, a concept must also be bounded. It cannot encompass every nuance of behavior. Disorder violates widely shared norms about *public* behavior; these norms prescribe how people should behave in relation to their neighbors or while passing through the community. They are not a neat bundle of rules, because legislatures have not set some of them in cold type even though they are widely agreed upon. Some activities in the bundle are unlawful, but it has been difficult to get police to take most of those very seriously. Because many norms about public behavior are uncodified and others are not traditionally defined as “serious,” evaluators need to work through the untidiness of disorder to identify its dimensions in a particular context. They usually need to develop new measures of their prevalence because the uncodified status of many disorders means there are few official reports or indicators of the extent to which they plague particular neighborhoods.

The importance of disorder to policing’s customers can be illustrated by what happens during beat meetings in Chicago. These meetings are a central aspect of the city’s program, for they are the principal arena in which joint problem identification and problem solving takes place. Attending 146 of these meetings, we noted a total of 113 different problems that were discussed, as well as 36 types of solutions to them. Of the problems recorded in our observations, 21 were mentioned in at least 10 percent of all beat meetings. These are depicted in exhibit 3. About half of these problems are related to social disorder issues; note the high rating given to “youth problems.” Complaints about police procedures made up another quarter of these issues, including two of the top four problems. Another fifth of the top issues involved the decay of the physical environment, in the form of graffiti, litter, and abandoned cars and buildings. The kinds of core problems around which reactive policing was organized—represented here by complaints about either burglary or robbery—ranked only 17th on the list and were brought up in only 12 percent of all meetings (Skogan et al., 1995).

There are at least three approaches to measuring the extent of disorder: analysis of archival records, direct observation by trained observers, and sample surveys. Each has strengths and weaknesses, and these are reviewed in detail by Ralph Taylor in his essay “The

Incivilities Thesis: Theory, Measurement, and Policy” in this volume. I focus here on survey-based measures of disorder.

Survey measures of disorder

The importance of disorder in the eyes of the general public can be seen in surveys. Boston’s 1995 public safety survey asked respondents about 16 different kinds of incidents or conditions in their neighborhood, asking them to rank “how big a problem” each was. The top rankings belonged to auto theft and drugs, but next were noise, public drinking, and vandalism; then, after burglaries, came kids hanging around, graffiti, and panhandling (Boston Police Department, 1995). A survey of the most dangerous district involved in Chicago’s community policing project found that two of the most highly rated local problems were gang violence and drug dealing, but between them came abandoned buildings; the fourth-biggest problem was junk and trash in the streets and sidewalks. Respondents in that survey also thought that public drinking was a bigger problem than burglary, assault, or rape (Skogan et al., 1995). While many surveys ask “how big a problem” specific disorders are, other formulations of the question include “how worried are you about . . .” (Maxfield, 1984) and “how concerned are you about . . .” (Mayhew et al., 1989). These approaches confound the prevalence of problems in their environment with their perceived impact on the respondent, which are not necessarily the same issue, and I would not recommend them.

Determining what disorders to include in an evaluation is, of course, driven by the problems facing the communities involved and the nature of the programs being developed. For example, some circumstances might call for targeting alcohol-related problems. In Chicago, we asked residents of program and comparison areas about “things that you may think are problems in your neighborhood.” They were read short lists of problem descriptions and asked each time if they thought it was “a big problem, some problem, or no problem in your neighborhood.” The following alcohol-related problems were addressed:

- Public drinking—27 percent thought it was some problem; 20 percent, a big problem.
- Taverns or liquor stores selling alcohol to minors—21 percent thought it was some problem; 15 percent, a big problem.

Measuring What Matters: Crime, Disorder, and Fear

- Taverns or liquor stores attracting troublemakers— 23 percent thought it was some problem; 19 percent, a big problem.

In other studies, I have examined survey reports of the extent of a variety of disorder problems:

- loitering
- fly dumping
- noise
- truancy
- graffiti
- public gambling
- public insults
- taverns
- pornographic theaters
- vandalism
- massage parlors
- abandoned cars
- panhandling
- public drinking
- loud parties
- spray painting
- topless bars
- street harassment
- abandoned buildings
- junk-filled vacant lots
- litter and trash
- broken windows
- school disruption
- dilapidated buildings
- dirty streets and sidewalks

In each case, it was necessary to tailor the specific wording of the question to local conditions. For example, questions about topless bars were included in surveys in Houston because I could not help but notice beer halls with flashing neon signs announcing “Naked Girls Dance” in several of the targeted residential areas (Skogan, 1990a).

Are these perceptual measures valid indicators of the true extent of disorder in a community? Unlike survey measures of victimization, relatively little research has addressed the matter, and much of it is reviewed in Ralph Taylor’s “The Incivilities Thesis: Theory, Measurement, and Policy” in this volume. The question is whether responses to these kinds of survey questions can be accepted as useful *reports* on neighborhood conditions and whether we can treat respondents as *informants*. Responses to questions about disorderly conditions might reflect respondents’ biases or personal preferences, or they might be random answers made up on the spot to satisfy interviewers. The middle choice (respondent bias) implies that disorder largely rests in the eye of the beholder

and that surveys are not a very useful way of gathering intelligence about the distribution of neighborhood problems. However, statistical analyses suggest that the surveys are not just measuring intolerance for all but conventional middle-class views of how people ought to behave. Rather, there is evidence that major economic, social, and lifestyle groups within neighborhoods are in a great deal of agreement about the problems they face and that the surveys actually represent neighborhood differences in conditions, not just individuals’ views.

Another approach to validating survey results is to compare them with the extent of specific disorders measured by observing the same area. This is easiest to do for such observable neighborhood conditions as litter, graffiti, and building abandonment. Ralph Taylor and his colleagues made carefully controlled observations of those factors in 66 neighborhoods. The results were correlated with perceptual measures gathered in surveys of the same areas. The correlations were not always very high. They were highest when the survey and observational data were combined to form general indices and when they were compared for small areas. However, at the single-measure, problem-specific level, the extent to which the low correlation could be attributed to measurement errors on both the survey and observational sides of the comparison is unclear.

Observational measures of disorder

As this hints, there are great possibilities for observational measurements of the targets of some policing programs. This work was pioneered by Ralph Taylor, who has conducted block-by-block physical surveys of neighborhoods in Baltimore. His observers assessed and scored the physical dilapidation of individual buildings as well as the deterioration of streets, alleys, and sidewalks. They noted the presence of abandoned buildings and storefronts, graffiti, and litter. These factors were then correlated with resident morale and calls for police service. Other researchers have examined the distribution of graffiti and abandoned cars or the impact of taverns, schools, and mixed land use on crime. This research is not easy to conduct. There must be acceptable levels of inter-observer agreement on what they observed for us to accept the results of their judgments; also, it is important to ensure the safety of observers.

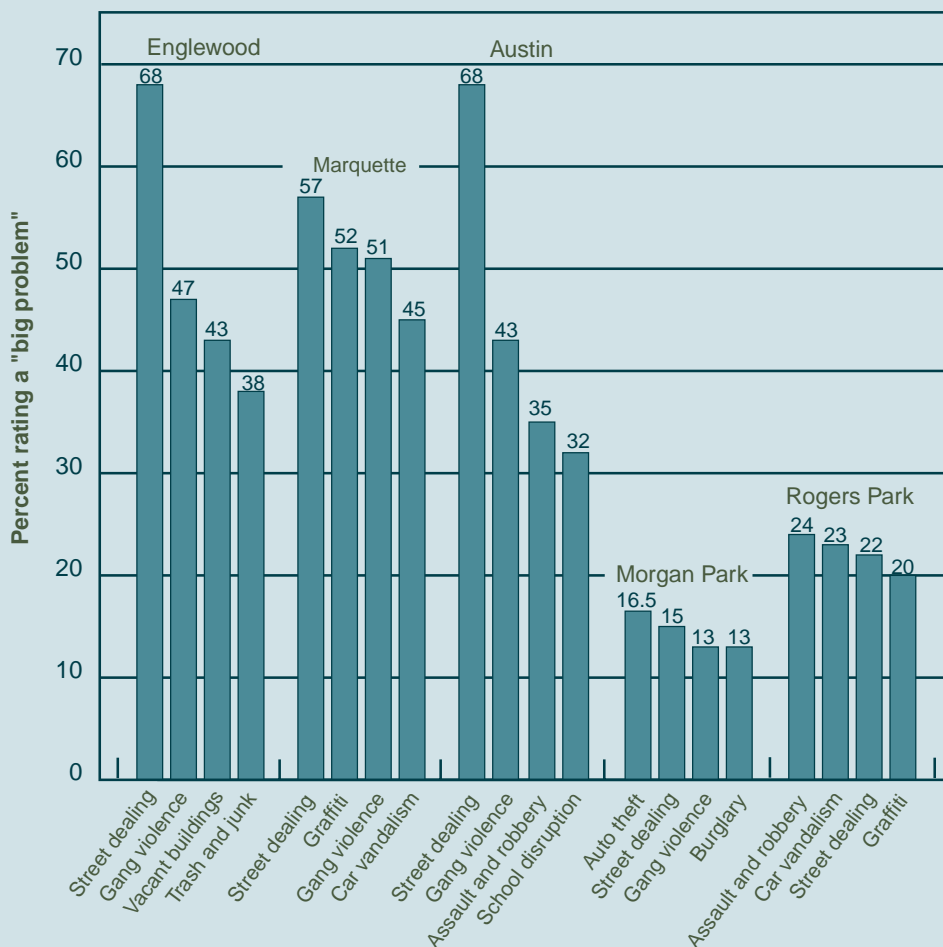
There are limits to what can be observed and what persons living in a neighborhood can be asked about. For example, Richard Taub (Taub et al., 1984) found that his observers could not reliably count junk in front yards and vacant lots that was “smaller than a toaster,” so they used that standard. Many of the phenomena we would like to observe can be transitory in character, especially if observers are looking at social behavior rather than physical manifestations of decay. These disorders are events rather than conditions, so brief observations are likely to miss them. They vary enormously by the time of day, the day of the week, and the weather. In one study, during repeated and lengthy observations of specific locations that had been identified as high-disorder hot spots, observers actually saw something disorderly take place very infrequently.

A survey example

Exhibit 4 reports the results of surveys of five police districts in Chicago, using the “how big a problem” formula described above. It identifies the 4 neighborhood problems that were the most highly ranked in each district from a list of 22 problems that were presented to respondents in 3 different sections of the questionnaire. Several points are illustrated.

First, some problems were common across many or most of the districts, including drugs and gang violence. Street drug sales were on the agenda in every community; gang violence, in four of the five. However, the other top problems differed from place to place, and issues that loomed large in some areas were scarcely problems in other districts. In one dense

Exhibit 4. Biggest Problems in Experimental Districts: Wave 1 Survey Results



Measuring What Matters: Crime, Disorder, and Fear

area with little off-street parking, vandalism to automobiles was one of the area's top four problems; only in the wealthiest area was auto theft on the list. Thus, one goal of community policing is to open departments up to local input—so they can effectively discern these variations in local concerns and tailor their operations to respond to them.

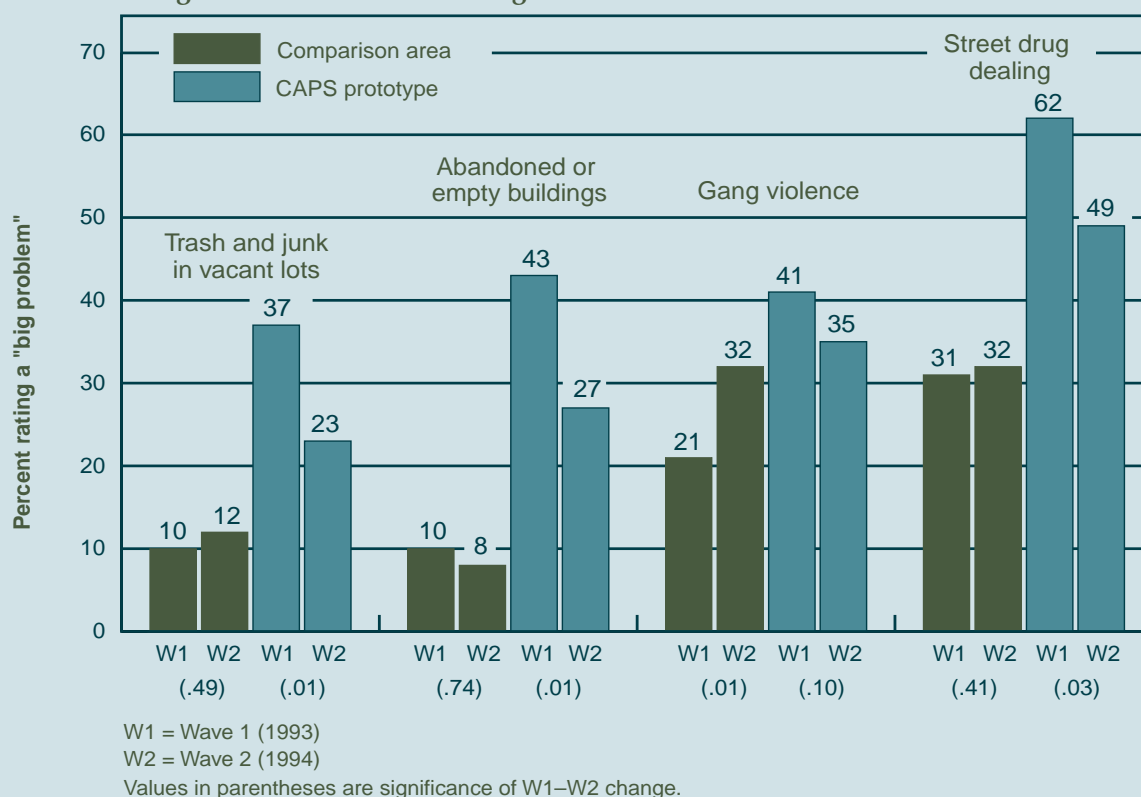
Second, not all of the problems on people's minds fell in the "conventionally serious crime" category. A wide range of problems were identified as vexing. Car vandalism was near the top of the list in two areas, as was graffiti. Street crime was also highly rated in two areas. Auto theft, burglary, disruptions around schools, abandoned buildings, and "vacant lots filled with trash and junk" each stood near the top of the list in one district. It is interesting to note that only in one district—Morgan Park—did conventionally serious crimes constitute all four of the area's most highly ranked problems. This was the wealthiest area of the group, one that is the home of many city workers and has strong connections with city hall and municipal service agencies. In the other four districts, two of the

top four problems were quality-of-life concerns rather than conventionally serious criminal offenses.

Finally, exhibit 4 illustrates that the initial levels of these "biggest problems" varied considerably from district to district. For example, street drug dealing was rated a big problem by more than 60 percent of residents of Englewood, but only by about 13 percent of the residents of Morgan Park, and by 20 percent of those we interviewed in Rogers Park, even though it was among these areas' top-ranked issues. In Morgan Park, burglary was a top-ranked problem, but only 10 percent gave it a high rating. In Morgan Park in particular, there was not much room for improvement on many dimensions, and expectations about the potential impact of community policing on problems had to be tempered by this fact.

What was the impact of the program on these problems? Exhibit 5 examines this question. It depicts Wave 1 and Wave 2 survey results for one district and its matched comparison area. The biggest problems in Englewood included drugs, gang violence, abandoned

Exhibit 5. Neighborhood Problems in Englewood



buildings, and trash-strewn lots. The values in parentheses near the bottom of the figure present the statistical significance of Wave 1 to Wave 2 changes within the area. This is the likelihood that the change recorded actually reflects a chance fluctuation in the survey. (We only want to pay attention to changes that were probably *not* due to chance.) Detailed statistical analyses of the data are not presented here, but they reinforced the patterns that can be observed in exhibit 5.

In Englewood, all four of the biggest problems declined, while none went down significantly in its matched comparison area. Street drug sales were ranked a big problem by 62 percent of Englewood residents in 1993, but by only 49 percent in 1994. Abandoned building problems dropped from 43 percent to 27 percent. Gang violence was down only modestly, declining from 41 to 35 percent, but it increased significantly in Englewood's comparison area. Detailed statistical analysis provided additional evidence that these problems all declined significantly after 15 months of community policing.

Measuring fear of crime

There have been many efforts to clarify the meaning of the concept of "fear of crime" (Ferraro and LaGrange, 1987; Maxfield, 1984). Some are troubled that there is no clear consensus on what the concept means or how it is best measured and that studies that measure the concept in conceptually diverse ways find that different operationalizations of fear are only moderately correlated with one another. However, this heterogeneity of meaning simply reflects the fact that fear of crime is a concept of everyday language, one suited for casual conversation. People commonly talk about fear of crime and its social and political effects; for example, one hears that the elderly are "prisoners of fear," traumatized by the thought of venturing out because of the risks they would face. But the concept needs to be refined for research purposes, and how it is best defined depends upon the purpose of the research.

Research on fear of crime conceptualizes it in one of four ways. Three definitions are cognitive in nature, reflecting people's *concern* about crime, their assessments of personal *risk* of victimization, and the perceived *threat* of crime in their environment. The remaining approach to defining fear is *behavioral*

and defines fear by the things people do in response to crime. Dissecting these variations in how fear of crime is defined is important because they make a great deal of difference in what researchers have found. Different definitions of fear can lead to different substantive research conclusions.

Concern about crime

The "concern" definition of fear focuses on people's assessments of the extent to which crime and disorder are serious problems for their community or society. Concern is a judgment about the frequency or seriousness of events and conditions in one's environment.

There are a number of approaches to measuring concern. Opinion surveys ask whether crime or disorder is increasing or decreasing and whether respondents would place them on their list of "most important problems." Most research adopting this definition of fear examines neighborhood conditions. In my research I have asked about "how big a problem" respondents think various conditions are in their immediate area. The 1995 Boston Public Safety Survey asks, "Is crime a problem in Boston?"

The British Crime Survey gives respondents a list of crimes and disorders and asks, "how common or uncommon they are in your area?" (Maxfield, 1984). Respondents also are sometimes asked to compare crime in their neighborhood to the city as a whole. Even in the highest crime cities, most report that their own area is "below average." Massive surveys of 13 cities conducted by the U.S. Census Bureau during the 1970s found that only 7 percent thought their neighborhood was more dangerous when compared to others in the metropolitan area (Garofalo, 1977). This is likely to be true because the distribution of crime within cities typically is very skewed, with a few areas driving up the citywide total. Because they ask for a report on neighborhood conditions that is independent of how respondents perceive their own risks, measures in this category are typically unrelated to those that tap the emotive dimensions of fear.

Risk of victimization

The second common meaning of fear is the perception that one is likely to be victimized. Since the surveys sponsored by the President's Crime Commission in the mid-1960s (Biderman et al., 1967), researchers have asked people to rate their chances of being

victimized. For example, survey respondents may be asked to rate “how likely” they are to be attacked or burglarized, on a scale ranging from “not very likely” to “very likely.” Assessments of risk are respondents’ perceptions of the likelihood of things happening to them, and these are frequently recommended as measures of “fear.” In the 1988 British Crime Survey, respondents were asked to rate their risk of being victimized in the next year using a six-point scale from “certainly not” to “certain to be victimized” (Mayhew et al., 1989). Risk measures appear to factor in what respondents have done to protect themselves from victimization. As a result groups like the elderly—who report high levels of fear on other dimensions—do not perceive of themselves as particularly at risk because they are much less exposed to victimization (Skogan, 1993).

Threat of crime

Definitions of fear focusing on threat emphasize the potential for harm that people feel crime holds for them. Threat levels are high when people believe that something could happen to them, if they exposed themselves to risk. The concept of threat is distinct from those of risk and concern. People may adopt various tactics to reduce their vulnerability to victimization; as a result, they may not rate their risk as particularly high because they avoid exposure to risk. However, they might rate the threat of crime as high if they were to be exposed to risk. Because many people believe they are capable of dealing with crime, threat is also distinct from concern about the issue. Threat is measured by questions that ask, “How safe would you feel if you were out alone?” or, “How would you feel if you were approached by a stranger on the street or heard footsteps in the night?” (Taub et al., 1984). Numerous surveys have found that the threat of crime is felt most strongly by the elderly, and in comparison to measures of risk or concern, questions measuring threat clearly differentiate senior citizens from the remainder of the adult population.

Fear as behavior

A final, important conceptualization of fear of crime is what people do. This operational definition of fear focuses on the behavioral, rather than cognitive, aspects of the attitude. From this perspective, fear is best assessed by how it manifests itself in the frequency with which people go out after dark, restrict

their shopping to safer commercial areas, fortify their homes against invasion, and avoid contact with strangers. The International Crime Survey, which has been conducted in almost 30 countries, asks if respondents avoid certain areas, go out with an escort, have a burglar alarm, leave their lights on when away from home, and ask neighbors to watch their homes when they are away (Van Dijk and Mayhew, 1993).

This research usually examines two general classes of reactions to crime: those that limit risk of personal attack by avoiding potentially threatening situations and those defensive tactics that reduce the vulnerability of households to burglary and home invasion. This distinction was first drawn by Furstenberg (1971), who dubbed them “avoidance” and “mobilization.” Avoidance definitions emphasize behaviors aimed at reducing risk of personal crime, such as avoiding dangerous places and people and walking only with an escort (rather than alone) after dark. Mobilization includes the extent to which people fortify their homes against crime by adopting security measures such as special outdoor lights, door locks, window bars, and interior lights and by marking their property with a special identification number.

Which measure to use

It makes a difference what measure is used. For example, research on the effects of mass media coverage of crime is contingent upon the conceptualization of fear that is used. Tyler and Cook (1984) found that exposure to media stories about crime increased people’s concern about crime (as it is defined here, the belief that crime is a growing community problem). However, they found that it did not affect people’s perception that their own neighborhood was unsafe or that their personal safety was at risk. Other researchers have found that political attitudes and measures of ideological position are correlated with concern measures, but not with risk or threat measures. Victimization, on the other hand, has clearer effects on both risk and threat measures. Interestingly, the elderly’s well-known fear of crime is manifested only on the threat measure; they do not rate their own risk of being victimized as particularly high, they do not perceive their neighborhoods as particularly disorderly, and they are much less likely than others to be concerned about crime (Skogan, 1993).

As this summary implies, it is important that evaluators pick and choose fear measures carefully. To evaluate the impact of visible patrol, it would be wise to use threat measures, which assess perceived risk “outside.” On these measures, almost no one feels very unsafe during the day, so after-dark fears—and after-dark programs—need to be assessed. Domestic violence programs would call for tailored behavioral measures that would assess, for example, things victims do to distance themselves from abusive partners. The fear-of-crime measure employed by the National Opinion Research Center, the Roper poll, and others (“Is there a place nearby”—that is, within a mile—where you would be afraid to walk alone after dark?”) would be a useful hot spot question, especially in conjunction with a followup open-ended question identifying the location. Specific interventions might call for fear measures linked to specific types of crime; for example, house burglary or robbery near automatic teller machines. Offense-specific measures of fear are more strongly linked to one another than are broad or heterogeneous measures (Warr, 1984).

An example

Can better policing affect fear of crime? This is an area where I think the common research wisdom is wrong. The notion that visible policing does *not* make a difference in fear and attitudes toward police stems from early experiments conducted in Kansas City. Police there were selectively withdrawn from some experimental precincts and their numbers beefed up in others to gauge the effect of the extent of routine (largely motorized) patrol on crime and fear. Researchers found no differences in the subsequent views or victimization experiences of residents of the experimental and comparison areas. Residents also did not notice that the number of police assigned to their area had changed. There has been research before and since that ran counter to these conclusions, but the Kansas City findings (Kelling et al., 1974) became famous.

However, researchers working with survey data on the visibility of policing and contacts between the public and the police quickly note that associations between visibility, contacts, satisfaction, and fear are strong, persisting even when a long list of alternative correlates are controlled for. This can be illustrated by the findings of an ongoing evaluation of community policing in Chicago (see Skogan and Hartnett, 1997).

Unlike Kansas City, the evidence in this case is correlational rather than experimental. But it also involves a program that suddenly increased—this time visibly—the level of police activity in selected areas. The apparent consequences of police visibility in Chicago contradict the Kansas City results. In this evaluation, respondents were questioned twice, once before the program began and again after about 15 months. The research examined the impact of experiences the respondents personally had between the two waves of interviews. Fear of crime was measured each time by responses to three questions about localized, outdoor crime threats:

- How safe would you feel being alone outside in your neighborhood at night? [four responses, ranging from “very safe” to “very unsafe”]
- Is there any particular place in your neighborhood where you would be afraid to go alone, either during the day or after dark? [yes or no]
- How often does worry about crime prevention prevent you from doing things you would like to do in your neighborhood? [four responses, ranging from “very often” to “never at all”]

The reliability of the composite scale combining these items was 0.66. Before the program began, levels of fear were higher among women, low-income and less educated people, African-Americans, and renters.

Statistical analysis found that the impact of visible community-oriented police efforts (walking on foot, talking with residents, patrolling the alleys) on this fear measure was large and highly significant. Controlling for many other factors, residents who subsequently observed the police involved in a list of community-oriented activities (*not* just driving by) felt safer. The most important control factors took advantage of the fact that the respondents were interviewed twice: The analysis controlled for a measure of how fearful they were before the program began and what they reported seeing police in their area doing before the program began. Controlling for past experience, residents of the target community policing neighborhoods were less fearful and more satisfied with police responsiveness to community concerns; they also thought police were more effective at dealing with crime. The effect of police visibility on fear was of about the same magnitude as the effects of age and sex, two of the strongest determinates of fear.

To illustrate the magnitude and generality of the involved effects, exhibit 6 charts Wave 2 responses to the first fear question listed above, “How safe would you feel being alone outside in your neighborhood at night?” It shows the percentage of respondents who replied “unsafe” or “very unsafe.” The visibility of community-oriented policing during the period between the interviews is represented by a count of sightings (ranging from zero to four) of two different kinds of foot patrol—police checking buildings and alleys, and officers having informal conversations with citizens. Whites were less fearful than African-Americans or Hispanics, most notably when police visibility was very low. However, levels of fear were lower for all groups when the police were more visible. Also, the downward slopes of the lines for African-Americans and Hispanics were somewhat steeper than the slope for whites. This suggests the effect of police visibility was greater for minorities than for white respondents.

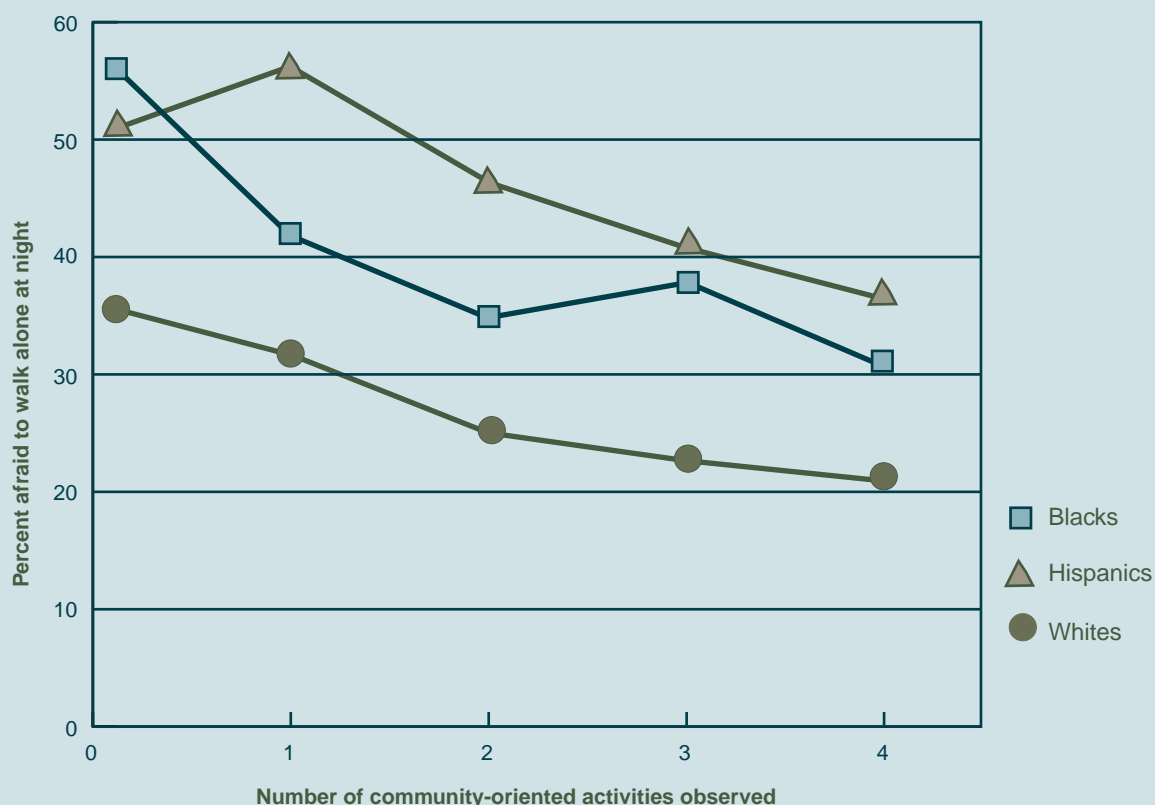
Police-related measurement issues

Having developed useful indicators of the extent of crime, disorder, and fear, is the evaluator’s task done? What we have reviewed is just the beginning. A thoroughgoing evaluation may have to attend to many more issues that call for systematic measurement. The list is long, and some issues—such as those related to assessments of the quality of police service, the visibility of policing, police-citizen contacts, and satisfaction with encounters with police—are worthy of a conference in their own right. The following section addresses some of the issues that evaluators have found crucial.

Visibility of police

Since the Kansas City preventive patrol experiment, surveys have routinely included questions about obser-

Exhibit 6. Police Visibility and Fear of Crime: Wave 2 Response



vation of various police activities. No research has addressed the accuracy of these measures, which is probably fairly low. Visibility should be mostly related to how frequently people are positioned to see police, and it is typically much lower among older people, the unemployed, and women.

In our Chicago study, we used a checklist of seven common police activities that neighborhood residents might observe, including driving through the area, patrolling a nearby commercial area, pulling over an auto or searching or frisking someone, patrolling an alley or checking garages, and having an apparently friendly chat with people from the neighborhood. All of these were commonly observed in the dense, not-well-off areas that we surveyed. Over time, the activities commonly associated with community-oriented policing (conversations, foot patrols, and alley or garage checks) were observed more frequently in the program areas than in the comparison areas. Those activities were also linked to reduced fear of crime (as illustrated in exhibit 6), while visible motorized patrol seemed to have no consequences at all.

Encounters between police and the public

The survey approach screens for encounters between police and the public within a specified recall period (e.g., “the last 6 months”), using a list of typical contact situations. The British Crime Survey, which is conducted in person, presents respondents with a checklist of 17 scenarios—ranging from reporting a crime to asking for directions—and asks if they have been involved in them during the past 12 months. More than 50 percent of Britons recalled such a contact during 1992. Almost 40 percent contacted the police, while an overlapping 33 percent were stopped by police or were contacted in the course of an investigation (Skogan, 1994).

There are no comparable national figures for the United States. In our Chicago surveys, we screen respondents for nine types of citizen-initiated contacts, ranging from reporting a crime to contacting the police to ask for information. We also ask about their involvement in motor vehicle stops and being stopped while they are on foot. In April 1993, 61 percent of adult Chicagoans recalled one or more of

these direct contacts with police during the past year. In addition, almost 30 percent indicated they had received a parking ticket in the city during the previous year, but we did not include that indirect contact in the 61 percent figure.

Assessments of the quality of police service

Remarkably little attention has been focused on developing measurements of public assessment of police service. In Chicago, we have asked “how good a job” respondents think the police do at a variety of tasks and under a variety of circumstances, “how satisfied” people are with specific police efforts, and how well the police behave “toward people in this neighborhood.” Typically, 15 to 20 percent of respondents insist that they “don’t know” about these things; analytically, they turn out to be older, to have had no recent contact with police, to watch little or no television, and to be uninvolved in neighborhood life.

Assessments of encounters with police

Following a contact screen like that described above, respondents recalling an encounter can be questioned about what transpired. If they have had multiple contacts, they should be asked about the most recent one. These data are particularly useful because they can provide a detailed “consumer report” of recent encounters with police. The British survey asks those who contacted the police about response time, efforts that police made at the scene, the interest the police seemed to show in the case, if the respondent had any followup contacts with police about the matter, and how politely the respondent was treated. People who were stopped by the police are asked if they were given reasons for being stopped; if they were questioned, searched, or breath-tested; and if they were arrested, prosecuted, or otherwise sanctioned. In Britain, all of these factors are closely related to how satisfied people who have had contacts are with the quality of police service (Skogan, 1994). One complication is that many crime victims who contact the police have also been stopped or even arrested by them in the recent past, complicating how they judge the quality of the service they receive (Maxfield, 1988).

References

- Biderman, Albert D., Louise A. Johnson, Jennie McIntyre, and Adrienne W. Weir. *Report on a Pilot Study in the District of Columbia on Victimization and Attitudes Toward Law Enforcement*. U.S. President's Commission on Law Enforcement and Administration of Justice, Field Survey I. Washington, DC: U.S. Government Printing Office, 1967.
- Biderman, Albert D., and James P. Lynch. *Understanding Crime Incidence Statistics: Why the UCR Diverges From the NCS*. New York: Springer-Verlag, 1991.
- Boston Police Department. *The 1995 Public Safety Survey*. Boston: Boston Police Department, 1995.
- Bureau of Justice Statistics. *Criminal Victimization in the United States, 1993*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, 1996.
- Farrell, Graham. "Preventing Repeat Victimization." In *Building a Safer Society: Strategic Approaches to Crime Prevention*, Crime and Justice: A Review of Research, vol. 19, ed. Michael Tonry and David P. Farrington. Chicago: University of Chicago Press, 1995: 469–534.
- Federal Bureau of Investigation. *Crime in the United States 1994*. Washington, DC: U.S. Department of Justice, Federal Bureau of Investigation, 1995.
- Ferraro, Kenneth F. *Fear of Crime: Interpreting Victimization Risk*. Albany, NY: State University of New York Press, 1995.
- Ferraro, Kenneth F., and Randy LaGrange. "The Measurement of Fear of Crime." *Sociological Inquiry* 57 (1987): 70–101.
- Furstenberg, Frank F., Jr. "Public Reaction to Crime in the Streets." *American Scholar* 40 (1971): 601–610.
- Garofalo, James. *Public Opinion About Crime*. Washington, DC: U.S. Department of Justice, National Criminal Justice Information and Statistics Service, 1977.
- Groves, Robert M., and Robert L. Kahn. *Surveys by Telephone: A National Comparison with Personal Interviews*. New York: Academy Press, 1979.
- Kelling, George. "Measuring What Matters: A New Way of Thinking About Crime and Public Order." *City Journal* 2 (2) (Spring 1992): 21–34.
- Kelling, George, and Catherine Coles. *Fixing Broken Windows*. New York: Free Press, 1996.
- Kelling, George, Tony Pate, Duane Dieckman, and Charles Brown. *The Kansas City Preventive Patrol Experiment: A Summary Report*. Washington, DC: Police Foundation, 1974.
- Kraemer, Helena C., and Sue Thiemann. *How Many Subjects? Statistical Power Analysis in Research*. Newbury Park, CA: Sage Publications, Inc., 1987.
- Maxfield, Michael G. *Fear of Crime in England and Wales*. London, England: Home Office Research Study No. 78, 1984.
- Maxfield, Michael G. "The London Metropolitan Police and Their Clients: Victim and Suspect Attitudes." *Journal of Research in Crime and Delinquency* 25 (1988): 188–206.
- Mayhew, Pat, David Elliott, and Lizanne Dowds. *The 1989 British Crime Survey*. Home Office Research and Planning Unit Report No. 111. London, England: HMSO, 1989.
- Mirrlees-Black, Catriona, Pat Mayhew, and Andrew Percy. *The 1996 British Crime Survey*. London: Home Office Research and Statistics Directorate, 1996.
- National Criminal Justice Information and Statistics Service. *Criminal Victimization in the United States 1976*. Washington, DC: U.S. Department of Justice, National Criminal Justice Information and Statistics Service, 1976.
- Schneider, Anne L. "Victimization Surveys and Criminal Justice System Evaluation." In *Sample Surveys of the Victims of Crime*, ed. Wesley G. Skogan. Cambridge, MA: Ballinger Publishing Co., 1976: 135–150.
- Shapland, Joanna. "Preventing Retail-Sector Crimes." In *Building a Safer Society: Strategic Approaches to Crime Prevention*, Crime and Justice: A Review of Research, vol. 19, ed. Michael Tonry and David P. Farrington. Chicago: University of Chicago Press, 1995: 263–342.
- Skogan, Wesley G. *Issues in the Measurement of Victimization*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 1981, NCJ 74682.
- Skogan, Wesley G. *Disorder and Decline: Crime and the Spiral of Decay in American Cities*. New York: Free Press, 1990a.
- Skogan, Wesley G. *The Police and Public in England and Wales: A British Crime Survey Report*. London, England: Home Office Research Study No. 117, 1990b.
- Skogan, Wesley G. "The Various Meanings of Fear." In *Fear of Crime and Criminal Victimization*, ed. Wolfgang Bilsky, Christian Pfeiffer, and Peter Wetzels. Stuttgart, Germany: Enke, 1993: 131–140.

Skogan, Wesley G. *Contacts Between Police and Public: Findings From the 1992 British Crime Survey*. London, England: Home Office Research Study No. 134, 1994.

Skogan, Wesley G. *Resident Survey Methods Report*. Program Paper No. 7. Evanston, IL: Institute for Policy Research, 1995.

Skogan, Wesley G., and Andrew C. Gordon. "A Review of Detective Division Reporting Practices." In *Crime in Illinois 1982*. Springfield, IL: Illinois Department of Law Enforcement, 1983.

Skogan, Wesley G., and Susan M. Hartnett. *Community Policing, Chicago Style*. New York: Oxford University Press, 1997.

Skogan, Wesley G., et al. *Community Policing in Chicago, Year One*. Chicago: Illinois Criminal Justice Information Authority, 1994.

Skogan, Wesley G., et al. *Community Policing in Chicago, Year Two*. Chicago: Illinois Criminal Justice Information Authority, 1995.

Taub, Richard P., D. Garth Taylor, and Jan Dunham. *Paths of Neighborhood Change: Race and Crime in Urban America*. Chicago: University of Chicago Press, 1984.

Taylor, Ralph B. "Going Over Crime Reduction: Conceptual and Practical Implications of Measuring and Distinguishing Community Disorder." Paper presented at

the National Institute of Justice and Office of Community Oriented Policing Services Meeting, Measuring What Matters, November 28, 1995.

Taylor, Ralph B. "The Impact of Crime on Communities." *Annals of the American Academy of Political and Social Science* 539 (May 1995): 28–45.

Trickett, Alan, Denise K. Osborn, Julie Seymour, and Ken Pease. "What is Different About High Crime Areas?" *British Journal of Criminology* 32 (1992): 81–90.

Tyler, Tom R., and Fay L. Cook. "The Mass Media and Judgments of Risk: Distinguishing Impact on Personal and Societal Level Judgments." *Journal of Personality and Social Psychology* 47 (1984): 693–708.

Van Dijk, Jan J.M., and Pat Mayhew. "Criminal Victimization in the Industrialized World: Key Findings of the 1989 and 1992 International Crime Surveys." In *Understanding Crime, Experiences of Crime and Crime Control*, ed. Anna del Frate, Ugljesa Zvekic, and Jan J.M. van Dijk. United Nations Publication No. E.93.III.N.2. Rome, Italy: United Nations Interregional Crime and Justice Research Institute, 1993: 1–50.

Warr, Mark. "Fear of Victimization: Why Are Women and the Elderly More Afraid?" *Social Science Quarterly* 65 (1984): 681–702.

Wilson, James Q. "The Urban Unease: Community Versus the City." *The Public Interest* 12 (1968): 25–39.

Measuring What Matters

Darrel W. Stephens

In recent years, discussions of policing among practitioners and scholars have begun to emphasize the importance of outcome and impact measures. These discussions have pointed out that the police have developed a series of performance measures that, for the most part, have little relationship to results. James Q. Wilson, in “The Problem of Defining Agency Success,” says it this way:

Most of the efforts to improve performance measures for policing have concentrated on finding either real measures of overall effectiveness or plausible proxy measures. Not much has come of these efforts for reasons that should be obvious. There are no “real” measures of overall success; what is measurable about the level of public order, safety, and amenity in a given large city can only partially, if at all, be affected by police behavior. (For example, if the murder or robbery rates go up, one cannot assume that this is the fault of the police; if they go down, one should not necessarily allow the police to take credit for it.) Proxy measures almost always turn out to be process measures—response time, arrest rates, or clearance rates—that may or may not have any relationship to crime rates or levels of public order. (Wilson, 1993)

Many practitioners and scholars would agree with Wilson. Nevertheless, the police continue to face the challenge of dealing with the impact of crime, fear, and disorder in their communities and the public’s belief that it is their responsibility. The police are the first, and frequently the only, government agency the public looks to for answers when crime rates change, a heinous crime occurs, or citizens are afraid to go out of their houses after dark. Like many other aspects of their job, even when the police do not have a clear answer, there is an expectation that they say or do something that will provide a sense that things are

either under control or will be in short order. A survey of Florida residents by the *St. Petersburg Times* (November 4, 1995) indicates that 85 percent of the respondents say the problem of greatest concern to them is crime. Over the past 10 to 15 years, national public opinion surveys routinely indicate that crime and drug abuse are among the highest priority concerns.

The police are truly on the front line in dealing with the crime, fear, and disorder that have such a great impact on a community’s quality of life. Before the police can address these problems, however, they face the significant challenge of *measuring* them. This challenge, along with the impact of these problems on the quality of community life, is the subject of this paper. The problems associated with measuring the levels of crime, fear, and disorder in the community are discussed in separate sections devoted to each of these areas, followed by an examination of the impact of these problems on the quality of life in the community. The concluding section discusses how these measures can be applied to specific neighborhoods in a way that allows the police to gain a sense of both the overall community problems and the efforts to deal with them.

Measuring crime

How do the police measure the level of crime in their community? For all intents and purposes the police measure the level of crime, and any change in crime, through the Federal Bureau of Investigation’s Uniform Crime Reports (UCR). In many cities, monthly, quarterly, and annual reports are released to the public to show the number of serious crimes (Part 1 or index crimes) that citizens have reported to the police during each timeframe. These reports often provide comparisons to the same period in the previous year so anyone interested can see if reported crime has increased or decreased. News media stories about these crime statistics usually include quotes and sound bites from police representatives who attempt to explain any significant variations from one timeframe to the next. Occasionally, the stories include observations

Measuring What Matters

about the statistics from political figures and academic experts. Political figures are most often available to the media when crime reports are down from the previous reporting period.

The UCR data represent the official level of crime in the community. These reports and the news media stories about them can have a significant impact on the community. They often serve as grist for the political mill—local elections have been greatly influenced by crime reports. In some cases, the careers of police chiefs and sheriffs have been affected in either positive or negative ways by these statistics. Because of their potential impact, UCR data have been the subject of considerable debate, discussion, and criticism as a measure of crime in the community.

The criticism of the UCR has been focused primarily on a number of well-known limitations of the reporting system (Silberman, 1978; Kelling, 1996). First, the UCR represents only that portion of crime that is reported to the police. Although well known, this fact is not usually noted in either the reports provided by the police or the news media stories about them. In many residents' minds, these statistics represent the actual level of crime in their communities, particularly if there are significant increases from one year to the next. The second criticism is that only eight crimes have been included as Part 1 offenses. Crimes that the public cares a great deal about such as narcotic offenses are not included in the reports. Third, a series of program rules contribute to confusion about what the reports actually mean. For example, a bicycle or lawn mower stolen from an open garage is classified as a burglary. If these same items are stolen from the driveway a few feet from the open garage door, the offense is called a larceny. Some are also critical of the "hierarchy rule," which requires that an incident be classified as the most serious crime if multiple crimes occur at the same time. The fourth and perhaps most significant criticism is that crimes are reported to the police, who classify them, tabulate them, and send them to the State or directly to the FBI. Those suspicious of the police argue that this provides the opportunity for intentional manipulation of the numbers or mistakes in classification.

The possibility of crime reports being manipulated by the police is not without some basis in fact. One example is the Kansas City, Missouri, police chief who had served with distinction for a number of years and

was indicted by a county grand jury in 1960 for manipulating the UCR. The indictment was eventually dismissed, but he lost his job in the process. The same problem has surfaced in other cities over the years and continues to be one of the most significant concerns about crime reports. After all, there are subtle differences between attempted burglary and vandalism. A window might be broken in both, but there are different motives for each type of crime, and the motive may not be immediately clear. There is also a slim margin of difference between a strong-arm robbery and a purse snatching. It is clear when the victim is knocked to the ground in the process of taking the purse. In many cases, though, the difference is the degree of resistance involved in hanging onto the purse. There are similar distinctions that can be made in shoplifting cases where the suspect is confronted and resists apprehension. These are important issues because the seriousness of the crimes can be influenced by the benefit of the doubt going to the less serious incident. In the case of burglary or vandalism, if the latter classification is used, the incident drops completely out of the Part 1 crime category.

All of the other limitations of the UCR are just that—limitations that need to be taken into account when using the data as a measure of crime. At the local level, *intentional manipulation* of the reports, however, is an entirely different matter. Manipulation of the reports renders them virtually useless as a measure of crime in a city. This, in turn, casts a dark shadow on the only measure of crime that most cities have and raises serious questions about the overall integrity of the police. Although local victimization surveys might be helpful, their cost puts them well beyond the ability of most police departments to conduct them with any regularity.

Given the limitations of the UCR, how useful is it to the police and community as a measure of crime? In one sense, the question is academic: Until someone develops a suitable replacement, the UCR is the best available measure of reported crime—even with the flaws. A substitute for the UCR is not likely to be available anytime soon. An alternative system developed in the mid-1980s by the Police Executive Research Forum with the support of the Bureau of Justice Statistics failed to attract sufficient interest to serve as a viable replacement. No other initiatives are under way to develop a crime reporting and measurement system to take the place of the UCR.

Therefore, it is important to reach a consensus on how significant the limitations of the UCR are to measuring crime in the community. If police departments pay close attention to proper collection and classification methods, the UCR can be a valuable and useful measure of *reported* crime. In fact, so much time is spent criticizing the system, little attention is given to the useful aspects of a reporting process that provides a good indication of the matters the public believes is important enough to bring to the attention of the police.

Several aspects of the UCR provide helpful information to the police. One useful aspect is that it provides a relatively simple method of classifying criminal incidents that are brought to the attention of the police by the public. Even with the limitations, it provides a common language that most people, police officers and citizens alike, can understand. Using State statutory definitions presents some of the same problems as the UCR, and generally State definitions are more complex. For example, in some States, a burglary is limited to building structures; in others, a theft from a vehicle can be a burglary. State statutes contain many overlapping definitions for similar incidents, which can result in several criminal charges from one incident.

A key criticism of the UCR is that it measures only the crime that is reported. That criticism would exist with any system unless it included victimization surveys, which are generally not practical for police departments. Moreover, one might want to explore just how valuable it would be for a police department to invest the resources to know what citizens have failed to report. How helpful would victimization data be for a police department? For the most part, knowing about every fight that takes place between two juveniles on the way home from school that might be classified as an assault is probably not particularly helpful to the police or the community. To be sure, most citizens will report what they believe is important for the police to know. If the police routinely encourage citizens to report incidents, what is reported might be a useful measurement of the level of crime in the community that the public believes is important for the police to know.

Given the challenges of measuring crime, the UCR has been and can continue to be a useful way of measuring reported crime in a community. One of the greatest difficulties with the UCR is not the system

itself but how the police and politicians use the information that comes from the system. Criticism of the UCR is loudest when reported crime is increasing. In spite of the cautions against comparisons from one city to another, it is done with great regularity, and it is naive to believe that will not continue. In fact, police, academics, and the news media regularly engage in the practice. The limitations of making such comparisons are rarely pointed out, except when reported crime is increasing. During these periods of increasing crime, it is often said that the primary reason the comparisons are not useful is because other cities may not give the same amount of attention to the accuracy of the reports. Although most police executives have learned to be cautious about what they say about UCR crime statistics when reported index offenses are declining, some are quite vocal about police contributions to the decline and look to the most recently implemented program as the source of the change.

An important question that begs for some professional resolution in dealing with the issue of measuring what matters is who gets the credit—or the blame—for fluctuations in reported crime. Are police executives entitled to take credit for a decline in reported crime? If so, under what circumstances? While some in policing believe the police are essentially powerless to do much about crime, others argue that the police can make significant contributions to reducing crime in specific neighborhoods and circumstances.

Focused, thoughtful responses to specific crime problems at the neighborhood level that involve those affected by the problem can contribute to reductions in reported crime. The police also should be able to accept some of the credit or responsibility for changes in reported crime. At the citywide level, it may be appropriate for the police to share in the credit for a decline in reported crime under at least two circumstances. First, the police should share in the credit if they address a problem in a small geographic area and changes in reported crime in the area affect the citywide totals. A good example of this is what happened with thefts from autos in the downtown area of Newport News, Virginia, in the mid-1980s. As a part of the department's problem-oriented policing effort, officers focused on the issue of thefts from vehicles parked in the area of the shipyard that employed more than 35,000 people. A careful analysis of the problem and the implementation of solutions tailored to the various aspects of the thefts resulted in a 52 percent

decline in theft reports over a 12-month period (Eck and Spelman, 1987). That decline corresponded with a significant decline in the total number of thefts from vehicles in the city. While there are other possible explanations for this, it seems it is appropriate for the police to say this initiative is likely to have had some impact on the overall reduction in thefts from vehicles in the city. Moreover, since the larceny category was a major part of overall crime, it could be argued the subsequent decline in property index offenses was due in part to the initiative at the shipyard. It is also important to note in this example that the solutions implemented relied heavily on the contributions of others—the shipyard, the city, owners of the vehicles—to take steps to change the environment; thus, they should share in the credit for reducing the problem.

Second, the police should share in the credit for declines in a specific crime on a citywide basis if they have implemented a specific response to the problem and the problem declines. Gasoline driveoffs have been affected by pay-before-you-pump policies advocated by police in many cities. In the mid-1970s, most urban areas enacted exact-change policies for public buses, and the once frequent bus robberies stopped. In neither case can other factors be ruled out because change and displacement influence overall numbers, but it seems appropriate for the police to accept some of the credit for the outcome.

The UCR is perhaps the best available tool to address the question of how the police measure crime in a community. Given careful attention to the process and how the information is used by officials, some of the concerns can be addressed. In addition, the UCR can gain greater credibility, which might enhance its value. The UCR, however, has taken on a role as a measure of police impact that is well beyond what it should be—even if it works exactly as it was designed and everyone understands its limitations. Community measurements of crime and fear do not seem to be influenced to a great extent by the fluctuations in Uniform Crime Reports. The community uses other barometers.

Measuring disorder

How does the public measure crime? How much influence do official police reports have on citizen perceptions of crime? Do police annual rituals of pro-

viding UCR statistics to the public create a sense of relief or contribute to concern about crime? Part of the answer to these questions lies in how citizens define crime. Experience in working with citizens in a number of communities suggests that citizens define crime in very different terms than the police, and, by and large, official periodic pronouncements of the level of crime in the community have little influence on citizens' feelings about crime. In fact, these experiences lead one to believe the average citizen's perspective is influenced to a much greater extent by the amount of disorder they encounter, what they hear from friends and family members, their personal victimizations, and news media reports. The combination of these and other factors influence both their sense of the significance of the crime problem and their level of fear. Perceptions of disorder clearly seem to have an effect on citizens' views of crime and its impact on the quality of community life. Therefore, it is important for the police to define disorder, gain a better understanding of its influence on citizens' perceptions, and make stronger efforts at measurement.

In "The Impact of Community Policing on Neighborhood Residents," Wesley G. Skogan looked at disorder through the use of survey questions that each of the projects included as a part of their evaluations (1995). The amount of disorder was determined by questions on public drinking, begging, street harassment, truancy, and gang activity. Surveying is one good way to understand citizens' views of disorder and its impact in a neighborhood or community. In fact, surveys of neighborhoods by the police in cooperation with residents are both practical and useful tools that are well within a department's capacity to conduct. There are other ways of measuring disorder as well.

One helpful way to measure disorder is through simple observation of neighborhood or area conditions. It would not be difficult for police officers or motivated citizens to conduct a disorder assessment of the neighborhood by systematically recording what they see in a drive or walk through an area of concern. In St. Petersburg, neighborhood groups have volunteered to conduct surveys of residents as well as record the physical aspects of the area. If security is a concern, and it almost always is, they routinely walk the neighborhood at night to do an inventory of street lights, noting those that need repair as well as identifying locations where they believe additional lighting

is needed. To measure disorder in a neighborhood, consideration might be given to the presence of graffiti, groups of people loitering on the street, the level of noise (from boom boxes or loud car stereo systems, for example), boarded and vacant structures, abandoned vehicles, homeless or street people, and litter. The presence of these elements in a neighborhood tends to contribute to a sense that the situation is out of control and to heighten the level of fear.

The police also have an abundant source of information about disorder that would provide a sense of both its extent and location. Police call records, arrests, and reports are all good sources of information on public concerns about disorder (Skogan, 1990). Police call data is little used but is one of the best sources of information that police have about citizen concerns and their views of what police work should be. Calls about noise disturbances, street corner drug dealing, drinking on the street, graffiti, and gunfire are all good indications of public concern about disorder. Regular analysis of call information—frequency, type, location, and time—can give police a strong indication of the nature of the problems and, in some cases, insight into what might be done to improve the situation.

Perhaps the greatest challenges for police in measuring disorder are to make it a priority and do what they can to change conditions. Wilson and Kelling's theory of "broken windows" is well accepted, and there is evidence that efforts to control disorder have some influence on the level of citizen fear, satisfaction, and reported crime (Houston, Newark, New York City, and St. Petersburg). However, it is often difficult for a street police officer to make the same connection. It is not because they do not have the intellectual capacity—they do. Police officers simply get caught up in the urgency of dealing with robberies, burglaries, auto thefts, and blatant street-level drug dealing. It is not easy for them to step back from the fray far enough to see the relationship between rowdy youths on the street corner, noise calls, and how those activities might contribute to the environment that produces the "real crime" they are most concerned about and believe is of greatest concern to the public.

Although a challenge, disorder management is becoming a higher priority in many cities as the police make greater efforts to develop partnerships with the community to solve problems. Interaction with residents about neighborhood problems helps officers

understand the importance of disorder to citizens' sense of safety. As police officers explore problems—and think about prevention and noncriminal justice responses—they begin to see the links between neighborhood conditions, fear, and crime. The development of a police department environment where officers have not only the expectation but also the opportunity to focus on problems in their areas of responsibility is critical. Police executives, managers, and supervisors have the obligation and responsibility to create this environment. With this environment comes the knowledge and understanding of the importance of measuring and responding to disorder problems.

Fear

Many would argue that the local government is as obligated to deal with the fear of crime as it is to deal with the actual incidence; that it is important, whatever the basis for existing fears, that citizens feel secure in their home and on their streets. (Goldstein, 1977)

Over the past 20 years or so, it has become increasingly clear that the true mission of the police ought not to be "to protect and serve" but to help create a sense of safety in the community. To contribute to the production of safe communities, the police must both acknowledge and take steps to address citizen fear. This is a complicated task indeed, particularly because Skogan showed that the level of fear is not directly related to the risk of victimization (1986).

Obviously, citizen surveys are the most helpful tool in measuring citizen fear and, like disorder, are within the capacity of the police to conduct on a neighborhood level. In fact, neighborhood surveys can be designed and conducted in a way that provides information on a variety of issues. The questions in exhibit 1 were included in surveys conducted in St. Petersburg that provided information on fear. While the information is not sufficient to understand the reason for the change in fear, it does give the police and citizens a sense of the level of fear and how it has changed over time.

Although measuring fear is a bit more complicated for the police than measuring crime and disorder, data are available that would be helpful if viewed in the context of this problem. Once again, police calls can be a useful source of information about the level of fear

Measuring What Matters

in the community. Of particular importance are calls related to suspicious people and vehicles. Alarm calls might also serve as a crude measure of the level of fear in some areas. Alarm calls, particularly false alarm calls, have increased in most cities. While part of that increase is due to faulty systems, the rise in the use of both building and vehicle alarms has contributed to the increase as well. In some communities, ordinances have been enacted that require alarms for structures to be registered with the police. New alarm permits provide an indication of the level of fear in the community. In St. Petersburg, alarm permits increased almost 25 percent in the second year following the enactment of an ordinance requiring alarm systems to be registered. Looking at these data in concert with neighborhood survey data might identify areas where police can engage in specific activities to address citizen fear.

While it may be difficult to capture, the investment in or presence of other security measures might be an indication of the level of fear in the community or

neighborhood. The use of window bars, dead bolt locks, and demands for increased lighting provide some indication of the level of fear in a neighborhood. The police or other governmental agencies also have information on gun permits, security guard services, and off-duty police employment. All of these areas can provide some indication of the level of fear in the community and offer the potential for identifying specific areas where fear levels seem to be increasing.

Although it is very difficult to measure, the impact of the news media, the entertainment industry, and police educational programs on citizen fear must be considered. The media obviously has some influence on how citizens feel about crime and violence and is, at least partially, responsible for contributing to citizen fear. When one considers the attention given to crime in both the print and electronic media, it is reasonable to conclude it affects the fear level in the community. In many metropolitan areas, local television news consumes from 4 to 6 hours of programming time. When combined with national news coverage, as much as a

Exhibit 1. St. Petersburg Survey Questions Measuring Citizen Fear

Change in Safety of Your Neighborhood in Past Year			
	1991	1994	1996
	(%)	(%)	(%)
Became safer	7.7	10.7	11.3
Stayed the same	57.9	66.8	68.9
Became less safe	33.3	18.9	17.7
Very Concerned About Neighborhood Problems			
	1991	1994	1996
	(%)	(%)	(%)
Crime	65.3	41.7	40.4
Feeling safe/secure	50.8	37.5	33.3
Fear of Being Out Alone in Neighborhood			
	1991	1994	1996
	(%)	(%)	(%)
Afraid at night	46.4	41.1	31.1
Afraid during the day	7.6	6.7	6.1

third of programming time is devoted to news. If the lead story is not devoted to crime, at least one of the top two or three stories is likely to deal with crime—generally the most violent or vicious of the day. In addition, a considerable portion of tabloid television shows are devoted to crime and violence. The steady diet of crime, murder, and mayhem reinforces daily the notion that there is good reason to be afraid.

A significant portion of the television and movie entertainment industry is focused on crime and violence as well. The police shows like “COPS,” “Stories of the Highway Patrol,” and “America’s Most Wanted” enjoy high ratings and add to the sense that crime and violence are completely out of control. This, of course, is an additional contribution to fear in the community.

The police contribute to fear as well. With the best of intentions, the police have made the challenge of dealing with fear even more difficult. Police efforts to convince citizens of the importance of taking precautions to minimize their potential for victimization almost always begin with statistics or anecdotes about crime. The idea is to motivate citizens enough to take reasonable steps to protect themselves or their property. Unfortunately, these efforts have also caused additional fear; a police officer telling a citizen about the risks of crime has an extra amount of credibility. The clear challenge for the police is to educate citizens about their risk of criminal victimization in a way that motivates action—but does not unnecessarily increase their fear.

The police must become more thoughtful and aggressive in providing information to the public to mitigate the effects of all the messages that promote fear. One tool that can be helpful is public cable television. Many cities have developed special programming designed to inform citizens about steps that can be taken to reduce the potential for victimization without living in fear. Police departments have also developed a range of methods to provide accurate information to citizens about crime in their neighborhoods. Some use telephone call-in systems allowing residents to access data 24 hours a day by entering the appropriate codes for their neighborhoods. Others provide periodic reports that are included in neighborhood newsletters. Still other departments have made crime and workload data available over the Internet. Many public newspapers in urban areas have returned to the practice of printing a police log that lists calls and

crime reports by neighborhoods. The *St. Petersburg Times* lists crime reports and calls by community policing area in a biweekly neighborhood section. All of these tools are important to help members of the community be mindful of their potential for victimization but not so fearful that they become prisoners in their own homes.

The effects of crime, disorder, and fear on the quality of community life

What are the effects of crime, disorder, and fear on the quality of community life? Are the choices that people make on where to live, work, shop, or recreate influenced by their assessment of the risk of being a victim of crime? Fear is one effect of crime and disorder that clearly has an influence on how people live their lives. A *USA Today* poll indicated that 43 percent of Americans no longer shop at night because of the fear of crime. In a recent meeting, St. Petersburg car dealers concerned about crime indicated that citizen fear about the location of their businesses made it more difficult to attract both employees and customers. Concerns about safety in public schools have also had as much or more to do with parents placing their children in private schools than the quality of education.

The fear of crime and disorder contributes to neighborhoods declining and dying because people are afraid to invest in them. Those who can afford it escape to the suburbs. Those who are not able to escape watch single-family houses turn into multiple-family dwellings that eventually get boarded up and demolished after absentee landlords reach the point where even minimal investments in meeting codes do not result in profits. Local governments wrestle with the dual problem of meeting increased service demands in these neighborhoods—fire protection, police service, code enforcement, environmental cleanups—while the revenue to support the services decreases. Measuring the effects of crime, disorder, and fear on the quality of life requires more than just measuring the levels of each of these variables.

Once again, surveys can provide an indication of how crime, fear, and disorder affect individuals in the community. In many respects, “quality of life” is a difficult concept to understand. While there will be agreement on many aspects of what a good quality of life might include, individual perspectives will differ

Measuring What Matters

considerably. The fear a young man has about crime and disorder is likely to be very different from the fear of an elderly man. A person who is financially well off will not feel the same effects of crime and violence that a poor person will. The wealthy can simply move away from the problem or invest a small portion of income in creating a greater sense of security. Surveys can help sort out these various effects of crime and disorder on the quality of life.

One can also monitor population shifts, property value changes, boarded and vacant properties, loss of public revenue, and similar variables that might provide some indication of the effects of fear, crime, and disorder. Another indication might be the willingness of the public to invest resources in public safety. The will to support get-tough policies continues to increase as more of the public treasury is devoted to the prison industry.

A focus on neighborhoods

When one thinks about crime, violence, drug abuse, fear, and all of the factors associated with them the problems seem overwhelming. The endless debate about what to do about these problems and who is responsible—individuals or society—takes place for the most part at the State or Federal level of government where the primary responsibility for many of the programs to address crime actually lies. And both of these levels of government are, for all intents and purposes, inaccessible to the general public. To effectively deal

with crime and disorder and the fear they generate, it seems that a focus on neighborhoods or small geographic areas of the larger community offers the greatest promise of both understanding what is happening and doing something meaningful about these problems.

The police have been more willing in recent years to acknowledge their limitations in dealing with crime. They have begun to talk about crime and violence in the context of neighborhood conditions, education, the economy, and other demographic factors in areas with the greatest problems. Yet most police departments have not considered changes in these conditions as possible measures of their contributions.

Fortunately, some police departments are beginning to look at these factors to determine the effect of initiatives aimed at neighborhood problems. One example is the appearance of the neighborhood. Building on the theory of “broken windows,” police departments working with neighborhood associations, other arms of government, and the private sector have begun to consider change in the way a neighborhood looks as a positive impact of their collective efforts. An improvement in the way a neighborhood appears could translate into less fear or higher property values. Both of these variables can be measured at the neighborhood level as can the level of reported crime and amount of disorder. The efforts in St. Petersburg since 1992 have made an important contribution to property values in targeted neighborhoods. Exhibit 2 provides an indication of the change in property values from

Exhibit 2. St. Petersburg Neighborhood Property Values

	1994	1995	1996	Change (%)
Bartlett Park	\$16,198	\$18,991	\$19,840	22.5
Childs Park	22,980	24,147	24,752	7.7
Kenwood	36,147	37,186	38,418	6.3
Old Northeast	96,977	99,786	102,999	6.2
Old Southeast	32,908	32,735	35,133	6.8
Palmetto Park	17,573	18,604	20,012	13.9
Roser Park	17,963	21,708	22,914	27.6
Uptown	34,780	36,281	37,716	8.4
Target Area Average*	34,690	36,429	37,972	9.5
Citywide	58,890	60,093	61,319	4.1

* Target area includes additional neighborhoods outside the boundaries of the eight neighborhoods listed above.

1994 to 1996 in eight neighborhoods where citizens and local government developed and implemented specific plans to address problems of concern. The police played a key role in each of these neighborhoods because of the priority that citizens placed on security issues.

What is the value of a new or expanded business in a neighborhood from the perspective of crime and disorder? Could new job opportunities help transform some individuals from criminal activities to legitimate forms of work? Can the foot and vehicular traffic associated with new business contribute to safer streets? Can police engage in programs or adopt policies that will enhance neighborhood improvement and investment? Is the police contribution to reducing truancy a valid measure of police performance, and how does that translate into reduced crime and disorder? Does an increase in occupancy of an apartment complex where police have worked on problems reflect a positive contribution? Obviously, the answers to these questions depend in part on the interventions police have initiated in cooperation with the community—but they also might provide greater insight into the ability of the police to affect crime and disorder and the fear they cause.

Conclusion

Measuring crime, disorder, fear, and their effects on the quality of life in the community is important to the police. It seems, nevertheless, more important to consider a wider range of issues to gain a true sense of the potential impact of the police on contributing to the creation of safe communities. It also appears that the police have the best chance of understanding these issues and making a meaningful contribution to dealing with them if the focus is on neighborhoods. At that level, even difficult, persistent problems do not appear to be quite so overwhelming. At that level, both the public and government can see visible signs of progress or the lack of it.

Many baby boomers remember a time when their neighborhoods offered a sense of safety and security and neighbors rallied to provide support to each other in times of need. Many can recall a story of their youth where someone in the neighborhood intervened in a way that enforced standards of acceptable behavior—and then made sure that parents were aware of the incident. These baby boomers also point out that neighborhoods are not what they used to be.

In spite of the changes in society, progress is being made in rebuilding neighborhoods and the sense of identity associated with them in cities throughout the United States. That experience suggests that crime, disorder, and fear can be influenced in a positive direction at the neighborhood level.

We should be building on that experience. We should measure crime, disorder, and fear at the neighborhood level and develop tailored responses to deal with these problems. In that way, the police can make a substantial and meaningful contribution to the creation of safe communities.

References

- Anderson, D.C. *Crimes of Justice*. New York: Timesbooks, 1988.
- Bennett, T. “Community Policing on the Ground: Developments in Britain.” In *The Challenge of Community Policing: Testing the Promises*, ed. D.P. Rosenbaum. Thousand Oaks, CA: Sage Publications, Inc., 1994.
- Daly, N.C. “Community Survey Comparative Results.” Unpublished Report. St. Petersburg, FL: St. Petersburg Police Department, 1994.
- Eck, J.E., and W. Spelman, with D. Hill, D.W. Stephens, J. Stedman, and J. Murphy. *Problem Solving: Problem Oriented Policing in Newport News*. Washington, DC: Police Executive Research Forum, 1987.
- Goldstein, H. *Policing a Free Society*. Cambridge, MA: Ballinger Publishing Company, 1977.
- Kelling, G. “Defining the Bottom Line in Policing: Organizational Philosophy and Accountability.” In *Quantifying Quality in Policing*, ed. L.T. Hoover. Washington, DC: Police Executive Research Forum, 1996.
- Moore, M., and D.W. Stephens. *Beyond Command and Control: The Strategic Management of Police Departments*. Washington, DC: Police Executive Research Forum, 1991.
- Silberman, C.E. *Criminal Justice, Criminal Violence*. New York: Random House, 1978.
- Skogan, W.G. *Disorder and Decline*. New York: Free Press, 1990.
- Skogan, W.G. “The Impact of Community Policing on Neighborhood Residents: A Cross Site Analysis.” In *The Challenge of Community Policing: Testing the Promises*, ed. D.P. Rosenbaum. Thousand Oaks, CA: Sage Publications, Inc., 1994.

Measuring What Matters



Skogan, W.G., and M.G. Maxfield. "Fear of Crime and Neighborhood Change." In *Crime and Justice: A Review of Research, Communities and Crime*, vol. 8, ed. A.J. Reiss and M. Tonry. Chicago: University of Chicago Press, 1986.

Stephens, D.W. "Community Problem-Oriented Policing: Measuring Impacts." In *Quantifying Quality in Policing*, ed. L.T. Hoover. Washington, DC: Police Executive Research Forum, 1996.

Taft, P.B., Jr. *Fighting Fear: The Baltimore County C.O.P.E. Program*. Washington, DC: Police Executive Research Forum, 1986.

Wilson, J.Q. "The Problem of Defining Agency Success." In *Performance Measures for the Criminal Justice System*. Washington, DC: U.S. Department of Justice, Bureau of Justice Statistics, 1993, NCJ 143505.

Wilson, J.Q., and G.L. Kelling. "Broken Windows: The Police and Neighborhood Safety." *The Atlantic Monthly* (March 1982).

Wilson, J.Q., and G.L. Kelling. "Making Neighborhoods Safe." *The Atlantic Monthly* (February 1989).

The Incivilities Thesis: Theory, Measurement, and Policy

Ralph B. Taylor

This paper traces the theoretical evolution over the last two decades of a close-knit family of theories linking incivilities to reactions to crime, crime changes, and neighborhood changes. Incivility indicators are social and physical conditions in a neighborhood that are viewed as troublesome and potentially threatening by its residents and users of its public spaces. More recent as compared to earlier theorists in this area have shifted from a psychological to an ecological perspective on responsible processes; expanded the scope of relevant outcomes; separated the causes of crime from the causes of incivilities, justifying a separate policy and theoretical focus on the latter; and switched from a cross-sectional to a longitudinal focus. Several measurement questions are raised by the thesis and its variations:

- The thesis proposes that incivilities represent a construct separate from other related features of the individual, street block, and neighborhood. But researchers have not yet examined the discriminant validity of incivilities indicators.
- Later versions of the thesis emphasize ecological processes. Indicators at this level are available from different sources, and we do not know yet whether those indicators display multimethod convergent validity.
- Later versions of the thesis focus on community change. We do not know if incivility indicators capturing change display convergent validity.

This paper analyzes data from different sources (Atlanta, Baltimore, Chicago, Minneapolis-St. Paul, and Seattle) to address these issues. Early, individual-centered versions of the thesis receive the strongest empirical support and rely on indicators with satisfactory measurement processes. Shifting to later versions of the thesis and focusing on community dynamics and change, empirical support weakens and measurement issues prove more troubling. These concerns deserve attention from practitioners and policymakers

charged with framing or evaluating order maintenance policing initiatives.

Controversy calls for reexamination

We witnessed during the early months of 1997, in the wake of falling violent crime rates in several large cities—with New York City's being the most noted—articles in the popular media debating the contributions made by police initiatives toward reducing grime and disorderly street activity. Jerry Skolnick (Skolnick, 1997) and George Kelling (Kelling, 1997) argued that these police efforts played a pivotal role; Richard Moran said we just could not know (Moran, 1997). At about the same time, in Baltimore, city council leaders harshly criticized Chief of Police Frazier for failing to mount policies similar to New York's zero tolerance for disorder.

At the center of these controversies are questions about the relative contributions of order maintenance policing—one component of community policing—versus traditional policing practices, to reductions in serious crime. Community policing and problem-oriented policing include order maintenance as well as numerous other strategies geared to address problems in a community that may precede serious crime (Goldstein 1990, 1993; Greene and Mastrofski, 1988). Receiving increasing attention during the past 20 years in such police strategies have been social and physical incivilities, also called signs of disorder, or simply disorder. These incivilities include public order problems such as groups of rowdy teens, public drunkenness, public drug use or sales, people fighting, street hassles, prostitution, aggressive panhandling, vacant or burned out buildings, shuttered stores, unsavory businesses such as adult bookstores, abandoned and trash-filled lots, graffiti, litter, and abandoned cars. Community and problem-oriented policing initiatives focus on far more than just these problems; nevertheless, these concerns have received

considerable community and problem-oriented policing attention (Buerger, 1994; Greene and Taylor, 1988; Greene and McLaughlin, 1993; Pate, 1986 and 1989).

Given current public controversies about whether incivility-reduction community policing can help reduce serious crime, an examination of the proposed theoretical rationales underlying these initiatives seems overdue. What have theorists in this area told us about how these incivilities cause crime, inspire fear in residents, and contribute to neighborhood decline? This paper undertakes such a review, examining a family of theories describing these processes. I will suggest that theorizing in the area has evolved in a number of discernible directions.¹ The theorizing and its evolution raise three distinct, but related, measurement questions, not as yet satisfactorily answered by the empirical research. First, is the incivility construct separable from related constructs? Do its indicators demonstrate discriminant validity (Campbell and Fiske, 1959)? Second, later versions of the thesis focus on community dynamics, giving researchers a choice of how to capture disorder. They can rely on aggregated resident perceptions or assessments of onsite conditions. Do indicators from different methods display convergent validity (Campbell and Fiske, 1959)? Finally, when we examine disorder change over time, to which the later versions of the theory direct our attention, do the change indicators demonstrate convergent validity?

Organization

Beginning in the mid-1970s, five distinct variants of the incivilities thesis emerged: James Q. Wilson, Garofalo, and Laub; Hunter; Wilson and Kelling; Lewis and Salem; and Skogan. I describe the central processes highlighted by each theory. Placing these versions of the incivilities thesis in a temporal ordering reveals several clear shifts in emphasis and scope over the period, and I describe these changes. I then briefly summarize empirical support to date for some of the key hypotheses in each version of the theory. Following that, I turn to a detailed consideration of the three measurement questions raised above, using data from five different cities. I close with a discussion of the policy, practice, and theory implications of these measurement results.

Variations on a theme

In this section I summarize five different versions of the incivilities thesis. After reviewing the processes of central interest to each, I describe in more detail how thinking has shifted on this topic from earlier to later versions of the thesis.

Wilson, 1975, and Garofalo and Laub, 1978. In *Thinking About Crime*, Wilson takes up the question of why urban residents are so fearful for their safety (Wilson, 1975). He suggests it is not only crimes that they find troubling. The daily hassles they are confronted with on the street—street people, panhandlers, rowdy youths, or “hey honey” hassles—and the deteriorated conditions that surround them—trash-strewn alleys and vacant lots, graffiti, and deteriorated or abandoned housing—inspire concern. Wilson does not provide extensive detail on the interpretations residents made when confronting minor disorderly conditions, except to point out the fear they inspired among residents and users of urban spaces.

In a closely related vein, Garofalo and Laub suggest that fear of crime reflects a more general “urban unease” rather than a specific concern about crimes that have occurred or may occur (Garofalo and Laub, 1978). This led to their dictum that fear of crime was more than “fear” of “crime.” Again, the key idea is that urban conditions, not just crime, are troublesome and inspire residents’ concern for safety.

These theories emerged in the wake of the first analyses of the National Crime Victimization Survey showing that residents’ fear was far more widespread than their victimization (Cook and Skogan, 1984; DuBow et al., 1979), and represented attempts to explain this discrepancy. For both sets of authors, the outcome of interest is fear of crime, an affective state reflecting safety-related concerns about possible street victimization (Ferraro, 1994). It is distinct from perceptions of risk, a more cognitive assessment of the likelihood of victimization (LaGrange and Ferraro, 1989). It is also separate from worry about property crimes while away from home, or worry about the potential victimization of family members (DuBow et al., 1979; Taylor and Hale, 1986).

In both of these theories focusing on fear, there is no explicit specification of the relationship between the conditions inspiring concern and local crime, except

to note that the conditions are far more prevalent than crime incidents. In short, they do not try to either connect or disconnect the causes of incivilities from the causes of crime.

One further similarity is the focus on psychological rather than community dynamics. Although community differences are implicitly acknowledged, the key focus is on why so many more people are afraid than would be expected given the prevalence of victimization.²

Hunter, 1978. Al Hunter presented a paper entitled “Symbols of Incivility” at the 1978 American Society of Criminology (ASC) conference.³ Like the Wilson, Garofalo, and Laub version, the outcome in question is still fear of crime, and it is assumed that incivilities are far more prevalent than crime or victimization.⁴ Exhibit 1 depicts Hunter’s causal model of the thesis.

Hunter’s framework elaborates on earlier statements in four major ways. Perhaps most importantly, he describes in some detail how residents may interpret signs of incivility; he considers what residents read into these conditions. He proposes that local residents attribute disorderly actions and deteriorating physical conditions to two complementary sources. Internally, the perceivers attribute conditions to local residents and organizations unable to manage or preserve the neighborhood. Beyond the neighborhood, perceivers conclude that the external agencies of control, which

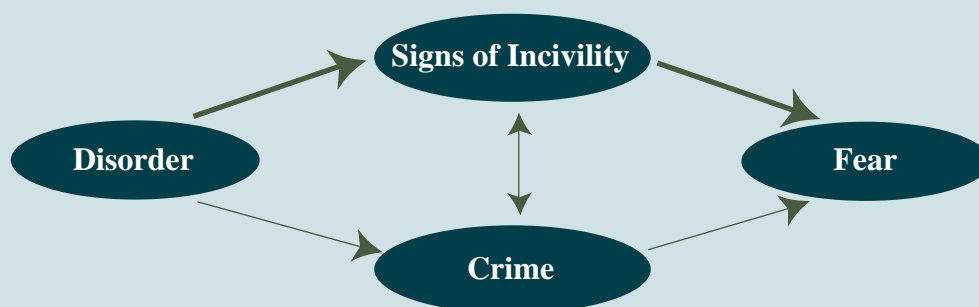
bear some responsibility for preserving order, are unwilling or incapable of doing so in that locale.

Therefore, because matters are out of hand in the neighborhood and local actors and external agencies cannot or will not intercede, residents feel personally at risk of victimization. This description is important because it suggests that the causal attributions residents make—their conclusions on why the incivilities occur and persist—shape their fear. It is not just the presence of the signs of incivilities that is threatening to them, it is also the meaning attached to them. Those origins, he suggests, are viewed as both endogenous and exogenous to the community.

Hunter’s second specification is to nonrecursively link crime and signs of incivility. Each causes the other; one does not precede the other. This view suggests that extensive incivilities will be found in high-crime neighborhoods, and high crime will be found in neighborhoods with extensive deterioration.

Third, Hunter connects incivilities and crime again through a common underlying exogenous cause: neighborhood disorder. It is not clear, however, if by disorder he specifically means social disorganization—the inability of a community to regulate itself and work toward common goals (Bursik, 1988)—or the community characteristics more generally associated with high offense or high offender rates (Baldwin and Bottoms, 1976; Harries, 1980).

Exhibit 1. Hunter’s Incivilities Thesis



Note: Heavy arrows indicate most common pathway. Reproduced from Hunter, A., “Symbols of Incivility,” paper presented at the annual meeting of the American Society of Criminology, Dallas, TX, November 1978.

Finally, Hunter's model moves us from the individual-level processes described by Wilson, Garofalo, and Laub to a contextual model (Boyd and Iversen, 1979). The earlier focus was on psychological processes. Here, these processes are elaborated, but with the inclusion of neighborhood crime rates and mutual impacts of crime and incivilities, these psychological processes are placed within varying community contexts.

Hunter's elaboration of the thesis leads to specific empirical predictions: Communities with higher crime rates should have more extensive incivilities; high community crime rates and extensive incivilities share common structural origins, such as instability, low status, and more extensive minority populations. But even after putting these common origins aside, crime and incivilities will still feed one another. Controlling for structural origins, crime should have an independent impact on incivilities and incivilities should have an independent impact on crime.

Wilson and Kelling, 1982. In their first *Atlantic Monthly* piece, Wilson and Kelling elaborate on the thesis in three important ways (Wilson and Kelling, 1982). This piece has proved enormously influential on researchers examining fear of crime (Ferraro, 1994) and on policy analysts in community policing (Greene and Taylor, 1988).

First, Wilson and Kelling inject a temporal perspective, describing a specific, multistep process whereby persistent physical or social incivilities lead to higher neighborhood crime rates. Their causal model of the thesis appears in exhibit 2.

The proposed sequence is as follows. A sign of incivility, such as a broken window, is not important per se. Windows are always getting broken, homes are always deteriorating, and some homes are always being abandoned. More important is how long the broken window remains unrepaired, the house remains in bad condition, or the building stays unoccupied. If the condition is not repaired in a relatively short time, then residents will infer that resident-based informal control on the street is weak and other residents do not care about what is happening in their neighborhood; they will surmise that the neighborhood is socially disorganized.⁵ Making such a judgment, residents become increasingly reluctant to use public spaces or to intervene in disorderly situations. As the withdrawal becomes more general and resi-

dents' informal control weakens, they become increasingly concerned about their safety. In the language of routine activity theory, natural guardians and place managers grow more reluctant to act (Eck, 1995). In Jane Jacobs' terms, there are fewer eyes on the street (Jacobs, 1961).

At the same time, local "lightweight" offenders, such as teens who spray paint buildings or taunt passersby, will become emboldened, causing further resident apprehension and withdrawal. For local delinquent youths and at-risk children, the persistent physical incivilities symbolize opportunities for delinquency (Cloward and Ohlin, 1960; Taylor and Covington, 1993).

After the above conditions have been in place for some time and local resident-based control has weakened markedly, motivated "heavy duty" offenders from outside the neighborhood will become aware of the conditions, the opportunities to victimize others, and the lower risks of detection or apprehension associated with offending in that locale. If offender motivation is high enough and enough targets are available, they will move into the neighborhood to commit street crimes.

In short, the authors temporally sequence the connections between physical deterioration, increased delinquency, decreased resident-based control, and increased serious crime.⁶ Time shapes not only the flow of consequences, but also the meaning attributed to the signs of incivility by residents and other users of local spaces.

Kelling and Coles (1996) update the thesis and provide a broader context. They further develop the rationale for order maintenance policing structured around social incivilities, but they also point out the challenges when police and the community work closely together to try to reduce disorder. In addition, they argue that disorder has increased in the past few decades in part because police have retreated from order maintenance, concentrating on serious crime. This retreat has coincided with shifts in civil law, placing limits on police and other agents of public control, further facilitating burgeoning disorder.

As is apparent from the above suggested dynamics, a second major difference in Wilson and Kelling's thesis compared to prior incarnations, is the expanded range of outcomes. Individual and group behaviors

and ecological features of the setting are now of interest. The authors move beyond fear per se, to also include resident-based informal social control on the street, the vitality of street life itself, and, perhaps most importantly, increasing neighborhood crime rates. Their inclusion of neighborhood crime rates as the ultimate outcome of interest justifies community policing initiatives designed to reduce social incivilities or to facilitate service delivery from other public agencies addressing physical incivilities.

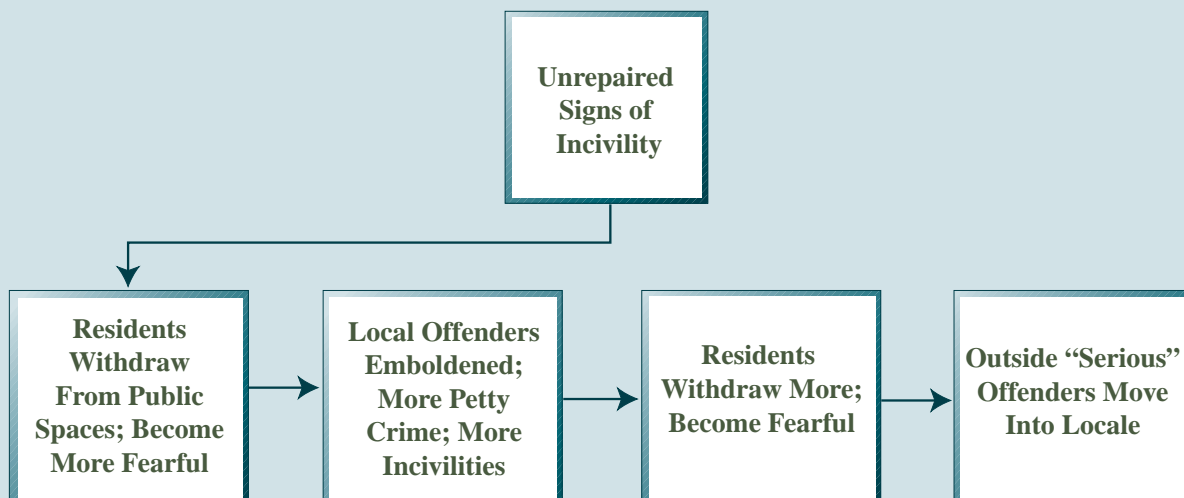
Given their concern for community policing, the authors also consider where to deploy these officers. Their stronger attention to local context represents an important third difference from prior treatments. They roughly separate communities into three groups: those with assured stability, those that are deteriorated and beyond hope, and those that have been stable but are currently threatened with an uncertain future. They suggest that this last group of teetering neighborhoods is where signs of incivility will have the strongest impacts on behavioral, crime, and emotional outcomes. Therefore, it is in these sites that remediation efforts, including community policing, should be concentrated.

The above focus brings us to the final contribution of the current model. Wilson and Kelling discuss the specific roles police officers can play in helping communities address disorderly conditions. In essence, the

job of community police or problem-oriented police is to learn what conditions are troubling residents and merchants in these teetering neighborhoods and then help them address these concerns. (Kelling and Coles [1996] develop in detail what actions are relevant and address some of the issues surrounding officer-community cooperation.) The officers might be moving rowdy groups out of an area, notifying agencies so that landlords are cited for needed repairs, or arranging to get junked cars towed or trash-filled lots cleaned. These problem-solving roles for community police officers have received attention in different demonstrations and evaluations (e.g., Greene and McLaughlin, 1993; Spelman and Eck, 1987).

Lewis and Salem, 1986. Dan Lewis and Greta Salem returned to a sole focus on fear of crime and a cross-sectional, as opposed to longitudinal, perspective in their 1986 volume *Fear of Crime* (Lewis and Maxfield, 1980; Lewis and Salem, 1986). They argue that both the extent of signs of incivility and crime levels contribute synergistically to fear. More specifically, they suggest that if crime and signs of incivility are both at high levels, residents will exhibit the highest fear levels. If crime is high but signs of incivility are not, or if signs of incivility are high but crime is not, residents will be less fearful. In analysis of variance terminology, it is the interaction effect of the two that influence fear, not the main effects of either. The authors support their argument using data from a

Exhibit 2. Wilson and Kelling's (1982) Incivilities Thesis



three-city, multineighborhood survey conducted as part of the 1975–80 Northwestern University Reactions to Crime project.

This model is of interest because it continues the trend of separating the causes of crime and incivility. By implication, if one can be high and the other low, each has causes that are somewhat unique from the causes of the other. The origins of each are distinct, strengthening our rationale for looking at incivilities as problems separate from serious crimes.

Skogan, 1990. Skogan provides an extended theoretical and empirical investigation of how incivilities influence crime and fear at the neighborhood level (Skogan, 1986, 1990).

Skogan's variant of the incivilities thesis (1986, 1990) focuses on neighborhood change as the ultimate outcome of interest. Labeling signs of incivility as disorder (1990: 2), he argues that "disorder plays an important role in sparking urban decline." He defines disorder by saying: "[It] reflects the inability of communities to mobilize resources to deal with urban woes. The distribution of disorder thus mirrors the larger pattern of structured inequality that makes inner-city neighborhoods vulnerable to all manner of threats to the health and safety of their residents" (p. 173). In short, as with Hunter's model, there are two causes of disorder: social disorganization within the community itself and inequality resulting from the sorting of neighborhoods in the urban fabric. This interpretation of incivilities again ties us to the extensive social disorganization literature and, simultaneously, to the extensive literature on urban inequality (Wilson, 1996).

Incivilities spur neighborhood decline because they influence a range of psychological, social psychological, and behavioral outcomes such as, respectively, fear, informal social control, and offender in-migration and resident out-migration. In short, according to Skogan, physical and social incivilities engender a range of consequences that ultimately result in neighborhood decline.

Skogan is clear about the processes mediating the connection between incivilities and neighborhood decline. First, echoing Wilson and Kelling, he suggests that incivilities undermine informal social control (Skogan, 1990). Second, echoing several of the prior theorists, he proposes that disorder "sparks concern

about neighborhood safety, and perhaps even causes crime itself. This further undermines community morale" (Skogan, 1990: 65). Third, incivilities "undermine the stability of the housing market" (Skogan, 1990: 65). This latter economic impact means that a neighborhood's housing prices would decrease relative to other urban neighborhoods. Impacts of neighborhood crime on housing values have been well established in the academic literature (Little, 1976; Taylor, 1995a); separate impacts of incivilities on house prices, net of other factors, have not.

Skogan states clearly that signs of incivility play an important part in this process. "Disorder can play an important, *independent* role in stimulating this kind of urban decline" (Skogan, 1990: 12, emphasis added). Current theorists (Kelling and Coles, 1996: 25) agree that Skogan has proven that "disorder, both directly and as a precursor to crime, played an important role in neighborhood crime."

Skogan's thesis represents an evolution beyond Wilson and Kelling's model in three respects. First, he has moved to an explicit focus on neighborhood change, in the form of decline, as the ultimate outcome of interest. This outcome was included but not emphasized in Wilson and Kelling's treatment; now it has been promoted as the outcome of most interest to residents and policymakers alike. High fear and weak informal social control by residents are important not in their own right, but rather because they result in later decline. With Skogan's model, we have completed the evolution from a focus solely on psychological outcomes represented by Wilson, Garofalo, and Laub, to a focus solely on ecological outcomes, leading Skogan to test his thesis using only neighborhood-level information.

Since the outcome in Skogan's model is explicitly neighborhood change, this leads him to expand the scope of contributing and mediating dynamics. The first versions of the incivilities thesis focused on fear; subsequent versions expanded to include weak informal social control and withdrawal from street life. Skogan further augments the relevant process dynamics to consider intent to move, neighborhood satisfaction (Skogan, 1990: 88), community solidarity (Skogan, 1990: 70), and involvement in privatistic crime prevention. Other authors (e.g., Kirschenbaum, 1983: abstract) have argued that perceptions of neighborhood deterioration act "as a major catalyst in provoking a move," or contribute independently to

neighborhood decline (Fisher, 1991). The literature, however, fails to consistently link crime or crime-related neighborhood conditions with mobility (Taylor, 1995a).

Third, Skogan explicitly acknowledges in several models that structural conditions give rise to signs of incivility. He reports that poverty, instability, and racial composition all contribute equally to signs of incivility and crime in the form of robbery victimization rates (Skogan, 1990: 75). In an earlier statement of the thesis, he suggests that “random shocks” arising from factors outside the neighborhood itself also can influence the expansion of incivilities (Skogan, 1986). In his 1990 analysis, signs of incivility almost totally mediate the effects of neighborhood structure on victimization.⁷ His is the first model to begin examining links between incivilities and community structure. His suggested causal dynamics appear in exhibit 3.

Evolution of the perspective

The main variants of the incivilities thesis reviewed above reveal numerous differences. In four areas, these differences reflect a clear evolution of the perspective applied.

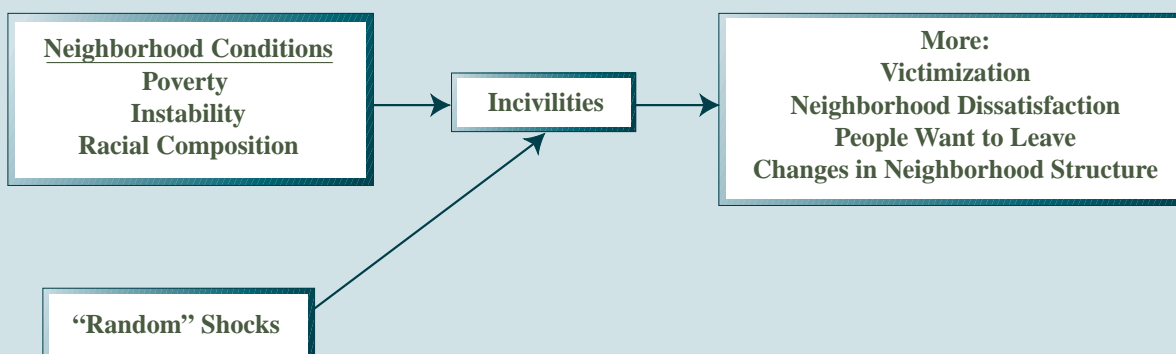
Expansion of outcomes. The models progress from a sole focus on fear of crime (Wilson, Garofalo, and Laub; Hunter; Lewis and Salem) to concern about neighborhood street life and crime (Wilson and Kelling) to neighborhood structural decline (Skogan). The enlargement of outcomes increases the importance of the thesis; it is relevant not only to reactions

to crime but also to the stability and viability of urban communities. The broadening scope also provides rationales for community policing initiatives focusing on order maintenance. It highlights the short-term (lower crime, residents taking back the streets) and long-term (neighborhood stability) benefits of such initiatives.

Shifting levels of analysis. As theorists have augmented outcomes, they also have shifted upward in their levels of analysis. Early statements of the thesis clearly present a psychological perspective. Garofalo’s and Laub’s notion that fear reflects “urban unease” expects that perceptions of local order-related problems will inspire residents’ fear. The dynamics in question are internal to individuals. Hunter’s and Lewis and Salem’s models are contextual, pointing out impacts of community as well as psychological factors on psychological outcomes such as fear. Wilson and Kelling’s discussion includes both street block and neighborhood outcomes, but the most central dynamics appear to be operating at the street block level (Taylor, 1997b). Skogan moves us explicitly to the neighborhood level, using neighborhood predictors and neighborhood outcomes. Reactions to crime, such as fear, and other person-environment transactions, such as neighborhood satisfaction or intention to move, are modeled at the neighborhood level because they contribute to long-term neighborhood decline. We are now interested solely in ecological dynamics.

When examining measurement issues, two concerns surface related to this shift in interest. The migration of interest upward presumes that the reactions to

Exhibit 3. Skogan’s Decline and Disorder Thesis



crime and person-environment transactions seen as part of the neighborhood dynamics have substantial ecological components; that is, that sizable between-neighborhood variance exists in these variables relative to the pooled within-neighborhood variance. In addition, the migration suggests researchers might want to use ecologically based rather than psychologically based incivilities indicators. These measurement issues receive consideration below.

Shifting temporal perspective. Models clearly evolve in their temporal perspective. Theorists start out discussing why some people are more afraid than others at one point in time (Wilson; Garofalo and Laub; Hunter) and end by focusing on changes in fear, informal social control, street life, neighborhood crime rates, and neighborhood structure (Wilson and Kelling; Skogan). Wilson and Kelling provide the most detailed temporal sequencing here, describing specific series of events linking incivilities, fear, resident withdrawal, petty crime, and, finally, increased serious crime. Again, as with the change in levels of concern, there are measurement implications. One would expect, given the shift from cross-sectional to longitudinal processes, that indicators would change correspondingly and that researchers would begin to look at changes in fear, neighborhood structure, and incivilities, for example.

Progressive unlinking of crime and incivilities. The early models (Wilson; Garofalo and Laub; Hunter) suggested a common origin for crime and incivilities. Incivilities were presumed to vary from neighborhood to neighborhood, roughly paralleling the crime differences from neighborhood to neighborhood, but taking place at higher rates than crime and thus influencing more residents. Hunter's model provides incivilities and crime with a common exogenous variable. Skogan, by contrast, explicitly anticipates that incivilities will make independent contributions to neighborhood change, net of neighborhood structure and, presumably neighborhood crime, although indicators for the latter were not available in his data set.⁸ Lewis and Salem anticipate that crime and incivilities can vary independently, leading to situations where one is high and the other not. The modeling implication is that neighborhood crime rates and neighborhood incivilities can be separated in a cross-sectional model and that changes in each can be separated in a longitudinal model.

Empirical support for hypotheses

Before turning to a detailed discussion of measurement issues, I provide a brief summary of what we know about some of the key hypotheses generated by each version of the incivilities thesis. I organize the evidence by theory version. I do not consider the extensive evaluation research on community policing programs based on some version of this thesis. (For recent reviews of this work, see Kelling and Coles, 1996; Sherman, 1997; Eck, 1997.) That evaluation work often fails to provide sufficient detail in the timing of measurement and the scope of indicators to address specific hypotheses mounted in these models.

Wilson, Garofalo, and Laub. The key idea that those perceiving more neighborhood problems are more concerned for their safety has been repeatedly supported. Initial analyses of individual-level outcomes confounding between- and within-neighborhood predictor variance (e.g., Lewis and Maxfield, 1980) have been confirmed by later studies partitioning predictor variance (Covington and Taylor, 1991), correctly modeling within-neighborhood correlated errors and controlling for direct and indirect victimization experiences (Taylor, 1997a). Rountree and Land (1996a, 1996b) found effects of community-level perceived incivilities on perceived risk and fear of crime in hierarchical linear models, but did not include perceived incivilities as individual-level predictors, in accord with the thesis discussed here.

In short, we have strong evidence that those who are more afraid than their neighbors see more local problems than their neighbors. At this time, it is not clear if social or physical disorders are more troubling to residents.

Hunter. Hunter's key idea is that both incivilities and local crime rates may contribute independently to outcomes like fear. One study using assessed indicators could not test this thesis because incivilities and crime were so closely linked (Taylor, 1996b). It is the case that, controlling for neighborhood crime rates, individuals who perceive more local problems than their neighbors are more fearful than their neighbors (Taylor, 1997a). Rountree and Land find that average perceived incivilities in a neighborhood and the neighborhood burglary rate contribute independently

to burglary-specific fear of crime (Rountree and Land, 1996a) and to perceived crime risk (Rountree and Land, 1996b). They do not test the contributions of perceived incivilities at the individual level to fear of crime or perceived risk, controlling for the local victimization rate.

The work so far suggests that, net of local crime rates, both individual and community differences in perceived incivilities contribute to reactions to crime such as fear and increased perceived risk. We do not yet have studies simultaneously examining impacts of individual and community perceived incivilities while controlling for local crime or victimization rates and individual victimizations.

Wilson and Kelling. Numerous studies claim to find support for portions of the Wilson and Kelling thesis, varying in the degree to which they apply needed statistical controls.

Although we do not have longitudinal confirmation, we do have cross-sectional confirmation that perceived incivilities predict perceived crime at the street block level, controlling for block composition and layout (Perkins et al., 1992).⁹ Wilson and Kelling anticipate that over time more incivilities on a block will lead to more crime problems. This street block analysis does not confirm that tenet in the longitudinal manner in which it was framed, but it does provide cross-sectional confirmation using crime perceptions.

Returning in the 1990s to local leaders in neighborhoods where residents had been interviewed in the late 1970s and early 1980s, Skogan and Lurigio (1992) find that average perceived social and physical disorder reported 7–12 years previously strongly predicts severity of current drug problems in the neighborhood. The authors conclude that these results “point strongly in the direction of the ‘broken windows’ hypothesis: that levels of noncriminal decay and social disruption can spawn more serious problems in the future by undermining the capacity of communities to respond to crime . . .” (p. 525). This conclusion, however, may be premature. The authors did not control for the earlier level of perceived drug problems in the community; thus, their outcome does not reflect community change. In addition, their data source, with a small number of communities, does not allow researchers to control for community structure.

Another longitudinal hypothesis receiving some cross-sectional support is Wilson and Kelling’s suggestion that incivilities have the strongest impact on teetering neighborhoods. In 66 neighborhoods studied in Baltimore, we found impacts of assessed social and physical incivilities on fear of crime were most evident in moderate-stability neighborhoods (Taylor et al., 1985). This analysis, however, failed to simultaneously control for socioeconomic status and racial composition. In addition, it appears that the impacts of incivilities on fear are extremely weak in the most deteriorated neighborhoods (Taylor and Shumaker, 1990).

Empirical research on interactions between incivilities and other predictors appears to have moved beyond the theoretical groundwork already laid out. For example, Rountree and Land (1996b) found that average neighborhood perceived incivilities shape the impact of race and unoccupied homes on individual risk perception. The relevant conceptual underpinnings for these moderating effects are not clear. More clear is the theoretical basis for interactions between perceived disorder at the individual level and social support on fear of crime. Ross and Jang (1996) find that among those with more local ties, the impact of perceived disorder on fear is weaker. This represents an example of the buffering hypothesis developed in the social support literature (House et al., 1988). The moderating effect, however, was extremely small in size compared to the main effect.

A third feature of the model receiving empirical support is Wilson and Kelling’s suggestion that increasing incivilities may signal opportunities for delinquency for local teens and other “lightweight” offenders. Replicated contextual models link neighborhood-assessed deterioration with residents’ belief that groups of unsupervised teens are problems in their neighborhoods (Taylor and Covington, 1993). Again, this confirmation is cross-sectional rather than longitudinal. This connection is of further significance because it connects theories about incivilities with social disorganization processes. Unsupervised teen peer groups have been used as a key indicator of weak local informal social control (Sampson and Grove, 1989).

Skogan. Skogan connects data from different studies spanning 40 neighborhoods in 6 cities, which was originally gathered between 1977 and 1983. Eighteen

of the different study areas are Chicago communities, some of which were surveyed three times (Skogan, 1990: 88). He operationalizes incivilities using subjective, survey-based responses in which respondents indicated how serious they perceived different incivilities to be in their own neighborhoods. He analyzes neighborhood-level outcomes using simple and multiple regressions and path models. Treating the time of the surveys as roughly comparable, he analyzes all the data in a cross-sectional design.

Skogan examines the causes of incivilities (Skogan, 1990: 60). He finds that nonwhite neighborhood racial composition, poverty, and instability are all linked to higher incivility levels. He also examines a range of the consequences of incivilities. He finds that in neighborhoods where incivilities are perceived to be more intense, neighbors are less willing to help one another (p. 71), robbery victimization is more extensive (p. 75), residential satisfaction is lower, and more people intend to move (p. 82). He also finds some extremely strong correlations (greater than .80) between signs of incivility and indicators of neighborhood structure, such as unemployment (p. 173). He models the perceived incivilities as mediating the impacts of neighborhood structure on the outcomes, leaving open the question of whether incivilities make independent contributions to these outcomes.

Harrell and Gouvis (1994) propose to test Skogan's thesis using census and crime data for Cleveland and Washington, D.C. Using the census tract as the unit of analysis, they determine if leading indicators of decay help predict later crime changes. Unfortunately, questions arise about their decay indicators, which do not focus on deterioration but instead are rates for crimes like arson. Their study appears to be showing that some crime rates help predict shifts in other crime rates.

Summing up empirical support. To date, we have the strongest confirmation for the Wilson, Garofalo, and Laub psychological model. Studies routinely find extremely strong correlations between individual differences in perceived incivilities and individual differences in fear of crime; these remain after controlling for neighborhood crime rates and neighborhood structure. Studies also find contextual impacts of neighborhood-level perceived (or assessed) disorder, suggesting that multilevel impacts may be operating. We do not yet have studies using the same indicator that compare individual and contextual disorder impacts.

The main effects of incivilities observed at the individual and community levels appear to be contingent on other factors. At the community level, Wilson and Kelling's thesis predicts that disorder impacts are contingent on community stability; Lewis and Salem's model predicts that impacts are contingent on local crime rates. Some empirical support has been obtained for the first model, although further testing with more adequate statistical controls is needed. Lewis and Salem's hypothesized interaction effect has not yet been tested. Part of the problem with doing so is that, especially with assessed indicators, disorder usually correlates very strongly with local crime rates. Researchers have begun suggesting that individual-level impacts of perceived incivility may be conditioned by other personal attributes, and work looking at these contingent impacts is beginning.

Hunter's version of the thesis also has received substantial support. It suggests that both crime and disorder contribute to the fear of crime. This idea is supported by perceived disorder indicators at the individual and community levels, controlling for other personal and neighborhood features. Assessed disorder at the community level correlates too strongly with crime to test for independent contributions without committing the partialling fallacy. You commit the partialling fallacy when you have two highly correlated variables, and you partial on the first variable and attempt to interpret how the second variable links to other variables. After partialling, there is too little of the second variable remaining for meaningful interpretation.

The support picture appears far murkier when we turn to versions of the incivilities thesis—Wilson and Kelling's, and Skogan's—that are explicitly longitudinal. Researchers interpret results from several cross-sectional studies as lending support to the thesis. But cross-sectional data do not provide an adequate test of the thesis. To test Wilson and Kelling's thesis, we need longitudinal studies of individuals within communities, using a large number of communities. This would permit us to gauge the independent impacts of incivilities to changes over time in fear of crime, perception of risk, and offender movement patterns. To test Skogan's thesis, we need to assess impacts of incivilities, independent of community structure and crime rates, to neighborhood structural changes and crime changes. These studies have not yet been completed.

From theory to research: incivilities indicators

Three important measurement questions arise from the incivilities thesis. First, all variants of the thesis presume that incivilities refer to a construct independent of related constructs. At the individual level, this means that incivilities indicators would be separate from indicators for perceived risk, fear of crime, territorial cognitions, sense of community, attachment to place, or neighborhood confidence and satisfaction. At the neighborhood level, this means that incivilities indicators would be separate from indicators for neighborhood structure (status, stability, racial composition) and crime. In short, all versions of the thesis presume that discriminant validity (Campbell and Fiske, 1959) has been established for incivilities indicators. In this section, we will look at a small number of data sets to determine whether this presumption is correct.

A second important measurement question raised by the evolution of the incivilities thesis is multimethod convergent validity. As noted above, incivilities theories began with a focus on psychological dynamics (Wilson, Garofalo, and Laub), moved forward to an interest in social psychological processes (Wilson and Kelling), and finally evolved into a focus on community dynamics and outcomes (Skogan). Paralleling this drift across analysis levels have been shifts in the incivilities indicators used. For psychological processes, researchers used perceived incivilities. To capture social psychological and ecological variations in incivilities, most researchers have averaged survey-based perceptions across residents in a neighborhood. A smaller number of researchers have responded to the ecological drift by gathering onsite assessment data, including site and street block features and aggregating those items to the street block level for social psychological investigations, and to the neighborhood level for ecological investigations.¹⁰ Our confidence in the construct validity of incivilities will be boosted if we find that incivilities indicators from different methods converge. Researchers have not yet investigated this question. Ideally, at each level of aggregation, different indicators of incivilities based on different data collection procedures would correlate closely with one another and would barely correlate with related constructs (Campbell and Fiske, 1959).

Finally, the latest variant of the incivilities thesis focuses on changes over time. Changes in disorder should, according to Skogan, lead to a host of consequences for a neighborhood. However, researchers have not yet extensively examined relationships among disorder change indicators.

Discriminant validity

What evidence do we have that incivilities indicators are distinct from other features of a community, such as its structure, crime rates, and land-use patterns?

Structural dimensions of community. Researchers using census data to describe community structure generally refer to three independent dimensions: socioeconomic status, stability, and racial and youth composition (Berry and Kasarda, 1977; Hunter, 1974a, 1974b).¹¹ These dimensions appear when researchers analyze census data from cities in the United States and abroad. These three dimensions also can be used to describe the structural pathways along which neighborhoods may change over time (Hunter, 1974a; Taylor and Covington, 1988).

Socioeconomic status is captured by variables reflecting income levels, housing values, occupational status, educational levels, and the extent of poverty and unemployment. *Stability* is best captured by variables reflecting the extent of home ownership and the proportion of residents living at the same address during the 5 years prior to the census. Housing type, such as the percentage of single-family structures, is also relevant. *Race and youth composition* is reflected in percentages of Hispanic and African-American persons and the proportions of the population under the age of 5, or between 6 and 13 years of age.

Assessed incivilities indicators appear to be linked to neighborhood structure. Using 1981 data from onsite assessments of more than 800 street blocks in Baltimore, aggregated to the neighborhood level ($N=66$), we completed an exploratory principal-components analysis of assessment-based incivilities and land-use indicators (Taylor et al., 1985). We defined a general incivilities index based primarily on physical items, but included some social factors as well.¹² We found moderate to strong links between this index and both reported crime and community structure. The simple correlations were: crime, 0.64; instability, 0.59;

Exhibit 4. Exploratory Principal-Components Analysis of Community-Level Indicators

Component	1	2	3	4	5
VANDLSM2	0.916	0.092	0.070	-0.031	0.197
TEEN2	0.856	0.015	0.064	0.298	-0.016
ABNDBLD2	0.643	0.215	0.401	0.237	0.163
LENGTH5	0.032	-0.906	-0.054	0.281	-0.029
OWN	-0.224	-0.854	-0.121	-0.282	-0.110
ASTRATE	0.142	0.111	0.935	0.164	0.178
BLACK	0.144	-0.005	0.159	0.914	0.215
EDUC2	-0.485	0.103	-0.225	-0.615	0.459
ROBRATE	0.312	0.121	0.372	0.203	0.788
Lambda	2.411	1.644	1.277	1.585	0.989

Note: VANDLSM2, TEEN2, and ABNDBLD2 refer, respectively, to neighborhood problems with vandalism, unsupervised or rowdy teens, and abandoned buildings. Indicators are dichotomous. LENGTH5 refers to the proportion of residents living in the community at least 5 years. OWN is the proportion of homeownership respondents. ASTRATE is the reported assault rate. ROBRATE is the reported robbery rate. BLACK is the proportion of African-American respondents in the community. EDUC2 is the respondents' years of education. Varimax rotation. Community-level indicators are from five different data sets in five cities. The number of communities in each city appear below. Suburban communities were removed from the Chicago data set, as were Chicago communities with fewer than five respondents.

City	Frequency	Percent
Atlanta	6	2.8
Baltimore	30	13.9
Chicago	56	25.9
Minneapolis-St. Paul	24	11.1
Seattle	100	46.3
Total	216	100.0

income, -0.53; and proportion of African-Americans, 0.40 (Taylor et al., 1985). Neighborhood structure explained 63 percent of the variation in assessed signs of incivility and 55.8 percent of the variation in residents' perceived signs of incivility. Exploratory principal-components analyses closely connect this same incivilities index with a structural component capturing poverty, low education levels, and neighborhood instability. Even if we rotate four separate principal components, incivilities continue to load highly on a poverty component.

Reanalysis of data from 24 small commercial centers and their residential surroundings in Minneapolis-St. Paul showed neighborhood instability correlating 0.62 with vacancies in small commercial centers, and assessed graffiti correlating 0.87 with the percentage of the neighborhood that was African-American (Taylor, 1995c). Exploratory principal-components analyses with the Minneapolis-St. Paul data, looking at specific assessed incivilities rather than a broad index, linked graffiti with the racial dimension of neighborhood structure and vacancies with instability in the surrounding neighborhood.¹³ (For a description of the original data collection, see McPherson and Silloway, 1986.)

These two analyses suggest indicators of assessed incivilities are not readily separable from neighborhood structure and crime. When we turn to perceived disorder indicators, however, what do we find?

We constructed a 5-city data set spanning 216 communities. The data were drawn from Atlanta (Greenberg et al., 1982), Baltimore (Taylor, 1996a), Chicago (Lavrakas, 1982), Minneapolis-St. Paul (McPherson and Silloway, 1986), and Seattle (Mieth and Meier, 1995). Only the six neighborhood Atlanta data set overlaps with those examined by Skogan (1990). All five data sets share several perceived incivilities. Aggregating perceived incivilities to the community level and carrying out an exploratory principal-components analysis of those items along with neighborhood structure and crime indicators generates the results shown in exhibit 4. Five components were rotated: incivilities (1), crime (1), and neighborhood structure (3). The three incivilities emerge distinctly on their own components. The only other variable loading above 0.40 on this component is the average years of education of residents. In this set of cities, although data suggest a modest connection between

incivilities and low socioeconomic status, perceived incivilities appear to be relatively independent of crime and structure at the neighborhood level. This analysis is limited, of course.¹⁴ Reanalysis with more indicators and a confirmatory, rather than exploratory, approach is desirable.

Using the same variables from the five cities, but not including the two crime rate variables, we carried out a series of exploratory individual-level principal-components analyses, using four components: socioeconomic status, stability, race, and incivilities ($N=8,195$). Again, as with the ecological-level principal-components analyses, the incivilities indicators formed their own separate component. No other variables loaded above 0.40 on the incivilities component.¹⁵ At the individual level, perceived incivilities separate clearly from other social demographics. When we added two indicators for person-environment bonds (neighborhood satisfaction, and attachment to place) and completed an exploratory principal-components analysis requesting five components, perceived incivilities and person-environment bonds each associated with different components.

Crime. Using the same five-city data set, we examined neighborhood-level connections between neighborhood perceived incivilities and neighborhood crime rates, before and after controlling for neighborhood structure. The number of neighborhoods ranged from 6 in Atlanta to more than 100 in Seattle. Results appear in exhibit 5. The first column shows the city-by-city correlations of community-level perceived problems with vandalism, teens, and abandoned buildings, and the community robbery rate. The second column repeats these correlations after partialling for the percentage of African-Americans, percentage of homeowners, and average education level. The third and fourth columns repeat the same information for the assault rate. Correlations are averaged across the five cities at the bottom of the table. Given the small number of neighborhoods in Atlanta, the numbers are reaveraged after excluding Atlanta.

The partialled correlations based on the four cities suggest that community-level perceived incivilities correlate modestly with street crime rates after removing community structure; the average partialled correlations, excluding Atlanta, range from 0.20 to 0.43. Perceived incivilities at the community level overlap enough with crime to lend support for

The Incivilities Thesis: Theory, Measurement, and Policy

Hunter's proposal that the two may nonrecursively influence each other, even after controlling for common structural origins. Comparable analyses from multiple cities using assessed incivilities are needed.

Land-use features. Using our 1981 general index of assessed incivilities, which was based on information from 66 Baltimore neighborhoods (Taylor et al., 1985), we were able to separate signs of social and physical incivility from indicators of residential versus nonresidential land-use mix. (The resulting component loadings appear in endnote 11.) These results suggested that signs of incivility could be discriminated from land-use and block layout patterns and that indicators of signs of incivility converged as expected.

We were similarly successful in Baltimore and Philadelphia using street block data and more rigorous analytic techniques. In the early 1990s, Barbara Koons, Ellen Kurtz, and Jack Greene collected onsite information from a large number of blocks in Logan, a North Philadelphia neighborhood. Using this information, along with onsite assessments from 50 Baltimore blocks collected in the late 1980s, we successfully separated land-use mix from signs of incivility using confirmatory factor analyses (Taylor et al., 1995). I am not aware of any other data sources available that would permit examining connections between land-use and assessed incivilities.¹⁶

Defensible space features and territorial signage. If we turn to other microlevel features in the urban

Exhibit 5. Neighborhood-Level Correlations: Crime Rates and Perceived Incivilities

City	Incivility	Crime			
		Robbery Rate	Partialled	Assault Rate	Partialled
Atlanta	Vandalism	.53	.69	-.13	.99
	Rowdy Teens	.32	.81	.52	.06
	Abandoned Buildings	.76	.88	.94	.92
Baltimore	Vandalism	.10	.14	.10	.03
	Rowdy Teens	.09	.18	.32	.05
	Abandoned Buildings	.34	.33	.54	.26
Chicago	Vandalism	.22	.45	.23	.38
	Rowdy Teens	.30	.25	.38	.34
	Abandoned Buildings	.56	.30	.67	.50
Minneapolis-St. Paul	Vandalism	.72	.40	.73	.45
	Rowdy Teens	.32	.22	.46	.46
	Abandoned Buildings	.68	.38	.73	.63
Seattle	Vandalism	.71	.49	.72	.51
	Rowdy Teens	.51	.15	.62	.15
	Abandoned Buildings	.54	.18	.65	.31
Average	Vandalism	.46	.43	.33	.47
	Rowdy Teens	.31	.32	.46	.21
	Abandoned Buildings	.58	.41	.71	.52
Four-City Average	Vandalism	.44	.37	.45	.34
	Rowdy Teens	.31	.20	.45	.25
	Abandoned Buildings	.53	.30	.65	.43

Note: The four-city average ignores Atlanta's data because the city had only six neighborhoods. The second and fourth columns control for percentage of African-Americans, percentage of homeowners, and average education level.

residential environment, such as defensible space features and territorial signage (Taylor, 1988), we do not yet know if they can be separated from signs of incivility. Multitrait, multimethod investigations at the block and neighborhood level are needed. Territorial signage refers to things people do to sites to show that they own or care about them. Features may include high levels of upkeep, intensive gardening, and signs of personal identification.

Summing discriminant validity. Is it possible to separate disorder at the community level from community structure and crime? The answer is yes, if we use indicators based on aggregated resident perceptions. It is not as easy to clearly separate them if we rely on indicators from onsite assessments. Analyses at the street block level in two different cities and at the neighborhood level in one city show that assessed incivilities are clearly separable from land-use features. At the community level, discriminant validity with respect to some community features depends in part on the type of indicator used.

At the individual level, disorder appears to be easily separable from other constructs, such as person-environment bonds, when both constructs rely on the same data collection instrument. Researchers have not yet investigated connections between disorder and related constructs like territorial signage, where the two constructs rely on different data collection methods.

Convergent validity and multiple assessment modes

A key idea behind the multitrait, multimethod approach to validity is that expected convergences and divergences within and between constructs, respectively, should appear even when multiple methods provide indicators of the same construct (Campbell and Fiske, 1959). When we turn to multiple methods, focusing on cross-sectional or longitudinal perspectives, we see incivilities indicators from different data sources failing to converge as expected.

Using cross-sectional data described in detail in Perkins and Taylor (1996), I completed an exploratory principal-components analysis of indicators of signs of incivility and crime. The analysis suggested two independent dimensions.¹⁷ The results appear in exhibit 6.

These mid-1980s data come from analyses of 50 different blocks, each in a different neighborhood in Baltimore. Three types of assessment are included: onsite assessments by trained raters, perceptions as reported by residents and aggregated to the block level, and coverage of crime and incivility issues in the neighborhood as reported by local newspapers.

Unfortunately, the multitrait, multimethod matrix does not generate strong evidence of convergent and discriminant validity independent of assessment method. Three variables with high loadings on the first component refer to signs of incivility: perceived social disorder, perceived physical disorder, and assessed incivilities of on-block households. These three high loadings suggest the first component refers to signs of incivility. Two survey items “go together” with one of our onsite assessment indicators.

Regrettably, this interpretation runs into two problems. First, onsite assessments of social incivilities—counts of people outside—do not load strongly on the component (0.168). In addition, serious crime news, measured from newspaper stories, does load on the component (0.639).

On the second component, the item with the highest loading is disorder news from newspaper stories. Nonresidential assessed incivilities, groups of young males loitering, and other crime news also load highly on the component, as does serious crime news. In short, the second component contains indicators of both signs of incivility and crime from two different methods. The second component appears to favor items based on newspaper sources.

The results from these 50 blocks in Baltimore are somewhat encouraging, in that two survey-based disorder items and one assessment-based disorder item appear together. However, they are discouraging because one component seems to favor the survey items, while the second component favors newspaper- or assessment-based items. Such results need to be considered with great caution given the small number of cases.

The incivilities thesis, especially as stated by Wilson and Kelling and Skogan, emphasizes the importance of *changes* in disorder. In 1981 and 1982, we collected survey data from residents in a random sample of Baltimore neighborhoods and completed onsite assessments in those neighborhoods (Taylor, 1996;

Exhibit 6. Exploratory Principal-Components Analysis of Cross-Sectional Disorder Indicators: Loadings

Variable	Name	Component I	Component II
Perceived physical disorder [S]	ZPHYSINC	0.94	0.10
Average residential address-level score on index combining litter, dilapidation, and vandalism [A]	ZAGINCIV	0.85	0.24
Perceived social disorder [S]	ZSOCINCV	0.85	0.24
Serious crime news (homicides, rapes, assaults, robberies, burglaries) [N]	ZSERCRNW	0.64	0.58
Disorder news (physical deterioration, racial unrest) [N]	ZDISNEWS	0.05	0.82
Nonresidential disorder (poorly maintained open land, graffiti, dilapidated buildings) [A]	ZNRINCIV	0.27	0.77
Young men outdoors (as proportion of housing units on block) [A]	ZMALEPRO	0.17	0.74
Quality-of-life crime news (drug abuse, carrying weapons, domestic disturbances, prostitution, vandalism, disorderly conduct) [N]	ZOTHCRNW	0.54	0.72
Lambda (before rotation)		4.61	1.32

Note: Principal-component loadings given are after varimax rotation.

Note: [S] = survey-based data source; [A] = onsite assessment items; [N] = based on newspaper archive. Survey and assessment information is based on 50 blocks, each in a separate neighborhood; newspaper data are based on reports from each of 50 neighborhoods during the study period. For more detail, see Perkins and Taylor (1996).

The loadings that are shown indicate how strongly each variable “correlates” with the broader component. A large number indicates a stronger “correlation.” Lambda indicates the size of the underlying component before rotation. A larger lambda indicates a more sizable component. Components are rotated using a varimax solution, designed to provide simple structure, i.e., a few variables with high loadings, and the remaining variables with loadings close to zero.

Taylor and Covington, 1993). Returning to a stratified sample of 30 of those neighborhood blocks in 1994, we interviewed residents again and completed onsite assessments. These data permit us to see how unexpected changes in perceived incivilities and assessed incivilities relate. Each variable in the analysis reflects unexpected change—1994 scores after partialling for respective 1981–82 scores. We used two survey-based measures of perceived changes in disorder: changes in physical incivilities and changes in social incivilities. We used two measures in assessed disorder: changes in vacant, boarded up houses and changes in the amount of graffiti.

Exploratory principal-components analysis suggests changes in disorder based on survey questions are relatively separate from changes based on onsite assessments. The results appear in exhibit 7.

Two measures of changing perceptions of disorder relate closely to one another, appearing with large loadings on the first component. Two measures of changing physical conditions based on assessments relate closely to one another and have high loadings on the second component. Stated differently, the changes cluster according to the assessment method used.

We repeated the analysis adding reactions to crime, such as changes in avoidance. Again, the survey items related closely to one another, loading better than 0.80 on their dimension. The two assessment items loaded better than 0.80 on a separate dimension.

Repeating the analysis again adding unexpected changes in three crimes—robbery, assault, and larceny—provided a diffuse pattern as well. The crime variables went together on one dimension, the survey items went on a different dimension, and the assessment variables clustered by themselves. If we asked for a two- rather than three-component solution, results became rather unclear, but we still saw the assessment-based variables separating from the survey-based variables.¹⁸

These analyses using different data sources raise questions. The latter finding regarding changes in disorder, although deserving an extremely cautious interpretation, suggests that changes in disorder may be far less unitary than previously thought. Neighborhoods where perceptions of disorder were increasing were not necessarily the same neighborhoods where

on-street conditions were worsening, nor were they the same neighborhoods where crime rates were rising.

The divergent patterns apparent in the latter analysis suggest two possible interpretations. One is that changes in different incivilities indicators may be driven by different processes. For example, the processes driving shifts in residents' perceptions may be heavily influenced by media reports and certain high-profile events in the neighborhood, whereas changes in vacancies may be driven by longer term trends in local housing and job markets.

Another possible interpretation is that perceptions do not immediately respond to ongoing changes in the locale. The perceptions may be “sticky” and slow to incorporate more recent events.¹⁹

Conclusions on measurement questions

This portion of the paper addresses three measurement questions raised by the incivilities thesis.

The first and second questions are: Can we separate incivilities indicators from related constructs? Are incivilities at the neighborhood level distinct from community structure and community crime rates? The answer to both questions is yes if we use aggregated indicators based on residents' perceptions. If we use assessed indicators, we have more trouble separating them from community structure and crime, but we can separate them from land-use features. At the individual level, perceived incivilities appear to be easily separable from related constructs, such as attachment to place. In short, discriminant validity for survey-based items appears acceptable, but not so for assessment-based items.

The third question asked about cross-sectional and longitudinal convergent validity is: Do incivilities indicators based on different data collection methods converge as expected? The data examined suggest they do not. Cross-sectionally, at the street block and neighborhood levels, indicators tend to converge as much by method as by construct. When we examine longitudinal data focusing on unexpected changes in neighborhoods over an extended period, such as a decade, indicators also cluster by method. Other researchers using shorter time frames have observed comparable patterns.

Implications for policy practice and theory

There are four approaches to gauging the amount of disorder in a locale: surveys, onsite assessments of conditions by trained raters, census data, and archival data. Most of the work on the incivilities thesis has used indicators based on the first two methods.

Incivilities theorizing, as described above, has moved through several levels over time, with a current focus on neighborhood dynamics. At the neighborhood level, we have a choice of how to measure incivilities,

relying either on aggregated survey responses or assessments of local conditions. Theoretically, which is more appropriate?

One can argue for aggregated survey responses because those capture residents' current views, subject only to the limitations of the sampling and surveying processes. They provide a snapshot of how residents gauge the problems in the community, and reveal the collective view.

Alternatively, one can argue for reliance on assessments. For example, by counting boarded-up houses, abandoned stores, and graffiti, raters can present

Exhibit 7. Unexpected Changes in Disorder: Exploratory Principal-Components Analysis

Variable	Component I	Component II
Unexpected changes in perceived social incivilities [S]	0.91	-0.09
Unexpected changes in perceived physical incivilities [S]	0.84	0.29
Unexpected changes in vacant, boarded up houses [A]	-0.02	0.83
Unexpected changes in graffiti [A]	0.17	0.80
Lambda	1.77	1.20

Note: [S] = survey-based data source, 17–28 respondents per neighborhood (24 = average); [A] = onsite assessment items.

All indicators are neighborhood-level indicators. Unexpected change = 1994 actual score–1994 predicted score, where the actual score is an empirical Bayes estimate of true neighborhood score derived from hierarchical linear models (HLM). The predicted score is likewise derived from HLM ($n=30$ neighborhoods).

For the onsite assessment items, the period of change is 1981–1994 with the same blocks assessed in 1981 and 1994. For the survey items, the period of change is 1982–1994. Excellent inter-rater reliability was obtained for both items at both time points. For vacant houses, the reliability coefficients were 0.78 (1981) and 0.93 (1995) using Cronbach's alpha. For graffiti present/absent on each block, the reliability coefficients were 0.78 (1981) and 0.83 (1995) using Kappa as the reliability coefficient.

The perceived problems used the standard format in which respondents were asked if the issue was not a problem (0), somewhat of a problem (1), or a big problem (2). We carried out a principal-components analysis of the perceived problems, extracting two eigenvalues explaining 60 percent of the total variance. Rotating the two components to a varimax solution one component picks up physical problems only: vacant houses, vacant lots, people who do not maintain their property, and litter. A second component focuses on social problems: insults, teens, noise, bad elements moving in, and people fighting. Vandalism had moderate loadings on both components. Putting vandalism together with the other physical problems, we created an index with a reliability (alpha) of 0.80. The reliability of the social problems was 0.86.

conditions on neighborhood streets subject only to the limitations linked to the raters' schedule of observations and inter-rater agreement.

Practitioners and policymakers evaluating initiatives geared to reducing incivilities need to choose the type of data on which they will rely for evaluating program impact. The foregoing analyses suggest which type they choose will have important implications for their evaluations.

If they choose survey-based assessments, they are focusing on an outcome more readily separable from fundamental community fabric. It should be easier to achieve changes on survey-based outcomes than on assessment-based outcomes because the former are somewhat more independent. If they choose survey-based measures, they can more easily argue that incivilities are a problem separate from neighborhood fabric and neighborhood crime and can more easily produce results.

The analyses presented, however, in particular the investigation into changes in incivilities, warn against assuming that conditions have improved just because residents think they have. Over a long period, such as a decade, it appears that different incivility indicators tap into different pathways of neighborhood change. Resident perceptions might worsen while neighborhood conditions improve, or the reverse could occur. Other researchers, using much shorter timeframes of 1 to 2 years, also find divergence between perceived incivility changes and assessed incivility changes (Giacomazzi et al., 1996; Popkin et al., 1996). If evaluators rely on survey-based incivility indicators, they may more readily find resident views improved but will not necessarily know how conditions have actually changed.

In sum, what we know about disorder and how to remedy these conditions depends on the theory used to frame the issue and the type of indicators chosen. The version of the theory receiving strongest empirical support to date is the Wilson, Garofalo, and Laub, individual-level theory. In addition, the disorder indicators it views as appropriate—survey-based reports of neighborhood problems—have demonstrated the expected convergent and discriminant validity patterns. These indicators point most clearly to a separate problem deserving separate policy attention. The intervention focus suggested by the thesis calls for identifying individuals who are more troubled by

local conditions than their neighbors and intervening with those individuals.

By contrast, when we move to the later versions of the incivilities thesis, shifting from an individual to a community focus, and from a cross-sectional to a longitudinal perspective, empirical support is much weaker and measurement questions persist. To date, we have no longitudinal tests of the independent contributions of incivilities to neighborhood changes in fear, crime, or structure. In addition, it is not clear if we should rely on onsite assessments or aggregated resident perceptions to gauge incivilities. The two types of indicators appear to reflect different, relatively independent dynamics and fail to demonstrate convergent validity when indicators from more than one method are used.

Researchers, practitioners, and policymakers also may want to widen the scope of inquiry into incivilities to consider two additional issues: a group that has been excluded in previous studies and a concept that has been ignored.

Researchers have overlooked many others who use neighborhoods besides residents: business personnel working at local establishments; or service providers passing through, such as delivery drivers, cable technicians, or phone company personnel. Researchers have not considered their perspectives: What types of local conditions draw their attention? Do they make inferences comparable to those made by residents? Are their conclusions markedly different? In short, are the attributions made dependent on the type of interpreter? We have one study from Minneapolis-St. Paul where impacts of assessed incivilities on business personnel were the opposite of what was expected based on research with residents (Taylor, 1997a).

Turning back to theory, researchers also have not explored the connection between incivilities and social disorganization. An extraordinarily rich conceptual and empirical literature exists on the latter topic (Kornhauser, 1978; Sampson 1988, 1991; Sampson and Grove, 1989). One of the premier items used to gauge social disorganization is the presence of unsupervised teen groups. This concern also has been labeled as a key social incivility. Are social incivilities little more than indicators of social disorganization, or do they refer to a related but distinct set of local processes? How should we establish the latter processes? If we are concerned that incivilities are little more

than perceived social disorganizing action, how do we resolve those concerns? Is the Wilson, Garofalo, and Laub incivilities thesis no more than the psychological counterpart of community social disorganization dynamics?

The discussion here faintly echoes the debate in the 1960s in the literature regarding anomie, social status, and delinquency (Chilton, 1964; Gordon, 1967; Lander, 1954). Given our current concerns, if we consider the relationship between incivilities and social disorganization, research in this area will at least become less theoretically insular.

Portions of earlier versions of this paper were presented at the annual meetings of the American Psychological Association, New York City, August 1995; and at the first National Institute of Justice and Office of Community Oriented Policing Services-sponsored conference on "Measuring What Matters," Washington, D.C., November 1995. The author is indebted to Bob Langworthy, who played a key role in the genesis of this paper; Steve Edwards, whose many thoughtful comments on these topics helped sharpen my own thinking; and Phyllis McDonald and Ron Davis, who provided helpful comments on previous drafts. The author received support from grants 96-IJ-CX-0067, 94-IJ-CX-0018, and 93-IJ-CX-0022 from the National Institute of Justice during the preparation of this manuscript. Opinions expressed herein are solely the author's and reflect neither the official policies nor the opinions of the National Institute of Justice or the U.S. Department of Justice. Address correspondence to RBT, Criminal Justice, Temple University, Gladfelter Hall, Philadelphia, PA 19122; V1008E@VM.TEMPLE.EDU.

Notes

1. It is not possible within the confines of this article to also review empirical work on the impacts of physical and social incivilities or empirical work on community policing impacts on incivilities.

2. Skogan and Maxfield's (1981) indirect victimization model also attempts to address this question. Instead of moving beyond crime per se, the authors discuss how crime impacts can be amplified through local social networks.

3. Although, to my knowledge, this presentation was never published, it significantly influenced workers in the field at that time and merits attention here. Hunter's influence can

be seen in publications like Lewis and Maxfield (1980) and Skogan and Maxfield (1981).

4. Hunter appears to be the first to coin the term "symbols of incivility."

5. Whereas Hunter allows that residents would make inferences about residents within the neighborhood, public agencies outside the neighborhood, or both, Wilson and Kelling suggest that the inference made refers to internal actors, such as other residents.

6. Unrepaired signs of incivility inspire nonserious crime initially, but contribute to later increases in serious crime arising from offender in-migration. Unfortunately, Wilson and Kelling fail to explain how prior crime levels might contribute to unrepaired signs of incivility in the first place. Their view appears to be different from Hunter's. He suggests that crime and incivilities have the same structural origin and are nonrecursively locked in an escalating loop.

7. Skogan's modeling of incivilities as mediating variables seems counter to his statement that incivilities make an independent contribution to the outcomes examined.

8. Skogan uses robbery victimization as an outcome variable, but does not carry out analyses that use victimization as a predictor, so that its impact can be separated from the impact of perceived incivilities.

9. The partial impact, however, exceeded the coefficient linking perceived vandalism with assessed vandalism on the block, suggesting that onsite incivilities may influence local crime in ways that do not involve residents' perceptions.

10. The only previously archived data set containing extensive assessed and perceived incivilities at the Inter-university Consortium for Political and Social Research is from Minneapolis-St. Paul (McPherson and Silloway, 1986).

11. Prior to 1970, variables describing youth population related to the stability dimension, which was sometimes referred to as the familism dimension. From 1970 to the present, youth population relates more closely to the race dimension. Thus, we refer to the latter as a race and youth dimension.

12. The individual items and the principal component loadings are shown below. The loadings show the "correlation" between the item and the underlying, broader component. The larger the lambda, the more sizeable the component.

	Commercial/ Incivilities	Residential
Small groups	.86	.06
Graffiti	.78	.33
Volume of males on street	.72	-.04
Vacant houses	.71	.23
Housing density/block size	.69	.32
Litter	.69	.46
Commercial/industrial/ institutional land use	.13	.86
Percent residential frontage	-.35	-.84
Parking lots	.04	.77
Amenities drawing foot traffic	.31	.64
High traffic/high volume streets	.08	.52
Vacant lots	.14	.50
Lambda	5.25	1.79

13. The exploratory principal-components analyses reported here for Baltimore and Minneapolis-St. Paul need to be interpreted with extreme caution, given the extremely low ratios of cases to variables.

14. Although this exploratory principal-components analysis has an acceptable ratio of cases to variables (216:9), it is problematic in that socioeconomic status and racial composition have only one indicator variable each. Thus, these components cannot be clearly defined. Nonetheless, we have three perceived indicators of incivilities which provide a relatively clear definition.

15. Removing Seattle from the analysis, because its more than 5,000 cases drove the analysis, and reanalyzing the remaining 2,893 cases, produced slightly different results. Most notably, education almost reached a sizable negative loading (-0.39) on the incivilities component, suggesting that low socioeconomic status and perceived neighborhood problems are weakly related. However, the incivilities indicators continued to load tightly together.

16. The Greenberg et al. (1982) data set from Atlanta contains perceived incivilities along with land-use information. But, it does not contain information on assessed incivilities.

17. Strictly speaking, principal-components analysis extracts linear composites, not underlying dimensions. These results should be viewed cautiously because the ratio of variables to cases does not reach the recommended ratio of 1:10.

18. Some researchers might argue that we should have tried a solution rotating to correlated components rather than orthogonal components and simple structure.

Oblique rotations raise extremely serious concerns about construct clarity (Gordon, 1968). Furthermore, looking at the factor loadings suggested clear orthogonality between the two components noted in exhibit 7.

19. I am indebted to Pam Lattimore and Jack Riley from the National Institute of Justice for this suggestion.

References

- Baldwin, J., and A.E. Bottoms. *The Urban Criminal*. London, England: Tavistock, 1976.
- Berry, B.J.L., and J.D. Kasarda. *Contemporary Urban Ecology*. New York: Macmillan, 1977.
- Boyd, L.H., and G.R. Iversen. *Contextual Analysis: Concepts and Statistical Techniques*. Belmont, WA: Wadsworth, 1979.
- Bryant, K. "Methodological Convergence as an Issue Within Environmental Cognition Research." *Journal of Environmental Psychology* 4 (1984): 43–60.
- Buerger, M.E. "The Limits of Community." In *The Challenge of Community Policing*, ed. D. Rosenbaum. Thousand Oaks, CA: Sage Publications, Inc., 1994: 270–274.
- Buerger, M.E. "A Tale of Two Targets: Limitations of Community Anticrime Actions." *Crime and Delinquency* 40 (1994): 384–410.
- Bursik, R.J. "Social Disorganization and Theories of Crime and Delinquency." *Criminology* 26 (1988): 519–551.
- Campbell, D., and D. Fiske. "Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix." *Psychological Bulletin* 56 (1959): 81–105.
- Chilton, R.J. "Continuity in Delinquency Area Research: A Comparison of Studies for Baltimore." *American Sociological Review* 29 (1964): 71–83.
- Cloward, R.A., and L.E. Ohlin. *Delinquency and Opportunity*. New York: Free Press, 1960.
- Cook, F.L., and W.G. Skogan. "Evaluating the Changing Definition of a Policy Issue in Congress: Crime Against the Elderly." In *Public Policy and Social Institutions*, ed. H.R. Rodgers, Jr. Greenwich, CT: JAI Press, 1984: 287–332.
- Covington, J., and R.B. Taylor. "Fear of Crime in Urban Residential Neighborhoods: Implications of Between and Within-Neighborhood Sources for Current Models." *The Sociological Quarterly* 32 (1991): 231–249.

The Incivilities Thesis: Theory, Measurement, and Policy

- Craik, K.H., and D. Appleyard. "Streets of San Francisco: Brunswik's Lens Model Applied to Urban Inference and Assessment." *Journal of Social Issues* 36 (1980): 72–85.
- Dubow, F., E. McCabe, and G. Kaplan. *Reactions to Crime: A Critical Review of the Literature*. Washington, DC: U.S. Government Printing Office, 1979, NCJ 061955.
- Eck, J. "REVIEW ESSAY: Examining Routine Activity Theory." *Justice Quarterly* 12 (1995): 783–797.
- Eck, J. "Preventing Crime at Places." In *Preventing Crime: What Works, What Doesn't, What's Promising*, ed. L.W. Sherman, D. Gottfredson, D. MacKenzie, P. Reuter, and S. Bushway. Research Report. Washington, DC: U.S. Department of Justice, National Institute of Justice, 1997, NCJ 165366.
- Evans, G.W. "Environmental Cognition." *Psychological Bulletin* 88 (1980): 259–287.
- Ferraro, K.F. *Fear of Crime: Interpreting Victimization Risk*. Albany, NY: SUNY Press, 1994.
- Fisher, B. "A Neighborhood Business Area Is Hurting: Crime, Fear and Disorders Take Their Toll." *Crime and Delinquency* 37 (1991): 363–373.
- Garofalo, J., and J. Laub. "The Fear of Crime: Broadening Our Perspective." *Victimology* 3 (1978): 242–253.
- Giacomazzi, A.L., E.F. McGarrell, and Q.C. Thurman. "Reducing Disorder, Fear and Crime in Public Housing: An Evaluation of a Drug Crime Elimination Program in Spokane, Washington." Draft Final Report. 1996.
- Goldstein, H. *Problem-Oriented Policing*. Philadelphia: Temple University Press, 1990.
- Goldstein, H. *The New Policing: Confronting Complexity*. Research in Brief. Washington, DC: U.S. Department of Justice, National Institute of Justice, 1993, NCJ 145157.
- Gordon, R.A. "Issues in the Ecological Study of Delinquency." *American Sociological Review* 32 (1967): 927–944.
- Gordon, R.A. "On the Interpretation of Oblique Factors." *American Sociological Review* 33 (1968): 601–620.
- Green, L. *Policing Places with Drug Problems*. Thousand Oaks, CA: Sage Publications, Inc., 1996.
- Greenberg, S.W., J.R. Williams, and W.R. Rohe. "Safety in Urban Neighborhoods: A Comparison of Physical Characteristics and Informal Territorial Control in High and Low Crime Neighborhoods." *Population and Environment* 5 (1982): 141–165.
- Greene, J.R., and S. Mastrofski, eds. *Community Policing: Rhetoric or Reality?* New York: Praeger, 1988.
- Greene, J.R., and R.B. Taylor. "Community-Based Policing and Foot Patrol: Issues of Theory and Evaluation." In *Community Policing: Rhetoric or Reality?*, ed. J.R. Greene and S.D. Mastrofski. New York: Praeger, 1988: 195–224.
- Greene, R., and E. McLaughlin. "Facilitating Communities Through Police Work: Drug Problem Solving and Neighborhood Involvement in Philadelphia." In *Drugs and the Community*, ed. R.C. Davis, A. Lurigio, and D.P. Rosenbaum. Springfield, IL: Charles C. Thomas, 1993: 141–161.
- Harrell, A., and C. Gouvis. "Community Decay and Crime." Final Report. Washington, DC: The Urban Institute, 1994.
- Harries, K.D. *Crime and the Environment*. Springfield, IL: Charles C. Thomas, 1980.
- House, J.S., D. Umberson, and K.R. Landis. "Structure and Processes of Social Support." *Annual Review of Sociology* 14 (1988): 293–318.
- Hunter, A. "Community Change: A Stochastic Analysis of Chicago's Local Communities, 1930–1960." *American Journal of Sociology* 79 (1974a): 923–947.
- Hunter, A. *Symbolic Communities*. Chicago: University of Chicago Press, 1974b.
- Jacobs, J. *The Death and Life of the American City*. New York: Vintage, 1961.
- Kelling, G. "Restore Order and You Reduce Crime." *The Washington Post*, February 9, 1997, C3.
- Kelling, G., and C. Coles. *Fixing Broken Windows: Restoring Order and Reducing Crime in American Cities*. New York: Free Press, 1996.
- Kirschenbaum, A. "Sources of Neighborhood Residential Change: A Micro-Level Analysis." *Social Indicators Research* 12 (1983): 183–198.
- Kornhauser, R.R. *Social Sources of Delinquency*. Chicago: University of Chicago Press, 1978.

Kurtz, E., and R.B. Taylor. "Fear of Crime: Testing Interactions Between Individual and Context." Draft Manuscript. Philadelphia: Temple University, Department of Criminal Justice, 1995.

LaGrange, R.L., and K.F. Ferraro. "Assessing Age and Gender Differences in Perceived Risk and Fear of Crime." *Criminology* 27 (1989): 697–719.

Lander, B. *Towards an Understanding of Juvenile Delinquency*. New York: Columbia University Press, 1954.

Lavrakas, P.J. "On Households." In *Reactions to Crime*, ed. D.A. Lewis. Beverly Hills, CA: Sage Publications, Inc., 1981: 67–85.

Lavrakas, P.J. "Fear of Crime and Behavioral Restrictions in Urban and Suburban Neighborhoods." *Population and Environment* 5 (1982): 242–264.

Lee, T., and R.W. Marans. "Objective and Subjective Indicators: Effects of Scale Discordance on Interrelationships." *Social Indicators Research* 8 (1980): 47–64.

Lewis, D.A., and M.G. Maxfield. "Fear in the Neighborhoods: An Investigation of the Impact of Crime." *Journal of Research in Crime and Delinquency* 17 (1980): 160–189.

Lewis, D.A., and G. Salem. *Fear of Crime*. New Brunswick, NJ: Transaction Books, 1986.

Little, J.T. "Residential Preferences, Neighborhood Filtering and Neighborhood Change." *Journal of Urban Economics* 3 (1976): 68–81.

McPherson, M., and G. Silloway. "The Role of the Small Commercial Center in the Urban Neighborhood." In *Urban Neighborhoods: Research and Policy*, ed. R.B. Taylor. New York: Praeger: 1986: 144–180.

McPherson, M., G. Silloway, and D.L. Frey. *Crime, Fear, and Control in Neighborhood Commercial Centers*. Minneapolis: Minnesota Crime Prevention Center, 1983.

Miethe, T.D., and R.F. Meier. *Crime and Its Social Context*. Albany, NY: SUNY Press, 1994.

Moore, G.T. "Knowing About Environmental Knowing: The Current State of Theory and Research on Environmental Cognition." *Environment and Behavior* 11 (1979): 33–70.

Moran, R. "New York Story: More Luck Than Policing." *The Washington Post*, February 9, 1997, C3.

Pate, A.M. "Experimenting with Foot Patrol: The Newark Experience." In *Community Crime Prevention: Does It Work?*, ed. D.P. Rosenbaum. Beverly Hills, CA: Sage Publications, Inc., 1986: 137–156.

Pate, A.M. "Community-Oriented Policing in Baltimore." In *Police and Policing: Contemporary Issues*, ed. D.J. Kenney. New York: Praeger, 1989: 112–135.

Perkins, D.D., and R.B. Taylor. "Ecological Assessments of Disorder: Their Relationship to Fear of Crime and Theoretical Implications." *American Journal of Community Psychology* 24 (1996): 63–107.

Perkins, D.D., J.W. Meeks, and R.B. Taylor. "The Physical Environment of Street Blocks and Resident Perceptions of Crime and Disorder: Implications for Theory and Measurement." *Journal of Environmental Psychology* 12 (1992): 21–34.

Popkin, S., V.E. Gwiasda, J.M. Amendiola, A.A. Anderson, G. Hanson, W.A. Johnson, E. Martel, L.M. Olson, and D.P. Rosenbaum. "The Hidden War: The Battle to Control Crime in Chicago's Public Housing." Draft Final Report. Chicago: Abt Associates Inc., 1997.

Ross, C.E., and S.J. Jang. "Community Disorder, Fear and Distrust: The Buffering Role of Incivilities." Paper presented at the annual meeting of the American Society of Criminology. Chicago: November 1996.

Rountree, P., and K. Land. "Perceived Risk Versus Fear of Crime: Empirical Evidence of Conceptually Distinct Reactions in Survey Data." *Social Forces* 74 (1996a): 1353–1376.

Rountree, P., and K. Land. "Burglary Victimization, Perceptions of Crime Risk, and Routine Activities: A Multilevel Analysis Across Seattle Neighborhoods and Census Tracts." *Journal of Research in Crime and Delinquency* 33 (1996b): 147–180.

Sampson, R.J. "Local Friendship Ties and Community Attachment in Mass Society: A Multilevel Systemic Model." *American Sociological Review* 53 (1988): 766–779.

Sampson, R.J. "Linking the Micro- and Macro-Level Dimensions of Community Social Organization." *Social Forces* 70 (1991): 43–64.

Sampson, R.J., and W.B. Grove. "Community Structure and Crime: Testing Social Disorganization Theory." *American Journal of Sociology* 94 (1989): 774–802.

Sherman, L.W. "Communities and Crime Prevention." In *Preventing Crime: What Works, What Doesn't, What's*

The Incivilities Thesis: Theory, Measurement, and Policy

Promising, ed. L.W. Sherman, D. Gottfredson, D. MacKenzie, P. Reuter, and S. Bushway. Research Report. Washington, DC: U.S. Department of Justice, National Institute of Justice, 1997, NCJ 165366.

Skogan, W. "Fear of Crime and Neighborhood Change." In *Communities and Crime*, vol. 8, ed. A.J. Reiss, Jr., and M. Tonry. Chicago: University of Chicago Press, 1986: 203–230.

Skogan, W. *Disorder and Decline: Crime and the Spiral of Decay in American Cities*. New York: Free Press, 1990.

Skogan, W., and A.J. Lurigio. "The Correlates of Community Anti-Drug Activism." *Crime and Delinquency* 38 (1992): 510–521.

Skolnick, J.H. "Making Sense of the Crime Decline." *Newsday*, February 2, 1997, G6, G15.

Spelman, W., and J.E. Eck. *Problem-Oriented Policing*. Research in Brief. Washington, DC: U.S. Department of Justice, National Institute of Justice, 1987, NCJ 102371.

Taub, R.P., G. Taylor, and J. Dunham. *Paths of Neighborhood Change*. Chicago: University of Chicago Press, 1984.

Taylor, R.B. *Human Territorial Functioning*. Cambridge, England: Cambridge University Press, 1988.

Taylor, R.B. "Impact of Crime on Communities." *Annals of the American Academy of Political and Social Science* 539 (1995a): 28–45.

Taylor, R.B. "Measuring and Distinguishing Community Disorder: Practical and Theoretical Implications." Paper for "Measuring What Matters," the Policing Research Institute. Washington, DC: U.S. Department of Justice, National Institute of Justice and Office of Community Oriented Policing Services, November 1995b.

Taylor, R.B. *Responses to Disorder in Minneapolis-St. Paul: Relative Impacts of Neighborhood Structure, Crime, and Physical Deterioration*. Final Report produced for the U.S. Department of Justice, National Institute of Justice. Philadelphia: Temple University, Department of Criminal Justice, July 1995c.

Taylor, R.B. "Impacts of Crime and Grime on Reactions to Crime, Neighborhood Crime Changes, and Changes in Neighborhood Structure." Draft Final Report. Philadelphia: Temple University, Department of Criminal Justice, 1996a.

Taylor, R.B. "The Systemic Model of Attachment, Neighborhood Use Value, and Responses to Disorder." *Sociological Forum* 11 (1996b): 41–74.

Taylor, R.B. "Relative Impacts of Disorder, Structural Change, and Crime on Residents and Business Personnel in Minneapolis-St. Paul." In *Community Crime Prevention at the Crossroads*, ed. S. Lab. Cincinnati: Anderson, 1997a.

Taylor, R.B. "Social Order and Disorder of Street Blocks and Neighborhoods: Ecology, Microecology and the Systemic Model of Social Disorganization." *Journal of Research in Crime and Delinquency* 33 (1997b): 113–155.

Taylor, R.B., and J. Covington. "Neighborhood Changes in Ecology and Violence." *Criminology* 26 (1988): 553–589.

Taylor, R.B., and J. Covington. "Community Structural Change and Fear of Crime." *Social Problems* 40 (1993): 374–397.

Taylor, R.B., and M. Hale. "Testing Alternative Models of Fear of Crime." *Journal of Criminal Law and Criminology* 77 (1986): 151–189.

Taylor, R.B., B. Koons, E. Kurtz, J. Greene, and D. Perkins. "Street Blocks with More Nonresidential Land Use Have More Physical Deterioration: Evidence from Baltimore and Philadelphia." *Urban Affairs Review* 30 (1995): 120–136.

Taylor, R.B., and S.A. Shumaker. "Local Crime as a Natural Hazard: Implications for Understanding the Relationship Between Disorder and Fear of Crime." *American Journal of Community Psychology* 18 (1990): 619–642.

Taylor, R.B., S.A. Shumaker, and S.D. Gottfredson. "Neighborhood-Level Links Between Physical Features and Local Sentiments: Deterioration, Fear of Crime, and Confidence." *Journal of Architectural Planning and Research* 2 (1985): 261–275.

Wilson, J.Q. *Thinking About Crime*. New York: Basic Books, 1975.

Wilson, J.Q., and G. Kelling. "Broken Windows." *Atlantic Monthly* 211 (1982): 29–38.

Wilson, W.J. *When Work Disappears: The World of the New Urban Poor*. New York: Knopf, 1996.