OPPORTUNITIES FOR IMPROVING PRODUCTIVITY IN POLICE SERVICES

The National
Commission on Productivity

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Report of the Advisory Group on Productivity

in Law Enforcement

on

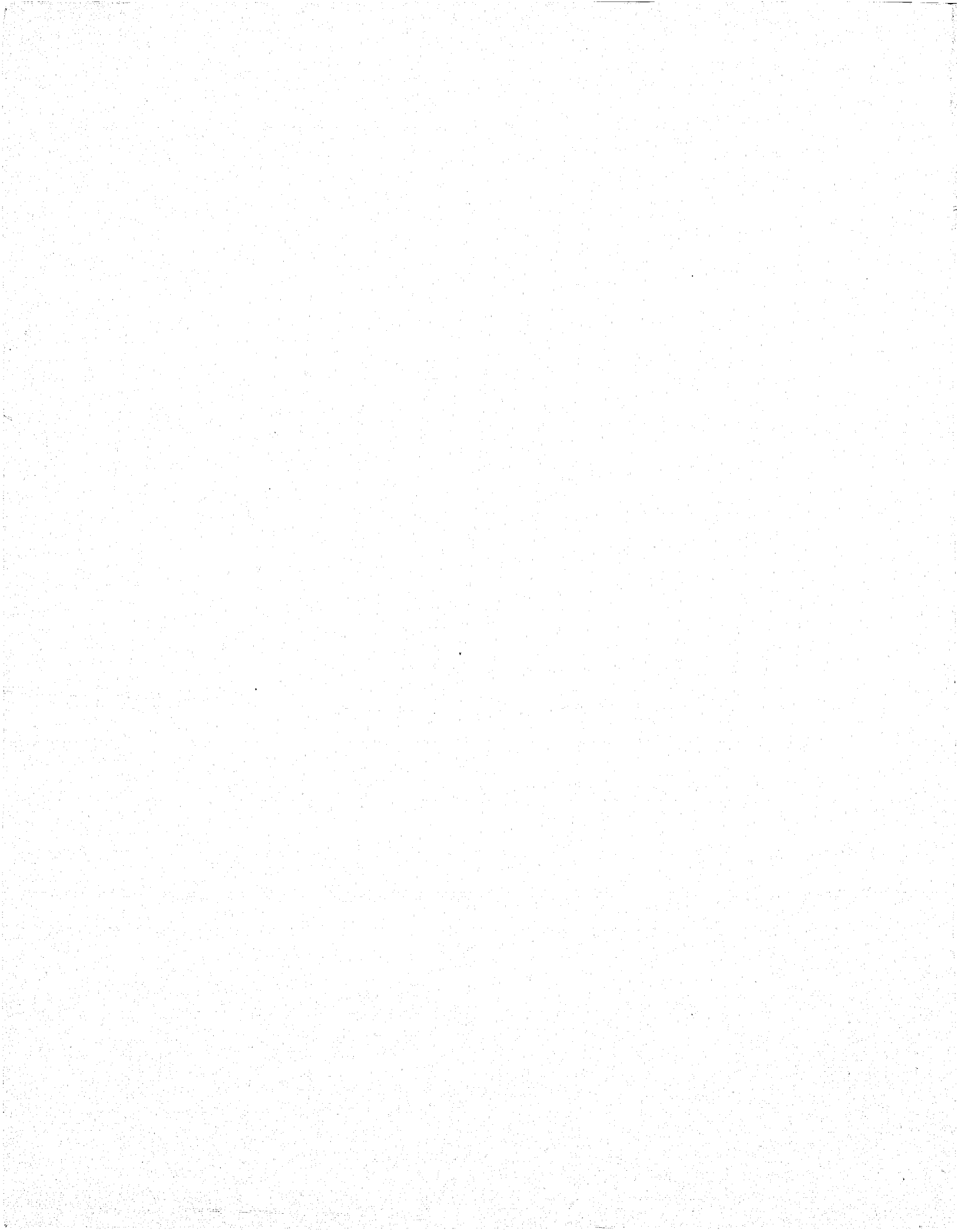# OPPORTUNITIES FOR IMPROVING PRODUCTIVITY IN POLICE SERVICES

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PREFACE

The need for raising productivity has been identified as a national concern. In the President's statement of July 10, 1970, creating the National Commission on Productivity, he said:

"In order to achieve price stability, healthy growth and a rising standard of living, we must find ways of restoring growth to productivity. The task of this Commission is to point the way toward this growth . . . in the years ahead."

Because public employment has been growing sharply in relation to that in private industry, the Commission was charged with looking into productivity in the public as well as the private sector. In 1970, nearly one out of every five wage and salary workers was a government employee, and 80 percent of all public employees[1] worked for State and local governments. Projecting the current trends of government growth and decentralization of Federal programs inherent in the revenue-sharing concept, experts foresee continued sharply rising expenditures and employment at the State and local levels.

The Commission, therefore, has been exploring the potential for productivity improvements in a variety of services delivered at the subnational level. It was against this background that this study of police productivity was launched in March 1973.

To carry out the study, the Commission established an Advisory Group and provided it with a small staff. The Advisory Group was selected from a cross section of progressive police administrators, criminal justice planners, and academicians, as well as representatives from relevant professional and funding organizations. The staff consisted of a select group of police officers, criminal justice planners, and consultants assembled by the Commission.

Various empirical and analytical approaches to the problem of police productivity were employed. Contacts were made with about 40 police agencies and sheriffs' departments across the country. Three questionnaires were administered to a sample of 11 selected State and local police agencies, ranging in size from 150- to 30,000-man forces. The Advisory Group held five meetings at which the combined expertise of the members was applied to the subject of police productivity.

The purpose of the effort, and of this report, was to develop the tools—concepts, measures, means for improvement, and strategies for change—whereby police departments can themselves improve productivity.

The Advisory Group recognized the diversity of police departments and the futility of trying to prescribe solutions which could be universally applied. Each department throughout the country is unique. Local conditions vary, governments are structured differently, community priorities respond to local needs, and police department roles are diverse.

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[1] First Annual Report, National Commission on Productivity, March 1972, pp. 13–14.

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In fact, productivity analysis is in part a response to that diversity, recognizing as it does the need for each government and police manager to respond individually to special local needs.

Furthermore, attempts to develop productivity tools for the public sector in general, and for police services in particular, are in their infancy. Because of the complex factors involved, these efforts are not likely to reach maturity in the immediate future.

Recognizing both the diversity of local situations and the complexity of police productivity, the Advisory Group decided to focus this initial effort on limited areas of police work. Three areas were selected because they were believed to be both of great importance to most police departments, and subject to significant productivity improvements through existing techniques or knowledge. The areas treated are:

Patrol: direct services to the public in both crime and noncrime situations.
Crime Prevention: specific programs—aside from those normally associated with traditional patrol activities—designed to anticipate and prevent crime.
Human Resources: the management of people—including recruitment, selection, assignment, training, and organization development—to maximize their potential in meeting department goals while increasing the satisfaction they get from their work.

In each area, issues relating to productivity are identified, the potential for developing more precise measures is explored, and some illustrative examples for actually improving productivity are suggested. Where measures are presented, in no sense are they offered as final, refined products. No preliminary and exploratory effort could pretend to do this. They are, instead, suggested starting points for the development of measures suited to the particular level of service and individual needs of a specific community. Only by trial of application will their full value and pitfalls be determined.

The report is structured in the following manner. Chapter 1 briefly defines the concept of productivity as it might be applied to police services. It emphasizes the need to view police productivity in terms of a process integrally related to overall police management.

Chapter 2 discusses the problem of measuring police activity. It identifies some pitfalls of measures currently in use, analyzes the principal elements of measurement, and emphasizes the importance of using measures within the overall management context.

Chapters 3, 4, and 5 apply the productivity concept to the three substantive target areas: patrol, crime prevention, and human resources management. In each case an attempt is made to provide sufficient detail to assist departments in moving rapidly to apply the ideas to their own situations. It is also hoped that the discussion summarizes key points in a manner broad enough to increase their general applicability.

Chapter 6 discusses the barriers to productivity improvement, including both the reasons why many police departments are not inclined to innovate and the factors that determine the success or failure of new programs.
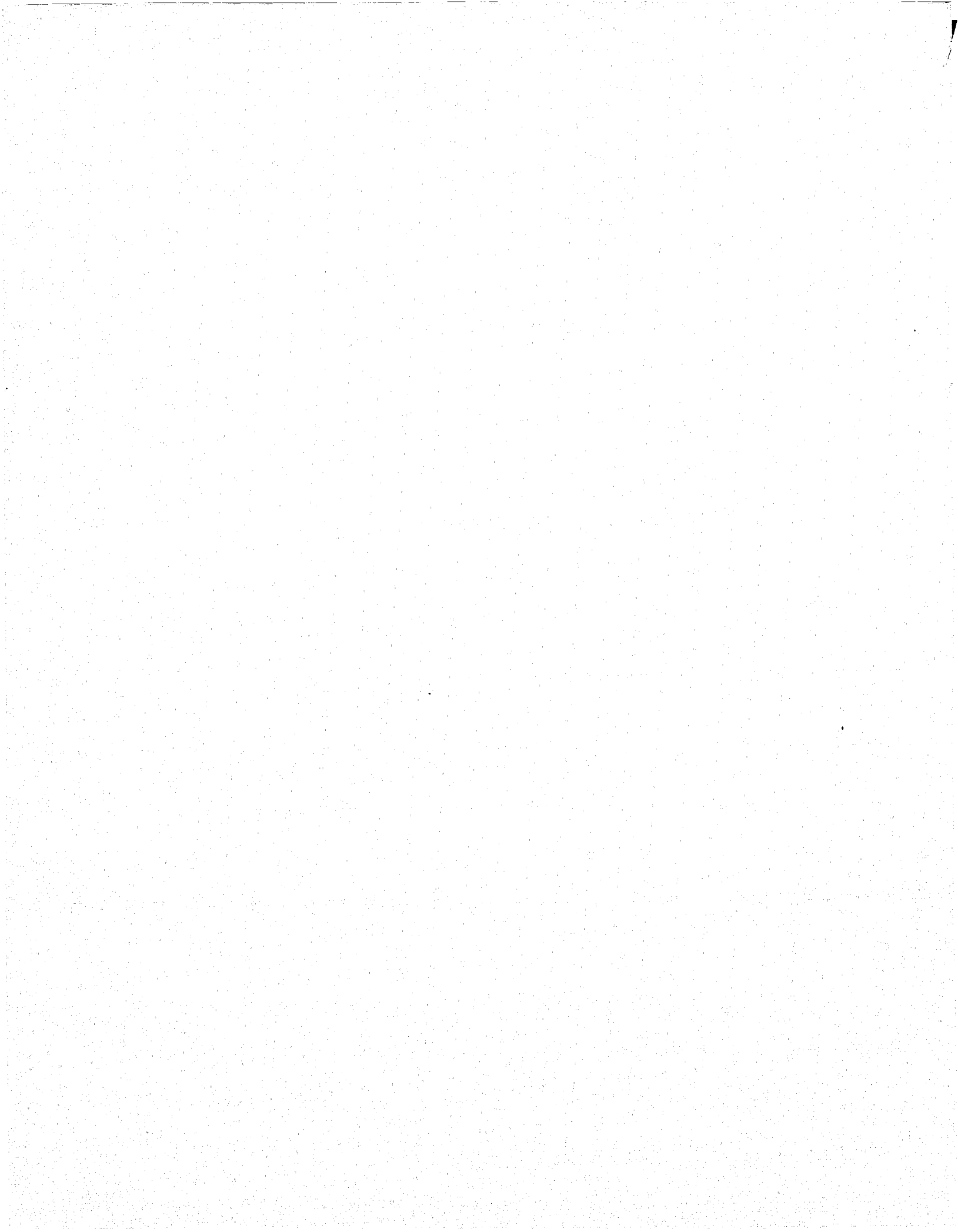
Specific suggestions for productivity measurement and improvement are included in each of the three substantive chapters of the report. A final section presents the Advisory Group's suggestions for national support to assist state and local police agencies in developing their own capabilities for improving productivity.

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PRODUCTIVITY
AND POLICE
SERVICES

State and local governments are challenged to provide more effective police services at a time when the growing desire for public safety is surpassed only by the increase in police costs. For a police department to create one more round-the-clock post actually requires adding five officers to the force at a cost that may exceed $80,000 a year. To place an officer in a police car with a partner 24 hours a day may exceed $175,000 in annual costs to the community.

These costs are reflected in the growing nationwide expenditures for police services. In response to the mounting fear of personal harm, loss of property, and public disorder in recent years, municipal police expenditures increased 70 percent from $2.1 billion in 1967 to $3.5 billion in 1971. Total Federal, State, and local expenditures for police services reached $6.2 billion in 1971, a 20 percent increase over the previous year. Those funds went principally to cover the compensation for over 530,000 law-enforcement officers employed full-time in over 10,000 public police agencies at all levels of government.[1]

These fiscal facts of life have forced many communities to recognize that the demand for more police services cannot be met simply by expanding the police force. Rather, police departments must learn to use more effectively the personnel and other resources currently available to them. That means increasing their productivity.

WHAT IS PRODUCTIVITY?

Productivity means the return received for a given unit of input. To increase productivity means to get a greater return for a given investment. The concept most often is used in reference to the production of goods, e.g., more agricultural products, automobiles, or tons of steel per man-hour. Specialists argue over the precise definition of the term "productivity," but it is generally assumed to be a ratio of "output" (or what results from an activity) to "input" (or the resources committed to the activity).

Police services are not as easily defined as the process of producing a television set or an eggbeater. In general, higher police productivity means keeping the police department's budget constant and improving performance, or keeping performance constant

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[1] *The Municipal Yearbook 1973*, International City Management Association.

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and reducing the size of the budget. Productivity gain can also mean increasing the budget, but improving performance at an even higher rate. But the concept of productivity cannot simply be transferred in its raw form from the economics of production to the operations of a State or local police department. Rather, increasing productivity in police services might be considered in the following four ways.

First, *increasing police productivity means improving current police practices to the best level known, to get better performance without a proportionate increase in cost.* In its simplest form, this means doing the things that are considered to be a necessary part of good police work, but doing them as well or efficiently as the best current practices permit. For example, officers assigned to patrol spend a great deal of time on such activities as filling out unnecessarily long reports, or on activities that are important but that would require less time if better coordinated, such as the long hours spent waiting to testify at a trial. These activities could be minimized through better administrative procedures, thus increasing the time available for more important assignments.

Of course, freeing up more police officer time—or improving upon other practices —will not guarantee that the force will be more effective in deterring crime, apprehending criminal offenders, or providing noncrime services. But it is a first step in making the force more effective, and can be accomplished at little or no cost to the department.

Second, *increasing police productivity means allocating resources to activities which give the highest return for each additional dollar spent.* A police department carries out a range of activities, many of which are non-crime-related and most of which are necessary to its overall capability and its responsibility to the public. Beyond a given scale, however, expanding certain activities will give the force less value than initiating or expanding others. For example, experiments already in progress tend to support the contention of some criminal-justice analysts that random patrol has a limited effect in deterring criminals. Thus, it may be possible to take, say, 10 percent or more of the patrol force off random patrol[2] without any significant negative effect and shift those officers to activities that focus on anticipating crime or "hardening" likely crime targets (e.g., improved building security), which may provide a higher payoff.

Or, to give another example, would a 500-man force get more value from adding a few more officers than from providing the existing 500 men with mobile radios? These are the kinds of decisions—rarely so simple in reality—that continually confront police managers, but that are often made with insufficient understanding of the options available or of their true costs and potential values. They require asking not just whether the force is doing things right, but also whether it is doing the right things.

Third, *given the uncertainties of police work, increasing productivity means increasing the* probability *that a given objective will be met.* The professional police officer—from the chief to the patrolman—must deal constantly with many unknown or ambiguous factors. He is continually assessing the likelihood that this or that may happen, and consequently the more skillful he becomes at increasing the probability that each activity will result in useful accomplishment, the more productive the overall operation will be.

The clearest example of increasing the probability of achieving intended impact is having personnel assigned when and where crime is highest or calls for service are heaviest. Simple observation can indicate the "when and where" in general terms; care-

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[2] Subject to acquiescence of citizens in the affected areas, for they have been made to believe, over the years, that random patrol has real deterrent value.

ful analysis of available data can more accurately pinpoint likely times and places of crime occurrence, thereby significantly increasing the probability of putting officers where they are needed.

Fourth, *increasing productivity in police work means making the most of the talents of police personnel.* Sworn officers are better trained and more expensive than ever before. This means that they are capable of higher performance, that economy requires they be used more effectively, and that they expect to be treated with greater respect and intelligence. Too often the individual talents of sworn officers are overlooked or suffocated by rigid organizational procedures. This represents both a squandering of public resources and a stifling of human potential. Our system should not—and increasingly will not—tolerate either.

Examples of better human resource development and management abound and can be expected to become increasingly important to police managers. They may include making patrolmen responsible for following through on investigations; permitting senior patrolmen to refuse promotion but receive a higher salary and prestige as a patrolman; and developing alternative career paths for professional police officers.

PRODUCTIVITY AND EFFECTIVENESS

For any police activity, productivity must be considered in relation to effectiveness. The two concepts are closely related and at times may be difficult to differentiate.

In simple terms, effectiveness is a measure of the extent to which a goal is achieved. In this sense, it does not include any notion of resources committed to the activity.

Productivity includes not just what was accomplished but what resources were required to accomplish it.[3] It is important to recognize that productivity does not necessarily indicate the extent to which the result actually accomplished a given goal. Productive performance—was the job done efficiently?—must also be seen in terms of effective performance—how well was the job done and how significant was the activity in contributing to departmental objectives?[4]

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[3] By the definition employed here, productivity is akin to, if not indistinguishable from, efficiency. However, the Advisory Group has used the term in a way that implies a greater concern for effectiveness and quality or value of service than is usually associated with the term "efficiency."

Others concerned with this broader concept may define productivity as effectiveness over input, or a cost-effectiveness ratio. There are no hard and fast rules for such measurements. Different kinds of problems lend themselves to different kinds of analytical formulations. At this stage in the process of police measurement, it is probably less important to quibble about these conceptual differences—although they no doubt will become more important as the art advances—and more worthwhile to get on with trying to establish and test measures that seem useful to police managers.

[4] While conceptually it may be useful to assume that effectiveness does not concern itself with resource input or cost, in practice the term "effective" often is used in a way that assumes a reasonable economy of resource use. This consideration, and the relationship between effectiveness and productivity, may be clarified in the following example.

Suppose that one measure of police productivity is the number of *valid* arrests per patrolman per year. If in a year a force of 100 men made 500 such arrests, then its productivity for that activity would be 5.0 arrests per patrolman.

However, if the force were reduced by 20 men, and if the remaining 80 men made 480 arrests the following year, then the productivity of the force would increase to 6.0 arrests per patrolman. But while productivity increased, the actual number of valid arrests made decreased. In that sense, the effectiveness of the force in apprehending criminals (assuming the same level of criminal activity) has declined.

Whether effectiveness actually declined, of course, depends upon how the goal of the police department is defined. If its goal is to apprehend as many criminals as possible commensurate with a reasonable degree of public order *and* cost, then perhaps the slight decline in arrests is acceptable, especially in light of the apparently large cost savings that resulted. In this type of case the goals of increasing productivity and increasing effectiveness become intimately related.

The ideal productivity gain, of course, is where the same force of 100 men is able to increase its number of valid arrests from 500 to, say, 600. In this case, both the productivity and effectiveness of the force—by this measure—are increased: more valid arrests are made with no increase in manpower.

One thing that is always common to both productivity and effectiveness is "output," or results. Under the pressure of growing demands for service and spiraling costs, government is being compelled to identify more precisely what it is trying to accomplish, and what the real results are from its activities. The former requires a clearer identification of objectives, and the latter a more precise way of assessing the results of activities that contribute to those objectives. Better measurement of results leads to better productivity assessment. And better productivity assessment, in turn, is an important step in the process of productivity improvement.

THE PROCESS OF PRODUCTIVITY IMPROVEMENT

Getting a greater return for the dollar spent is not a "one shot" activity. It is an ongoing, long-term process that should be an integral part of police management. The Advisory Group has identified the following five-stage process as one approach to productivity improvement in police agencies.

Establishment of Objectives

Ideally each police department establishes its goals in concert with the political and professional leadership of its government and the people they serve. It then proceeds to identify intermediate objectives, the achievement of which will contribute to the attainment of the broader goals.

In practice, the process of setting objectives is often reversed. Instead of determining the mission of the department and then organizing to accomplish it, more often the apparent aims of ongoing activities are described and are built into departmental goals.

What is important is that the different levels of objectives be clearly related and understood.

For example, police agencies usually have a broadly defined goal of reducing the amount of crime to tolerable levels. An intermediate objective would be to reduce the incidence of a specific crime during a specific time period. A police department can then choose various strategies, such as reducing the opportunity for burglary by a citywide campaign on building security or increasing the visibility of the police in areas of high burglary rates.

The key is that activities at rank-and-file level should be contributing to higher level departmental goals. Simple as this sounds, it often is not the case.

Systematic Assessment of Progress

Police management needs to know how well it is doing in meeting its objectives. Most police chiefs, mayors, or managers have some judgment on how their police force is doing; for example, good, better than before, about the same, not quite up to par, or, it appears that we have a problem. Often these are "gut reactions" based on little more than intuition and informal evaluation.

In contemporary police work, effective assessment requires more precise measurement. This is not to suggest that all assessment must be based on quantified information, but without more precise measures it is difficult to determine how much better

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or worse a particular unit, strategy, or piece of equipment works. Even scant quantifiable data can be used as a limited aid to assessment.

Search for Improved Operating Methods

The Advisory Group agreed that many improved operating methods, types of equipment, and ideas being used in certain police agencies could and should be made known to and be applied in other jurisdictions. While numerous journals, conferences, and other communications media provide information on innovative and improved methods, some are not presented fully or clearly enough to be usable by busy police managers. Nevertheless, police managers ought to play an active role in searching for new and better methods.

Efforts to learn about developments in other jurisdictions are frequently passive, at best. Often the most valuable ideas come from within an agency, but people familiar with staff and line problems either are not asked for suggestions for improvement, or are asked to address themselves to the wrong questions. Similarly, nonpolice agencies within the same government, such as management analysis staffs, are too often ignored. If police managers sought their cooperation, such agencies could become sources for ideas or assistance for better police performance.

Experimentation

Most police chiefs are understandably cautious when it comes to doing something out of the ordinary. "Innovation" is a luxury many police departments feel they cannot afford. However, neither can they afford to hold to the *status quo* while conditions around them change.

Clearly a prescription for a balanced approach to risk-taking is needed. It is important to recognize that useful information often comes from the idea that did not work as expected. Managers must also learn how to take reasonable and controlled risks, that is, to try things out, and establish a consistent approach to risk-taking. Experiments should be designed in such a form as to make evaluation possible, to determine whether or not they are successful, as well as why and by what margin of quality or cost they are inferior or superior to existing methods, techniques, equipment, and ideas. In addition, those who ultimately are to use a new idea should be involved with the development and testing process.

Implementation

A new method that has been tested and proven feasible remains to be implemented. At this point, the sense of caution and resistance to change that it might have met from department leadership extend throughout the department, the government, and the citizenry as well. Overcoming this resistance requires involvement of those people at the experimentation stage, as well as thorough preparation, patience, cooperation, close monitoring of the innovation, and clear accountability.

A BEGINNING TO PRODUCTIVITY IMPROVEMENT

The Advisory Group did not address itself equally to each of the elements in the process. It focused primarily on two: assessment through measurement, and seeking ways to improve productivity. The chapters dealing with the three target areas—patrol,

crime prevention, and human resources management—discuss both problems of measurement and possible means of improvement. Throughout, the treatment of means of improvement deals more with illustrative examples than with the mechanisms or channels for systematically seeking new ideas.

The Advisory Group spent relatively little time on the problem of setting goals and objectives, recognizing that other groups were addressing that issue in greater detail and that ultimately it is a matter for local determination. The problem of identifying objectives and relating them one to another was considered insofar as it relates to measuring police activity.

Nor was a great deal of time spent on the techniques of experimentation or testing, although the measures suggested should assist in the evaluation of experimental programs.

Somewhat more attention was given to the problems of implementing new ideas. The Advisory Group agreed that the resistance to new ideas—even those that have been tried and tested—is a principal cause of low productivity in police departments. This problem was uppermost in the minds of the Advisory Group during the course of their discussions, and their feelings on the question are reflected throughout the report and are summarized in Chapter 6.

In sum, productivity in police services is a broad and largely unexplored subject. The Advisory Group attempted to define its general outline. But it consciously limited the investigation to those topics that seemed to represent the opening wedge to greater understanding and practical use. Thus, within the three substantive areas chosen for consideration, only certain elements of productivity are discussed.

As pointed out in the preface to this report, the Advisory Group considers its efforts to be preliminary and exploratory. Its suggestions are made as starting points for the development of measures and practices suited to the particular level of service and the needs of specific communities. They should be subjected to the processes of trial and evaluation by operating departments that will reveal their full value and disclose their shortcomings.

2
MEASURING
POLICE
SERVICES

Quantitative measures are nothing new in police services; in fact, they may be more familiar to police managers than to many other State and local government officials. Nevertheless, many of the measures currently being applied to police services do not provide managers with the information they need to help them improve operations. This chapter discusses some of the problems experienced with current measures and the potential and limitations of better measurement in helping police managers to improve productivity.*

PROBLEMS WITH CURRENT POLICE MEASURES

The most common data used for judging overall police performance are crime rates —such as compiled in the *Uniform Crime Reports (UCR)* published annually by the Federal Bureau of Investigation.[1] However, because the incidence of crime is a function of many factors unrelated to police activity, crime rates alone are insufficient measures of police performance. Police managers need other measures that more directly reflect the significance of police activities.

The *UCR* has additional limitations as a management tool, many of which are cited in the *UCR* itself. The most critical of these is the fact that the *UCR* is not an altogether accurate reflection of crime. The *UCR* documents only *reported* crime, which, as several surveys have shown, is only a fraction of crime actually committed. In fact, recent surveys of "victimization" have indicated that reported crimes may represent, in some jurisdictions, as little as 25 percent, and rarely more than 75 percent, of the actual incidence of crime. One reason many types of crime go unreported is the victims' fear of embarrassment, of family or personal involvement, or of retaliation on the part

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* Other aspects of police measurement are treated in: *Measuring Police-Crime Control Productivity*, prepared for the National Commission on Productivity by the Urban Institute and available from the National Technical Information Service, U.S. Department of Commerce (Document No. PB 22317).

[1] The full title of the *UCR* dated August 8, 1973, is *Crime in the United States, 1972—Uniform Crime Reports*. Since it was first published in 1930, the *UCR* has been the only nationwide data source on crimes committed throughout the United States. The report has been improved over the years by refinements in data collection, comparison, and dissemination, and it will undoubtedly continue to be used in the future as an indication of crime rates and police performance.

of the offender. In some cases victims failed to report crimes because of lack of confidence in the police.[2]

Furthermore, in the FBI's Crime Reporting Program, data are not published on both offenses and arrests for all categories of crime. The *UCR* identifies "Index crimes," which include the major crimes of murder, forcible rape, robbery, aggravated assault, burglary, larceny $50 and over in value, and auto theft. It then groups offenses into two categories: "Part I" offenses, which include the Index crimes, and "Part II" offenses, which, while they are lesser crimes, consume much of every police department's time and effort. The *UCR* reports both offense and arrest information for "Part I" offenses, but only arrest information for "Part II" offenses. The distinction between major and minor offenses is all the more a problem since many police agencies do not adhere strictly to *UCR* definitions. Some, for example, classify a burglary attempt as a malicious destruction of property, thus demoting it to a "Part II" offense.

Some hope is offered for getting more accurate crime data through victimization surveys—confidential and detailed surveys of scientifically selected samples representative of the population as a whole to detect the true number of crime victims. Scientifically and consistently administered, victimization surveys may provide new measures for crime-control and crime-prevention programs.[3] They may reveal not only the true incidence of crime but also the reasons why crimes were not reported and the victims' attitudes toward the police and police service.

Victimization surveys, however, are expensive if conducted properly, primarily because a large sample is needed before the data are valid. The Law Enforcement Assistance Administration, in collaboration with the Bureau of the Census, is gathering victimization data on a national and citywide basis. The National Crime Panel, under technical development for about 3 years, is a nationwide survey of individuals and businesses which regularly provide statistical data on the incidence of common crime, its costs, the characteristics of victims, and the characteristics of criminal events.[4]

In addition to crime statistics (e. g., the *Uniform Crime Reports*), there are several other types of data upon which police generally rely to help them monitor their workload and evaluate their performance. These include:

- Numbers of arrests by crime category.
- The clearance rate. (As used in the *UCR*, police "clear" a crime when they have identified the offender, have sufficient evidence to charge him, and actually take him into custody. The arrest of one person can clear several crimes, or several persons may be arrested in the process of clearing one crime.)

[2] The rape victim fears the reaction of relatives or suitors. Parents fear sex crimes involving their children may bring unwanted publicity. Burglary victims fear higher insurance rates, loss of coverage, or simply that publicity will make them a target for other burglars. Fear of retaliation by the perpetrator and a reluctance to involve spouses or friends are important factors in underreporting personal assault or robbery crimes.

[3] See Anthony G. Turner, "Victimization Surveying—Its History, Uses, and Limitations," Appendix A in *Report on the Criminal Justice System*, Uncorrected Proof Copy, National Advisory Commission on Criminal Justice Standards and Goals, Washington, D.C., soon to be published.

[4] A brief though more detailed description of the National Crime Panel can be found in the forthcoming *Report on the Criminal Justice System* ("The National Crime Panel," part of Appendix A, 110–112 of the uncorrected proof copy), National Advisory Commission on Criminal Justice Standards & Goals, 1973. It may be that after several years of victimization survey data collection, stable correlations may be demonstrated by crime category, type of population, or by some other breakdown of the data, between reported crime and total crime. In this event, police agencies would have a relatively cheap tool of very great utility for productivity management. However, it cannot yet be said whether or to what extent this may happen.

- The exceptional clearance rate. (Once again using the *UCR* definition, crime solutions are recorded in exceptional instances when some element beyond police control precludes the placing of formal charges against the offender, such as the victim's refusal to prosecute after the offender is identified, or local prosecution is declined because the subject is being prosecuted elsewhere for a crime committed in another jurisdiction.)
- Complaints received from the public about the department or about specific actions by officers.
- Activity measures of field operations and other services.
- Workload measures of clerical functions (e.g., number of additions per month to the fingerprint files).

All of the above data are useful, but they are limited in the amount and quality of information they supply. Activity and workload measures can be usefully integrated into an information system to help managers estimate the demand for additional manpower resources or to identify concentration of clerical or administrative activity. Arrest data provide crude estimates of the activity of the patrol force, and the clearance rate is thought to provide some indication of a department's ability to solve reported crimes.

However, the majority of these data are not sufficiently refined to provide police managers with dependable and useful information which can lead to better performance. Clearance rates, for example, frequently do not correspond to police arrests made in the same time period; for example, crimes committed in one year may not be solved with the offender apprehended and court action taken until the following year. Similarly, a simple measure of arrests may tell little about how effective the police were in arresting the "right" person. A study for the 1967 President's Crime Commission estimated that only 24.1 percent of arrests for Index crimes survived a "formal accusation and detention" stage, and only 22 percent of all arrests resulted in conviction.[5]

In another example, measures of simple "workload" may reflect the amount of activity in a given function or field operation, but do not indicate how well the job is done or the amount of resources devoted to that activity.

Complaints received by the police department regarding general police performance or specific police activities potentially can give insight into their effectiveness and the quality of both the crime and noncrime services they provide. Frequently, however, police departments fail to distinguish the sources of such complaints (e.g., individuals vs. community groups vs. political pressure), and respond equally to all types of pressure for improved service. If tabulated carefully, complaints from the general public could provide useful guidelines for police as well as "feedback" regarding the public's perception of the relative importance of various police activities.

Many police departments presently have a solid base for gathering information regarding police activities. However, these data as presently aggregated can be misleading. One reason that existing data are not put to better use is that the police mission is complex. The specific objectives of the force are not always clear. Nor is it always certain what some police activities are contributing, or how they relate to higher department goals. In short, it is often difficult to know what to measure.

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[5] *Task Force Report: Science and Technology,* Report of the President's Commission for Law Enforcement and the Administration of Justice, U.S. Government Printing Office, Washington, D.C., 1967, pp. 60–61.

Consequently, a first step to improved measurement is to understand how the various functions of police work relate to the broader mission of the department and the goals of State and local government.

IMPROVING MEASUREMENT OF POLICE SERVICES

Measurement of police activities, as is true for most government organizations, is complicated by the absence of goals and objectives that are easily quantifiable. While there may be agreement on the broad goals of the police force, the specific activities that "rightly" fall under the jurisdiction of a police department are subject to debate.[6]

The Realm of Police Management

A police department is part of several public service systems, each of which may include a variety of public agencies. Although overall police performance may be judged by the general public on the basis of crime prevention or some perceived level of public security, the police are also responsible for non-crime-related and nonemergency services. Among the categories of service in which the police department plays a role are the following:

- Criminal justice, which includes, depending upon one's definition, the courts, correctional institutions, probation, parole, and many other public and private agencies concerned with crime and the criminal offender.
- Maintenance of public order.
- Emergency response, for fire, accidents, natural disaster, medical emergencies, etc.
- Community relations, which affects the community's feeling of confidence in or alienation from the government.
- Nonemergency general services. Police are called upon for a variety of non-crime-related tasks which do not fall under the responsibility of any other public agency, or which, because of the 24-hour nature of police duty, befall them when other agencies are closed. This may range from directing a stranger to a historical landmark, to registering bicycles, or to stoking the townhall furnace.

The relative amount of time and resources a police department devotes to meeting responsibilities within each of these systems naturally varies from community to community. But more important is the fact that the police both affect and are affected by other elements of the several systems of which they are a part. Effectiveness in preventing crime, for instance, depends in part on how well the corrections agency performs in rehabilitating felons. Or, whenever patrolmen spend time in court beyond the minimum required for efficient assistance in the judicial process, the less time they will be available for crime-related work. On the other hand, police skill in investigation and apprehension increases the likelihood that district attorneys can obtain convictions of arrested persons.

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[6] One list of police goals provided by the American Bar Association's Project on Standards for Criminal Justice (which was also approved by the executive committee of the International Association of Chiefs of Police) ranges from such general goals as safeguarding freedom and developing a reputation for fairness, civility, and integrity, to more specific goals such as identifying and apprehending offenders and facilitating the movement of people and vehicles. The Advisory Group did not attempt to define the overall police responsibility or to develop an authoritative list of police goals and functions. Rather, it decided to focus its attention on selected activities which are of top concern to police chiefs. The debate over proper police goals no doubt will, and should, continue. And efforts to measure police activity must be attentive to the changing perception of police responsibilities.

Consequently, measures of police performance must take into account the other system components that affect the outputs of police work.

Despite these problems, measuring police activity need not await, nor depend upon, a final resolution of the "proper" police role and responsibilities. Certain goals can be agreed upon, and certain activities clearly are important enough that measurement of them can proceed. Indeed, it may be that careful measurement and analysis of specific police activities will gradually produce a clearer understanding of their relationship to broader police and community goals.

Measurement to Assist Management

The principal purpose of measurement is to provide sufficiently precise information to enable police managers to: (1) evaluate their department's performance; (2) identify and diagnose problem areas; and (3) design solutions.

But measurement can provide other advantages as well. For example, measures frequently stimulate constructive thinking—e.g., measurement of crime deterrence requires in-depth analysis of the nature of deterrence—thus increasing the understanding of police activity. Measurement also may provide a means for linking one activity to another, or one part of the management process to another—e.g., relating resources to output.

Measurement, of course, also has its limitations. It is not a substitute for sound professional judgment; it is meant to assist the manager, not dictate action to him. Furthermore, care must be taken to guard against measures that provoke negative activity. To use a familiar example, measuring a patrol unit solely on the basis of arrests made, without considering whether or not the arrests are valid, can reward the apprehension of innocent people. Nor should uncritical enthusiasm for measures result in meaningless and costly measurement activity. Some measures may require data gathering that is more expensive than their value would justify, and consequently should be avoided.

But the most difficult problem in measurement is to assure that measures provide information that genuinely assesses how well the department is doing its job. Where the agreed-upon objectives of the department can be quantified, this should not cause problems. The difficulty lies in constructing indirect or proxy measures for objectives which defy quantification. In such cases professional judgment must be used to determine what activities contribute toward the accomplishment of the objective, with quantitative measures then established for the intermediate objectives of these activities. The identification of intermediate activities and objectives, however, requires great care and constant evaluation to assure that they do, in fact, contribute to higher departmental goals. Otherwise a department may erroneously judge its performance by measuring an activity that bears little or no relation to the real role of the force.

There are many types of measures, and as many names to describe them as analysts have time to devise. Given the state of the art of measuring public services, we need only be concerned with a few basic distinctions.

There are two fundamental types of measures which may be used separately or in combination to provide useful information. They are measures of results (or output) and measures of resources used (or input).

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Police departments, as is true of most public services, traditionally have been more concerned with measures of resources than with measures of results. The budget gives the most basic measures of what resources are being used for what activities. Resource use might also be measured in terms of man-time, or units of equipment. Variations of resource measures include simple percentages of total resources devoted to a particular activity or subactivity.

Results, as noted earlier, are generally more difficult to define and measure. Traditionally, police departments have relied upon easy-to-quantify results such as miles driven by a patrol vehicle. Such measures (often referred to as workload) have some use as indicators of intermediate results, but they clearly do not provide an adequate assessment of whether higher level objectives are being met. A comparison between results achieved and results intended gives a simple measure of effectiveness.

Result and resource measures can be compared to indicate productivity. A productivity measure indicates the cost (in money, men, and/or equipment) of accomplishing a given result. Such a measure can apply to a whole police department, a division of the department, or a unit within a division. It should be noted that where the results of a smaller division are meaningless to overall departmental goals, the productivity of that division may increase (it gets more results per unit of resource) but with no improvement in the department's overall productivity. Thus, it is essential that the measurement of individual activities or organizational components always be understood in the context of overall departmental goals and performance. This suggests the need for budgeting systems that integrate the diverse operations of the police department into a coherent package.

Quantitative measures can take an endless variety of forms. At some future date it will no doubt be useful to establish a more precise system and language of public service measurement. For the time being, these simple distinctions should suffice. The important thing is to devise quantitative measures that provide better information to management, and to constantly be alert to what those measures are and are not revealing.

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3
PRODUCTIVITY
IN POLICE
PATROL

The patrol force—the men and women who know and "work" the streets—is the front line of every police department. These men and women are responsible for carrying out the wide variety of crime and noncrime services that a police department provides.[1] During a single tour, a patrol unit may respond to a bank robbery, assist a resident who forgot his housekey, rush a coronary victim to the hospital, and quell an argument between irate neighbors. Thus, the patrol force is more than a single man walking a beat or a lone patrol car; it is the principal operational arm of the police department.

The Advisory Group chose the following three objectives of police patrol for consideration in this report:[2]

- deterrence of crime;
- apprehension of criminal offenders; and
- satisfaction of public demands for noncrime services.

These three objectives are closely related. Apprehension of criminal offenders, an end in itself, also has some effect—to what extent is uncertain—in deterring crime. Deterrence of crime, of course, reduces the need for apprehension. And better noncrime services enhance the image and public support of the police department, thereby strengthening crime deterrence and apprehension efforts.

To meet these objectives, the patrol force carries out a variety of activities, any one of which may contribute simultaneously to one, two, or all three of the objectives. The activities include observation; response to calls for service; enforcement of the law; investigation; maintaining order; and various administrative and postarrest activities

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[1] For examples, see Richard C. Larson, *Urban Police Patrol Analysis*, Cambridge, Massachusetts: The MIT Press, 1972, p. 27 ff.

[2] Two other important objectives should also be mentioned. The first is the recovery of stolen property, which is relatively easily measured either by the value of stolen goods or units of stolen items recovered. The second objective is to provide the community with a sense of security and a feeling of confidence in its police force, a more difficult objective to measure. The public's attitudes toward crime and the police nevertheless can be assessed through a variety of means, including opinion surveys. And while the Advisory Group did not have the time to examine this question, its importance should not go unrecognized.

(e.g., report writing, court duty). Since any one activity may contribute to all three objectives, and since the objectives themselves are interrelated, the measurement and analysis of the patrol force can be a complex undertaking.

In an attempt to cope with this complexity in a practical way, the Advisory Group has identified three problem areas which begin to sort out the easier patrol problems from the more difficult ones. These areas are:

- Making a greater proportion of the existing patrol division (up to a reasonable limit) available for street assignment;
- Increasing the real patrol time of those who are given street assignments; and
- Utilizing patrol time to best advantage (i.e., to achieve the greatest impact in accomplishing patrol objectives).

It is important that the relationship among these three areas be clearly understood: The first two—the easier ones—are *preparatory* to increasing patrol productivity, a mobilization of resources with which to do the job. The maximum number of personnel is made available, and then the time of those people is unfettered by relieving them of useless or marginally useful activities. Thus, the pool of real manpower available to do the job is increased without any additions to the patrol force.

Neither step one nor two alone, however, will guarantee increased productivity. The payoff comes in using that manpower to the greatest advantage. That is the concern of the third problem area where the more difficult questions arise and the activities of the patrol force are related directly to patrol objectives.[3]

This chapter discusses, first, measurement; and, second, actual means of improvement, in each of these three problem areas. Many of the measures suggested are not "productivity measures" as some strict definitions may hold. But taken together they do suggest a set of quantitative measures that should prove helpful to police departments in assessing the performance of their patrol force.

MEASURING PATROL ACTIVITY

In order to determine the type of data now collected and used for patrol evaluation, and to assess the range of performance among departments for specific activities (use of patrol time, response time, misdemeanor vs. felony arrests, etc.), the Advisory Group surveyed several police departments throughout the United States. The results of the survey show that:

- many police departments keep statistics needed to compute productivity measures that are adaptable for widespread use; and

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[3] Clearly, discretion must be used in determining the division of labor within any police department or patrol division. Some sworn officers will always be needed for other than street assignment, and some of their time may be required for what are considered to be non-patrol-related activities. The Advisory Group's approach focuses on the situation found in many departments across the country: within the patrol division, too many sworn officers are performing jobs they should not be performing, and of those officers with street assignments, too much time is spent on activities unrelated to patrol objectives. Improvement in these two areas could, in most departments, contribute significantly toward making more people available for the real role of the patrol force, regardless of how departments wish to define that role. This does not necessarily mean that additional men should be assigned to traditional patrol activities, as will be discussed further in this chapter.

- the range of performance for a variety of measures (allowing for probable differences in definition) suggests a potential for productivity improvement in most departments.

Other, more specific, results of the survey are quoted, where appropriate, throughout the report.[4]

Making More Patrolmen Available for Street Assignment

Assigning more of the patrol force to street work and increasing their effective time on patrol are important steps toward expanding the use of the existing resources of the patrol force. Although these efforts may not insure better performance, they are important to maximizing useful patrol time, and to minimizing or even eliminating the need for increasing the overall size of the force.

At any given time, only a small percentage of a patrol force is on the street. In great part this is due to the need to provide 7-day-a-week, 24-hour coverage; at least five men must be on the roster in order to fill any one patrol position around the clock. However, not all of the positions themselves are given to street assignments. Many are assigned to police headquarters, precinct stations, and other facilities in jobs that may not contribute directly to the crime-control and service-delivery objectives of the patrol function and that may not require the skills of a sworn officer.

A simple measure to help determine the ability of management to make manpower available for patrol is:

$$\frac{\text{Patrolmen Assigned to Street Patrol Work[5]}}{\text{Total Patrolmen}}$$

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[4] The survey was conducted by distribution of three questionnaires (one each on Patrol, Crime Prevention, and Human Resources) to the following 11 law-enforcement departments and agencies: Police Departments of Boston, Massachusetts; Charlottesville, North Carolina; Cincinnati, Ohio; Kansas City, Missouri; Miami Beach, Florida; New York, New York; Oakland, California; and Washington, D.C.; the Los Angeles (California) Sheriff's Department; the Michigan State Police; and the St. Petersburg (Florida) Department of Public Safety.

This sample was not intended to be statistically valid on a nationwide basis. It was considered sufficient, however, for the limited objectives of the survey, which were:

- To check whether data required for use in measures being developed are normally available.
- To test whether the measures are feasible when actual data are applied to them.
- To obtain some idea of the ranges (or disparities) existing so that the potential for improvement could be assessed.

Time available for conducting the survey did not permit a pretesting of the questionnaires, which would have enabled the Advisory Group's staff to refine definitions of the terminology used. Therefore, not all respondents provided comparable data in response to all questions. For that reason, the survey results, as depicted in figures and tables throughout this report, provide approximate data for those departments (8 in some cases, only 4 in others, etc.) whose responses seemed to reflect a common understanding of the categories of data solicited.

It should be noted in particular that, to preserve the anonymity of respondents, identification of departments is by letters only; moreover, Department "A" in Figure 1 does not necessarily correspond with Department "A" in Figure 2, etc.

[5] This measure does not, of course, indicate whether the patrolmen thus assigned are accomplishing anything useful. It is an indication of the department's success in making sworn officers available for more directly patrol-related activity.

FIGURE 1

PERCENTAGE OF PATROL FORCE
WITH STREET ASSIGNMENTS
FOR SIX DEPARTMENTS,
1972*

The percentage of the patrol force assigned to patrol appears to vary considerably among departments, indicating that there may be opportunity for improvement. Figure 1 presents percentages of the patrol force with street patrol assignments reported by six of the police departments that responded to this question in the Advisory Group's survey. At least two departments were able to maintain almost 90 percent of the patrol division on patrol duty.

It is impossible and unwise, of course, to put the entire patrol force out on the street. Some experienced patrolmen are needed for supervisory and other essential assignments at the station. The range of values for this measure, as shown in Figure 1, however, does indicate a potential in some departments for increasing the proportion of men on the street without adding any more sworn personnel.

Increasing the Real Patrol Time of Those Assigned

Once personnel are assigned to patrol duties, their time should be devoted to activities that may potentially meet patrol objectives. A simple measure to indicate the extent to which patrol time out in the field is being committed to patrol activities is:

Man-Hours of Patrol Time Spent on Activities Contributing to Patrol Objectives[6]

Total Patrol Man-Hours

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[a] As noted for the previous measure, this measure does not indicate whether the time made available is put to good use. It does measure success in making more time available which can be turned to good use.

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FIGURE 2

PERCENTAGE OF PATROL TIME SPENT ON ACTIVITIES CONTRIBUTING TO PATROL OBJECTIVES FOR FIVE POLICE DEPARTMENTS, 1972
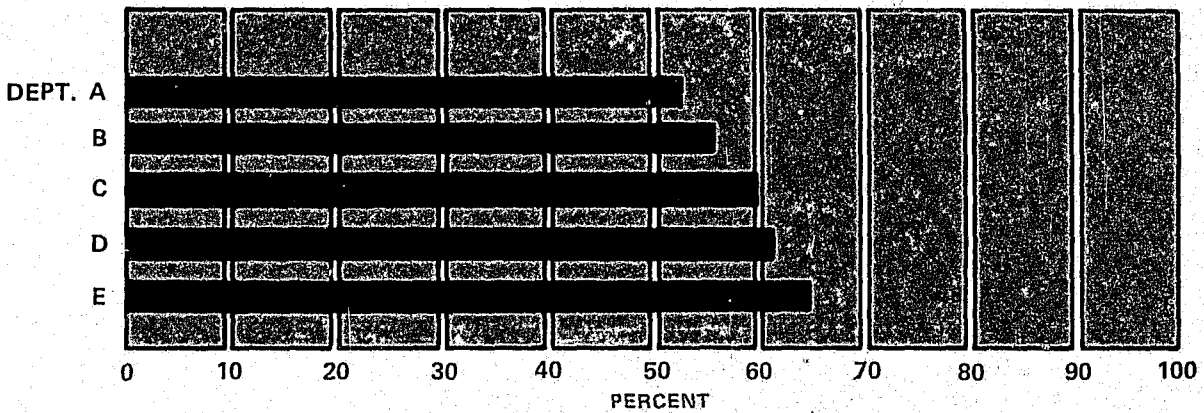
Time can be "lost" by performing nonpatrol tasks during duty hours. Examples are filling out unnecessary forms, servicing vehicles, running errands, and spending unnecessarily long hours waiting for court appearances. An analysis of the percentage of time spent performing such activities would be a preliminary step in diagnosing how patrol man-hours are really used.

The percentages of time spent by a patrol force on activities germane to their function (that is, random patrol, directed patrol, and responding to crime-related and noncrime calls for service) are shown in Figure 2. It is, of course, unlikely that close to 100 percent of time would be spent directly on patrol-related activities. Some time must be allocated to meal breaks, vehicle servicing, clerical tasks, court appearances, and the like. But the statistics indicate room for some improvement in several of the departments surveyed.

Given the rapidly rising costs of sworn personnel, even a small increase in the percentage of time spent on patrol activities can lead to a significant savings and, potentially, to increased effectiveness. Breaking down these statistics into portions of time spent on specific kinds of activity shows significant ranges in time allocations to different activities performed on a normal tour of duty. (See Table 1.) The spread of time allocations is no doubt due to differing styles of operation and differing responsibilities of the police in their communities. But these ranges also suggest that some patrolmen may be spending too much time on nonpatrol activities.

Maximizing the Impact of Patrol

So much for the relatively easy problems that focus on increasing the availability of existing resources. The more difficult problem is how to increase the effectiveness of those available resources. This requires relating patrol activities more directly to the three patrol objectives selected for consideration by the Advisory Group: crime deterrence, apprehension, and noncrime service.

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TABLE 1

RANGES IN THE PERCENTAGE OF TIME ALLOCATED TO DIFFERENT PATROL ACTIVITIES, 1972 SURVEY DATA

Activity	Range (%) Low	High	Time Allocation Should Be*
Random and other preventive patrol ____	16	36	High**
Crime-related calls for service _____	6	38	High
Noncrime calls for service _____	2	30	High
Training (on duty) _____	0	20	Medium
Report writing _____	2	6	Low
Arrestee processing _____	4	10	Low
"On duty" time in court _____	2	8	Low
Meal breaks _____	2	16	Low
Other _____	5	36	Low

* This column is included as a guide to help interpret the ranges in the table.
** Assuming a variety of patrol strategies and methods of deployment.

Deterrence of Crime.[7] A principal objective of most police departments is to deter crime. The patrol force bears an important responsibility in this effort. Through its "preparedness" to respond to calls for service and its patrol activities, apprehensions, and investigations, the patrol force is expected to reduce the amount of crime actually committed by impressing would-be criminals with its ability to detect, to respond, to apprehend, and to marshal the support of the community.[8]

There are no altogether satisfactory measures of the success or failure of a patrol force's efforts to deter crime. Whereas apprehension, for example, can be measured directly from the number of arrests made, the number of crimes not committed—except for those few stopped in the act—is impossible to measure directly and can only be inferred. In fact, no persuasive relationship between overall patrol activities and crime deterrence has been established, as yet.[9]

In the absence of a direct measure of deterrence, three types of substitutes might be used:

- Existing reported crime indices used with discretion.
- Victimization surveys.
- Quantitative measurement of activities which professional judgment suggests contribute to deterrence.

[7] This section deals with the crime deterrence activities generally associated with the work of patrol. Chapter 4 discusses the impact police can make in crime-prevention programs not traditionally associated with patrol.

[8] Richard C. Larson, *op. cit.*, p. 32.

[9] For a thorough discussion on this subject, see Franklin E. Zimring, *Perspectives on Deterrence*, prepared for the National Institute of Mental Health, Center for Studies of Crime and Delinquency, Public Health Service, Publication No. 2056, January 1971, U.S. Government Printing Office, Washington, D.C.

The values and limitations of reported crime indices (especially the *Uniform Crime Reports*) and victimization surveys were discussed in Chapter 2. For all its problems, reported crime is still one of the few measures that police managers have to provide some check—however general and unreliable—on their activities. Used judiciously, for specific types of crime, in specific districts, over specific periods of time, and with specific knowledge of what other factors (such as employment or age of population) may be affecting the result, reported crime can be a useful tool in evaluating the effects of patrol activities in deterring crime. The use of crime data to assess police activity is discussed further in the next chapter. There is hope that victimization studies will provide more reliable information; perhaps such information will permit a more accurate relationship to be established between the amounts of actual. and reported crime, thereby increasing the usefulness of reported crime data.

This discussion focuses on the third method of assessing crime deterrence: the more precise measurement of patrol activities which are thought to contribute to deterrence.

Among the patrol activities thought to contribute directly to deterrence are apprehension and the ability to respond quickly to calls for assistance. Theoretically, a high likelihood of arrest undermines the confidence of would-be criminals and deters them from future crime. The extent to which this assumption is valid remains open to question. In any case, apprehension is considered to be an appropriate objective of the patrol force in and of itself, and is treated as such in the following section.

The remainder of this discussion will address the question of how to measure response time.

Assessing Patrol Response Time. Rapid response time may contribute to deterrence in at least three ways. First, there may be some deterrent effect in the knowledge that police can respond quickly to crimes in progress, although no indisputable correlation has been so established. Second, there is evidence that suggests that below certain time levels quicker response to crimes in progress does result in higher apprehension rates;[10] higher apprehension rates, in turn, may have some deterrent effect, although with qualifications as mentioned above. Third, rapid response probably does or could increase citizen confidence in the police, which in turn could encourage greater citizen involvement in the observation, reporting, and prevention of crime; such public involvement may, in turn, have some effect in deterring crime.

In short, there is no definitive relationship between response time and deterrence, but professional judgment and logic do suggest that the two are related in a strong enough manner to make more rapid response important. Moreover, response time is an important factor in achieving other police objectives, especially apprehension, which in turn contribute to increased deterrence.

Given these assumptions, we can turn our attention to the measurement of response time, bearing in mind that more rapid response is not an end in itself but a means of achieving patrol objectives.

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[10] See Appendix B, "A Study of Communications, Crimes, and Arrests in a Metropolitan Police Department," Herbert H. Isaacs, *Task Force Report: Science and Technology*, President's Commission on Law Enforcement and Administration of Justice, 1967. U.S. Government Printing Office, Washington, D.C.

Several factors must be considered in establishing a measure for response time. In the first place, different kinds of calls require different speeds of response. Nonemergency calls, for example, need not be answered as quickly as reports of crimes in progress. Some crime calls, in turn, may warrant a quicker response time than others, depending upon community priorities. Clearly, there are trade-offs in using existing men and equipment to respond to different kinds of calls. A low *average* response time for *all* calls, emergency and nonemergency, may mean sacrificing a quicker response capability for emergency calls. A decision to focus on emergency crime-related calls by deferring or "stacking" nonemergency calls may lengthen the overall average response time but significantly speed up responses to crimes in progress.

The desired response time to emergency calls must also be based upon some knowledge of the relationship between quicker responses and higher rates of apprehension. If reducing response time from 14 to 10 minutes produces little or no apparent increase in apprehensions or prevention of crime, its value is doubtful, except insofar as it may increase citizen confidence. Reductions from 5 to inside 3 minutes, on the other hand, may prove to produce significantly higher apprehension rates.

Still another important factor to be considered is the cost of reducing response time by given increments. If response time is already low, shaving off additional seconds may require heavy additional inputs of men and equipment or shifts of resources from other activities. The desired response time cannot be established on the basis of the projected result alone, but must also include consideration of the cost in new resources or men and equipment diverted from other activities.

The Advisory Group attempted to consider all of these factors in developing possible measures for patrol response time. No one measure adequately accounts for all of these factors, and consequently at least two measures should be used in concert with the kind of knowledge and judgment discussed above. Those two measures are:

$$\frac{\text{Number of Calls of a Given Type Responded to in Under "X" Minutes}}{\text{Total Calls of That Type}}$$

and

$$\frac{\text{Number of Calls Responded to in Under "X" Minutes}}{\text{Resources Devoted to the Response Function}}$$

"Resources devoted to the response function" is used in the denominator instead of patrol man-hours because of the potential for introducing capital-intensive technologies for improving the efficiency of response activities. Resources include patrol force salaries and benefits (still the major component) as well as the cost of computer-assisted dispatching systems and the salaries of nonsworn dispatchers.

"X" minutes is used in the numerator to indicate that different response times are appropriate for different types of calls. The value of "X" would depend on whether the call was an emergency or nonemergency call, or whether the call was about a crime-in-progress, suspicious activity, or previously committed crime. Additional breakouts by type of crime may also prove helpful. A report of a bank robbery, for example, may require a more rapid response than a larceny in progress. In each case, the department must determine for itself what is a desirable response time ("X") for a particular kind of call, based upon the considerations noted above.

TABLE 2

RESPONSE TIME COMPONENT DELAYS, 1972 SURVEY DATA

Response Time Component	Category	RANGE (Minutes)	
		High	Low
Dispatch Delay _____	Emergency	3	1
	Nonemergency	10	2
Queue Delay _____	Emergency	1.5	0
	Nonemergency	10	0
Travel Delay _____	Emergency	5	3
	Nonemergency	14	3

To the extent that the measures reveal inefficient resource use, it would help, in diagnosing the problem, to divide response time into three segments:

* Dispatching delay
* Queue delay
* Travel delay

Dispatching delay is the time from receipt of a call to the time the dispatcher is ready to assign a unit. The queue delay is the time a dispatcher must wait before a unit is available for dispatch, and thus is calculated as zero if a car is available. Travel delay covers the time from dispatch of a unit to its arrival at the scene of an an incident. To the extent that these components of response time can be recorded separately, they can be quite helpful in diagnosing the cause of an inefficient activity.

If a police manager is using his resources in the most effective manner, however, but response time still has not been reduced to an "acceptable" level, then the only available alternative is to seek an increase in resources that will be sufficient to enable him to obtain the desired response time. This assumes that emergency calls are being given priority, that nonemergency and service calls are being "stacked," that maintenance of patrol cars is managed in a way that keeps the maximum number available for responding to calls, and that shifts and positioning of cars place them where they are most likely to be required at the times of greatest need. When a police manager can show that all these things are being managed with maximum efficiency, but the response time still is not meeting his and the community's needs, then he can present a justified request for the resources that are needed.

Table 2 displays the range of response times obtained in the survey of departments. It demonstrates that at least some departments are able to furnish the kinds of response-time statistics useful in troubleshooting the causes of poor productivity. Of course, the data cannot point directly to inefficiencies in the use and deployment of patrol resources, but they may assist in searching them out. Unfortunately, the survey did not yield sufficient data on the extent of patrol resources devoted to the response function, although most departments have the data available to do this. Consequently, ranges in the response productivity measure cannot be presented.

No matter how quickly a department can respond to a call for service, productivity is sacrificed if the quality of the response is not up to par.[11] Thus, a further indication of this quality is a necessary adjunct to the principal response measure, and in some cases can be provided by a followup recipient-of-service survey.

Most of the departments responding to the Advisory Group's survey indicated that they are already carrying out some such form of survey. Telephone surveys could reveal what percentage of recipients were satisfied with the service. Questions asked should cover the effectiveness of the officers in performing the particular service as well as their courtesy and general helpfulness at the time. Criteria could be developed for these surveys which differentiate between satisfactory and unsatisfactory police responses to calls for service, and only a sample of recipients need be surveyed to obtain valid results. This information can be useful in uncovering persistent problems (or new ones) which may require some retraining of patrol officers.

Since one of the benefits of lowering response times is the opportunity to make more quality arrests by arriving at the scene of a crime in progress or by intercepting a fleeing suspect, departments might use the following measure of response effectiveness in leading to arrests:

$$\frac{\text{Arrests Surviving the First Judicial Screening[12] Resulting}}{\text{From a Response to a Crime Call}}$$
$$\overline{\text{Crime-Related Calls for Service}}$$

Again, this measure should be applied to appropriate categories of arrest (felony, etc.) and be calculated separately for each major type of call. Suspicious activity and past-crime calls may not result in many arrests, but they are important for maintaining public confidence in the police and a feeling of security. As noted above, rapid responses to calls, especially to crimes in progress, can result in a higher rate of apprehension.[13]

Apprehension of Criminal Offenders. Traditionally, number of arrests has been used as an output measure of apprehension. Occasionally, other outputs, such as clearances and convictions, also are used. Although these may be useful "workload" measures for some police activities, as measures of output or results for productivity measurement the Advisory Group found them subject to the following qualifications:

- Arrests themselves may be too easily subject to inflation; e.g., by making arrests of dubious merit (or increasing arrests for minor public nuisance offenses).

- Clearances (i.e., crimes for which police identify an offender, have sufficient evidence to charge him, and actually take him into custody) may be unsuitable because crime frequently cannot be attributed accurately to offenders. This figure can be adjusted according to particular department incentives—for example, over-attribution—if it becomes important to keep clearance rates high. In addition, clearance rates are not due solely to patrol activities, but also reflect investigative and prosecutorial activity.

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[11] The arrival of an officer at the scene of an incident assumes a certain "quality" factor—i.e., a police officer is on the scene. That has some intrinsic value, but more discriminating information is needed to determine what the officer does when he gets there, i.e., the "quality" of the response.

[12] See the following section on "Apprehension of Criminal Offenders" for explanation of this language.

[13] Herbert H. Isaacs, *op. cit.*

- Although convictions reflect the quality as well as the quantity of patrol work, conviction rates usually are subject to many forces outside the control of the police (actions of courts, prosecutors, etc.).

Because of these difficulties, the use of arrests *surviving the first judicial screening* is a more appropriate "output." Although the process of judicial screening differs from one jurisdiction to another, thereby making interjurisdictional comparisons difficult, it usually involves an appearance before a judge or magistrate to assess whether or not a case has enough substance to merit a trial (probable cause). Survival of the screening process implies some measure of quality which arrests by themselves do not reflect (although some prosecutors and judges refuse to accept certain charges for various reasons).[14] Furthermore, the survival of arrests past the first judicial screening is less susceptible than convictions to forces outside police control. A poorly prosecuted case, for instance, can mean that an otherwise "valid" arrest will not result in conviction.

A suggested measure for apprehension productivity, then, is:

$$\frac{\text{Arrests Resulting From Patrol Surviving the First Judicial Screening}}{\text{Total Patrol Man-Years}}$$

Because patrol is a labor-intensive activity (80 to 90 percent of the costs of deploying a patrol force are salaries and benefits), patrol man-years is probably a more appropriate measure of resources than dollar costs.[15]

According to this measure, patrol productivity, in terms of the apprehension objective, would increase:

- if the number of arrests surviving first judicial screening per patrol man-year increased (e.g., through change in methods, deployment, etc.); or
- if the number of arrests per patrol man-year remained the same but the effective patrol time (number of patrol man-years actually employed in patrol activities) of the existing patrol force increased sufficiently to permit fewer sworn officers to be assigned to the patrol force.

To illustrate briefly, consider a patrol division having 500 sworn personnel which only manages to maintain 50 positions in the field round-the-clock. If each position accounts for, say 30 quality arrests per year, the above productivity measure computes to $(50 \times 30)/500 = 3$ quality arrests per man-year. If the department fielded more than 50 round-the-clock positions from its force of 500 (it is generally recognized that 5 men are required for every round-the-clock street position), then any number of additional quality arrests made as a result would increase patrol productivity so long as patrol strength remained at 500. An extra 10 fielded positions also averaging 30 quality arrests per year would yield an overall result of $(60 \times 30)/500 = 3.6$ quality arrests per man-year. If an extra 18 positions were fielded with a lower overall arrest rate of 25, patrol productivity would still be increased from 3 to 3.4 quality arrests per man-year.

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[14] In Los Angeles County, District Attorney rejection rates in cases involving possession of dangerous drugs vary from 26 percent for the Whittier Police Department to 69 percent for the Long Beach Police Department. For robbery, the rejection rates vary from 6 percent in Compton to 53 percent for the Los Angeles Sheriff's Department. A major reason cited in the report from which figures are taken, though by no means the sole one, for these rejection rates is that police departments vary greatly in their own screening of felony cases. See Peter W. Greenwood et al., *Prosecution of Adult Felony Defendants in Los Angeles County: A Policy Perspective*, Report R–1127–DOJ, The RAND Corporation, Santa Monica, California, March 1973, page ix.

[15] "Total Patrol Man-Years" refers to all sworn officers in the patrol division whether or not they are assigned to street work. Note that, instead of years, such other units of time as months, days, or hours can be used, depending upon which makes more sense to the user.

In addition to the productivity measure suggested above, police departments can develop other, more detailed, measures to provide useful information. Among the most important of these is an apprehension productivity measure for each major arrest category. For example:

$$\frac{\text{Felony Arrests Resulting From Patrol Activities Surviving First Judicial Screening}}{\text{Total Patrol Man-Years}}$$

This measure can be modified for consideration of different kinds of arrests, including:[16]

- Felonies.
- Misdemeanors that involve a particular victim.
- Consensual crime misdemeanors as determined by local jurisdiction.
- Other violations.

Different types of arrests have different values, which can in turn vary from community to community. An armed robbery arrest and an arrest for public drunkenness clearly are not equivalent. Arrest totals may be inflated by legitimate arrests for petty and often so-called "victimless" crimes, which do not reflect police goals for more serious crimes.

Moreover, using the measure to calculate separately one arrest productivity measure for each of these categories may tell managers where their arrest emphases lie, and will allow them to assess whether or not the results are in accord with their particular priorities.

For example, the ratio of felony to misdemeanor arrests in Long Beach, California, is 0.22, while in nearby Compton the ratio is 0.77. For drug offenses, the ratios for the same two cities are even more extreme—0.66 in Long Beach and 114.3 in Compton. As the study reporting these statistics explains:

> They (the range of these ratios) . . . cannot be accounted for by differences in crime patterns; they flow mainly from differences in police arrest policies.[17]

Schemes that give weights to different types of arrest and that compute a combined arrest index are generally undesirable because the weights often must be arbitrarily chosen and are therefore unrelated to public concerns about certain crimes.

A variant of the preceding measure can be applied when evaluating the success of a specific, directed patrol strategy—for example, the concentration of uniformed or plainclothes preventive patrols in areas with particular crime problems. The measure would read:

$$\frac{\text{Arrests (Resulting From a Directed Patrol Strategy) That Survive the First Judicial Screening}}{\text{Total Directed Patrol Man-Years}}$$

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[16] Individual police departments should develop and use crime categories which reflect as accurately as possible the true mix of arrests in the community and which provide them with the specific information that they require.

[17] Greenwood, *op. cit.*, pp. viii and ix. It should be mentioned that the report does not make clear whether these arrest ratios are for arrests that survive the first judicial screening. The ranges indicated, however, would not change very much if the data were qualified by judicial screening.

This measure could be adjusted, as above, by specifying the type of arrest to evaluate the impact of the strategy on a particular crime category.

It is important to remember that the amount of crime in a jurisdiction may bias apprehension productivity data. Because different crime rates represent different opportunities for making arrests, it is often easier for a patrol force to make more arrests in the presence of a higher crime rate. By close examination of the productivity improvements, those due merely to an increase in the crime rate could be distinguished from those due to better use of the patrol force. The clearance rate also may be of some use as an adjunct because it reflects to some extent how well a department is matching apprehensions to crimes that actually occur.

A second important source of information for police managers is the ultimate disposition of arrests, which provides an additional check on the quality of apprehensions and postarrest activities. Even though judicial screening, used in the original arrest productivity measure, imposes some quality standards for arrests, such screening occasionally can be perfunctory. Two additional measures of the quality of arrests are:

$$\frac{\text{Convictions}}{\text{All Arrests Made by Patrol Force}}$$

$$\frac{\text{Convictions}}{\text{Arrests Resulting From Patrol That Survive the First Judicial Screening}}$$

These measures also may be calculated separately for each arrest category to provide more detailed information. Although these two measures are determined by factors beyond police control, they do reflect somewhat the quality of police discretion in making arrests and the effectiveness of postarrest activities (e.g., preparation for testimony).

Thus, police managers may determine—by breaking down the apprehension productivity measure according to crime category and comparing the results to crime statistics —what relative importance the department places, implicitly or explicitly, on various types of crimes. Police managers can evaluate, further, the quality of police arrests by examining the portion of all arrests surviving first judicial screening made in a given crime category and resulting in conviction of the offender.

Responses to an Advisory Group survey question on the number of felonies and misdemeanors surviving first judicial screening per patrol man-year showed a wide variation among police departments.[18] Whereas one department reported a combined number of felony and misdemeanor arrests surviving judicial screening of 61.5 per man-year, another reported only 9 per man-year.[19]

Figure 3 shows not only a range of arrests per patrol man-year among seven police departments, but also reflects the relative emphasis placed by these departments on felony vs. misdemeanor arrests. The department which reported the highest number of arrests surviving judicial screening also reported over 80 percent of these as misdemeanors.

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[18] The man-years include those expended by members of the patrol force in supervisory, clerical, and other nonpatrol assignments to give a clear picture of the total resources expended.

[19] Although these data have not been adjusted for definitional differences among departments, differences in the definition of misdemeanor and felony alone could not account entirely for the range in performance.

FIGURE 3

FELONY AND MISDEMEANOR ARRESTS SURVIVING THE FIRST JUDICIAL SCREENING (RESULTING FROM PATROL) PER PATROL MAN-YEAR, 1972 DATA FOR SEVEN POLICE DEPARTMENTS
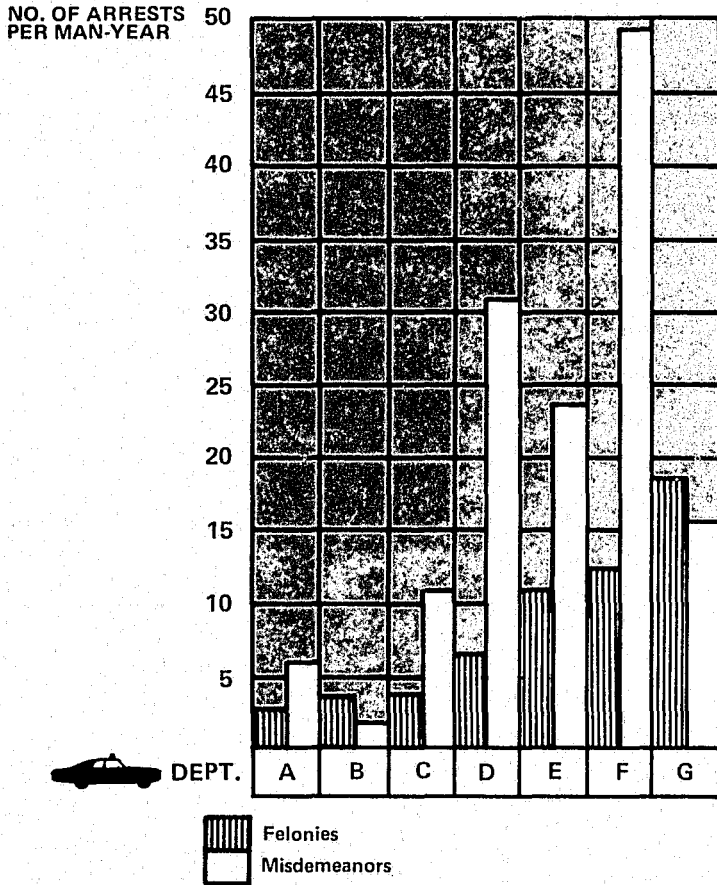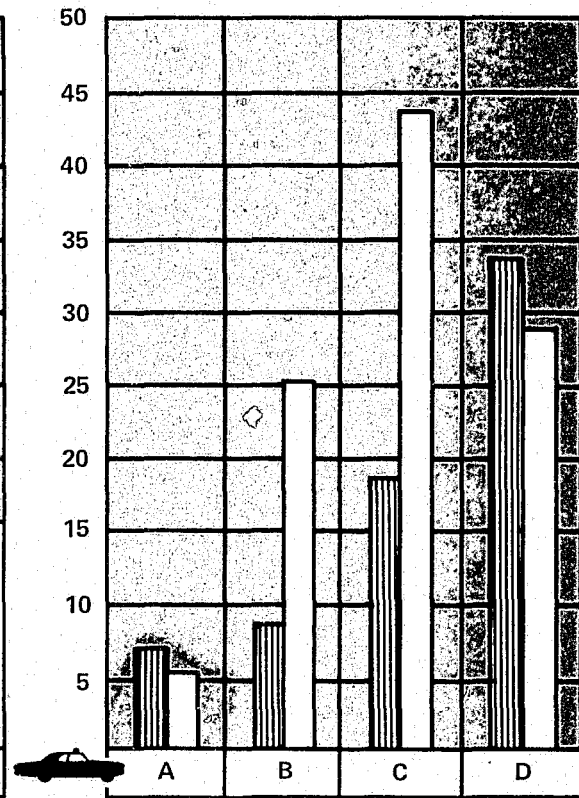
FIGURE 4

FELONY AND MISDEMEANOR ARRESTS SURVIVING THE FIRST JUDICIAL SCREENING (RESULTING FROM PATROL) PER MAN-YEAR ACTUALLY SPENT ON PATROL, 1972 DATA FOR FOUR POLICE DEPARTMENTS

NO. OF ARRESTS PER MAN-YEAR

Felonies

Misdemeanors

26

Four other departments, though with lower overall arrest productivity levels, also reported a much higher percentage of misdemeanor arrests than felony arrests. Two departments reported more felony than misdemeanor arrests.

Figure 4 shows the number of felony and misdemeanor arrests surviving first judicial screening for the portion of the patrol force actually engaged solely in patrol activities (for the four departments that could provide such information). Although arrest rates are higher for all four departments because the patrol force resource base is lower, those departments that have the largest percentage of the patrol force on the street and expend the largest percentage of time in patrol activities have the highest number of arrests per patrol man-year.

Provision of Noncrime Services. Services provided by the patrol force that do not relate to incidents of crime or suspicious activities make up the large majority of calls for service, often 70 percent or more. Despite their predominance in the patrol workload, police departments put the most emphasis on crime-control activities and stress crime control in their training programs. Many departments are actively turning some of their noncrime responsibilities over to other city agencies or performing them with non-sworn personnel. These steps, they argue, are essential to release police resources to be directed at growing crime problems.

Some government managers argue, on the other hand, that the police are well suited to respond to a variety of noncrime situations and that it would be expensive and unproductive to establish a separate agency to perform those tasks. In the end, the mix of services that the police do provide is a function of local objectives and priorities. Whatever the mix, it is certain that the public will continue to expect the police to provide a 24-hour response capability for a variety of emergency and nonemergency needs. Even if some of these needs are met by nonsworn personnel, they still remain the concern of police managers. To the extent that police continue to provide noncrime services, with both sworn and nonsworn personnel, these services should be provided as efficiently and effectively as possible.

The measures presented in this section apply to both emergency and nonemergency services and are probably applicable to any department regardless of its mix of services. A department's service mix may include emergency responses such as ambulance runs, calls to assist ambulance crews, rescue runs, and deployment at the scene of disasters. Nonemergency calls may include quieting a noisy party or a barking dog, helping a resident who is locked out of his house or a motorist whose car has broken down, or "adjudicating a dispute" between two neighbors or between a landlord and a tenant. In providing noncrime services, a patrol force's productivity may be determined by the following measure:

$$\frac{\text{Number of Noncrime Calls for Service Satisfactorily Responded To}}{\text{Man-Hours Devoted to Noncrime Service Calls}}$$

Here the number of calls includes both emergency and nonemergency situations. The quality of the response should be sufficient to satisfy the recipient of the service. Therefore, supplementary information provided by a followup survey should be used in conjunction with this measure.

Calculating the measure separately for emergency and nonemergency noncrime calls may be useful, but not as useful from a management point of view as the calculating separately of measures for major categories of noncrime service calls. This more detailed kind of information is likely to indicate where action can be taken to improve noncrime service productivity.

For example, the effectiveness of the force in responding to medical emergencies (accidents, impending births, etc.) could be assessed by a measure of this type:

$$\frac{\text{Medical Emergency Calls That Emergency Room Personnel}}{\text{Total Medical Emergencies}}$$

An evaluation procedure can be developed to provide data for this measure in cooperation with emergency room staffs at local hospitals. A sample, rather than an evaluation of every case, may be sufficient for determining effectiveness in this area. Too low a value for this measure may indicate inadequate first-aid training or equipment.

Another measure may be developed for calls regarding noisy disturbances in the community:

$$\frac{\text{Noisy Disturbance Calls for Which No Further Attention Is Required}}{\text{Total Noisy Disturbance Calls}}$$

Too low a value of this measure may indicate a lack of respect for the police in the community or a lack of tact on the part of officers handling such incidents. A low value may also indicate a need for additional training of some officers and/or a better community relations program.

Regardless of the service mix provided by a particular department, these measures may be helpful to the police manager in diagnosing a productivity problem in the patrol force's provision of noncrime services.

Several of the departments responding to the data survey were able to provide data on numbers of calls for noncrime services and the man-hours devoted to answering those calls during 1972. Figure 5 presents the ratios of noncrime calls for service to man-hours spent in answering such calls.

Some of the reasons for the wide range of these statistics may merely be such factors as larger patrol sectors and the longer travel times they imply. Other factors, however, may be excessive service times or excessive amounts of paperwork associated with each incident.

Police departments can be more productive in meeting noncrime service objectives if they carefully analyze what is required to provide these services. For example, is a sworn officer always needed? Can a report be taken by phone? How much time is really needed for this type of call? By answering such questions, police managers can apply the necessary resources and accomplish noncrime service objectives more productively.

FIGURE 5

NUMBER OF NONCRIME CALLS FOR 🚗 SERVICE PER MAN-HOUR SPENT ANSWERING THOSE CALLS, 1972 DATA FOR FIVE POLICE DEPARTMENTS

0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0

NO. OF CALLS PER MAN-HOUR
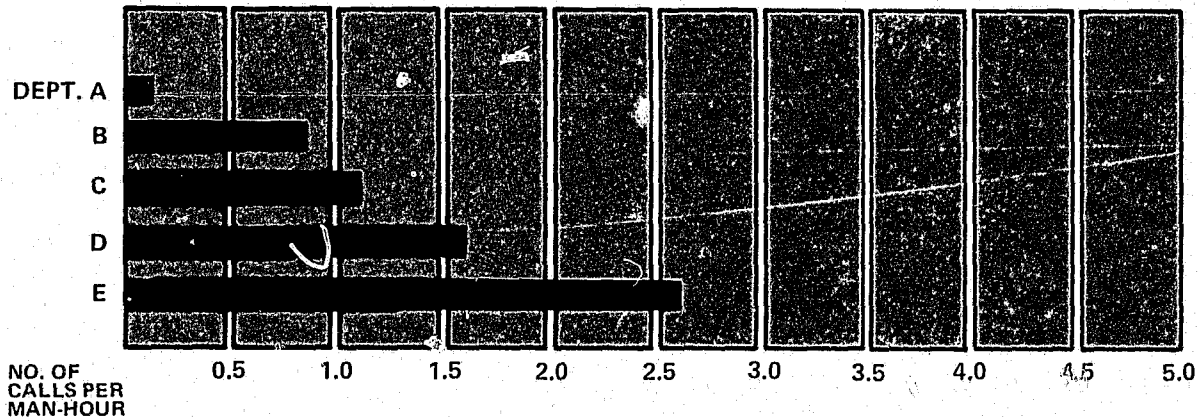
IMPROVING PATROL PRODUCTIVITY

Measures are useful only when they lead to analysis and improvement of police operations. The following section suggests the kinds of action departments might consider to raise productivity by considering each of the same three problem areas for which measures were discussed in the preceding section:

- Making a greater proportion of the existing patrol division (up to a reasonable limit) available for street assignment;
- Increasing the real patrol time of those who are given street assignments; and
- Utilizing patrol time to best advantage (i.e., to achieve the greatest impact in accomplishing patrol objectives).

Most of the examples cited below are practices which have been tried and found useful in police departments around the country. Some may be inappropriate for a number of departments since the cost of implementing them may be higher than the value they would return. These, of course, are decisions that each department and government must make for itself.

Making More Officers Available for Patrol

Three kinds of action might be considered for getting a larger proportion of the patrol force in a position where they can contribute more directly to patrol objectives.

Use of Nonsworn Personnel. In the past virtually all of the positions in police departments were filled by uniformed, sworn personnel. But today's policeman is too highly trained and too expensive to be doing tasks that could be performed by a less skilled, less expensive person. It is inefficient, for example, to have a policeman acting as a chauffeur, working a switchboard, or collecting money from parking meters, since these are jobs that civilians could do at less cost.

On the other hand, there are many specialties for which an officer is not trained, and in which a civilian professional could perform more efficiently and effectively. Patrolmen should not have to type reports when a professional stenographer could do the job in half the time. Computer experts, management analysts, equipment specialists, and the like, may be well worth their cost in time saved or better service delivered.

In most large cities approximately 20 percent of police personnel are nonsworn. However, that percentage can be as much as 37 percent and as little as 6 percent,[20] indicating that some departments may not have made as much of an effort to substitute nonsworn personnel as others. Some have made special efforts. In Oakland, California, for instance, sworn personnel had been used at one time to compile checklists in the Criminal Investigations Division (CID). Twenty-nine men (or 33 percent of the sworn officers assigned to CID) have since been replaced by nonsworn personnel and now have street assignments.[21]

On a much larger scale, the New York City Police Department has instituted what it calls a civilianization program that will replace 2,100 sworn officers in clerical positions with nonsworn personnel within a 2-year period. The estimated cost to the department of the civilians will be approximately one-half that of the officers, achieving savings of close to $20 million per year.[22]

As part of New York's civilianization program, the 24th precinct has had assigned to it a full-time nonsworn precinct manager, who is well versed in business management techniques. His duties consist of (1) identifying positions that could be performed by nonsworn rather than sworn personnel, (2) combining job tasks and duty descriptions, and (3) developing performance standards and procedures to determine resource requirements. Previously, the precinct had 50 uniformed officers performing nonpatrol tasks such as complaint processing, switchboard operating, statistics compiling, payroll maintenance, etc. The precinct now has 23 nonsworn personnel and 18 patrol officers performing the work done previously by the 50 officers. Thus 32 officers have been released for street duty (an increase in the precinct's patrol force of approximately 12 percent) and the civilianization will save the department about $400,000 per year in salaries with no apparent loss in the quality of services rendered.

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[20] Figures from the "1972 Survey of Municipal Police Departments," Police Department, Kansas City, Missouri.

[21] Figures from Mr. Michael Darby, Research and Development, Oakland, California, Police Department.

[22] Figures from Capt. Thomas Guthrie, Programs and Policies, New York City Police Department.

Combining Jobs. One way the New York City Police Department reduced personnel was by combining the jobs of arrest processing officer and cell attendant into one position. Since both were 24-hour-a-day jobs, combining them released five patrolmen for street duty. Another example is that after establishing performance standards, the manager replaced three patrolmen with two nonsworn personnel in performing personnel record tasks.[23]

Transfer of Services. Another method of releasing patrolmen for street duty is to transfer certain services, such as issuing licenses and performing inspections, to other city agencies.

In Miami Beach, for example, parking meter duties were reassigned from the police department to the finance department, freeing about 40 patrolmen ·(approximately 12 percent of the total force) for street patrol duty.[24]

For a transfer of service to result in productivity gains, of course, the agency to which the service is transferred must perform it more efficiently, or at a higher quality or volume, than the police department.

Increasing the Patrol Time of Those Assigned

The amount of time which a patrolman assigned to street work can actually devote to important patrol activities can be increased in at least three ways: (1) by reducing his responsibility for nonpatrol activities; (2) by better use of time-saving equipment; and (3) by simplifying necessary but time-consuming administrative chores.

Reduction of Nonpatrol Activities. The following are examples of how some departments are attempting to prune or reduce less important activities to free the patrolman to attend to more patrol-related activities:

Arrestee processing centralization. There are many specific ways of reducing time spent in arrestee processing. For instance, one way is simply to reevaluate the entire process to identify duplication of effort and excessive transport time. One police department halved the amount of time involved in the booking process by centralizing its operations. Before centralization, the time to process an arrestee was approximately 9 to 10 hours; after centralization, 4 to 5 hours. Another department (Oakland, California) accomplishes this same process in less than 1 hour.[25] This technique eliminates the necessity for police officers to transport arrestees to court. Instead, they are picked up at the patrol stations by an arrestee transport system, thus saving a substantial amount of transportation time.

Early arrest screening. Another possibility is the early screening of arrests by legal counsel. Arrests that show low probable cause and thus would have a low probability of passing the arraignment stage would have the charges dropped. In that way, patrolmen will not waste time in court waiting for a case to come up that has little chance

[23] Information obtained from precinct manager Daniel Bergfeld, New York City Police Department, 24th Precinct, New York City.

[24] Figures from Chief of Police Rocky Pomerance, Miami Beach, Florida.

[25] David Burnham, "Lag in Arrest Systems Noted Here," *N.Y. Times*, May 13, 1973. The article reported a Ford Foundation study sponsored by Freely and Woods for the Center of Administration of Criminal Justice, University of California at Davis.

of surviving the first judicial screening. Washington, D.C., presently has such an operation. It screens out approximately 350 arrests per month. The average time saved in each of these is about 2 to 3 hours.[26]

Misdemeanor summons. Since many arrests are for misdemeanors and the probability of the arrestee showing up in court is high, several cities have instituted misdemeanor summons in lieu of physical arrest and incarceration. New Haven, Connecticut, has found that there is no significant difference in the court appearance rate of people issued summons compared with those posting bond.[27] New York City uses what it calls a desk appearance ticket which saves the officer the time of transporting the arrestee to the courthouse.[28] On the other hand, Oakland, California, had reported some difficulty with misdemeanor citations in that officers were failing to notify citizens whom they have cited that they have to appear in court.[29] However, this has been corrected.

Sworn affidavits or complaints. The requirement that arresting officers stand at arraignment even though they have very little to do much of the time they are present is a nonproductive use of patrolmen's time. In jurisdictions where the courts would determine that sworn affidavits or complaints are sufficient, they could substitute for the officer's actual presence and, as such, reduce significantly the time spent by patrolmen in arrestee processing.

Better Use of Time-Saving Equipment. There are many instances where equipment could be better used by a patrol force to save time:

Replaceable radios to cut vehicle downtime. In Miami Beach, Florida, the police department found that a considerable amount of time was lost when a car radio broke down.[30] The car would be out of service for the entire time the radio was being repaired. The department, therefore, installed replaceable radios so that when one breaks down a working one can be inserted in its place.

Phone and mail complaints. Another way of saving patrol time is to accept information over the phone or by mail rather than dispatching an officer. St. Petersburg, Florida, has a program of accepting crime reports over the phone. Followup surveys showed that 97 percent of those citizens receiving this service were satisfied with it.[31] Although this scheme does not improve the efficiency measure mentioned earlier, it is clearly an improved use of patrol time.

Closed circuit TV. The use of closed circuit TV for court appearances could save considerable time. The Kansas City, Missouri, Police Department is presently using it for forensic laboratory testimony. They intend to expand its use to arrestee processing and other court appearances as soon as the use of closed circuit TV is approved by the courts.

Simplification of Administrative Chores. A third way to recover the patrolman's "lost" time is to eliminate unnecessary administrative responsibilities, or to simplify those that are necessary. A simple example is to shorten official forms, the filling out

[26] General Counsel Geoffrey Alprin, Metropolitan Police Department, Washington, D.C.
[27] Ernest Diette, New Haven Police Department.
[28] Capt. Thomas Guthrie, New York City Police Department.
[29] Information Bulletin, Oakland Police Department, 23 March 1970. "Misdemeanor Citation Program."
[30] Chief Rocky Pomerance, Miami Beach, Florida.
[31] J. P. Morgan, Jr., Director of Public Safety, St. Petersburg, Florida.

of which can consume a great deal of an officer's time. In Miami Beach, Florida,[32] for instance, officers were spending a considerable amount of time filling out accident forms. An analysis of the form showed that much of the information was not needed for police records but was used solely by insurance companies. In other words, the officers were filling out forms mainly for the benefit of insurance companies. That inefficiency was eliminated by reducing the form as much as possible and transferring to the insurance companies the work that was rightfully theirs.

Maximizing the Impact of Patrol

Improvements in the first two areas—personnel available and effective time available—are aimed at maximizing the available manpower resource from the total potential manpower pool in the patrol division. Actually increasing patrol productivity, however, requires using that manpower in the most effective manner. That means both achieving a high level of proficiency in all activities undertaken *and* undertaking the "right" activities.

How to achieve maximum patrol impact with available resources is a question each department must resolve for itself. The purpose of the productivity measures discussed above is to begin to provide departments with new tools that can be used to analyze and improve upon their own situation.

The areas of improvement and examples which follow were thought by the Advisory Group to have high potential for most departments' patrol activities.

Reduced Response Time. Much can be done in most departments to reduce each of the three components of response time (dispatch, queue, and travel). In some instances improvements can be made with little or no additional cost. In other instances additional cost is involved, thus requiring an individual assessment of the value of incremental time reductions versus the cost of achieving those increments. The measure and considerations suggested earlier should be helpful in making such an assessment.

Dispatching delay can be reduced with the aid of improved manual procedures or by enlisting the aid of a computerized system that automatically registers calls with the appropriate dispatcher in order of receipt. Display devices then automatically indicate which units are available for dispatch. New York City's SPRINT (Special Police Radio Inquiry Network) is one of the most sophisticated computerized dispatching and car-monitoring systems in existence today. In addition to its direct operational duties, SPRINT compiles and prints out information such as number of calls serviced, length of time required for service, and car-utilization factors.

Queuing delay can be caused by the mismatch of patrol allocations with the demands for police service. If that mismatch is high, queue delay could also be quite high. One means of determining which patrol allocations would most reduce response time is computer simulation. In a matter of a few minutes several allocation strategies can be simulated and the program will give results on various performance indicators, one being the available response time. Washington, D.C., Boston, and New York City are all presently implementing simulation models geared to their departments. In addition to analyzing response times, the simulation model can help establish policy with respect to which car should be assigned a call and which call should be assigned next.

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[32] Rocky Pomerance, Chief of Police, Miami Beach, Florida.

Washington, D.C., and New York City also have ongoing efforts to determine in which directions travel time is the quickest. In Washington it was found that there is a significant difference in the time required to travel north-south as opposed to an east-west direction.[33] Such information, when used by dispatchers, can lead to a reduction in response times.

Of course there can be a significant amount of delay in trying to phone the police. This delay may be reduced by instituting the 911 emergency call number. Many cities already use this system, and its potential should be explored by the cities that do not.

Flexible Deployment. An obvious but often overlooked element in effective patrol is to have people on call when and where they are most needed, and in a manner which fully uses the individual and combined abilities of the force.

Traditionally, patrol forces have been rigidly assigned to certain time shifts and certain geographical districts without great concern for when and where the force was really needed. Increasing the proportion of the force assigned during high call periods and in high activity areas clearly produces a better match of resources to needs. The peak hours and locations, of course, can change over time, and the force should be capable of responding accordingly. The St. Louis, Missouri, Police Department, for instance, has innovated with flexible deployment strategies since the mid-1960's.

In an attempt to get more coverage on the street with the force available, many departments use one-man radio patrol cars. Other cities have chosen to continue using two-man cars because they were felt to provide better officer safety and morale. Of course, there is nothing to prevent a department from adopting a mix of one-man and two-man cars as an alternative.

Better deployment can also mean a different way of organizing the patrol force to better use the individual talents of patrolmen and the collective potential of a group of men and women working as a unit. Team policing, for example, is designed to permit officers to become more responsive to local needs by improving their understanding of and identification with the needs of the citizens in a neighborhood. Though officers are assigned to the teams on a permanent basis, they are permitted, and even encouraged, to develop flexible work schedules which enable them to make necessary followup investigations of crimes.

The Cincinnati Police Department is currently undertaking an experiment in a community sector, commonly called "Com Sec." Under the program, officers form small teams and are assigned to specific neighborhoods in a police district.

Similar team-policing concepts are being tested in other cities besides Cincinnati. Noteworthy programs are underway in New York City; Dayton, Ohio; Simi Valley, California; Richmond, California; and the Venice District of Los Angeles, California.

In the Venice Division, not only have community relations been improved, but there has also been a significant reduction in crime: 43 percent for burglary, 42 percent for grand theft auto, and 20 percent for burglary from auto.[34]

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[33] Information supplied by Inspector Herbert Miller, Metropolitan Police Department, Washington, D.C.

[34] Obtained from Commander E. M. Lembke, Headquarters Uniformed Services Group, Los Angeles Police Department.

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Special Units. Many departments have developed special patrol units whose efforts are specifically directed at street crime. These units often operate in plainclothes and as decoys to seek out potential crime situations rather than rely upon random observations. Examples of this type of unit are Kansas City's Tactical Unit, New York City's Anti-Crime Squad, Washington, D.C.'s Special Operations Division, and Denver's SCAT (Special Crime Attack Team) Units. Kansas City's Tactical Unit has about 50 percent of its men in uniform and 50 percent in plainclothes. On the other hand, New York's Anti-Crime Unit consists solely of nonuniformed patrolmen.

New York City's unit has been highly effective in producing quality felony arrests. The average Anti-Crime Squad member makes 18 arrests per year, 83 percent of which are for felonies, compared to 3 felony arrests per year for the average patrolman. In addition, about 73 percent of the squad's arrests result in conviction, which is more than twice the rate of arrests made by the average patrolman.[35] The Denver Police Department reports that patrolmen assigned to its SCAT Program make about 10 felony arrests per year, considerably more than the average patrolman.[36]

The difference from city to city could of course be caused by different definitions of felony. Another difficulty associated with assessing the relative effectiveness of these units is that the departments that use them find they attract more capable patrolmen, ones who normally would account for a high number of quality arrests on regular patrol. In order to adjust for this factor, it would be helpful to examine the arrest productivity of officers assigned to the special unit during the time they had been on regular patrol.

Special units may also be useful in attacking other specific problems more directly. New York City, for example, has established an auto crime unit that has been particularly effective in making auto theft arrests. The 73 police officers assigned to that unit in 1 year accounted for 1,583 felony arrests, or 21.7 felony arrests per man-year. Of those arrests, about 70 percent were for grand larceny auto and altered vehicle identification number.[37]

In still other cases, special activities may be useful but may not justify special units all to themselves or may be more effective if carried out as an integral part of regular patrol. In Washington, D.C., for example, the Metropolitan Police Department, in carrying out a departmentwide reorganization, eliminated such specialized units as the Canine, Traffic, and Youth units by blending their components into regular patrol units.

The purpose and value of special units, of course, is to attack a specific problem or to employ a specific resource. It is a recognition that the added or marginal value of putting a few more regular patrolmen on the force may not be as great as using that manpower in a different and more productive fashion. This concept—of the marginal or incremental value of a given activity versus an alternative way of using those resources —is a key to improving productivity. It is probably most clearly illustrated in the case of special units.

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[35] Of course it must be understood that at least some of the Anti-Crime Squad's higher productivity is due to its freedom from answering routine calls for service and its assignment to high crime areas.

[36] Mr. Vetter, Denver Impact Cities Program.

[37] Capt. Thomas J. Guthrie, New York City Police Department.

Crime Prediction and Information. Possibly the most innovative potential for improving patrol effectiveness is to make patrol work anticipatory rather than reactive. Traditionally patrolmen respond to incidents. This often gives the criminal a great advantage. Systems are presently being developed to predict where and when crimes will occur. An example of a highly computerized system is the Los Angeles Police Department's PATRIC (for Pattern Recognition and Information Correlation) System. Kansas City's Crime and Traffic Analysis Unit uses a computer to establish crime patterns and predict the movement of crime almost on a daily basis. With such information, officers can be more alert to certain kinds of criminal activity. Other cities are using manual systems to chart geographically the occurrence of crime and to use stakeout patrols to anticipate criminal activity.

Better and more rapidly available information can improve patrol effectiveness in other cities as well. In recent years there have been some technological innovations to improve patrol effectiveness in dealing with certain types of crime. The in-car computer terminal (two-way digital system) can provide patrolmen with a significant amount of information that can be helpful in identifying stolen cars and alerting officers to potentially dangerous situations. Computerized criminal history and outstanding warrants data can be obtained quickly simply by placing an inquiry on the terminal in the car. Kansas City, Missouri, is presently using these on a limited scale and, if their potential lives up to expectations, plans on expanding their use shortly to all patrol cars. Computer terminals, of course, are expensive, and in effect simply do more rapidly and precisely what could otherwise be done with a radio or telephone. These costs and values, therefore, have to be carefully weighed.

Citizen Support. Many cities are enlisting the "eyes and ears" of private citizens to notify the police of any suspicious activity or crimes in progress.[38] Such help can be

very effective in deterring crime and producing arrests. Oakland, California, for instance, has a radio alert program in which operators of motor vehicles with radios (such as taxis and some trucks) are asked to keep an eye out for criminal activity. The Oakland Police Department publishes monthly the names and stories of civilians who have assisted the police. New York City has an auxiliary police program. Civilians, after undergoing a short training course, patrol certain streets in a uniform similar to the police uniform. They are not sworn police officers, but are very helpful in deterring crime and spotting and reporting suspicious activity.

Other means of involving citizens more directly in law-enforcement activities are mentioned in the following chapter, which discusses specific crime-prevention programs.

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[38] This is included in one of the recommendations for improved productivity in crime prevention in Chapter 4.

4
PRODUCTIVITY IN CRIME-PREVENTION PROGRAMS

A principal objective of the police is to prevent crime. Yet many police departments do not think positively and specifically about crime prevention. They rely largely on the traditional methods of patrol and investigation, and too often fail to consider specific, anticipatory, and higher leverage programs that may be more applicable to contemporary crime problems.[1]

This chapter considers some of the things that police departments can do, aside from regular or traditional patrol activities, to focus more directly on crime prevention. This is not to say that the regular activities are not oriented toward crime prevention, for obviously they are. What the Advisory Group wishes to emphasize are ways in which departments could divert some resources from their regular activities — resources which may not have any appreciable effect and hence will not be greatly missed—and use them more productively to prevent crime.

Consider a simple example of this resource "trade-off." To fill one 24-hour-a-day patrol position typically requires five men. Suppose a given force has 50 such 24-hour positions. Reducing the number to 49 might not significantly decrease the effectiveness of the force, yet would free the five men used to fill that one position for other activities which may use their time more productively. They might, for example, work together on one 8-hour shift to establish a building security-audit program. Which is the greater value for the same money: 1 additional 24-hour patrol position doing essentially the same thing as 49 others; or an altogether new program of building security audits with a full-time staff of five trained police officers?

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[1] The distinction between crime-related patrol activities and "crime prevention programs" is somewhat arbitrary. Naturally, the sum efforts of the police department theoretically are geared toward deterring crime; the very existence of the department serves notice on would-be criminals that society has the means to track down and apprehend offenders. The intent of the distinction, and the purpose of having a chapter on crime prevention, is to highlight the fact that there are many things that a police department can do—which may lose emphasis if they are thought of simply as an extension of patrol—to more effectively control crime without a significant increase in cost.

Nor should the distinction between the terms "crime deterrence" and "crime prevention" be dwelled upon. Perhaps it is legitimate to think of "deterrence" as a more abstract concept (e.g., creating sufficient fear in the mind of the would-be criminal to cause him to refrain from criminal activity), whereas "prevention" focuses more specifically on actions taken to decrease crime opportunities (e.g., improving the security of a building to make it physically impossible for a burglar to enter). But this study makes no attempt to draw such rigorous distinctions. The term "prevention" is used in this chapter principally to draw attention away from more tradtional deterrence activities in order that the new opportunities for controlling crime may be highlighted.

Of course, no one can say for certain which would be more valuable. But it is reasonable to assume that the five men may be more useful in some such different kind of activity that is more directly geared toward crime prevention than they are in their traditional role. At least it may be worth a try.

What other kinds of activity could these five men be doing to more effectively prevent crime? The kinds of programs suggested in this chapter have some common features that distinguish them from regular patrol activities. They tend to focus on a particular type of crime, in a specific location, through the use of clearly identified resources, over a specified period of time. The emphasis on specificity is intended to achieve a "cutting edge" effect which has greater impact than more diffused efforts. Specificity can also permit the impact of the program to be more easily evaluated, so that the value of its continuation can be weighed.[2]

The programs cited here also tend to capitalize on untapped pools of resources. They seek to establish a more potent mix of joint police and community efforts to outwit the would-be criminal, to reduce his opportunities, and to instill in his mind a high degree of uncertainty that significantly increases his fear of detection and apprehension.

PROGRAM ATTRIBUTES FACILITATING MEASUREMENT

Unfortunately, the factors affecting crime prevention are extremely difficult to isolate and measure. For example, can one measure the number of robberies which did not take place because of a policeman's time spent working on recreation programs for inner-city youth? Or the number of burglaries that did not take place because of advice given to the community on building security? It is not surprising, given the difficulties of answering such questions, that police performance more commonly is judged on the basis of apprehensions than on their apparent success in holding down the rate of crime increase.

A number of difficulties must be overcome before reliable measures of productivity in crime prevention can be devised. For example, the most commonly used measure, the rate of reported crimes, represents only a fraction of all crime committed, and variations in the rate can be caused by a variety of factors other than crime-specific prevention programs. Victimization surveys (described in Chapter 2) and careful design and control of crime-prevention programs offer some promise of overcoming the weaknesses of this measure.

And, because productivity is a comparative concept, care must be taken to avoid the "measuring of apples against oranges" and other statistical fallacies. It may be easier, for instance, to achieve a 10 percent reduction in a small number of burglary occurrences than in a relatively larger number. It may also be easier to reduce burglaries in an area that has suffered temporary police neglect than in one where patrol and other activities have been intense.

There is no doubt that crime-prevention activities have, in many instances, been effective. Unfortunately, however, most have been subjected to little evaluation beyond subjective judgments or limited observations. Encouraging measurement of crime-prevention activities does not mean to suggest that only those activities that can be quan-

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[2] Care must be taken not to distort a program solely to facilitate measurement. A little extra thought in program design, however, often can assist in evaluation without jeopardizing the program's objective. Some programs, of course, are undertaken for the principal purpose of gaining information or may require documented results to justify their continuance. In such cases a program design geared toward producing evaluative information is especially important.

titatively measured are valuable. The point is that one is unlikely to be able to make judgments about priorities and resource allocations among various crime-prevention activities unless it is known *how* productive or effective they are in comparison to each other. Measures are simply a tool for better evaluation. But to accomplish this, crime-prevention programs and activities should be structured so as to yield as much useful information as possible. This is not to suggest that ease in measurement should be the principal criterion in the design of a crime-prevention program. Sometimes rigor in design for measurement purposes can dilute the effectiveness of the program. Fortunately, however, there are several factors which can both facilitate evaluation and enhance the effectiveness of crime-prevention programs. These include:

- specific objectives with relation to type of crime, location, and period of time;
- specific strategies for achieving the objectives; and
- specific resources and manpower allocated to the strategies.

Specific Objectives

In FY 1973, one police department spent $102,000 on 18 crime-prevention programs. As far as could be determined, none of them had specific objectives. As a result, it was difficult to evaluate the worth of each program or to identify where improvements could be made in subsequent years.

On the other hand, St. Petersburg, Florida, and Oakland, California, are two departments that set, and can measure progress toward, objectives in crime-prevention programs.

Using its own funds, St. Petersburg is trying to reduce residential burglary citywide over the next 10 months by 20 percent. Through individual security checks, lectures, burglary-prevention brochures, radio and TV "Prevention Tips" broadcasts, a Burglary Security Ordinance already drafted, and efforts by the city's Citizens' Crime Committee, it hopes to measure a reduced incidence of this crime. (Results are not yet available.)

Oakland, also using local funds, tried to reduce burglary 10 percent in a selected census tract over a 3-month period by persuading residents and merchants to keep lights burning in front and in back of their houses or business establishments all night at a cost of about 2 cents per night. They managed only a 3 percent reduction.

Specific Strategies

The California 6-City Model Burglary Prevention Program, funded by the Law Enforcement Assistance Administration (LEAA) through the California Council on Criminal Justice (CCCJ), is one of the most carefully designed crime-prevention programs carried out to date.[3] A consultant firm is being used as the independent program evaluator for all six participating law-enforcement agencies: Los Angeles County Sheriff's Department, Los Angeles Police Department, Oakland Police Department, Orange County Sheriff's Department, San Diego Police Department, and San Francisco Police Department.[4] Each law-enforcement agency involved is free to develop its own strategies and abatement techniques with respect to the following five categories:

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[3] For other discussions of program planning and evaluation, see (1) "Program Measurement and Evaluation," Appendix C (written in Sept. 1972) in *Report on the Criminal Justice System*, Uncorrected Proof Draft of the National Advisory Commission on Criminal Justice Standards and Goals, pp. 118–144, 1973; and (2) *Evaluation in Criminal Justice Programs: Guidelines and Examples*, Law Enforcement Assistance Administration, May 1973.

[4] The evaluation process presumably will be ex post facto as the consultant was brought into the program only after the individual proposals had been approved. CCCJ, however, is planning to extend the program to cover an additional 12 cities. The results from the second set will benefit from having the evaluation experience built into its design and execution.

1. Increase public awareness and involvement through education.
2. Improve security (target-hardening).
3. Improve patrol and surveillance.
4. Improve investigation and suspect handling.
5. Decrease the market for stolen goods.

Preliminary results are available from the program's first 4 months (though it has been in operation considerably longer). A portion of the results are presented in Table 3, namely, those relating specifically to nonpatrol crime prevention. The program also involves the monitoring of such other areas as the characteristics of the burglars apprehended (mean age 18, median age 16) and of the local character of the crimes (57 percent are committed within a mile of home). The chief point to note is the way in which measures have been chosen to reflect specific program activities, which in turn can be instrumental in the planning and goal-setting of other similar burglary-prevention programs.

Specific Resources and Manpower

The commitment of funds to explicitly defined crime-prevention programs in the sample of our survey (see footnote 4 in Chapter 3) ranged from 0 to 1.6 percent of the police budget. Unless the costs to carry out these programs can be isolated, productivity improvements will be difficult, if not impossible, to measure. Further, assessment of any program will not be possible unless the results can be related to the skills, methods, and manning brought to the program. The National Crime Prevention Institute, which is part of the Southern Police Institute of the University of Louisville, Louisville, Kentucky, believes that it is both desirable and feasible for departments to aim for a 2 percent budget allocation to specific crime-prevention programs.

TABLE 3

PRELIMINARY RESULTS FROM CALIFORNIA 6-CITY MODEL BURGLARY
PREVENTION PROGRAM*

| Category | Measure | 4-Month Period for Which Data Have Been Examined | | Percent Change |
		Beginning	End	
OVERALL	Monthly burglaries per thousand population	1.52	0.72	—53
	Dollar losses from reported burglaries per thousand population	$70	$25	—64
PUBLIC EDUCATION	Number of no-force entries per thousand population	0.48	0.24	—50
	Percent burglaries reported by nonvictims	9.9	13.1	+32
TARGET-HARDENING	Number of minor-force entries per thousand population	1.15	0.54	—53
	Number of aborted or unsuccessful attempts as a percent of all burglaries per month	5.0	6.4	+28

* Source: System Development Corporation, Santa Monica, California. Permission to publish these preliminary results obtained from the California Council on Criminal Justice.

In the end, the results of measurement must enable police managers to distinguish between crime-prevention programs that yield a lasting improvement and those whose effect is only temporary. Measures must also be structured so as to relate the improvement directly to specific activities carried out in the program and to a determination as to whether or not the program has simply pushed crime into neighboring areas or jurisdictions.

SOME USEFUL INDICATORS

As more experience is obtained through experiments in specifically designed programs (such as the California 6-city plan just described) and better crime data are developed, it should become possible to devise more definitive productivity and effectiveness measures for crime prevention. For those departments that cannot conduct such ambitious projects, a number of indicators can be used as a start toward developing meaningful measures. These include:

- the relationship between the fiscal resources spent on crime-prevention activities and the total departmental budget;
- the extent to which volunteer manpower is used; and
- the extent of crime-prevention training.

Fiscal Resources

Comparisons of the resources devoted to crime-prevention programs from one period to another, or between comparable jurisdictions, is a rough indicator of a department's relative priorities. The greater the proportion of the police budget devoted to specific crime-prevention activities, the greater the commitment to crime prevention one would expect to find. As noted below, however, more money is not the only indicator of commitment.

Volunteer Manpower

The use of volunteer community resources to augment police manpower is an important component of crime-prevention programs. The greater the resources that can be marshaled at minimal cost, the more productive the enterprise is likely to be. Again, however, the real test is the extent to which the volunteer manpower is engaged in effective work and/or increases the efficiency of sworn personnel. (Some of the more promising uses of volunteer resources are described later in this chapter.) The number of man-hours devoted to a particular program by nonpolice community volunteers is an indicator that can tell a police manager something about not only his crime-prevention effort but also the state of police-community relations.

Training

Specific crime-prevention training generally has a low priority in most departmental training programs. From data obtained in the Advisory Group's survey of 11 police departments (only 6 of which furnished meaningful replies),[5] crime-prevention training averaged from 0 to 8 hours per year for personnel attending regular inservice and supervisory training programs. Of course, more important than the time spent in training is the quality of the training. Another useful indicator is the numbers of personnel sent to external institutions for courses concerned with crime prevention. The survey data showed that, although the numbers are small in comparison to the size of the departments, personnel trained externally in crime prevention increased by a factor of 10 over the last 3 years.[6]

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[5] Departments that provided data were Oakland, California; Washington, D.C.; Kansas City, Missouri; St. Petersburg, Florida; Cincinnati, Ohio; and the Los Angeles Sheriff's Department.

[6] The survey showed that the National Crime Prevention Institute at the University of Louisville, Louisville, Kentucky, was the most popular choice for external crime-prevention training.

IMPROVING PRODUCTIVITY IN CRIME-PREVENTION PROGRAMS

In spite of the difficulties encountered in designing crime-prevention programs, several new programs have been accompanied by significant decreases in reported crime, or by the reduction or elimination of inefficiencies. Some of these are discussed below for the purpose of suggesting ideas on where to begin. (Not all, obviously, are equally applicable; each department must determine its own needs and limitations.)

Utilizing Community Resources

Nonpolice resources in the community, whose use is often less expensive than the addition of sworn and nonsworn personnel to the payroll, can be directed toward increased crime-prevention productivity. These include volunteer manpower, cooperation of commercial and private vehicles with radios, block security programs, identification of property, referral services, and building security audits. Examples of these in specific communities are:

Volunteer Manpower. In New York City and Los Angeles County, special men and women reserves, paid only $1 per year, are trained for specific work performed on call. They serve as a second man alongside uniformed officers in radio patrol cars; do special duty at fairs, parades, and youth programs; assist in traffic and crowd control; and provide special skills such as electronics, photography, and horsemanship.

Citizen Eyes and Ears. In Oakland, the Citizens' Crime Prevention Committee, which helps the department involve the community in crime-prevention activities, assisted in organizing the Radio Alert Program. By 1971 this comprised 31 companies with more than 1,700 radio-equipped vehicles such as tow trucks, taxis, utility trucks, and ambulances. Drivers are instructed to call in if they notice crimes in progress or unusual occurrences. In 1 month, the department received 80 calls, some of which resulted in successful apprehensions.[7]

Block Security. In New York City, the municipal government is setting aside $5 million to provide technical and financial support for local residents and groups willing to work together to make their blocks and homes safer. One resident in each block is to serve as block security officer. After receiving special training, he will be responsible for designing ·· .. ɔlementing the block security program and will act as liaison between the block an .. .ʰpartment on crime-prevention programs.

Identification of Property. "Operation I.D." is being used in many communities. This encourages residents, using a pointed steel-tipped vibrating pen, to mark their valuable possessions with either a driver's license or social security number to assist in proper identification and speedy return of stolen items.

Referral Services. In both Oakland and Los Angeles, extensive use is made of community referral services. The Oakland Police Department's Family Crisis Intervention Program has secured the participation of eight public and private social service agencies. In Los Angeles County, the Juvenile Referral and Resource Development Program of the Sheriff's Department has used the services of about 100 community-based agencies since the inception of its referral program in 1970. In Richmond, California, a juvenile referral program is aimed at increasing the number of youths apprehended, "processed,"

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[7] Complete data are not available, but some examples are cited in the department's Information Bulletin of July 1972.

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and passed to an appropriate referral agency, and who do not revert to crime, presumably within a specified period of time.[8]

Building Security Audit. A crime-prevention program in Sunnyvale, California, includes a comprehensive security audit of all commercial and multidwelling apartment complexes. A unique feature of the program is the use of firemen[9] to conduct the security inspections while they are gathering information about fire hazards in the same buildings. A separate file is maintained for premises that have been burglarized. The ultimate intent of the program is to recommend worthwhile security strategies and techniques based on the data gathered in this broad security audit. The city obtained $25,000 in Federal grants and added $80,000 of its own funds to conduct the security audit. The program should be completed toward the end of 1973.

Research Related to Crime Prevention

Many basic questions remain unanswered in the field of crime prevention, such as:
- What are reasonable crime-prevention goals?
- What behavior patterns can be changed or encouraged to decrease the likelihood of crimes being committed?
- How can the changing socio-cultural profile of a community be described, and how does this affect ongoing crime-prevention programs?

Although each crime-prevention program launched involves a search for answers, systematic research is needed to make possible the planning and design of more effective programs. Such research, of course, will probably be limited to the larger police departments, which are able to devote resources to research. Universities, research institutions, and State and Federal agencies working to prevent crime also have a responsibility in this area.

Three examples of research which illustrate the value of increased knowledge in designing strategies to meet crime-prevention objectives are described below.

An Assessment of Criminal Justice Priorities. In Ventura County, California, a survey of all criminal-justice agency heads in the county was conducted.[10] They were asked to rank 40 separate types of crime on a scale from 0 to 100 using criteria such as the cost per offense to the system and to each major part of it, the complexity of dealing with it, and its impact on victims and the community in general. These data were compared to objectively measured data on the impact and characteristics of these offenses. The purpose was to assess criminal-justice priorities.

The results were voluminous and informative, although not conclusive in the sense that one type of crime stands out and begs for top-priority consideration. Some specific data for decisionmaking were revealed, however. The victimization rate[11] for bur-

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[8] Letter from Lourn G. Phelps, Chief of Police, Richmond, California, dated April 20, 1973.

[9] The city consolidated its police and fire agencies in 1950, and a recent 1973 study showed that, while their performance in both fire and police areas was significantly better than the average of the 12 comparable Bay Area Cities included in the study (measured according to indicators of fire damage in dollars and UCR statistics respectively), the weighted police-fire cost per capita was 20 percent less than the average.

[10] Robert W. Poole, Jr., *Crime and Criminality Matrix*, Report 012-005 Public Safety Systems, Inc., prepared for the Ventura County Model Criminal Justice System Development Project, Board of Supervisors of Ventura County, Ventura, California, February 1973.

[11] Defined in the report cited as the number of crimes per year divided by the number of *potential* victims—rape victims, for example, are almost exclusively female; auto thefts can only occur from those who own an auto.

glary in the county, for example, was more than 25 times the conventional reported rate per 1,000 population. The odds of a business being burglarized were 1 in 2.5 compared to 1 in 1.4 for shoplifting. Most burglars are male (83 percent), young (75 percent under 25), single (58 percent), unemployed (66 percent), and, of those employed, 80 percent are categorized as semiskilled or less.

Crime-prevention planning should be able to make use of such crime-specific data in setting priorities and devising prevention strategies.

An Econometric Study of Crime Factors. An econometric study [12] of the factors contributing to crimes against property and the factors determining the effectiveness of law-enforcement activity directed against these crimes was carried out in 1969. Among its findings, which are supported by substantial statistical evidence, are the following:

- "Deterioration of labor market opportunities for youths, particularly nonwhites, was one of the principal factors responsible for rising per captia offense rates for economic crimes."
- "Increasing school enrollment rates for youths have had an ameliorating effect on the rise in crime rates for some types of crime."
- "The decline in police effectiveness, as measured by the ratio of offenses cleared by arrest to known offenses (clearance ratio), commencing in the late 1950's and early 1960's, has encouraged criminality and induced higher rates of growth in per capita offense rates." [13]

For each of the age groups studied (16-17, 18-19, and 20-24-year-olds), the report found that "approximately 98 percent of the rising trend of economic crime is explained by the worsening of economic conditions as measured by the age group's unemployment and participation rates." [14] The report implies that two strategies—namely, increasing labor market opportunities for youths and increasing school enrollments (with their potential for greater earning power) — would have a substantial impact on reducing the amount of property crime.

An Exploration of Police Inputs to City Planning. A Police Foundation planning grant has recently been awarded jointly to the police departments of Fremont and Richmond, California, to explore the potential of police inputs to city planning. [15] Specifically, the project will try to:

1. Demonstrate actual changes in planning practices as a result of police inputs:
   - in building, street, and park design and construction.
   - in adoption of minimum security codes or guidelines for business and residences.
2. Collect data needed to convince planners and developers that security-related modifications are worth the costs involved; to show city officials how the modifications can diminish calls for service.
3. Disseminate the results of the project to other jurisdictions. The results of this kind of project will have significant impacts on cities engaged in substantial re-

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[12] Harold L. Votey, Jr., and Llad Phillips, *Economic Crimes: Their Generation, Deterrence, and Control,* National Technical Information Service Document No. PB 194 984, December 1969.

[13] *Ibid.,* p. 3.

[14] Ibid., p. 41.

[15] Information from Mr. Joseph Lewis of the Police Foundation, and from the Fremont Police Department, June 1973.

development, or those that are growing very rapidly. Illustrations of the crime-prevention thrust of this work are the attention paid to:

- Patrol access to backs of houses in cul-de-sacs and those bordering on wooded sites.

- The visibility of entrances to buildings.

- The visibility of entrances to apartments on a floor of a multiapartment unit —they should all open onto a common space where every entrance is visible from any other; and in instances where corridors are necessary, no crooked corridors.[16]

- Design of cargo-loading areas—prior work led to the reduction of cargo thefts in one firm by 40 percent following the redesign of the loading bay into the shape of a large "U," with centralized surveillance at the head of the "U" and controlled access at the other end.

Organizational Status for Crime Prevention

For a department concerned about crime prevention, the requisite activities need visibility, emphasis, competent direction, and commitment. The effectiveness of such activities suffers when they are performed as an adjunct to other activities such as patrol, and when people are put to work on such programs with inadequate training.

These principles were applied by the Oakland Police Department in February 1970 when it established a Preventive Services Division. It consolidated three related units into a more effective managerial structure. These were the Crime Analysis Unit, the Building Security Section (formerly the Security Section), and the Special Operations Section (formerly the Crime Prevention Unit). The merger of these units into a cohesive group reflected a commitment by the chief to these activities and a realization that performance can be improved through a unified structure.

To summarize the chapter, while the problems of measuring crime prevention are formidable, the opportunities for developing new programs geared specifically toward the prevention of crime nevertheless appear to be great. The volume, patterns, and methods of crime have changed over the past years faster than police departments have altered their operations to keep up with the change. And, consequently, there is great potential for diverting departmental resources from marginally productive activities to higher leverage programs of active and anticipatory crime prevention.

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[16] For a discussion of this and other design techniques that reduce criminal incidents, see Oscar Newman, *Defensible Space: Crime Prevention Through Urban Design*, New York: The Macmillan Co., 1972.

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MANAGING
HUMAN RESOURCES
MORE PRODUCTIVELY

Human resources account for 80 to 90 percent of present-day police costs. How well a police department manages these resources, therefore, is a crucial factor in its productivity performance. New technology, new strategies, and even substantial increments of money will make little difference if the police do not also have personnel who *know* how to do a good job, *want* to do a good job, and *can* do a good job.

If a department has excessive turnover of good people, it is losing the type of personnel who can manage and execute work productively. If it has a high absenteeism rate, productivity is reduced because of the large amount of time lost. If it has unqualified personnel, productivity is reduced through errors, poor judgment, and because more men than necessary are needed to perform a task.

Perhaps the most important productivity ingredient is the attitude or motivation of a department's personnel. Whether productivity means more valid arrests, a greater community feeling of security, or lower response to calls, a motivated officer is certain to be more productive than one who is not motivated to perform well.

Two kinds of factors affect the productivity of human resources: personal factors, such as the values placed on work, family, and leisure time; and organizational factors, such as the recruiting, selection and assignment, training, and organizational development processes.

Although it is important to be sensitive and responsive to personal factors, most are largely beyond the control of law-enforcement agencies. Therefore, this chapter will focus on organizational factors and processes, including the need to design work to simultaneously increase job satisfaction and improve performance. The chapter will not dwell upon factors associated with productive groups and good management practices, which have been dealt with extensively by others.[1] It will provide some basic measures for assessing the ability of police personnel and a departments' management of those personnel as well as suggestions for improvement.

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[1] For example, R. Likert, *New Patterns of Management*, New York: McGraw-Hill, 1961; D. McGregor, *The Human Side of Enterprise*, New York: McGraw-Hill, 1960; and *Municipal Police Administration*, Municipal Management Series, Washington, D. C.: International City Management Association, 1969.

MANPOWER QUALITY CONSIDERATIONS

No satisfactory "hard" crime-related indicators exist for measuring the performance of police personnel. Such indicators as numbers of arrests (qualified by type) or recovered property are all dependent on numerous factors outside the control of the personnel being evaluated. For example, among the factors beyond their control are deployment strategy, type of neighborhood, shift, and type of assignment.

Nor does a single measure or index of performance exist for an individual police-man. An assessment can be begun, however, by first separating the positive and the nega-tive aspects of performance.

Positive performance measures (which are highly subjective and hence require a con-siderable degree of judgment) include the assessment of position requirements versus in-cumbent qualifications and performance evaluations.

Negative performance measures [2] include disciplinary actions (harassment, depart-mental charges, substantiated criminal complaints, substantiated civilian complaints); days lost due to injury, disciplinary reasons, or days sick; and turnover.

Positive Performance

Law-enforcement agencies have enough available data to make reasonable measure-ments of job qualifications or performance. Some suggested ways for assessing these kinds of manpower quality are offered below.[3]

Job Qualification. A person is considered to be suitably qualified for a job when the physical, intellectual, and psychological attributes (attitudes and personal characteristics) he or she brings to the job match the requirements of the job. Qualifications as broadly defined as this can thus be developed through education, training, experience, and prac-tice. A person may be qualified for one police job and not another. Each job requires a different type of skill and ability to perform it properly.

For this reason, job requirements must be carefully thought out and clear descrip-tions formulated. The requirements of a job are determined by its responsibilities and activities.[4] Once identified, the skills and abilities to perform them can be enumerated. The

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[2] B. Cohen and J. Chaiken, *Police Background Characteristics and Performance*, The New York City RAND Institute, August 1972.

[3] The need for cautions because of the difficult and judgmental nature of these assessments cannot be overemphasized. Applied carefully and consistently, however, they can provide extremely valuable data.

[4] Some departments feel that because a person is holding a job, he is, by definition, qualified. This is likely to be true, for with such an attitude the requirements for a job tend to erode to fit the person carrying it out. Over time, substandard levels of performance become accepted as standard. Some assess-ment of the types anad levels of skills and abilities to do a job is needed to counter this attitude. (A consensus of managers familiar with the job in question is one way to assess the requirements of a job.) It then requires a comparison between the skills and abilities (i.e., experience, education, etc.) of the jobholder against the person actually required by someone familiar with both sets of skills and abilities. This is not a simple task, though well worth the effort, since it provides an understanding of and famili-arity with the organization, its overall manpower requirements, and its manpower shortcomings.
This sort of analysis can make it apparent that a number of personnel are underutilized; i.e., their skills and abilities far exceed the requirements of the job. This poses a different, more serious challenge than the "overutilization" of personnel. All but three of eight police departments surveyed on the manage-ment of human resources (for list of the departments, see footnote 6) indicated that they use job rather than rank descriptions in order to differentiate between requirements of personnel at the same level hold-ing different jobs (e.g., a captain working in planning as opposed to one in field operations).

judgment as to whether or not a person is qualified is often subjective, and in most cases relevant skills and abilities can be judged only from past behavior.

A person's qualifications alone cannot forecast his performance, which is also affected by his motivation, the organizational constraints he might encounter, and the degree to which his qualifications are matched with the requirements of the job. A department concerned with manpower quality should consciously strive to place individuals in positions for which they are adequately qualified. A person qualified to do his job not only can perform better but is more likely to find satisfaction in his work. Obvious as this point may seem, it is often overlooked by police departments.

Performance Appraisals. Performance appraisals are frequently unduly influenced by factors unrelated to performance. On the other hand, relatively objective performance appraisals can be a source of useful information about personnel quality.

If performance goals—assuming they exist in the first place—are clearly understood by both parties involved in the appraisal, and if the criteria for rating the individual are well defined, then the summary rating accompanying appraisals could be used collectively as a rough indicator of manpower quality. This rating usually is expressed by a variety of descriptive words, such as "outstanding," "satisfactory," or "unsatisfactory." In some instances, a continuum could be used, with "outstanding" performance at one end and "unsatisfactory" at the other, and with an appropriate point on it representing the individual's rating.

If either the negative or positive performance criteria point to a degradation in the quality of manpower, the department should make an effort to determine the underlying problems.

Negative Performance

Charges. Several types of complaint and disciplinary actions can be lodged against officers; for example, for illegal search, illegal detention, illegal confiscation of property, and other acts of criminal and unethical conduct against the public; or violation of departmental policies and regulations, ranging from insubordination to sleeping on duty.

The word "charge" includes criminal, civilian, and departmental complaints, instances of harassment, and any other similar action.[5] The first manpower quality measure, isolating a department's negative performance, is expressed as the total number of charges pressed against personnel divided by the total number of personnel:

$$\frac{\text{Number of Charges During the Year}}{\text{Total Number of Department Personnel}}$$

Departments willing to undertake a careful evaluation of the relative seriousness of each charge can develop a weighting scheme according to particular values and goals. Even where this is not desired, a useful result can still be obtained if the various charges are given equal weight.

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[5] The number of charges or days lost is strongly determined by the policies of a department. For example, one department records all types of charges brought against an officer. Another department records only clearly supportable complaints. Obviously, therefore, comparisons between departments are not appropriate. Instead, each department should monitor changes over time in the measure and assess whether it is satisfied with overall performance along each measure.

FIGURE 6

COMPLAINTS AND CENSURES
FOR SIX POLICE DEPARTMENTS,
1971 DATA

Number of Complaints During Year
Number of Substantiated Complaints
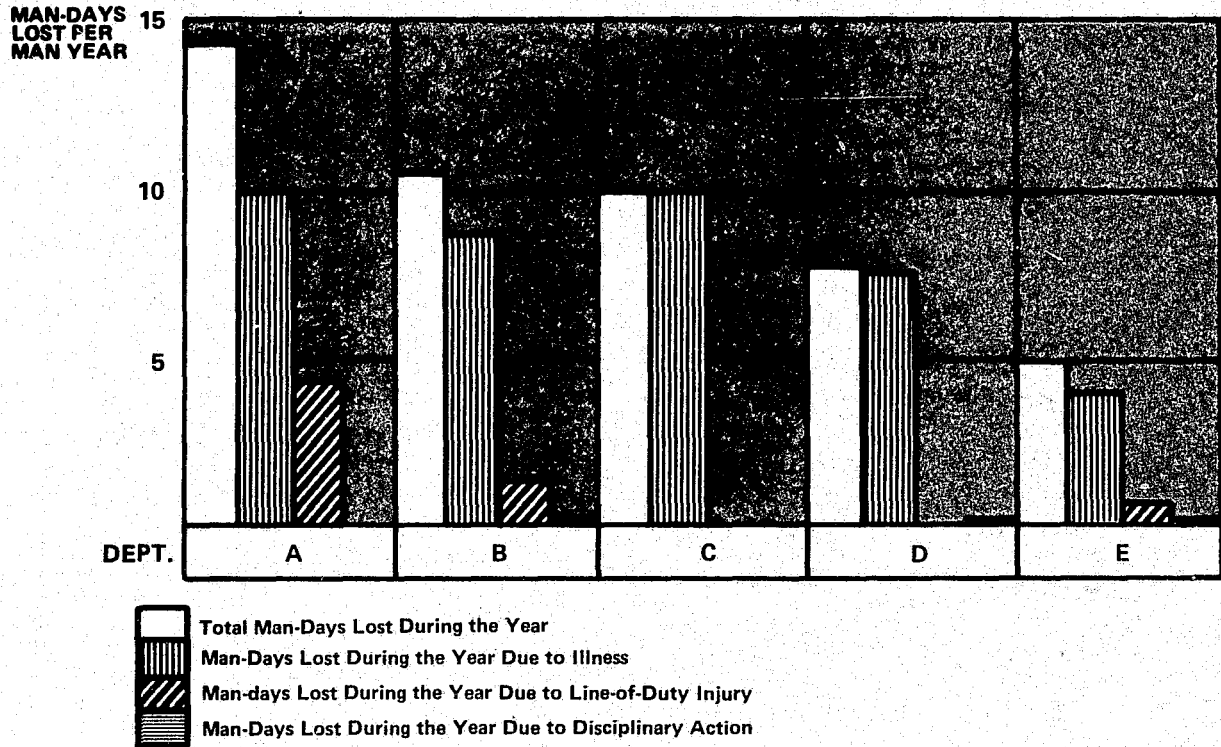**Number of Censures During Year**
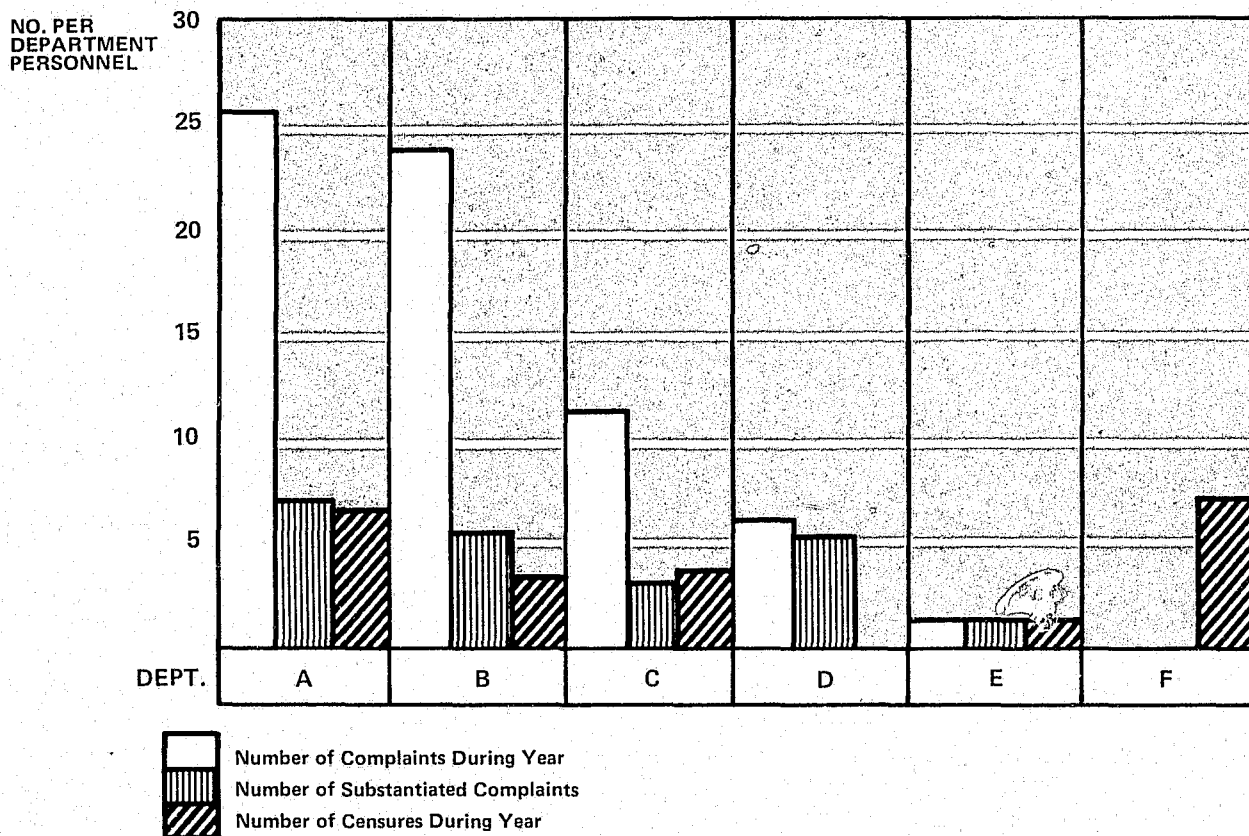
For the measure to be useful over a period of time, a department should be consistent in the way it defines and uses the measure. If criteria for a charge are changed during the period, or if activities affecting the number of charges are changed (for example, actively soliciting civilian complaints), this measure must be adjusted if it is still to yield useful comparisons.

An increase in the relative number of charges pressed may indicate the existence of problems with some personnel or in personnel programs. A survey of eight police departments [6] on the management of human resources (six of which reported data calculable in this measure) revealed a wide range of results, in large part a reflection of differences in department policies and reporting practices. (See Figure 6.) Several departments found that the same officers are targets of complaints and censures. In such cases, focusing training and management efforts specifically on these men is suggested.

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[6] These departments were Los Angeles County Sheriff's Department, Michigan State Police, and the Cincinnati, St. Petersburg, Kansas City, Oakland, New York City, and Washington, D. C., Police Departments.

FIGURE 7

MAN-DAYS LOST FOR FIVE POLICE
DEPARTMENTS, 1971 DATA

MAN-DAYS LOST PER MAN YEAR

DEPT. A B C D E

Total Man-Days Lost During the Year
Man-Days Lost During the Year Due to Illness
Man-days Lost During the Year Due to Line-of-Duty Injury
Man-Days Lost During the Year Due to Disciplinary Action

Days Lost. An unnecessary number of days lost can result from poor morale, poor supervision, poor training, or bad selection.[7] The quality measure here, calculated in addition for sworn and nonsworn personnel, is:

Number of Man-Days Lost During the Year Due
to Illness, Disciplinary Action, and Injury

_____

Total Number of Man-Days Served During the Year

For departments reporting on the number of man-days lost due to illness, injury, and disciplinary action, the figures ranged from 5 to 14 days lost per man during 1972. (See Figure 7.)

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[7] Departments should examine whether or not their personnel policies help to produce productive behavior. For example, not allowing partial days off could result in more full days lost than may occur otherwise and/or less reliability in how personnel report their hours.

FIGURE 8

TURNOVER—PERCENTAGE OF TOTAL FORCE LEAVING PER YEAR DUE TO VOLUNTARY RESIGNATION AND FOR DISCIPLINARY REASONS FOR EIGHT POLICE DEPARTMENTS, 1971 DATA
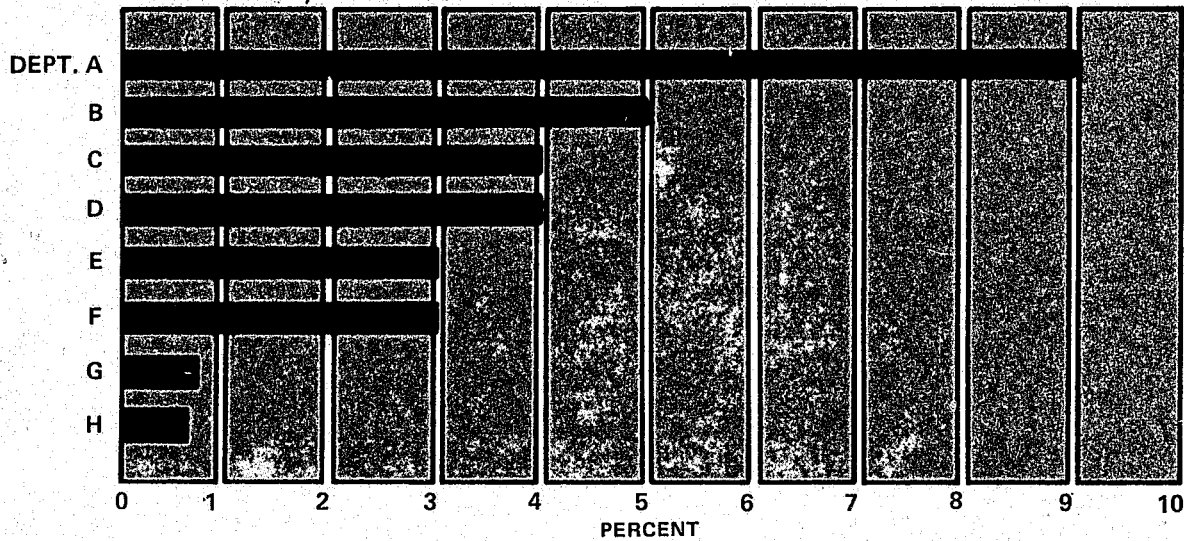
Turnover. Turnover includes the annual number of voluntary resignations, forced resignations, discharges, and resignations in lieu of disciplinary actions and during investigations, but not the number of retirements. The third indicator of the quality of personnel programs is therefore the total departmental turnover compared to its manning strength. It should, in addition, be calculated for both sworn and nonsworn personnel:

$$\frac{\text{Total Turnover During the Year}}{\text{Total Number of Department Personnel}}$$

When applying this indicator, the result must be qualified by the type of person who leaves (which can be determined by performance appraisals). This is often more important than the number who leave.

Unnecessarily high turnover can be traced, among other factors, to poor management, improper selection and assignment criteria, and few opportunities for growth.

Very low turnover is equally undesirable, since it indicates a situation, often overlooked by managers, that is symptomatic of organizational stagnation and lack of growth. Under these circumstances, upward movement is stifled and opportunities are curtailed. In time, the organization will find itself with tired leadership.

Figure 8 shows the range in turnover data for the eight police departments surveyed. (Experience in private industry shows that the range for "acceptable" turnover is 5 to 20 percent.)

MEASURES USEFUL IN THE MANAGEMENT OF HUMAN RESOURCES

Four major programs contribute to maintaining the quality of personnel at the highest levels. These are recruiting, selection and assignment, training, and organization development. Each is discussed below, in turn, together with suggestions for a number of potentially useful measures. All of the measures suggested, it should be reemphasized, must be adapted to specific local circumstances and will require experimentation and further development.

Recruitment

Recruitment refers to the effort to attract, find, identify, and hire high-quality personnel for the department, and may involve nonpolice personnel. It applies to the entry of sworn and nonsworn personnel at the basic training level as well as to personnel moving in at all levels (i.e., lateral entry). While police may have limited input to the recruitment and selection activities noted below, police managers are, nevertheless, responsible for reducing barriers that result in unproductive practices by bringing them to the attention of relevant agencies and bodies, including the general public.

A good recruiting process identifies and attracts enough qualified personnel to fill open positions. Recruitment is not simply advertising but involves, as well, the use of active personnel in promoting law enforcement as a career, building a positive public image, using attractive materials, and employing a variety of recruiting approaches (face to face, large meetings, public media). It also involves deciding where, when, and how to recruit, recognizing that nonpolice personnel or civil-service agencies could also perform these functions.

Since one purpose of recruitment is to bring people into the department, one measure of recruitment effectiveness is:

$$\frac{\text{Number of Man-Years Lost Due to Unfilled Vacancies}}{\text{Total Authorized Man-Years}}$$

In addition, another measure is needed to indicate the effectiveness of the recruitment program in attracting people who not only meet entrance requirements but also perform satisfactorily on the job. A general indicator for this purpose is:

$$\frac{\text{Total Number of New Hires Who Perform Satisfactorily After "X" Months}}{\text{Total Number of New Hires}}$$

Satisfactory performance must be qualified by a test, performance evaluation, or some other means determined by the department to insure that incumbents are performing their jobs satisfactorily. If new personnel perform satisfactorily 3 or 6 months after placement, the position can be considered to have been filled successfully. When probationary periods are genuinely used to identify and discharge unsatisfactory performers, survival of the probationary period may be a possible indicator of successful performance.

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These two measures taken together should provide a reasonable idea of whether the department is recruiting qualified people in a timely manner. Timeliness, it should be emphasized, is not only important in producing manpower when it is needed, but may also determine the quality of personnel recruited. Several departments have reported that the candidates who took other jobs while on the list awaiting appointment to the department were the most qualified. The better qualified people may tire of waiting for an appointment and take other offers, while the less qualified may not receive other offers and hence are still available by the time the department gets around to hiring new people.

Similar indicators can be used to determine the effectiveness of recruitment[8] for above-entry-level positions, women, and members of minority groups.

Three unit-cost measures are proposed for recruitment. The first is:

$$\frac{\text{Total Cost of Recruitment}}{\substack{\text{Number of Candidates Who Apply Who Also} \\ \text{Survive Preliminary Screening}}}$$

The cost of recruitment includes the time of recruiting personnel, as well as the cost of advertising, materials, and any recruitment bonuses. The measure should also be used separately for lateral-entry positions, minority groups, and the like.

The second unit-cost measure for recruitment is:

$$\frac{\text{Total Cost of Recruitment}}{\text{Number Who Pass Selection and Enter Training}}$$

For the five police departments reporting recruiting expenses per man recruited, the figures ranged from $175 to $607. The bulk of the reported costs were attributed to tests and screening devices. Those departments relying on early initial screening (for example, assessment of the application form, background checks, and a written exam) tended to have lower recruiting costs per man than did departments that lost larger proportions due to the medical background examinations and training program screens, which came, usually, farther down the line. There is no evidence as yet as to whether one approach is more effective than another. The departments that screened recruits out later in the screening process did no better in turnover, days lost, grievances, or charges against their personnel. But their costs per man were higher.

A successful recruiting program is also able to reach and attract personnel for positions above the entry level; i.e., through lateral entry, as departments become increasingly interested in attracting from the outside specialized and scarce skills in nonsworn personnel where before they would promote less qualified persons from within. This interest has grown because of the increasingly complex role of police departments, especially in the larger cities, as a way of allowing sworn officers to perform their primary patrol function unencumbered by numerous peripheral demands on their time. Some departments noted two other major benefits stemming from a carefully executed lateral entry program:[9] economic advantages and improved community relations.

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[8] For both sworn and nonsworn personnel.

[9] For smaller departments, the costs of lateral entry recruitment and associated pay scales, particularly for nonsworn personnel, may be disadvantageous.

Specific recruitment techniques can also be evaluated for unit-cost performance. For example, the cost of a public radio announcement, divided by its results in number of candidates (those meeting the minimum specifications as to age, health, height, etc.), can be compared with the cost of a newspaper advertisement, divided by its results in candidates meeting the same specifications. In allocating money to media, such comparisons should be taken into account.[10]

The third unit-cost measure for recruiting applies to evaluating alternate advertising media, and should be used separately for each medium (newspapers, radio, magazines, etc.). It is:

<div align="center">

Annual Costs of Advertising in One Medium

Number of Candidates Initially Attracted by the Medium
Who Satisfactorily Complete Their Probationary Period

</div>

The number of candidates who simply *apply* based on information from one source or another is less useful information for this decision than those who satisfactorily complete the probationary period. To use the measure, candidates must be asked (perhaps in the application form) how they first found out about job opportunities in the police department.

Selection and Assignment

Selection and assignment involve the specification of the requirements to do a job and the matching of people's skills and interests with the job requirements. Jobs at all levels—at entry and those above it—are included.

The personnel selection and assignment process, for both new hires and promotions, is often looked upon merely as a means of filling slots, with little concern given to the task of matching the person to the job. On the one hand, the aspirations of the individual need to be considered—will this job lead to where he wants to go? All too often the average patrolman has no control over his career path. On the other hand, the longer term manpower needs of the organization need to be taken into account. How do jobs change over time as the organization and its goals change? What type of experience will be necessary for managers 2 years from now?

Selection and assignment is therefore a crucial and sensitive activity. Inadequate or too restrictive a set of selection criteria can prevent a department from getting the right kinds of people. Poor assignment procedures can strip a department of the skills it needs where it needs them. The hidden costs of poor performance of either activity are enormous. For example, consider the department whose ratio of field to support personnel is so poor that, while it is heavily manned, an adequate number of men cannot be placed in the field. The problem is not one of a constrained budget, but rather an example of a lack of well-thought-through assignments. Several years from now a department such as this will suffer from a lack of necessary field experience in its managers. The selection and assignment effectiveness measure, calculated again in addition for sworn and nonsworn personnel, is:

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[10] For an actual example, see: Isaac Hunt and Bernard Cohen, *Minority Recruiting in the NYPD, Part I, The Attraction of Candidates*, N.Y.C. RAND Institute, R702-NYC, May 1971.

$$\frac{\text{Total Number of Positions Successfully Filled by}}{\text{Promotion, Transfer, and New Hires}}$$

$$\text{Total Number of Positions To Be Flled by}$$
$$\text{Promotion, Transfer, and New Hires}$$

Again, the result must be refined by a test, for example, a performance appraisal 3 or 6 months after placement to insure that the selection and assignment process has been operating adequately. Those found not to be performing adequately should not be counted in the numerator. The 2-week constraint suggested in the recruiting section should also be applied for inclusion in the numerator, except in those cases where special qualifications, high-level positions, or other extenuating circumstances are involved.

This measure could be computed separately for lateral-entry selection and assignment effectiveness, and even separately for promotion, transfer, and new-hire positions. As with any measure presented in this report, the criteria for carrying out the additional calculations should rest on the perceived usefulness of the information relative to the costs incurred in obtaining the information.

One unit-cost measure to help evaluate the selection and assignment process is:

$$\frac{\text{Total Cost of Selection and Assignment}}{\text{Total Number of Positions Filled}}$$

The cost of the selection and assignment activities is the cost of the people's time to evaluate candidates and the cost of the information and the time to get it. (For new recruits it may include costs of the medical examination, testing, screening, and personnel processing.) Note that the denominator is the total number of positions filled—both successfully and unsuccessfully. Of course, an insight into the productivity of selection and assignment can be gained by considering in the denominator of the measure only the number of positions filled successfully.

Training

Training covers all forms of departmental training, development, and education. Initial training usually consists of courses to provide skills to new personnel, through classroom lessons. Development training is designed to upgrade skills and abilities so that personnel can more effectively accomplish present and future jobs, and involves classroom education (within or external to the department), special assignments, job rotation, or transfers. Training programs often have multiple objectives; for example, in human relations, to improve management ability and ability to relate to the community and handle family crises.

All departments do some training. (Among the departments surveyed, the percentage of the budget spent on training varied from 0.6 percent to 8.7 percent.) The better managed departments tailor training to job requirements, reinforce classroom training with practical experience, and use special assignments, rotation, teamwork, and other on-the-job training programs. Finally, some of the best departments recognize the value of a good supervisor as a key element in a man's training and development, with the supervisor being evaluated in part on how well he develops his subordinates. Survey data on the types and length of training programs reported by five police departments are shown in Table 4.

TABLE 4

TYPE AND LENGTH OF TRAINING PROGRAM, INCLUDING
NUMBER TRAINED IN EACH, FOR FIVE POLICE DEPARTMENTS

TYPE OF TRAINING PROGRAM	A		B		C		D		E	
	Man-hrs per person	Number Trained per yr	Man-hrs per person	Number Trained per yr	Man-hrs per person	Number Trained per yr	Man-hrs per person	Number Trained per yr	Man-hrs per person	Number Trained per yr
BASIC RECRUIT _____	784	118	1040	213	733	94	----	----	480	500
SWORN OFFICERS IN-TRAINING _____	294	706	40	200	80	215	40	350	120	390
SUPERVISORY TRAINING (SGTS.) _____	----	----	64	213	88	15	40	171	120	----
SUPERVISORY TRAINING (OTHERS) _____	2	97	----	----	50	9	40	61	40	50
MIDDLE MANAGEMENT (LTS.) _____	2	33	----	----	51	18	40	4	80	50
MIDDLE MANAGEMENT (CAPTS.) _____	8	11	28	45	----	----	40	----	----	----
MIDDLE MANAGEMENT (OTHER) _____	----	----	128	19	----	----	----	----	----	----
TOP MANAGEMENT __	----	----	120	4	----	----	----	----	40	96
TRAINING COST AS A PROPORTION OF TOTAL BUDGET, PERCENT __	----		8.7		3.5		4.0		1.5	

The degree to which the objectives of training programs have been met should be tested (although only one of the departments contacted did any meaningful evaluation). The best way to do this is to evaluate on-the-job performance after training. Subordinates and/or superiors might be asked, for example, whether the participant's performance as a manager has significantly improved. In order for such judgment to be meaningful, performance ratings are needed before training is undertaken. The effectiveness of a training program could be given by the following measures:

$$\frac{\text{Cost of Training}}{\text{Number of Trained People}} \qquad \frac{\text{Cost of Training}}{\text{Total Man-Hours of Training Received}}$$

The problem with these measures is that they do not reflect quality in the denominator. The unit cost of training could be reduced simply by giving more people training at the expense of quality. Therefore, to be useful, it is necessary to couple these measures with appropriate effectiveness tests at the end of training. Those failing the tests would not be counted in the denominators.

Where possible, measures should distinguish among courses with different training content (e.g., initial vs. supervisory) and/or those employing different methods (e.g., classroom vs. special assignment).

Data from six police departments show that costs of internal training programs are almost entirely accounted for by compensations for instructor and participants. Training cost per recruit ranged from $1,000 to $6,000 with the average around $2,500. Where the instructor was drawn from departmental personnel, training costs were considerably lower. Regular use of external programs, which are the most expensive, increases significantly the amount invested in training.[11]

Organization Development

While recruitment, selection and assignment, and training are accepted and fairly well understood as normal human resource management activities, organization development is less well understood and not as widely accepted as a police department activity. But organization development is in every way as important as, if not more important than, the other activities, and while it is difficult to measure and evaluate, its importance demands that the effort be made.

Organization development is concerned with the way people make decisions, work together, handle problems and conflicts, and communicate. It entails a series of planned efforts which individually and together are designed to promote development of an entire organization. Those efforts include a careful examination of present modes of operation, the setting of improvement goals, the planning of appropriate action steps to accomplish them, the implementation of those steps, and a systematic evaluation to assess the degree to which the improvement goals have been achieved.

It is not uncommon for well motivated, highly qualified personnel to be hamstrung by organizational policies, procedures, and modes of operation, especially in larger departments. In fact, few organizations make it easy to promote change. An individual may find

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[11] In those areas where internal personnel are simply *not qualified* to teach (e.g., long-range planning, statistical evaluation of program results, building design for security), a department should pay the additional costs for external courses since the eventual costs are greater when poor inhouse instructors who do not know their subject try to teach.

that he does not have control over the resources to do his job, or that any change in procedures requires four levels of approvals and a lapse of 10 months, or that the information he needs to be productive is not readily accessible because "he is in the wrong department." As a result, a person may be forced to choose to expend his efforts dealing with his own organization—usually his superiors and peers—or to give in and simply accept the less productive way of doing things. And it is the rare individual who will not give in either initially or after a few frustrating attempts to initiate change.

Actually most organizations reward the person who meekly follows the accepted way of doing things and reject and even punish creative people with new ideas in subtle but effective ways (e.g., by excluding such people from events, making them the butt of jokes, etc.).

Ingredients of a "productive" organization include open communication between levels, an incentive system that rewards interdepartmental collaboration rather than competition, the confrontation of differences, participatory decisionmaking, and an organization structure that allows for flexibility. However, those critical ingredients tend to be overlooked because they are not *directly* traceable to productivity gains, and because many managers prefer to think in terms of getting the job done rather than how the job might be better managed.

The most important person in an organization development effort is the police chief, for it is with his support and guidance that a department can be transformed from an antiquated, stifling, reactionary organization into a healthy, modern, innovative one. But for successful organization development efforts to succeed, all who are affected by them must participate.

With the chief's support, department personnel can examine, for example, the nature of communication within the department. Is it all from the top down? How much distortion is there between levels? How much routine lateral communication is there? When there is communication, does it get the job done? Such examination may indicate the need for transfer of personnel or for training to improve communication skills.

The common goal of all of these action steps is to increase productivity by improving the flow of information. Considering how much time is spent communicating, the impact on productivity of even a small improvementt can be enormous, with better coordination, saved time in explaining and repeating, fewer mistakes, and a better feeling about the department and the public because of improved performance.

The improvement goals of an organization development effort can vary enormously, ranging from a shift in the level of decisionmaking to encouraging more new ideas. Because these are difficult to articulate in measurable terms, and because there is a further difficulty in assessing a financial or other kind of return, no specific productivity, effectiveness, or efficiency measures are offered at this writing. Yet, it is important to try to assess progress —with respect to organization development goals—in however crude a fashion.

On the other hand, there is no lack of indicators in organization development that can uncover organizational problems. A few are presented for illustration, divided into the categories of "administration" and "motivation":

Administration Indicators. These are:

- time spent mediating rivalry between departments.
- time spent performing functions assigned to people lower in the organization (e.g., making arrests).
- time spent reacting to crises that should or could have been planned for and handled by lower level personnel.
- number of decisions made by a supervisor which could have been made and implemented at lower levels.

Organizational problems are indicated when a high proportion of time is spent on such activities and a low proportion is spent on planning, evaluating, and implementing new ideas, and facilitating the work of subordinates.

Motivation Indicators. These are:

- turnover and absenteeism (discussed earlier in this chapter) [12]
- percentage satisfied with their job, department, and supervisor [13]
- percentage of personnel who have received censures, suspensions, or substantiated complaints against them (discussed earlier in this chapter) [14]
- number of employee suggestions effectively implemented.

IMPROVING THE MANAGEMENT OF HUMAN RESOURCES

The principles of good personnel management which have improved productivity in nonpolice organizations have been applied in varying degrees in the more progressive police departments. Rather than enumerate a list of principles which are available in books and from professional organizations and other sources, the Advisory Group identified only those principles and specific practices that appear particularly useful for police organizations. Following are suggested means of improving human-resource management in each area:

Recruitment

Lateral Entry. A certain percentage of all open positions above sergeant or equivalent should be filled through lateral entry of sworn and nonsworn personnel. The rough figures collected from the survey suggest that 5 percent is well within the reach of aggressive departments; some specialists believe the figure should be considerably higher. Lateral entry provides hard-to-get skills, permits minority and female personnel to be attracted more readily, introduces fresh ideas from men with police experience elsewhere, and builds bridges to the community. The Metropolitan Police Department in Washington, D. C., filled the positions of personnel director and training director by lateral entry of nonsworn personnel. Both jobs were formerly held by police inspectors. [15]

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[12] Both are important indicators of morale problems if the figures are high. Very low turnover can be a sign of organizational stagnation. A sudden change in these measures is also indicative of a problem. (Note that departmental policies on sick pay can affect the absenteeism rate.)

[13] This figure can be developed through attitude surveys. Four of the eight departments surveyed used attitude surveys for this purpose.

[14] This indicator reflects the quality of personnel in the organization and the ability of management to direct and control them effectively. In the survey, from 1 to 3 percent of the personnel had received censures in the majority of the departments.

[15] Information from Herbert F. Miller, Inspector, Metropolitan Police Department, Washington, D. C.

Portable Pensions. One of the major hurdles to transfers between departments and from one government jurisdiction to another is the absence of portability of pension systems and other accrued benefits. This problem has not been investigated, per se, by the Advisory Group, but was raised frequently enough by departments to merit further inquiry.

Use of Nonsworn Personnel. In most departments, many positions currently occupied by sworn officers could be filled with nonsworn personnel. Chapter 3 on patrol productivity discusses the advantages of using nonsworn personnel and the experiences of cities that are exploring their use.

Alternative Recruiting Methods. Some of the alternative recruiting methods found productive by various department include:

- Offering current personnel incentives to bring well-qualified acquaintances into the department. This reduces the cost of recruitment and attracts qualified candidates not reached by other methods. The Kansas City Police Department, for example, offers $100 for each applicant brought in.

- Using a recruiting team to cover a neighborhood. This has met with mixed success.

- Using public media selectively. Apart from attracting qualified personnel, this method helps build a positive image for the department.

Careful cost-effectiveness evaluations of alternative recruiting methods could significantly improve the quality of manpower.

Selection and Assignment

Career Path Choice. A program which permits a person some say and control over his career path helps to motivate him. Personnel at all levels should be presented with options for future assignments and be allowed to indicate their preferences. Developmental opportunities should be provided to allow them to build the requisite knowledge and skills to achieve their career goals. The New York City Police Department has a program that allows patrolmen to select the type of neighborhood where they serve, a process which eventually will lead to other clearly defined opportunities. The Los Angeles Sheriff's Department has conceptualized a career counseling and development program. The Dallas generalist/specialist program also provides multiple career paths, including advancement while remaining in patrol.[16]

Job Descriptions. Most departments need better job descriptions which reflect the nature of the activity or function rather than the general responsibilities at a particular level or rank. Different attributes, for example, are needed for positions in planning as opposed to training. The Los Angeles County Sheriff's Department has laid the foundation for an extensive program to identify the skills, experience, and other attributes necessary to perform a specific type of job. The object is to improve the selection and assignment of personnel, provide more information to help people make better decisions regarding their career development, and determine types of development needed to qualify for a particular position later on.

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[16] Communication from Joseph H. Lewis, Director of Evaluation, The Police Foundation.

Careers for Specialists and Generalists. Recognition of different careers for police specialists and generalists allows appropriate remuneration for specialist duty rather than punishing those who want to acquire special skills yet remain, perhaps, in patrol. By adequately compensating those who wish to specialize, the Los Angeles Police Department, under the so-called Jacobs Plan, does not discourage specialization. On the other hand, in the New York City Police Department, generalists are brought into middle-management positions. Generalists have also been successfully developed through interdisciplinary projects, rotation programs, interdepartmental exchanges, and team policing.

Supervisor and Assignment Selection. Too often high-potential officers have been demoralized and discouraged by serving under a corrupt or rigidly authoritarian supervisor. Perhaps the only way to identify such a problem is by keeping the informal lines of communication open. Evaluation assignments should not fail to include asking such questions as: Does it allow for learning? Does it promote the growth and development of the officer? Will he work with others he respects? Will he be sensitive and responsive to the citizens with whom he will have contact?

Manpower Planning. To be effective, manpower planning procedures should be undertaken in conjunction with the annual budget cycle.[17] A manpower plan is necessary to insure that the department will have the requisite number and types of management and specialized personnel it is likely to need several years hence. The leadtime for recruitment, selection and assignment, and training and development processes is understandably long. And once the time frame in question has reached 2 years or more, it may not be prudent to assume that job descriptions will remain fixed or that the police role in the community may not change. These uncertainties render manpower planning at the same time essential and extremely difficult to perform.

Identifying High-Potential Talent. The New York City Police Department has used management assessment centers and performance appraisals to identify high-potential talent. These personnel are given key positions to maintain their high rate of development toward appropriately high future responsibility. Most other departments are severely lacking in such activity.

The goal of some progressive business organizations is to insure that 8 percent of the personnel have sufficient potential to occupy the top position. Achievement of such a goal for personnel in a police department probably would assure sufficient quality manpower for filling management positions.

Every department should have some mechanism for identifying high-potential talent.

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[17] See Paul Pigors and Charles A. Myers, *Personnel Administration*, 5th edition, New York: McGraw-Hill Book Co., 1965, p. 53.

Training

Supervisor as Developer of Personnel. To encourage supervisors to take an active role in developing the personnel under their command, they must be trained, evaluated, and rewarded. Training should include how to set objectives, establish performance criteria, create feedback, and develop learning styles. Performance appraisals should take into account supervisors' self-development as well as development of subordinates.[18] Both the New York City and Kansas City Police Departments have instituted management development programs to develop supervisor and leadership skills.

Evaluating Why Personnel Leave. The characteristics of people who leave can reveal important facts about the department. More important than simply recording the numbers who leave is to determine whether they were expected future leaders or below-average performers, and the reasons why they left. Such information could be useful in the formulation of future training programs.

Training Objectives Matched to Skill Requirements. Objectives should be stated in terms of meaningful, observable acts of behavior. For example, while most police officers spend 60 to 80 percent of their time interacting with the public, the emphasis given to interpersonal and community relations rarely exceeds 10 percent of the content of all training given. To improve this situation, five general categories of training courses are suggested:[19]

- *Preservice*—procedures and policies of the department, basic skills, techniques, and human relations
- *Supervisory*—how to manage people, delegation, motivation, feedback (minimum of 5 man-days)
- *Organization* — administration, planning, decisionmaking, organization structure (minimum of 5 man-days)
- *Refresher courses*—reviews for all personnel about 1 year after promotion (minimum of 2 man-days)
- *Specific skills program*—e.g., drug control, community relations, juvenile crime, etc.

Organization Development

Periodic Organization Assessment. Most departments should conduct, at least annually, an organization development survey to examine communication, decisionmaking, goal-setting, and leadership procedures. The survey might consist of a number of questions, such as how often they are involved in decisions for which the information must be obtained elsewhere.

Goal Development. In a formal process of department and individual goal development, each person sets his own job-related goals for the year in the context of department goals. Subsequent performance appraisals are based on the goals set by each per-

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[18] The full benefit of performance appraisals can be realized if they are used for individual developmental purposes. The appraisal should focus on the career goals of the subordinate, the identification of the skills and attitudes he needs to reach those goals, and the plans for their development (one step at a time) through a special assignment or other training programs.

[19] It is reasonable to expect 4 to 8 percent of the department budget to be allocated to training, including the cost of time spent by trainees. Departments not able to support their own programs should utilize those of larger neighboring departments or other centralized facilities. The Regional Center for Criminal Justice in Independence, Missouri, and the North Central Texas Regional Police Academy in Arlington, Texas, are examples of successful regional training programs.

son for himself. The Kansas City Police Department has found the formulation of departmental objectives useful for individual goalsetting. The Los Angeles County Sheriff's Department is undertaking a major project to develop a mechanism and process for setting long-range and intermediate departmental goals.[20]

Cooperation Among Units. To integrate efforts of separate units where there is conflict, or where more cooperation can be beneficial, interfunctional teams, task forces, and interchange of personnel are useful, since they increase cooperation between such entities as patrol and investigation and between field and support. The Los Angeles Police Department, among others, has used this approach with success.

Personal Development Through Variation in Assignment. Motivation and individual development can be promoted through special projects, task forces, exchange programs, full-time schooling for advanced degrees, rotation programs, etc. While such assignments can be found in many departments, only two of the eight departments surveyed had a formal policy of planned rotation or special assignments to prepare a sufficient number of people for movement into upper level positions as and when they become open.

Correlating Information and Decisionmaking. Decisionmaking, whenever possible, should occur at the level where information is available. Precinct captains, for instance, should determine the allocation of resources within their precincts and then be held accountable for the use of those resources.

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[20] *Law Enforcement Long-Range Planning Project*, Los Angeles County Sheriff's Department, Los Angeles California, June 1971.

6
BARRIERS TO PRODUCTIVITY IMPROVEMENT

The preceding three chapters identify specific measures and means that can be used to analyze and improve productivity in three important areas of police work. Most of the means of improvement are drawn from programs and practices that are known to the Advisory Group to have been tried, tested, and proven useful in operation. With the many new and useful ideas available, why have not more police departments adopted them for their own use?

The reluctance to try new ideas, even when they have been successful, stems from many circumstances. But if police productivity is to be improved, if the proposals contained in this report are to have any effect, the barriers to innovation in police departments must be understood and overcome.

This chapter discusses the reasons why police departments are generally not inclined to seek out and implement better practices; identifies some of the factors that determine why new ideas, when tried, either succeed or fail; and suggests some ways in which departments could become more innovative.

THE IMPEDIMENTS TO CHANGE

Most police departments are organized in what might be termed a "bottom-up" hierarchy that requires all new entrants to start at (or near) the lowest rank and move in a step-by-step fashion up the organizational ladder. "Promotion from within" is the cornerstone of most police personnel policies.

Bottom-up departments tend to become closed circles in which practices pass down from one closely knit group to another as new recruits are "taught the ropes" by oldtimers. There are, to be sure, advantages to such a structure. Police departments are closely knit paramilitary organizations that maintain their cohesiveness through the sharing of experiences and dangers. By insuring that all members of a department start at the same rank, close bonds are developed from common experience. The lengthy training program and "apprenticeship" faced by a new policeman equip him with a set of skills, and also instill in him a set of attitudes.

But while the attitudes developed by an officer reinforce solidarity with the force, they also discourage openness to outside ideas. Most officers have little exposure to

policies and practices of other police departments. In time they tend to accept uncritically the methods they learn in their own department, and are likely to overlook a host of possible improvements that could be learned from other police agencies or elsewhere in nonpolice circles. The potential influx of new ideas that could be brought into the department by experienced officers from other forces is impeded by the policy of promotion from within.

The discouragement of lateral entry also deprives the department of technical skills needed to select and evaluate innovations. New police recruits do not generally have the technical skills required for such evaluation. With rare exceptions, individuals with the requisite technical ability seldom are willing to enter a police department on the ground floor. Thus few departments possess the technical sophistication required to determine the relevance and value of new technologies and practices.

The bottom-up structure places in leadership positions men who have demonstrated excellent operating skills and abilities. Skill as an operating policeman, however, does not necessarily also insure skill in management or in the tricky business of introducing innovation. The more bottom-up an organization is, the more the skills and attitudes of the leadership derive directly from those of lower level personnel. External influences —the experience of other departments and ideas advocated by Federal assistance agencies, State and local criminal justice planners, and consultants—come into play here. But their impact is limited by the degree of receptivity of a police department's leadership.

The skills and attitudes produced at the top of a police department directly affect the leadership's aggressiveness in seeking innovations. A police chief who has worked his way up through a department over 25 years is not likely to be searching for, or perhaps even to be open to, new ways of operating. Also, he is not likely to risk the consequences of disrupting close personal relationships by introducing new techniques which will require major changes in established practices. As a consequence, too few police organizations have innovative leadership. There are, of course, some notable exceptions, but they are presently in the minority.

Budgetary constraints also affect a department's inclination toward innovation. Many small departments lack the resources to invest in experimentation. Many also lack the magnitude of operations to benefit from new techniques (e.g., computerization of dispatching). Even the large cities are severely constrained, in spite of the fact that they receive a large portion of the Federal assistance and private foundation funds. Often the only reason they try something new is that someone else will pay for it. The importance of union relations can also come into play here. For example, changes which affect the number of men or the skills required to perform a certain function may be tolerated in a pilot project but may encounter union opposition if the department attempts widespread implementation (e.g., one-man patrol cars, or changes in the organization of geographical units).

Finally, innovativeness of departmental leadership is also highly dependent on political considerations. As one large city police chief said: "You need to smell if something is going to be a winner before you get behind it." The risks are great because politicians and the general public do not let a police chief "win some and lose some." They are very unforgiving; a failure is hung around a chief's neck without much regard for his success. With this kind of pressure, it is important that an innovation show near-term results, i.e., before the next election. Experimentation is difficult, if not nearly impossible, under these conditions. For example, it may be more productive to use plainclothesmen or unmarked cars. But if the public *feel* less safe because the police are less visible, their reaction may well scuttle the experiment.

The interplay of all of these factors determines in large measure a department's innovativeness. In time, the character of a department's experience with innovation itself has a critical effect on departmental attitudes. If it has been positive, with "success building on success," the department's receptivity and the leadership's predisposition to try new things may thereby be heightened. If it has been negative, the department may mistrust new ideas and avoid trying innovations that may involve risks. Sufficient positive experience will tend to institutionalize innovation and make it a way of life—an important part of a department's self-image. This has happened in only a few cases. These departments attract more dynamic individuals at all levels; their programs are more "robust" and less susceptible to short-term political or constituent pressures.

THE DETERMINANTS OF SUCCESSFUL INNOVATION

In spite of the impediments discussed above, some departments have adopted innovative programs. The funds associated with the Safe Streets Act of 1968, disbursed by the LEAA, have undoubtedly been a major stimulus for the adoption of new programs. The need to seem "progressive" has also been behind the adoption of new programs by a number of departments. Others may have undertaken programs in a genuine attempt to increase effectiveness or minimize costs.

Once adopted, innovative programs may have difficulty in surviving. Whether they survive and prosper or fail and are rejected depends on a number of factors.

Newly introduced programs continue to face the same difficulties that may prevent them from being adopted in the first place. Political realities make it difficult for police management to support programs other than those that appear successful soon after their adoption. The lack of technical skills among most department personnel often makes it difficult to carry out innovative programs successfully and may lead to their early failure. Difficulties in evaluating the effectiveness of programs, especially as they affect the crime rate, may make it difficult to "prove" the effectiveness of a new program and sustain it against any opposition. Budgetary difficulties may render innovative programs vulnerable to cancellation if there must be a choice between them and a department's traditional activities. Programs that disrupt accepted patterns of operation, such as the adoption of one-man cars in a two-man car city, may be especially prone to creating resistance that will cause them to fail.

Innovative new programs are especially susceptible to rejection if they are felt to detract from the functions regularly expected of police departments. Two functions that are most visible to the public are response to calls for service and maintenance of a visible "presence" on the streets through patrol activities. Longer response times (even for nonemergency calls) and reduced visibility can contribute to a negative public reaction to police performance. If changes in regular service are associated with new programs, the latter are likely to be perceived as the cause of "lower" performance. If these reactions are strong and sustained over time, the department's management may respond by returning resources to the regular functions, in which case the innovative program may suffer or die. The degree to which the department's management responds to these pressures is largely dependent on the support of top management for the program and the store of political support and public confidence enjoyed by the force.

Some programs are especially vulnerable to this problem. Plainclothes patrol programs such as New York City's Anti-Crime Squad may divert officers from regular patrol and consequently reduce the visible police presence on the street. This anonymity, of

course, is the principal strength of plainclothes patrol strategies and may more than make up in effectiveness what is lost in visibility. The reduced visibility, however, may be perceived by citizens as a reduction in police protection.

Public reaction to a program may depend as much upon the character of the program as upon its proven effectiveness. New York City's plainclothes Anti-Crime Squad has been especially successful because, in addition to its high effectiveness, it has seemed to capture the public's imagination with unusual tactics to foil and apprehend criminal perpetrators. Other cities' plaincothes squads, on the other hand, have alienated the public with such shortcomings as the excessive use of weapons, even while they are extremely effective in apprehending offenders.

Another factor affecting success or failure is the productivity of the resources invested in a new program, and the delay before an innovation becomes productive. If a program takes too long to get rolling, management may simply decide that it is inherently ineffective and scrap it. For example, the effectiveness of a team-policing program depends on the establishment of relationships between police teams and their communities, a process that necessarily takes a long time. If this lengthy delay is mistaken as an indication of intrinsic ineffectiveness, a potentially useful team-policing program may be eliminated before it has had a chance to prove itself.

Failure to enlist the cooperation of the department's personnel also can easily doom an innovative program to failure. Different programs will elicit different responses from a department's sworn personnel. A focused patrol program, for example, may create a negative reaction because officers believe it will entail more supervision than random patrol. In fact, random patrol may require greater supervision. Innovative management systems may be resisted because personnel resent the accountability required or feel that the system counts things that are easily countable (e.g., arrests) while ignoring the bulk of an officer's work. Resistance to these systems may often take the form of rendering their measures useless by such tactics as making many petty arrests merely to generate high arrest totals. Some programs, such as plainclothes patrol, may be extremely popular with the personnel directly involved, but are resented by other personnel.

The effects discussed so far do not occur in isolation from each other. Instead, they form a system of factors, all of which operate to determine whether a program will prosper and grow or will fail.

Dealing with one aspect of the system, such as enlistment of personnel cooperation, may not be sufficient to assure a program's success if, for example, it encounters a negative public reaction. The guidelines in the following section may be helpful in implementing innovative police programs.

ENHANCING INNOVATION

There are a number of things that can be done to foster more successful innovation in police departments. These suggestions will deal, first, with ways to increase the inclination of departments to innovate; and, second, with ways to increase the likelihood that attempted innovations will be successful.

Increasing Innovation in Police Departments

Any action that would promote the acceptance of innovation by police departments at the expense of organizational cohesion and morale could well be counterproductive. Similarly, it is probably unrealistic to assume that deeply ingrained personnel policies,

which represent an essential element of police department tradition, can be quickly altered. On the contrary, external attempts in that direction will be strongly resented and resisted.

Consequently, a "frontal attack" on the impediments to innovation is not recommended. Rather, a far less disruptive approach is to identify "leverage points" through which police department behavior can be affected. For example, if police leaders could be exposed to more ideas, accompanied by more honest and accurate evaluative information and precedents of successful implementation by other departments, they would probably become more flexible in their thinking. A department's leadership might thereby become more active in seeking better practices and more receptive to change. Another leverage point is the rate of successful innovation actually experienced. Better selection and management of innovative programs and more constructive relationships with outside "helpers" would increase the likelihood of success. That, in turn, would provide impetus for the "success building on success" phenomenon.

The following is one set of suggestions for overcoming impediments to innovations:

- In general, there should be greater emphasis on incremental changes. Occasionally, too much time, effort, and money are spent on sweeping changes that are too great a departure from traditional operating procedures. While police departments should and can innovate, spending money on new ideas which have little relationship to present operating modes is foolhardy. Radical changes should be phased in through a series of evolutionary steps.

- There currently exists no unbiased, readily available source of information regarding the performance of police innovations. This greatly increases the risks inherent in trying something new, and increases the skepticism with which outside ideas are received. An independent evaluation agency is badly needed in the police field. To be credible, it should be independent from governmental assistance programs and private equipment suppliers.

- A regular survey of police innovations in major cities should be undertaken that describes the innovations and various departments' experiences with them. In this way, the "bandwagon" can be made more visible, the spread of successful innovations can be expedited, and the lesson of shortcomings more widely shared.

- There should be joint funding of specialist positions in police departments using local, State, and Federal funds. Specialists to be "subsidized" should include technical personnel, people with special training in organizational development and change, and planners. This can provide the necessary skills to identify and support needs for change. These specialists should report directly to the police chief, possibly with a "dotted line" relationship to the mayor or city manager.

- There should be more extensive use of interdepartment personnel rotation programs for periods of up to 2 years. Exchanging personnel is a way to exchange ideas, and the mere placement of an "outsider" in a department is a stimulus which can facilitate additional changes.

- "Gatekeepers," i.e., those departments that tend to lead in the adoption of new ideas, should be identified. Their key role in the innovation diffusion process should be formalized by publicizing their activities and establishing personnel exchange programs between them and other departments. A study should be undertaken to determine what factors differentiate these departments and allow them to be "gatekeepers" so that other departments may follow suit.

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- Training programs for police officers should be established on the evaluation of new ideas, the management of change, and the concept of planned change. The idea of a national police academy should be seriously explored. Such an institution could have a great deal of prestige as a source of ideas. It could contribute to the professionalism of policemen and to their perception of themselves as professionals. And it could be an important source of badly needed managerial and technical skills.

- LEAA grants could play an important role in encouraging and supporting increased police productivity. To date, LEAA programs have followed their legislative mandate to add strength to police departments to bolster the fight against crime. With greater stress on evaluation and improving the internal analytical capability of police agencies, LEAA programs could begin to foster an attitude that emphasizes the development of existing police resources to more effectively fight crime and provide other police services.

In general, there are two distinct governmental roles in fostering police innovation. The first, on the Federal level, is to identify and disseminate promising new innovations. This action will deal with a number of the barriers cited above. The second is at the State and local level where there is a need to recognize and revise the organizational, personnel, and financial policies and procedures that choke attempts to change.

Making Innovations Work

The following suggestions address the problems that keep innovative programs from succeeding once introduced. They are intended to increase the likelihood that new programs will succeed.

- It is important to select programs that at least seem to be more productive in achieving a department's objectives than the normal police activities. This is especially true if the department is using some of its own resources rather than drawing on outside funds and capabilities.

- Departments need to have a realistic idea of the time delays before new programs can become productive, and to protect these programs from raids on their resources before higher productivity is achieved.

- The public must be educated about innovative programs so that it will be more tolerant of perceived reductions in regular activities due to a reallocation of resources. Otherwise, reduced visibility of police on the street, for example, may result in public pressures that will doom the innovative program.

- A department's personnel must also be educated about the goals of innovative programs and the improvements they are expected to produce in the department's overall performance. This process of education should permit the personnel to provide feedback on the new programs and give them the opportunity to suggest modifications that will help the programs to be more effective.

- New programs should be carefully designed and evaluated so that, whether they are permanently adopted or dropped, the department will still have gained some knowledge from the experience. Careful evaluations that explain why programs have succeeded or failed can help a department in the future selection and implementation of new programs. Careful evaluation can also reveal the effectiveness of controversial programs and help to maintain them in the face of opposition.

SUPPORTING ROLES FOR NATIONAL ORGANIZATONS

The purpose of this report has been to provide some basic tools—concepts, measures, means of improvements, and strategies for change—that police agencies can themselves use to improve productivity. While the previous chapters have identified some roles for Federal and State governments and national organizations, the Advisory Group has intentionally focused on the importance of individual police departments' taking action themselves. In fact, some departments have already begun to employ many of the tools included in the report.

Still, there is a need for national impetus to take the work of the Advisory Group and encourage dissemination, experimentation, and continuing development of its findings. Productivity improvement clearly is not a "one shot" affair. Increasing productivity in police services is an especially complex undertaking, and success ultimately will depend upon a continuing and lively debate and testing of the tools that the Advisory Group has just begun to advance in this report.

In order to carry this effort forward, the Advisory Group recommends a three-part approach. First, the National Commission on Productivity (NCOP) should find active advocates of police productivity programs who will carry the work forward on a national level. Second, the NCOP should continue its efforts on behalf of productivity in police services beyond publication of this document, at least until the applied aspects of the work are successfully handed over to responsible and willing agents. And, third, a conference should be held at which a broad representation of State and local government police officials can discuss the Advisory Group's work. Each of these recommendations is discussed in turn.

1. The National Commission on Productivity should find responsible and capable agencies or organizations willing to accept the responsibility for playing an active role in encouraging implementation and development of the programs and ideas contained in the Advisory Group's report and in general to promote police productivity throughout the country. The agencies should be able to:

    1.1 Reach a national constituency and/or special audience. Candidates might be such organizations as the Bureau of the Census, LEAA, Federal Bureau of Investigation, International Association of Chiefs of Police (IACP), or the International City Management Association (ICMA).

1.2 Provide technical assistance for productivity enhancement and measurement.

1.3 Conduct an annual audit or monitoring of the utilization of the concept of productivity within police agencies and publish these results in appropriate organizational publications.

1.4 Join with LEAA to create, at the national level, a clearinghouse on productivity in criminal justice. Responsibilities should include those of information collection, standardization, and dissemination, and the provision of such reporting assistance as may be deemed useful. LEAA would appear to be a natural source for sponsorship of this endeavor.

1.5 Encourage the State planning agencies, with assistance from LEAA, to provide support and assistance to local units of government in the development and implementation of productivity measures through conferences, site visits, State plans, and project funding.

1.6 Encourage funding agencies to sponsor and support dissemination of progress, problems, results, and improvements achieved by individual agency productivity measurement and improvement programs (including but not limited to those mentioned in 2.1 below).

1.7 Encourage national organizations such as the ICMA, IACP, National Conference of Mayors, National Conference of Governors, and the American Society for Public Administration to devote adequate time in their conferences to the concept and implementation of productivity measurements. In addition, these groups should develop separate conferences and workshops devoted entirely to productivity and its measurement in the police service.

2. The National Commission on Productivity, in cooperation with other organizations, should reach a small but carefully selected number of police agencies and provide encouragement and support to begin or expand productivity programs and pilot projects. To this end it should encourage:

2.1 The ongoing productivity-measurement programs in innovative departments such as those of Kansas City, Missouri; St. Petersburg, Florida; New York City; Nashville-Davidson County, Tennessee; and Cincinnati, Ohio; and the Michigan State Police.

2.2 The Law Enforcement Assistance Administration (LEAA) to defray the costs of publishing and disseminating case studies on programs in 2.1 above. The Technical Assistance Branch of LEAA should be expanded and appropriately staffed to provide expertise in assisting agencies with the design and implementation of measures. This request for assistance will be generated by the success of the pilot projects mentioned below (2.3).

2.3 Funding sources such as LEAA; the Department of Health, Education, and Welfare; the Department of Housing and Urban Development; the Department of Transportation; the National Science Foundation; the Police Foundation; etc., to:

• give priority in consideration and funding to projects which, in the evaluation section, place heavy emphasis on the measurement of productivity.

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- encourage, through financial support, the refinement of suggested productivity measures through appropriate projects.
- support financially the development of new measures of productivity of police activities.

2.4 Publication and dissemination of this study with all possible speed. To achieve the widest circulation possible, it should be:

- disseminated free to those holding full or associate memberships of the IACP; those heading criminal justice programs in colleges and universities; all chief elected officials and administrators in cities and counties over 50,000 population; all State governors and State planning agencies; and other current and potential funding agencies including, but not limited to, those listed in 2.3 above.
- accompanied by appropriate but full coverage in the press, both national and local, and possibly other media.
- accompanied by the publication of appropriate articles in professional journals, newsletters of professional and Federal agencies, and pamphlets to elected officials.

3. The National Commission on Productivity, in conjunction with the current Advisory Group on Productivity in Law Enforcement and other appropriate organizations, should, after dissemination of this document, hold a conference on productivity in the police services.

3.1 The conference will be for 200 to 300 key policymaking officials at the State and local levels, to include mayors, city managers, budget directors, and police administrators.

3.2 The goals for the conference should include, but not be limited to:

- conveying the deeper implications of the meaning of productivity and its measurement.
- obtaining the thoughts of the conferees on future dissemination strategies.
- enabling participants to come away with useful information such as new ideas and data, departments and cities with innovations to share, sources for advice and help, etc.

3.3 The agenda should include, but not be limited to, the following suggested items:

- Measurement and data collection problems.
- Case implementation histories.
- Implementation problems and barriers to change and how to deal with them.
- Strategies for implementing programs, taking into account department budget size and needs and productivity training programs at different levels in a police department.
- Police management planning and control systems, evaluative techniques, and monitoring systems.

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A useful supplemental bibliography will be found in:

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Appendix C of this Urban Institute study contains both "Annotated Literature References Relating to Police Productivity" and a supplemental bibliography to the Institute's study.

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