

EVALUATING CITIZEN CRIME PREVENTION PROGRAMS

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SUMMARY

Citizen crime prevention activities are a potentially important element of residential crime control. Increasing evidence of anecdotal or preliminary form even suggests that, unless a garrison state is desired, only a vigilant and concerned citizenry can effectively deter crime.

However, the potential effects of citizen crime prevention activities are difficult to evaluate in any rigorous manner. This is because the state of evaluation methodology is only barely capable of coping with the measurement and design problems of the usual social intervention program (e.g., a Head Start, manpower, or drug rehabilitation program). For crime control programs, the state of the art has not adequately addressed additional problems such as the measurement of the absence of an event and the measurement of displacement effects. For citizen crime prevention programs, all of these obstacles are present but there are the additional problems that the intervention--being a citizen-initiated and voluntary act--cannot be manipulated by an evaluator, and the key activities may consist of those informal interactions and surveillance behaviors that are the most difficult to measure.

Because these difficulties are imposed by the state of evaluation methodology rather than any shortcomings of the citizen crime prevention activity, it is incumbent upon researchers and policymakers to state clearly the conditions under which evaluative questions may be fairly asked. In the case of *voluntary* citizen crime prevention efforts, evaluation studies can probably determine:

- o The verbally-reported effect of a voluntary crime prevention activity on residents' behavior and feelings of safety--*but not* on the overall incidence of crime in the neighborhood;
- o The presumed effect of a voluntary crime prevention activity on the victimization rates among the residents being protected --*with the reservation* that a matched, post-treatment design would have to be employed and the quality of the matching procedure might always be subject to criticism; and

- o The presumed effect of an externally initiated (and hence not entirely voluntary) effort that allows for the collection of baseline data--*with the reservation* that a classical design would be employed but (1) with certain major risks (e.g., truly voluntary activities could not be prevented from forming at the control sites) and (2) at great relative cost (the cost of implementing the research and conducting the evaluation will greatly exceed the amount of funds disbursed for operating the voluntary activity).

In the face of these limitations, federal and local officials should create different criteria for setting priorities for supporting voluntary crime prevention activities. First, because the activities are voluntary and incur low costs, they might be actively encouraged unless there was compelling evidence concerning measures of *ineffectiveness*. Second, the entire evaluation research paradigm might be de-emphasized in this type of situation (where there are clearly insurmountable obstacles to solid evaluation), and priority-setting might be based on the workings of the more traditional political process--i.e., whether citizens and their elected representatives would like to initiate such activities.

EVALUATING CITIZEN CRIME PREVENTION PROGRAMS¹

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The Potential Importance of Citizen Crime Prevention Efforts

From a policy perspective, there are four broad approaches² for reducing the vulnerability of residential areas to crime:

- o *Paid public policing activities* in which individuals--i.e., police officers--are supported at public expense and are specifically sworn to enforce the law;
- o *Environmental design*, in which planners and builders incorporate public safety concerns into the design of residential areas and new housing;
- o *Private-minded actions*, in which citizens act to protect their private domains (their persons or their homes)--e.g., through the purchase of security devices and alarms or through training in the martial arts; and
- o *Public-minded actions*, in which citizens act to protect public domains (public areas or the public interest)--e.g., through the development of neighborhood norms for behavior in public places and through surveillance activities conducted by residents.

On the whole, there is still little definitive evidence concerning the relative effectiveness of these four approaches or their combinations. Recent research, however, suggests that effective crime prevention--to the point that a neighborhood or set of residences can be said to be "safe"--may require some component of the fourth approach.

As for the effectiveness of the first approach, Wilson (1975), for instance, reviewed several key studies of the effects of police preventive patrol and concluded that, with the possible exception of saturation

¹Paper presented at the National Conference on "Criminal Justice Evaluation, Washington, D.C., February 22-24, 1977. The author wishes to thank Dr. Jan Chaiken for helping to develop and refine many of the ideas in this paper.

²The full array of crime prevention techniques is best summarized in Sagalyn et al. (1973). See also Wilson and Boland (1976) for a discussion of interventions at other points in the criminal justice system (e.g., a changed sentencing policy) that might affect residential crime.

patrol (a condition that may be socially undesirable and fiscally impossible for long-term application in any neighborhood), there was no clear evidence that increases in preventive patrol alone led to a reduction in crime.¹ This conclusion was based mainly on several post-hoc studies (e.g., Press, 1971) as well as on the results of an actual field experiment--the Kansas City Preventive Patrol experiment (Kelling et al., 1974). Levine (1975), in conducting his own analysis of reported robbery and murder as a function of different levels of police manpower in 26 cities, also found no relationship between the amount of police and crime prevention.

As for the second approach, there has been preliminary evidence of some effective measures that can be taken (e.g., Newman, 1972; and Reppetto, 1976). However, it should be noted that much of the crime prevention effect occurs through behavioral changes among residents, who become more vigilant and develop a greater sense of territoriality. Thus, the appropriate environmental designs do not work by themselves but depend upon the type of activity that is characteristic of the fourth approach below.

As for the third approach, it is well known that residents who are fearful of crime take many steps to make their homes and daily routine more secure, e.g., the purchase of locks, alarms, and window bars. There is a limit, however, to the effectiveness of crime prevention through precautions of this sort. Heller et al. (1975) have helped to identify some of the difficulties with private-minded actions by citizens. In their review of Operation-Ident projects, which require residents to mark their valuables in order to facilitate recovery if stolen, a key finding was that the enrollment rate for such efforts was very low (around 10 percent). Thus, although those who participated in the program appeared to be better protected from crime, only a minimal portion of the citizenry was involved in the program. Further, the authors found it difficult to identify ways of increasing the enrollment rate. Private-minded actions

¹Similar conclusions were also reached in a review by Chaiken (1976), who also points out, however, that practically any kind of increase in police manpower will produce increases in the number of arrests made by the police (where arrest rates are used as an alternative outcome measure).

may therefore always suffer from a low participation rate, and even though they may be effective in theory, difficulties in implementation will pose a chronic problem. Although low participation rates may also characterize other crime prevention activities, the low rates are particularly debilitating for any strategy based on private-minded actions because, by definition, everyone must participate in such actions in order to establish full coverage (see also Schneider and Eagle, 1975).

In contrast, the admittedly rudimentary evidence concerning the potential importance of public-minded citizen crime prevention activities--in which residents take an interest in each other's activities and therefore use their own eyes and ears to monitor their neighborhood--has led to increased interest on the part of policymakers in exploring new activities by citizens (Washnis, 1976). Public-minded activities may be carried out in a number of ways--e.g., the formation of a resident patrol (Yin et al., 1976) or the establishment of various citizen crime reporting systems (Bickman et al., 1976). Such activities may also be one component of a mixed approach. Reppetto (1974), for instance, conducted a study of residential crime, including interviews of offenders involved in burglary cases. He concluded with the suggestion that the most fruitful course of future action might be the development of a crime prevention approach that would (1974, p. 87):

. . . blend the deterrent effects of the criminal justice system with citizens' anticrime efforts. . . It is possible, for example, that the "rapid response" techniques of the police could become a more meaningful deterrent to residential crime if environmental characteristics could be modified to maximize surveillance possibilities and encourage a sense of territorial concern among residents; citizens would take a few more precautions aimed at "slowing down" the prospective burglar so that his suspicious activities might attract the attention of neighbors; and observing neighbors might feel a "social commitment" sufficient to prompt them to summon the police.

Thus, the provisional findings from the public policy perspective point toward the need to assess resident-based, public-minded actions

in promoting residential crime prevention.¹ In addition, it may also be argued that such actions may lead to the further cohesiveness of a neighborhood, in which residents also help each other in dealing with other everyday functions, such as child care and supervision, shopping, schooling, and emergency assistance. In contrast, neighborhood interactions and cohesion might even diminish as a result of two of the other approaches to crime prevention, i.e., increasing preventive patrol by police or stimulating private-minded actions by citizens to protect themselves and their homes.

Why the Evaluation of Citizen Crime Prevention Efforts is Difficult

At the same time, citizen crime prevention efforts present some of the most difficult circumstances under which a policy evaluation must take place. Normally, the evaluation of a *public policy intervention* must surmount five general obstacles:

- o The identification of measurable objectives;
- o The identification of a target population;
- o Control over the intervention program, so that it can be applied or withheld according to a specific research design (e.g., experimental vs. control groups);
- o The ability to measure the key features of the intervention *process*; and
- o The availability of sufficient time so that the short- and long-term effects of the intervention can be assessed.

These obstacles have only occasionally been completely surmounted in existing evaluations of such programs as a Head Start program, a manpower program, or a drug rehabilitation program (e.g., methadone maintenance). For instance, a common problem is that members of the target population may not be easily assigned on a random basis to experimental

¹Although it is always difficult to make comparisons between different countries, a recent article (Bayley, 1976) suggests that crime prevention associations exist in most neighborhoods in Japan and appear to be one reason for Japan's low crime rate. (The article makes a compelling case that most other conditions that might affect crime rates--e.g., a tradition of violence or lenient sentencing policies--are either similar or less favorable in Japan than in the United States.)

and control groups (Boruch, 1976). This and many other methodological problems have been adequately described by the existing literature on evaluation research (e.g., Campbell and Stanley, 1963; Suchman, 1967; Rossi and Williams, 1972; Weiss, 1972; Caporaso and Roos, 1973; and Bernstein, 1976).

Any evaluation of *crime control programs initiated by law enforcement agencies* must face these five general obstacles as well as others. Regarding the five obstacles, the difficulties of evaluating crime control programs are well known (e.g., Maltz, 1972; and Chaiken, 1976): (1) the identification of measurable objectives usually calls for the use of "crimes reported to the police," which is a highly inadequate data base; (2) the target population is usually a geographic area as well as a set of individuals, creating difficulties in selecting control or comparison groups; (3) and (4) the intervention process is usually controllable and measurable but may have unavoidable complications;¹ and (5) the pressure to produce results usually means that the long-term effects of a crime control program are ignored by the evaluation. However, evaluations of crime control programs are also confronted by three additional obstacles:

- o The actual crime control objective is to *prevent* an event from occurring, and such an absence of events is difficult to assess;
- o The full assessment of a crime control program requires the measurement of possible displacement effects--to different geographic areas,² to different times of the day, or to different types of crime; and

¹An excellent example may have occurred in the Kansas City Preventive Patrol Experiment, where patrol cars for the reactive beats--i.e., beats that supposedly received minimal preventive patrol--may have inadvertently produced a significant preventive effect by their longer and more visible drives to intervene in incidents (Larson, 1975). The point here is that the desired treatment--variation in preventive patrol but constancy in response to actual calls for assistance--may be difficult to implement without some contaminating factors.

²The role of a rudimentary typology of neighborhoods is usually overlooked in research on geographic displacement. Such research (e.g., Press, 1971) usually examines the geographically contiguous areas for displacement effects, whereas it can be equally argued that if crime is suppressed in one neighborhood and is thereby displaced to another neighborhood, the target of the displaced activity will be a neighborhood *of the same type* as the first, not necessarily the next closest neighborhood.

- o Within most realistic ranges of activity, any single crime control program that is the subject of evaluation may be expected to have only a weak (and hence more difficult to measure) effect on the incidence of crime, and such effects may also not be readily separable from the effects of other crime control activities.

Difficult as these conditions appear, evaluations of *citizen crime prevention programs* face all of these as well as two other obstacles:

- o By definition, many citizen activities are voluntary acts and hence cannot be manipulated by policymakers as they might manipulate other intervention programs; and
- o The most effective forms of citizen crime prevention activities--e.g., maintaining strong informal relationships with other residents or maintaining frequent informal surveillance over behavior in public places--may be the most difficult to measure. It would probably be extremely difficult to determine, for instance, when such informal patterns first emerged and hence when the "treatment" actually began.

The full combination of all these obstacles often leads to awkward dilemmas in evaluating citizen crime prevention efforts. For instance, if the number of crimes reported to the police is the only outcome measure available, it cannot even be hypothesized that an effective effort will lead to a reduction in reported crime; reported crime may very well increase, at least in the short-term, as a result of an effective program (Schneider, 1975; and Bickman et al., 1976). As a second example, police coverage is a factor that should be made constant in comparing two geographic areas, one with a citizen crime prevention activity and the other without; yet such coverage may also be affected by the very existence of such an activity (Yin et al., 1976).

This brief sketch of the evaluation problems to be resolved should suggest the enormous difficulties posed by trying to answer the question of whether a particular citizen crime prevention activity is effective or not. As a result, it is not surprising that attempts to evaluate such activities have either culminated with an absence of conclusive findings or been described under such hedged conditions that the casual reader believes the activity was probably ineffective. Such a negative

connotation is easily captured by the mass media, and further citizen voluntarism may even be somewhat reduced. This is a most unfortunate occurrence, because what is at fault is clearly our research methodology, and not necessarily the crime prevention activity. To the extent that methodological progress cannot be made, then it is incumbent on researchers and policymakers to state clearly the conditions under which evaluative questions may be fairly asked.

Study of Citizen Patrols

A recent study of citizen patrols attempted to deal with some of these evaluation problems (Yin et al., 1976). Our main objective here will be to identify the main possibilities for any evaluation of patrol activities. However, the basic findings of the study should also be summarized.

First, the study began with a fourfold definition of patrols. Such activities had to:

- o Include a specific patrol or surveillance routine that was not just a part of another full-time activity such as driving a taxicab;
- o Be aimed at preventing criminal acts;
- o Be controlled by a citizens' or residents' organization or a public housing authority; and
- o Be directed at residential rather than commercial areas.

Second, the study's main contribution to the state of knowledge was descriptive rather than evaluative. As a result of a research design that sampled cities across the country and personal or telephone interviews with over 100 such patrols, the study concluded that:¹

- o There are about 800-900 patrols in the U.S., lasting an average of 4-5 years.
- o Patrols emerge in a variety of neighborhoods at all income levels and racial mixes (including areas in which residents wish to preserve a previously crime-free environment);

¹See Yin et al. (1976) for a full elaboration of the research methods, conclusions, and recommendations of the study.

- o For most patrols (over two-thirds were operated by volunteers), voluntary efforts and contributions comprise the main resources, with few cases of funding from any public agency such as the U.S. Law Enforcement Assistance Administration; and
- o Patrol operations are facilitated if a patrol is affiliated with a larger community or neighborhood organization; if some resources are used to support rudimentary bureaucratic procedures such as maintaining formal membership lists, schedules, and substitution procedures; if a patrol has a cooperative relationship (where relevant--see below) with the local police; and if a patrol allows for a flexible range of activities so that even noncrime prevention activities can be pursued when patrolling appears unnecessary (with the patrol capability being maintained, however, should patrolling subsequently become necessary).

Put simply, the study found that citizen patrols had become part of the normal repertoire of residents concerned with crime prevention, and that these contemporary patrols are far different from the riot-related patrols that have dominated earlier research (e.g., Marx and Archer, 1972). To the extent that the patrols have positive effects, they represent an important additional resource because of their low cost.

The study also developed a typology of patrols. For the purpose of the present paper, two of these types are especially relevant: *building patrols*,¹ in which volunteers or paid guards maintain surveillance over a building, and *neighborhood patrols*, in which volunteers or paid guards maintain surveillance over a small geographic area, usually by driving around in a car and maintaining radio communication with a base station (e.g., one of the resident's homes). These two types of patrols appeared to develop different organizational histories and to produce different outcomes. For instance, building patrols are easier to staff on a 24-hour basis, because a much more limited area is involved and can be covered with fewer personnel than is the case with a neighborhood patrol. As another example, building patrols are simpler to operate than neighborhood patrols because there need be little or no interaction with the local police, who do not usually cover specific buildings and

¹In a large city, a block patrol (usually given the specific assignment of covering two, four, or eight block faces) may be regarded in the same manner as a building patrol.

who therefore do not feel the need to know about (much less coordinate with) the activities of a building patrol. As a final example, the work of the building patrol may be made easier by the fact that such patrols can concentrate on screening strangers and keeping them off the premises; a neighborhood patrol can only focus on observed behaviors that appear suspicious, which is a more judgmental task that may lead to false alarms and unnecessary provocations.

Evaluating Citizen Patrols¹

The distinction between these two types of patrols also serves as a starting point for differentiating between those evaluation questions that can and cannot be asked. To begin with, it is probably true that, at least in conventional terms, the effectiveness of a neighborhood patrol cannot be determined by research evaluations. This is because:

- o The area covered and residents protected by a neighborhood patrol are too poorly defined--i.e., the selection of respondents for a victimization survey, for instance, would not precisely reflect the target population, and control or comparison areas would also be difficult to define;
- o Any effects of the neighborhood patrol cannot be sufficiently distinguished from those related to police and other crime control activities--i.e., a neighborhood patrol is only a weak treatment, and conclusive evidence of its effect could probably only be established through an unrealistic experiment in which one condition was to have some neighborhoods with no crime control activities other than a neighborhood patrol; and
- o The quality and quantity of local police activities could change as a result of the presence of a neighborhood patrol (e.g., police coverage might be reduced in the face of a neighborhood patrol that was perceived to be effective), and even if such changes could be measured accurately, the overall outcomes would be affected in a very complex manner.

However, even though the ultimate crime control effects of a neighborhood patrol might not be determinable, other important questions about

¹This section draws in part from portions of Yin et al. (1976) that were drafted by Dr. Jan Chaiken.

the patrol might be asked. A policymaker might be interested, for instance, in the extent to which the residents of an area (even if it did not exactly coincide with the patrol area): (1) were aware of the patrol, (2) had encounters with the patrol, (3) felt any differently about safety in the neighborhood as a result of the patrol, or (4) made greater or lesser use of public areas or otherwise changed their crime prevention behavior because of the patrol. Such outcomes have become important because of a contemporary concern with citizen alienation (e.g., Yin and Lucas, 1973), even though it must be made clear that little would be known about crime deterrence.

In contrast, the effectiveness question can probably be addressed for building patrols, given certain limitations. Because building patrols serve a well-defined population and do not usually compete with the police in providing preventive patrol, an evaluation could probably be established whereby similar buildings (or building projects) with and without patrols are compared. Victimization rates among the residents would have to be the major outcome measures. Such an evaluation could not, however, follow the classic pre-post, experimental-control design. This is because building patrols are a voluntary citizen activity that can neither be initiated at a time and place of the evaluator's choosing, nor prevented from forming at any preestablished control sites. Furthermore, as a voluntary activity that often emerges quickly and unexpectedly, there would probably be no time to collect baseline data, unless the evaluator had the uncommon luxury of having monitored the victimization rates at numerous sites for a period of time, in the hope that patrols would emerge at some meaningful subset of these sites.

One feasible evaluation design would be a matched, post-treatment design, in which sites with existing patrols are compared with comparable sites with no patrols. This design would obviously be limited by the nature of the matching procedure. In addition, there might be little record of the early patrol activities (i.e., before the evaluator came upon the scene), so that the exact nature of the intervention could not be established.

An alternative design could overcome these obstacles but would involve other tradeoffs. In this alternative, a public agency (e.g., local law enforcement agency, public housing authority, or federal criminal

justice agency) could initiate a program to assist residents in establishing new building patrols. The classical pre-post, experimental-control design could then be followed, given the stipulation that patrol activities could not begin until baseline data had been collected. The evaluation would clearly not be of a purely citizen-initiated activity, and strictly speaking, the results could only be generalized to other resident patrols willing to accept external funding under the same prespecified conditions. However, there is reason to believe that such patrols might not differ substantially from truly citizen-initiated patrols, and that the evaluation results might therefore be of considerable value. Nevertheless, although such a design might make an evaluator more confident of his results, this alternative presents major risks:

- o A resident group might be responding to a serious crime problem and might thus be unable to honor its intentions to await baseline data collection--there could be intense pressure on the evaluator to complete the job, residents' attitudes may have changed anyway with the knowledge that a patrol is about to begin, or informal patrolling could actually be initiated, even at the risk of losing the external funds, if the situation became sufficiently critical. Under any of these conditions, both the external funding agency and the evaluator would be forced into an embarrassing public relations position, because the purity of science would appear to be of higher priority than the public interest.
- o Resident groups in the pre-designated control sites could still initiate their own patrols and upset the research design.
- o The costs of implementing and conducting the research project might be substantially greater than the funds disbursed to the patrol groups and might generate public criticism. For instance, a building patrol might satisfactorily operate for a year with a grant of less than \$10,000 from the external agency; the costs of a victimization survey at that site *alone* (i.e., not counting the implementation of the project, the support needed for the research design and preparation, or even the surveys to be done at the control sites) could be \$50/respondent for 100 respondents in each of at least two waves--or \$10,000 by itself.

In short, the decision to conduct a classical evaluation and to attempt to answer the effectiveness question must be weighed against the financial and possible political costs of doing the evaluation.

Implications for Citizen Crime Prevention Activities

The above examples should make clear that most evaluations of citizen crime prevention activities are likely to be severely limited. In the face of such limitations, it is extremely important that any negative connotations--which at present stem from the methodological state of the art--not be allowed to reflect unfairly on the actual citizen crime prevention activity. Voluntary efforts are difficult to initiate and yet are low in cost to public agencies; such efforts should probably be actively encouraged unless there is clear evidence of a serious negative outcome.

One task of the policymaker (e.g., local law enforcement official, mayor, or federal agency official) is therefore to create a different climate for viewing citizen crime prevention activities--one in which the burden of evidence is placed on those who would like to show that the patrols are *ineffective*. Note that ineffectiveness measures are not merely the observation of null effects for effectiveness measures. For a citizen crime prevention activity, ineffectiveness measures might include errors (e.g., false arrests, unnecessary injuries, etc.), low participation rates, complaints by participants, complaints by residents, or failure to gain cooperation from the police. Most of these ineffectiveness measures are more easily monitored and assessed than the typical array of effectiveness measures. Yet we know of no evaluation that has deliberately assumed the burden of demonstrating ineffectiveness.

Other tasks may be considered as well. First, methodological research should be encouraged so that citizen activities might be more accurately assessed in the future. Second, the ultimate limitations of research on this topic may still have to be recognized. Here, it is important to remember that evaluation research is only one mechanism (and a fairly unimportant one, at that) for setting public priorities. The political process, as reflected in voting behavior and the priorities of legislators and other elected officials, is in fact the more common way of setting public priorities, and federal agency policymakers, for instance, should enthusiastically mount new programs mandated by the

Congress¹ without unduly straddling the programs with evaluative questions that we have shown cannot be answered. The worthiness of a citizen crime prevention activity might thus have to be judged simply by input measures-- e.g., how many participated (or were employed) at what cost, and how the activity was received by other residents and the police--as well as by the absence of compelling evidence concerning negative outcomes.² Finally, policymakers could encourage citizens themselves to make more intelligent choices. Agency-sponsored public information programs could assist citizens in different cities and neighborhoods to become more aware of the experiences of others. For instance, residents--who, incidentally, may have already decided on a course of action independent of any formal effectiveness evidence--could benefit by knowing about the implementation problems and solutions of other groups.

¹For example, Congress passed the Community Anti-Crime Assistance Act (S.3337) in 1976, which calls for the disbursement of \$15 million to citizen groups across the country.

²It should be noted that, before the advent in the mid-1960s of the new concern with evaluation research, many social programs were initiated with just these requirements. However, we are not advocating that evaluation of effectiveness be dropped indiscriminately--only that certain activities that cannot be evaluated not be restrained unless there is negative evidence.

REFERENCES

- Bayley, David H.; "Learning about Crime--the Japanese Experience," *The Public Interest*, No. 44, Summer 1976, pp. 55-68.
- Bernstein, Irene N. (ed.), *Validity Issues in Evaluative Research*, Sage Publications, Beverly Hills, Calif., 1976.
- Bickman, Leonard, et al., *Citizen Crime Reporting Projects*, Loyola University of Chicago, Chicago, Ill., 1976.
- Boruch, Robert F., "On Common Contentions about Randomized Field Experiments," in Gene V. Glass (ed.), *Evaluation Studies Review Annual*, Vol. 1, 1976, pp. 158-194.
- Campbell, Donald T., and Julian C. Stanley, *Experimental and Quasi-Experimental Designs for Research*, Rand McNally, Chicago, Ill., 1963.
- Caporaso, James A., and Leslie L. Roos, Jr., *Quasi-Experimental Approaches*, Northwestern University Press, Evanston, Ill., 1973.
- Chaiken, Jan M., "What's Known about Deterrent Effects of Police Activities," The Rand Corporation, P-5735, paper presented at the annual meeting of the Operations Research Society of America, Miami, Fla., November 1976.
- Heller, Nelson, et al., *Operation Identification Projects*, U.S. Department of Justice, Washington, D.C., 1975.
- Kelling, George, et al., *The Kansas City Preventive Patrol Experiment: A Summary Report*, Police Foundation, Washington, D.C., 1974.
- Larson, Richard C., "What Happened to Patrol Operations in Kansas City? A Review of the Kansas City Preventive Patrol Experiment," *Journal of Criminal Justice*, Vol. 3, 1975, pp. 267-298.
- Levine, James P., "The Ineffectiveness of Adding Police to Prevent Crime," *Public Policy*, Vol. 23, Fall 1975, pp. 523-545.
- Maltz, Michael D., *Evaluation of Crime Control Programs*, U.S. Department of Justice, Washington, D.C., April 1972.
- Marx, Gary T., and Dane Archer, "Community Police: An Exploratory Inquiry," unpublished paper, Harvard-MIT Joint Center for Urban Studies, Cambridge, Mass., June 1972.
- Newman, Oscar, *Defensible Space*, Macmillan, New York, N.Y., 1972.
- Press, S. James, *Some Effects of an Increase in Police Manpower in the 20th Precinct of New York City*, The Rand Corporation, Santa Monica, Calif., R-704-NYC, 1971.

Repetto, Thomas A., "Crime Prevention through Environmental Policy," *American Behavioral Scientist*, Vol. 20, November/December 1976, pp. 275-288.

-----, *Residential Crime*, Ballinger, Cambridge, Mass., 1974.

Rossi, Peter, and Walter Williams (eds.), *Evaluating Social Programs*, Seminar Press, New York, N.Y., 1972.

Sagalyn, Arnold, et al., *Residential Security*, U.S. Department of Justice, Washington, D.C., 1973.

Schneider, Anne L., "Evaluation of the Portland Neighborhood-Based Anti-Burglary Program," Oregon Research Institute, Eugene, Ore., March 1975.

-----, and Jerry Eagle, "The Effectiveness of Citizen Participation in Crime Prevention: A Random Outlaw Model," Oregon Research Institute, Eugene, Ore., 1975.

Suchman, Edward, *Evaluative Research*, Russell Sage, New York, N.Y., 1967.

Washnis, George J., *Citizen Involvement in Crime Prevention*, Praeger, New York, N.Y., 1976.

Weiss, Carol (ed.), *Evaluating Action Programs: Readings in Social Action and Education*, Allyn and Bacon, Boston, Mass., 1972.

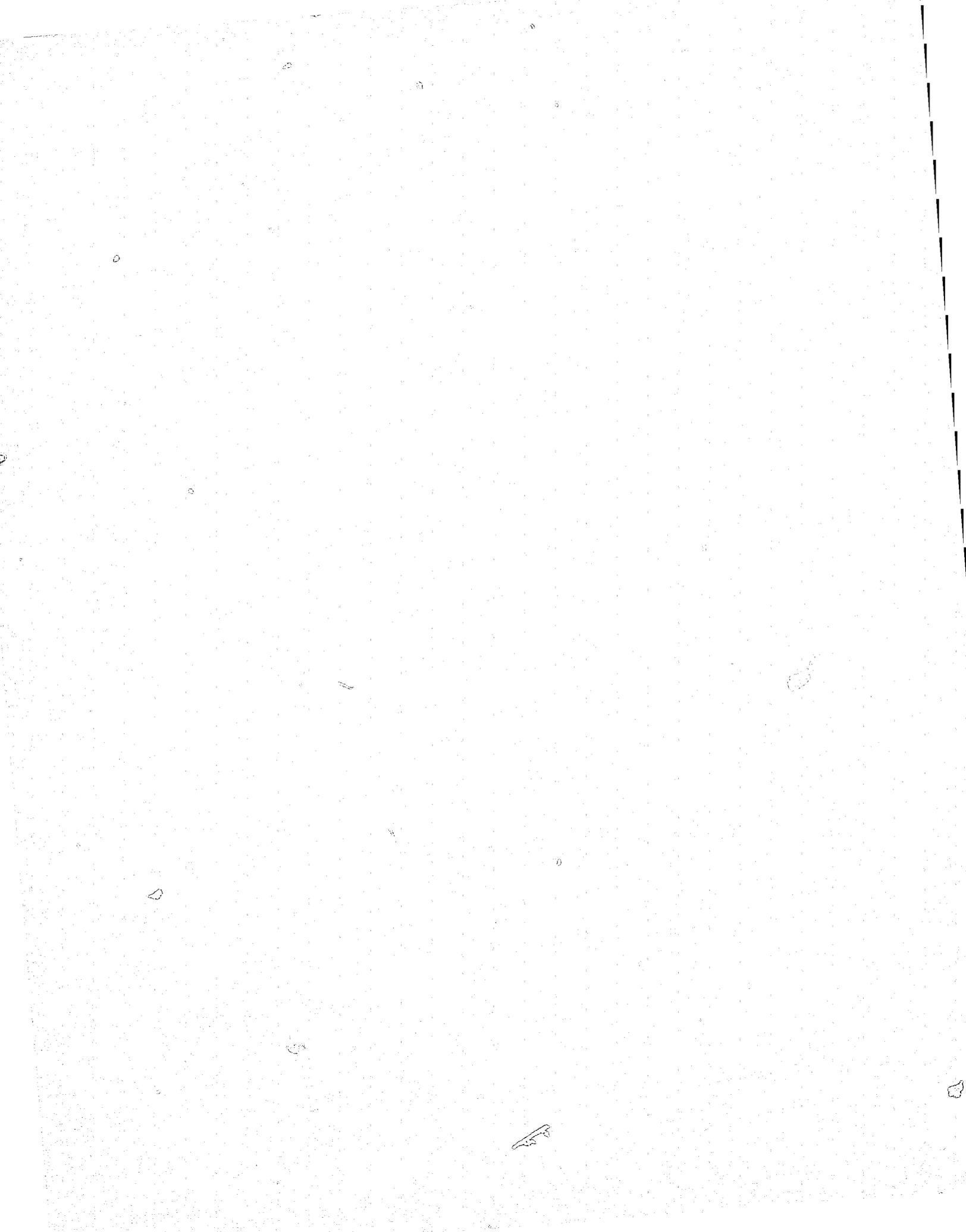
Wilson, James Q., *Thinking about Crime*, Basic Books, New York, N.Y., 1975.

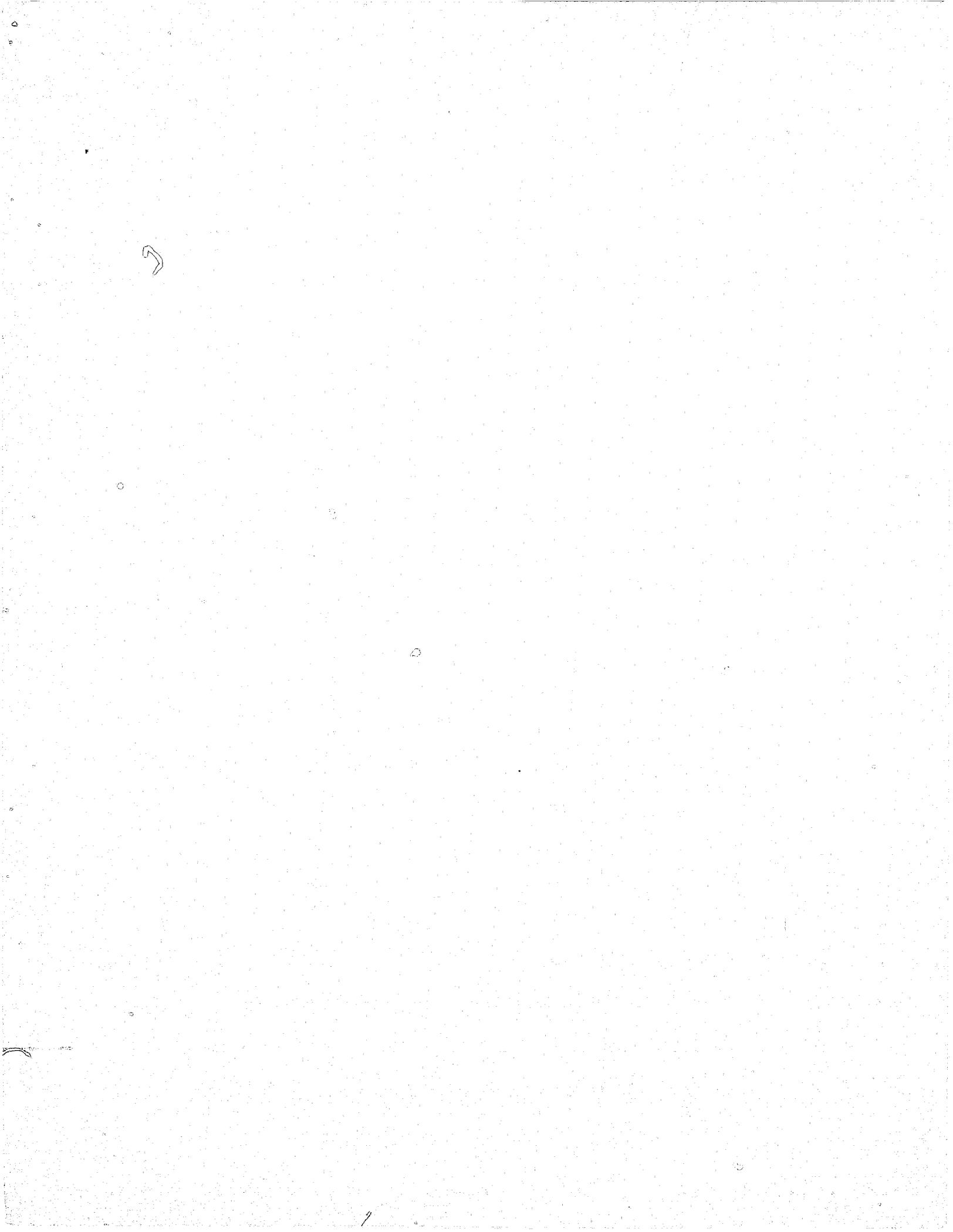
-----, and Barbara Boland, "Crime," in William Gorham and Nathan Glazer (eds.), *The Urban Predicament*, The Urban Institute, Washington, D.C., 1976, pp. 179-230.

Yin, Robert K., and William A. Lucas, "Decentralization and Alienation," *Policy Sciences*, Vol. 4, September 1973, pp. 327-336.

-----, and Douglas Yates, *Street-Level Governments: Assessing Decentralization and Urban Services*, D. C. Heath and Company, Lexington, Mass., 1975.

-----, Mary Vogel, Jan Chaiken, and Deborah Both, *Patrolling the Neighborhood Beat: Residents and Residential Security*, The Rand Corporation, Santa Monica, Calif., R-1196-HEW, March 1976.







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