

ASSESSING THE BEHAVIORAL CONTEXT OF VICTIMIZATION*

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One of the greatest shortcomings of victimization research has been the failure to understand the behavioral context within which crimes occur. The routine activities of citizens are widely viewed as explaining in part who falls victim to crime. The relatively low rates of victimization reported by the elderly are commonly attributed to their generally circumspect behavior, which seems to grant them less exposure to risk. People also vary in the extent to which they take specific precautions, such as installing special locks or alarms, to avoid falling victim. Those encouraging community crime prevention efforts have acted on the presumption that these activities yield positive benefits. Yet a close reading of the research on victimization fails to support most of these assumptions. Most studies of crime-related behavior have been underconceptualized and have employed inadequate measures, hence have not yielded reliable findings with regard to the personal significance of what people do.

The concept of victim precipitation employed by Wolfgang,¹ Normandeau,² and others, is but one example of how researchers have pointed to the behavior of ordinary, non-criminal citizens to explain the incidence and distribution of victimization. More recently, theories employing concepts of exposure to risk and opportunity have drawn upon the routine activities of ordinary citizens to explain who among them is likely to fall victim to crime. None of the studies based on these notions has directly tested the utility of these ideas, however. Hindelang and his colleagues,³ Corrado and his colleagues,⁴ and others who have empha-

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¹ Wolfgang, *Victim Precipitated Criminal Homicide*, 48 J. CRIM. L.C. & P.S. 1 (1957).

² A. Normandeau, *Trends and Patterns in Crimes of Robbery* (Ph.D. dissertation, University of Pennsylvania, 1968).

³ M. HINDELANG, M. GOTTFREDSON & J. GAROFALO, *VICTIMS OF PERSONAL CRIME: AN EMPIRICAL FOUNDATION FOR A THEORY OF PERSONAL VICTIMIZATION* (1978).

⁴ R. Corrado, W. Glackman & R. Roesch, *EXTENT AND DISTRIBUTION OF VICTIMIZATION* (Simon Fraser Univ. Research Rpt., 1979).

sized the importance of lifestyles as indicators of exposure to risk have largely inferred behavior and even the lifestyles from the demographic profiles of survey respondents. Thus they substitute measures of factors like marital status for measures of behavior. Cohen and Felson⁵ employ aggregate indicators of behavior concepts, one of which is guardianship, as part of their opportunity-based understanding of the growth over time in official rates of crime. For example, in their model the number of single-person households is important because single people are presumed to act in ways that increase their vulnerability to both personal and household crime.

Our understanding both of the genesis of victimization and the individual utility of crime prevention would be greatly advanced by studies more focused on the relation between individual and household behavior and experiences with crime. At a minimum, we must clarify simple issues like whether victimization is indeed linked to individual differences in routine behavior and exposure to risk, and if by changing their habits, they will reduce their chances of being victimized. Answering those seemingly simple questions poses a number of problems, however. This essay will analyze some of the problems that research of this type would face, from a strategic and methodological point of view.

Most important, there is no clear agreement among criminologists on what behavior is in a conceptual or typological sense. Research involving assessments of behavior usually focuses on single items, apparently measuring discrete activities, reflecting this conceptual poverty, which has a number of disadvantages greatly limiting the utility of earlier studies. There also has been little research concerning the accuracy of measures of crime-related behavior or reports of routine activities. In part, this lack of research reflects the limited conceptualization of behavior in most research studies. That problem, in turn, discourages the adoption of the multiple indicators approach to measurement, which naturally leads to concern about measurement issues. Accurately assessing the frequency of routine activities raises questions about the fallibility of human recall which are difficult to answer.

Finally, research designs suitable for answering even these simple questions about victimization and behavior have extensive and expensive data requirements. By their nature, measures of those phenomena cannot be linked in convincing causal fashion without long-term panel data on individuals. Policymakers' concern about the issue of whether activities truly prevent or simply displace crimes further complicates those research designs.

⁵ Cohen & Felson, *Social Change and Crime Rate Trends*, 44 AM. SOC. REV. 588 (1979).

CONCEPTUALIZING BEHAVIOR

One shortcoming of most research on victimization and crime prevention is its item-by-item focus on behavior. Rather than conceiving of crime-related behavior in broad conceptual categories, and thinking of reports concerning specific actions as manifestations of those more general concepts, most researchers doggedly catalogue the distribution of particular instances of behavior. There is a heavy price to be paid for keeping the level of abstraction of research so low. Research on victimization should involve broader and more complex concepts of the dimensions of behavior, combined with methodological work aimed at developing reliable and valid indicators of those dimensions.

The most often-cited conceptual scheme elucidating the behavior of potential victims was offered by Furstenberg.⁶ He discussed two dimensions of behavior which describe people's attempts to forestall victimization: avoidance and mobilization. Avoidance includes actions that people take to limit their personal exposure to risk, such as staying at home, keeping their doors locked, and ignoring strangers on the street. Mobilization, on the other hand, is aimed at property protection, and involves the purchase of some piece of hardware, such as an alarm, window bars, or floodlights. There is little evidence supporting the utility of these distinctions. Furstenberg was analyzing survey data collected by the Harris organization in Baltimore, and he was forced to make do with what he had. He reported no evidence that the behaviors that he combined reflected some underlying dimensions. An extensive attempt to replicate Furstenberg's dimensions and to test their generality using different indicators to reflect his conceptual distinctions indicated that they do not hold up empirically.⁷

Another important set of conceptual categories for analyzing behavior can be gleaned from crime prevention through environmental design (CPTED) theory.⁸ This theory suggests three important behavioral dimensions: target-hardening (locking doors, fences), surveillance (watching out, patrolling), and territorial (individual proprietary) activity. A multiple-replication study using factor analysis on several data sets found some evidence of having locks and using locks in Portland and Kansas City, but no empirical target-hardening dimension of any greater generality.⁹ Skogan and Maxfield¹⁰ employed a four-item sur-

⁶ Furstenberg, *Fear of Crime and Its Effects on Citizen Behavior*, in CRIME AND JUSTICE (A. Biderman ed. 1972).

⁷ Lavrakas & Lewis, *The Conceptualization and Measurement of Citizen's Crime Prevention Behaviors*, 17 J. RESEARCH CRIME & DELINQUENCY 254 (1980).

⁸ J. Tien, T. Reppetto & L. Hanes, ELEMENTS OF CPTED (Westinghouse Elec. Co. Research Rpt., 1976).

⁹ Lavrakas & Lewis, *supra* note 7, at 268-69.

veillance measure which has suitable Guttman-scale properties. Oscar Newman¹¹ developed a survey-based measure of territoriality for a study of crime in public housing. It measured the extent to which residents were willing to intervene in vandalism and assault cases and what they would do if they noticed suspicious persons. A five-item scale combining these measures had a reliability (Cronbach's Alpha) of .71.

In addition to these constructs, several loosely-defined typologies currently in use could more aptly be considered organizational rather than analytic distinctions between behaviors. Conklin,¹² for example, discussed at length activities he classified as individual and collective in nature. The former are actions that people can take alone, while the latter are actions taken in concert. This differentiation is largely a literary device, for scarcely any victimization-related behavior fits uniquely into either of those categories. Schneider and Schneider¹³ discussed public-minded as opposed to private-minded activities in the context of preventing residential crime. The former are efforts that benefit a participating household, while the latter have positive collective payoffs. This distinction concerns the collective consequences of behavior rather than the efforts themselves, and one type of activity could well have both results. Schneider and Schneider do use behavior indices which combine reports of several activities, including "protective neighboring" and "private protection." They do not assess the scalability of the individual items, however.

Skogan and Maxfield¹⁴ have proposed several distinct behavioral dimensions. One general category encompasses risk avoidance activities and the other risk management tactics. Risk avoidance limits a person's exposure to potential offenders, which is high in a high-crime environ, and includes staying at home and moving to the suburbs. Risk management includes activities undertaken to reduce their chances of being victimized when people *are* exposed to potential offenders. These activities include attempts to walk with others rather than alone, and to avoid passing near strangers. Some risk avoidance and risk management behaviors are aimed at preventing personal victimization and others at forestalling residential crime.

The emergence of many overlapping and sometimes competing concepts to describe citizen behavior is to be expected at the early stages

¹⁰ W. Skogan & M. Maxfield, *Coping with Crime: Victimization, Fear and Reactions to Crime in Three American Cities* (Northwestern Univ. Research Rpt., 1980).

¹¹ O. Newman & K. Frank, *Factors Influencing Crime and Instability in Urban Housing Developments* (Inst. for Community Design Analysis Research Rpt., 1979).

¹² J. CONKLIN, *THE IMPACT OF CRIME* (1975).

¹³ Schneider & Schneider, *Private and Public-Minded Citizen Responses to a Neighborhood-Based Crime Prevention Strategy* (Inst. of Pol'y Analysis Research Rpt., 1978).

¹⁴ W. Skogan & M. Maxfield, *supra* note 10.

of development of victimization theory. At this point, the only test of a concept is its empirical utility. Concepts are useful if they explain shifts in victimization rates, if they are systematically related to neighborhood-by-neighborhood differences in crime, or if they are robustly correlated with the distribution of fear. Once a respectable body of research on these topics begins to develop, on the other hand, concerns like theoretical parsimony, relatedness to existing concepts, and other criteria will lead researchers to eye new constructs more carefully.¹⁵

At any stage of research, however, a clear distinction between concepts and measures of them must be maintained. Reports of specific actions or activities are at most indirect *indicators* of the object of interest when studying victimization. They inevitably point only generally in the direction where individuals, households, or neighborhoods stand on a behavioral dimension. Almost never will a "yes" or a "no" or a "how many times" response tell a researcher what he really wants to know about something. The most obvious reason for this indirection is that single measures of individual actions or activities will always be swamped by measurement error. By accumulating reports of behaviors through a variety of channels and summing across instances of activity to arrive at more global scores, a researcher can more accurately characterize individuals or households. Persuasive research shows that one-item survey measures of attitudes have about a 50% error variance.¹⁶ Only after about three observations can researchers arrive at minimally stable readings of behavior, using either self-reports or the ratings of judges.¹⁷ As Epstein argues:

Not only has the direct measurement of objective behavior failed to provide evidence of stability, but self-report scales in attitude and personality inventories, as well as ratings of behavioral samples by judges (although themselves stable), have produced low correlations with objective behavior. Does this indicate, as some have suggested, that stability of behavior lies primarily in the eye of the beholder? The issue can be resolved by recognizing that most single items of behavior have a high component of error measurement and a narrow range of generality. . . . [I]t is normally not possible to predict single instances of behavior, but it is possible to predict behavior averaged over a sample of situations and/or occasions.¹⁸

Raising the level of abstraction at which we think about victimization and related behaviors would also increase the generality, and thus the utility, of research findings. Many of the behaviors that researchers

¹⁵ Campbell & Fiske, *Convergent and Discriminant Validation by the Multicrait-Multimethod Matrix*, 56 PSYCH. BULL. 81 (1959).

¹⁶ Schuman & Gruenberg, *The Impact of City on Racial Attitudes*, 76 AM. J. SOC. 213, 226 (1970).

¹⁷ Epstein, *The Stability of Behavior*, 37 J. PERSONALITY SOC. PSYCH. 1097 (1979).

¹⁸ *Id.* at 1097.

investigate are individually trivial and unlikely in themselves to have significant consequences. Further, many are appropriate only for certain people and under a restricted set of conditions. Thinking about behavior at a more general level would enable researchers to subsume many actions appropriate under a variety of circumstances under the same rubric. Moreover, a general approach would enable them to deal more effectively with the substitutability issue. A home with a very loud alarm and another with a very loud dog have arrived at the same end via different routes, an observation which is only apparent when those strategies are considered in terms of their result.

Many individual crime prevention activities are contingent upon features of peoples' lives. Survey questions about whether someone has bought special door locks may misconstrue the responses of people who have not done so because some previous resident of their unit or their landlord had already installed them. Whenever researchers give respondents check-lists of protective behaviors that they might take when out alone after dark, inevitably a substantial number of respondents will insist that they never go out, and will sensibly refuse to pick from among the proffered categories. Responses to questions about walking places in one's neighborhood may be affected by differences in the availability of places to walk to; certainly residents of New York and Los Angeles might not respond in the same fashion to such questions. In each case, responses to questions about the performance of a specific activity make sense only in the absence of contingencies which may make almost every form of behavior impossible or irrelevant to the problem at hand. In practical terms, complex survey filter questions are often required to establish the need or relevance of a behavior. Filter questions, in turn, exclude many respondents from consideration when we examine any specific behavior, making the analysis very cumbersome. Particular questions may be relevant only for homeowners, people who have automobiles, or those physically able to get about. Raising the level of abstraction of a behavior dimension may suggest alternate conditions or behaviors which are functionally equivalent, and which can be used to give comparable behavior scores to all individuals or households.

One important aspect of a general behavioral domain is that specific actions may be substitutable within it. People who routinely drive by automobile rather than walk, even to places near their home, may instead recruit someone to walk with them when their car breaks down. For this reason, check-list studies of the performance of specific behaviors often fail to consider the object of the behavior. The *end* of any specific behavior, which from the point of view of citizens is "what they are doing," may have been arrived at in some other way. Program directors, who have some particular countermeasure that they are trying

to encourage, usually dwell on a specific activity, and in turn divert the attention of researchers from the end to the act. If they kept their attention properly fixed at the level of general behavior domains, households with loud alarms and loud dogs would have similar scores on their measures.

One great limitation on the potential generality of behavioral dimensions is the problem of context. Most of the crimes that victimization research deals with are clearly bounded in space, if not, in the case of conditions like vandalism, by time. Most crime-related behaviors take place in a specific place as well. People avoid dangerous corners, install locks, and take care to lock their car doors in particular places. The interactionalist view of behavior is that:

Since behavior never takes place in a vacuum, but always occurs in a situational context, it is meaningless to talk about characteristics of an individual's behavior without specifying the situation in which the behavior occurs. To understand and predict behavior it is, accordingly, just as necessary to have a classification system for situations as for individuals¹⁹

Only at a high level of generality will behavioral dimensions overlap specific contexts.

Most research on crime-related behavior has solved this problem by confining its scope of inquiry to households and neighborhoods. Researchers ask people about surveillance activities on their block face (watching out the windows or asking neighbors to watch their house), how they act when they are walking in their neighborhood (are there places they avoid?; do they walk with someone else?), and what they have done to protect their home. With the exception of the school environment, there has been relatively little research on how people protect their person and property in any other context. This curious lapse surely leads us to greatly underestimate the impact of crime on people's lives. The question of how people deal with crime in the workplace, downtown, or on recreational excursions, remains almost completely uninvestigated.

This lack of investigation is important, for there is reason to believe that some combination of these other places may play a more significant role in people's experiences with crime than does their neighborhood. Victimization surveys indicate that the majority of crimes other than burglary do not take place in or near the home. In 1977, 78% of all robberies were described by their victims as occurring somewhere other than in or near home. The figure for assault was the same, and fully 95% of all purse snatchings and picked pockets took place elsewhere.

¹⁹ *Id.* at 1102.

For property thefts not involving personal contact the total was 63%.²⁰ The limited variance in context that has been studied to date greatly limits our understanding of the relationship between victimization and individual behavior.

The difficulty with the necessary research is that requiring the specification of their situational contexts would greatly complicate the measurement of behaviors by multiplying the number of observations that researchers must make. However, if a researcher wishes to accurately characterize individuals to explain the pattern of their experiences, he must observe that behavior over a variety of situations. This variety will average out behavior factors due to unique situational factors, revealing stable underlying behavioral and experiential tendencies. Epstein notes that "single items of behavior have a high component of error of measurement, thereby limiting the possibility of replication, and a high component of situational uniqueness, thereby limiting the possibility of generalization."²¹

Raising the level of abstraction of behavior research also would advance the cause of science. One reason to distrust the depressing report of evaluators that nothing works is that few studies, at least in the criminal justice area, have enjoyed adequate measures.²² An evaluation should be seen as a contest between the effects of a program and measurement noise; programs can be winners only when they can outshout the opposition. As a result of poor measurement, evaluators probably are rejecting hypothesized program effects more often than they should. The indicators approach to assessing behavior directly confronts the problem of unreliability in measurement, rather than in the program, and allows for correction.

Examples abound of the use of single-item measures of behavior and attitudes to evaluate programs. An important component of the Police Foundation's evaluation of a preventive patrol experiment in Kansas City²³ was before-and-after contrasts of citizens' views and self-reports of activity in target and control districts. A significant finding of the evaluation was that those measures were unresponsive to variations in levels of police patrolling. However, the survey questions were analyzed one at a time, and a plausible counter-hypothesis is that they were

²⁰ These figures were calculated using the figures contained in LEAA, CRIMINAL VICTIMIZATION IN THE UNITED STATES 1977 (1979), assuming equal numbers of armed and unarmed robberies and assaults. *Id.* at table 56.

²¹ Epstein, *supra* note 17, at 1102.

²² Skogan, *Community Crime Prevention Programs: Measurement Issues in Evaluation*, in REVIEW OF CRIMINAL JUSTICE EVALUATION 1978 (1979).

²³ G. KELLING, T. PATE, D. DIECKMAN & C. BROWN, THE KANSAS CITY PREVENTIVE PATROL EXPERIMENT (Police Foundation 1974).

individually so unreliable that shifts in their small true score component were lost in random variation from survey to survey.

The cause of science is also advanced when we move our sights from the trivial to the consequential, and from the particular to the general. There can be no science of door locking or property marking. Rather, the scientific study of behavior can only proceed if it strips away the complex contingencies and interchangeabilities surrounding individual actions and focuses on their commonalities. What at the phenotypic level is contingent, dichotomous, and couched in everyday language must at the genotypic level be general, measured continuously, and abstracted from concrete circumstances. Only then can we have explanation rather than description of behavior.

MEASURING BEHAVIOR ACCURATELY

Once researchers have identified dimensions of behavior which are relevant to victimization, their next task is to measure them using reliable and valid indicators of the standing of individuals or households on those factors. Surprisingly, measuring of overt behavior is often more difficult than assessing seemingly elusive phenomena like attitudes or perceptions. Perhaps because overt actions are not simply internal states, but observable and intersubjectively knowable, researchers have high standards with respect to the measurement of behavior. The same psychologists who employ many-item tests to characterize human traits are often disturbed that single-item indicators of behavior do not evidence similar reliability.²⁴

People take actions to avoid crime which are either repetitive or need to be performed only once. Repetitive behaviors are performed all the time, operationally, perhaps at least once a week. Actions in this category include going inside after dark, talking with neighbors about crime, and avoiding strangers on the street. Repetitive behaviors are best measured by frequency counts of their incidence over some fixed period of time. The category of one-time activities includes installing alarms, purchasing insurance, and moving to the suburbs. These are all measured as dichotomies, or "yes-no" indicators. Whenever possible, however, researchers should move away from what have been dubbed vague quantifiers,²⁵ that is, survey responses couched in language such as "sometimes" or "most of the time." Specifying particular recall periods and attempting to elicit accurate counts of behaviors during these spans will be more profitable than other methods.

²⁴ See Epstein, *supra* note 17.

²⁵ Bradburn & Miles, *Vague Quantifiers*, 43 PUB. OPINION Q. 92 (1979).

Among the many methodological obstacles to accurately assessing citizen behavior in this way, four will concern us here:

1. the measurement of many activities involves retrospective recall—a memory search for events over some period in the past;
2. many of these behaviors have little meaning to those involved;
3. even the one-time performance of many of these behaviors may not be known to respondents;
4. estimating the frequency with which repetitive behaviors are performed can be a difficult respondent task.

The burden which a difficult memory search can impose upon survey respondents is well known. One dimension of this task is the length of time in the past a respondent is expected to review in responding to a question. Research on victimization, media consumption, health behavior, and household repairs, all suggest even salient events cannot always be recalled accurately from the distant past. In certain areas of health research and in studies of the media, the reference period employed in surveys is “yesterday.” People are not expected to be able to accurately recall what they have done for more than one day in the past. If the object of inquiry is common, such as tooth-brushing or television viewing, the accuracy possible with a brief recall period is the dominant concern. However, if the behavior of interest is relatively infrequent, then studies employing brief recall periods must involve large samples in order to gather useful data on the activity. Retrospective surveys must balance the expected frequency with which events will be recalled, which often demands a lengthy recall period, with the error that such a task entails for the respondent.

The low salience of many of the routine events of interest to victimization researchers presents other recall problems. Repetitive, habitual tactics, like leaving the lights on when going out after dark, and driving rather than walking, are particularly difficult to characterize accurately by their frequency. One response to the salience problem is to shorten the length of the recall period. For example, many researchers ask about visiting neighbor’s homes or the number of times the respondent went out after dark only in the past week. Events of low salience also require more memory aids, including repeated questions, visual aids, and examples.

Moreover, a respondent to a survey may not be sufficiently knowledgeable to provide reliable information about a particular behavior. This problem is relevant for measures taken to protect households. Not everyone in a household is necessarily informed about insurance protection, particular target hardening efforts, or whether anyone attended a crime prevention meeting. Surveys that select random adults from within a household for interviewing in effect use them as proxy respon-

dents for others who may know more about the subject in question. The experience of both the National Crime Survey²⁶ and the Current Population Survey²⁷ is that the use of proxy respondents frequently misrepresents the activities of others.

Finally, some measures of crime-related behavior involve estimates of the frequency with which they are performed, which can be an extremely difficult recall task. One problem may be that a behavior is too frequent; within a reasonable reference period at least some people perform the act "too many times to count." Research indicates the most accurate recall is of events with frequencies in the zero-to-three range, and that above about eight times, frequency estimates become rounded categorical estimates. One solution to this problem is to shorten the length of the reference period. Another is to ask respondents who perform the action frequently to estimate the number of times they did it each week or some similar base period. Those rates, when multiplied by the number of base periods in the reference period, may produce more accurate counts of high frequency events than do straightforward estimates of magnitude. Inevitably, however, any distribution of frequency estimates will be clustered at values of five or ten, due to the rounding-off problem.

An important issue in any measurement is the reliability and validity of the resulting data. The multiple indicators approach suggested here would provide the basis for routinely calculating the internal consistency of measures of a construct, which is one form of reliability estimation. Repeated measures, through call-backs or re-observations, would yield test and retest reliability estimates. Validity measures of many behaviors also could be determined by matching survey and observational evidence or carrying out record checks.

In a typical validation study, Lavrakas and Jason²⁸ explored the validity of survey reports of participation in community crime prevention programs. They assembled a list of persons who were known to have attended crime prevention meetings, requested security surveys of their homes, or borrowed an engraving tool to mark their valuables. These known participants were questioned by telephone by interviewers who were ignorant of the nature of the study and the source of the sample of names. They administered a standard survey which included both open and closed ended questions about crime prevention activities.

²⁶ LEAA, CRIMES AND VICTIMS: A REPORT ON THE DAYTON-SAN JOSE PILOT SURVEY OF VICTIMIZATION 34-35 (1974).

²⁷ C. Brooks & B. Bailar, Employment as Measured by the Current Population (Off. of Fed. Statistical Pol'y & Standards, U.S. Dep't of Commerce, Statistical Policy Working Paper No. 3, Sept., 1978).

²⁸ Lavrakas & Jason, Evanston Recall Study (Northwestern Univ. Research Rpt., 1979).

In all, reports of 88% of these activities were elicited in the interviews. Specific, fixed-response questions generally were more productive than replies to open ended questions.

In a related study in Holland, Van Dijk, and Nijenhuis²⁹ compared survey reports of precautionary measures with observations of what respondents actually did. In a survey of The Hague, they asked people what precautions they took before answering their door late at night. Respondents indicated whether they simply opened their door or checked on the identity of a caller before opening the door. Six months later, observers visited a sample of 110 of those households at ten o'clock in the evening, and rang the doorbell. They found that eighty-two observations were congruent with the earlier survey report. Seventy-eight percent of those who opened the door immediately lived in households which earlier had indicated less caution, while 71% of those demanding identification or viewing the caller lived in households reporting more caution. This correspondence is particularly striking in view of the fact that there was no assurance that the same person answered both the questionnaire and the door. Therefore, researchers could classify *households* as more or less cautious with some validity.

There is some evidence from other areas of research that survey reports of events and conditions may correspond with physical measurements as well. Ostrom and her colleagues³⁰ have found substantial agreement between variations from place-to-place in street light intensity measured by light meters and the perceptions of citizens about the intensity of lighting in front of their homes. Similarly, people's ratings of street roughness in their area correspond highly with observer ratings of street conditions.³¹

These studies establish the credibility of self-reports of local conditions and crime-related behavior. In demonstrating the validity of self-report measures, they enhance confidence in generalizations based upon survey research. More extensive studies which compared the power of alternative means of eliciting accurate self-reports of behavior would enable us to improve upon current victimization research. This research would also be welcomed by evaluators. The effects of programs aimed at, for example, increasing the use of public facilities after dark or encouraging citizens to be more cautious could be gauged more credibly if self-reports of such actions were demonstrably related to actual behavior. Were those programs successful, estimates of increases in person-

²⁹ Van Dijk & Nijenhuis, *Za Zeggen, Nee Doen?* (Center for Research and Documentation Research Rpt., Ministry of Justice, The Netherlands, 1979).

³⁰ Ostrom, *Multi-Mode Approaches to Measurement of Government Productivity*, in *DELIVERY OF URBAN SERVICES* (R. Gage & R. Sloan eds. 1976).

³¹ *Id.*

hours of facility use could be projected, providing the basis for more rigorous cost-benefit analyses of such programs. Such evaluations have floundered in the past in a sea of vaguely quantified outcome measures of unknown validity.

CONSEQUENCES OF BEHAVIOR

Throughout this discussion, we have assumed that crime-related actions by individuals and households have significant consequences for their fate. Whether this theory is true is still open to debate, nor would the *collective* consequences of those actions necessarily be positive even if their individual outcomes were. The relationship between crime-related behaviors and their outcomes is an important issue for research, evaluation, and policy. Rational-cognitive theories of human behavior assume that man's fate is malleable, and that by making choices and taking actions people can, within significant constraints, reshape their condition.

There are smatterings of evidence everywhere of the efficacy of individual precautionary efforts. For example, both women and the elderly are physically vulnerable to predatory crime, but victimization surveys indicate that they enjoy low rates of victimization from most types of offenses. One explanation for this apparent paradox is that both of these groups evince extremely low levels of exposure to risk. For a variety of reasons, the elderly lead more circumspect lives than do younger persons and they always score high on measures of purposeful crime-avoidance and risk management.³² The high victimization rates of divorced, separated, and unmarried women, in contrast to those for married women, may be attributed to differences in their daily routines, social activity, and companions. The chance that women or the elderly would be victimized when they *are* exposed to risk might be high, but they do not place themselves in that position often.

The relationship between personal caution and victimization is difficult to document. By staying indoors, driving rather than walking, or walking with friends, people presume that they can reduce their chances of being victimized, but no adequate data exist for assessing the magnitude of that reduction. The problem is twofold. First, there have been no general surveys which adequately measure *both* the incidence of victimization and individual behavior. The National Crime Survey employs good measures of victimization and the sample for that survey is large enough to uncover substantial numbers of victims of personal crime for analysis. However, this survey gathers no direct information

³² F. COOK, W. SKOGAN, T. COOK & G. ANTUNES, CRIMINAL VICTIMIZATION OF THE ELDERLY (forthcoming, 1981).

about the behaviors or lifestyles of those who are interviewed. Many smaller surveys which do focus on behavior have been conducted, but few have employed adequate measures of victimization and none has been large enough to uncover meaningful numbers of personal crime victims. LEAA's city surveys have large samples and useful, if somewhat less accurate, measures of victimization, but have poor measures of behavior.

Measurement is not the only issue which clouds our understanding of the nexus between victimization and precautionary behavior, however. The problem is further compounded by the necessarily retrospective nature of victimization measurement, coupled with the difficulty of assessing behavior in anything but the most recent period. As we indicated above, measuring many important, repetitive accommodations to the threat of crime through surveys except for recent, brief periods of time is extremely difficult. On the other hand, the relative infrequency of personal victimization demands that respondents be asked to recall events for a greater length of time. As a result, behavior measures typify the current activity of survey respondents, while victimization measures characterize their past experiences. The logic of causation demands that under these circumstances behavior can be viewed as at best a consequence of victimization. This constraint does not entirely foreclose research in this area, for the effect of victimization on the behavior of individuals is important. The relative sequence of these measures explains why recent victims report being *less* exposed to risk than nonvictims. The higher levels of caution observed among recent victims also may account in part for the unexpectedly small number of multiple victims revealed in victimization surveys. If incidents were independent of one another, there should be more of them;³³ but if an experience with crime changes a person's subsequent behavior, then the events are not independent. Crosssectional data, however, cannot discern the consequences of adopting various behavioral stances for an individual's risk of being a victim.

Panel data is required. A survey measuring both victimization and behavior adequately, conducted at two or more points in time, and involving the same sample of respondents, would allow for untangling the relation between the two. A panel study would reveal the extent to which naturally occurring differences in exposure to risk contribute to subsequent victimization, as well as the impact of that experience on those involved.

Such a study might reveal that people *cannot* do much to significantly change their risk of victimization. In part, this observation in-

³³ R. SPARKS, H. GENN & D. DODD, *SURVEYING VICTIMS* (1977).

volves the issue of constraints on behavior. For a variety of reasons, people often are forced to do things that they consider risky. If they live alone, work the night shift, or do not own a car, they may be exposed to risks they would like to avoid on a regular basis. Also, researchers do not know how much variance in victimization can be explained using data gathered from the point of view of potential victims. A crime may occur when a victim and offender are brought together under appropriate circumstances. There doubtless is a random element in that encounter from both their perspectives, and in the vast majority of appropriate circumstances no incident occurs. So people who are very cautious may not be robbed, but most people are not robbed regardless of their level of caution. In the most dangerous places, nothing happens most of the time.

If we consider crime prevention activity from a policy perspective, the issue of consequences becomes even more complicated. Researchers may learn, for example, that target-hardening a dwelling unit may reduce its chances of being burgled by x percent, and that displaying a sticker warning potential intruders that this is a property-marking household may have an additional y effect. The difficulty from a policy perspective is that such efforts may simply displace rather than prevent crime. From the point of view of individuals or households such activities may be worthwhile, but should governments encourage activities which at some cost merely shift the burden of crime to others? For this reason, anti-crime activities may be thought of as resulting in crime reduction or victimization prevention. The difference between them can be revealed only with research designs that deal with both the individual and collective benefits of adopting various tactics. This inquiry doubtless will lead evaluators back into criminology, for they will be able to understand displacement issues only through more serious studies of offenders and their patterns of activity. For example, opportunistic offenses characteristic of small bands of idle youths may be deterred rather simply by target hardening, for if they do not occur at a pregnant moment, they may not happen at all.

CONCLUSION

The research uses and policy implications of victimization data could be greatly expanded by broadening the scope of surveys measuring the incidence of crime to encompass the immediate context within which incidents occur and to describe the routine activities of victims and nonvictims. New opportunity or routine activity theories of victimization emphasize the importance of processes which bring together potential offenders with potential targets for crime under circumstances which facilitate an attack. We currently gather only sketchy data about

the location of offenses, and none at all about how often victims and nonvictims are in those locations, and under what perhaps facilitating circumstances. The National Crime Survey does gather reports of "what happened," but these reports are only helpful for understanding differences between completed and attempted crimes.³⁴ We also know little about the direct, individual benefits of crime prevention activities. The question to what extent people's fates are indeed in their own hands, or how much of the variation in victimization can be explained by their routine activities or purposive actions remains unanswered. The answer may be relatively little.

Relevant behaviors are not assessed at all in the current National Crime Survey questionnaire. The city surveys which were conducted for LEAA during the early and mid-1970s included a few poor behavior measures. The best measures to date are to be found in individual evaluation studies like those conducted in Hartford³⁵ and Portland.³⁶ However, those surveys were not large enough to gather sufficient numbers of victims of personal crimes for detailed analysis. I have suggested a number of standards by which behavior measures could be judged. In particular, those measures should refer to specific recall periods brief enough to promise accurate recall, and should gather quantitative estimates of the incidence of the activity of interest in order to maximize their utility to evaluators, especially those conducting cost-benefit analyses. Whenever possible, individual items measuring behaviors should be validated against observations or other independent records of behavior to establish the margins of error with which they truly reflect the activity of interest. Employing multiple-component measures reduces the relative size of the error component of measures, allows for the substitutability of various related behaviors, and increases the generality of the analysis. Multiple-indicator measures are better measures of concepts.

Better measures cannot in themselves resolve most of the unanswered questions concerning the relationship between behavior and victimization, however. The problem is one of research design. Crosssectional surveys of a single point in time can only examine the effect of past victimization on current behavior. An examination of the impact of routine activity or conscious anti-crime efforts on victimization requires long-term panel data on a sample of respondents. Then we can properly assess the consequences of what people do to avoid or prevent crime.

³⁴ R. BLOCK, *VIOLENT CRIME* (1977).

³⁵ F. FOWLER, M. MCCALLA & T. MANGIONE, *REDUCING RESIDENTIAL CRIME AND FEAR* (U.S. Dep't of Justice 1979).

³⁶ Schneider, *Victimization Surveys and Criminal Justice System Evaluation*, in *SAMPLE SURVEYS OF THE VICTIMS OF CRIME* (W. Skogan ed. 1976).