

**THE  
NEWARK FOOT PATROL  
EXPERIMENT**

**PoliceFoundation**

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This is a narrative report of the Newark Foot Patrol Experiment. A second volume containing tables, questionnaires, and measurement instruments also is available from the Foundation. For information on these reports, write the Communications Department, Police Foundation, 1909 K Street, N.W., Washington, D.C. 20006.

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Library of Congress Catalog Card Number LC 80-85062

## *PREFACE*

One of the questions citizens most often ask of mayors, council members, and police chiefs is, "Why don't we have foot patrol, like in the good old days?" The good old days were a time of tightly knit urban neighborhoods, strong institutions such as the church, the school, and the family, and few patrol cars in which police officers could be encapsulated and made remote from the citizens they served. The good old days began to dissolve after World War II, with the flight to the suburbs, the weakening of traditional institutions which tended to direct personal conduct and foster civility, and, in policing, the widespread adoption of the patrol car and other apparent technological advances which, whatever their benefits, worked to isolate police from the community. Yet, though the American urban scene has changed immensely, citizen demand for foot patrol remains as a remedy to crime and a key to maintaining order. Citizens associate the officer on the foot beat with a time when crime rates were low and they felt secure in their neighborhoods.

This volume and the accompanying volume of tables, questionnaires, and measurement instruments represent the most intensive study yet of foot patrol. True, the study was set in New Jersey and the results apply specifically to Newark, where a very helpful police director, Hubert Williams, generously opened up his department to Police Foundation researchers. But the results and other information developed in the study should be useful to all urban police departments which, because of citizen pressure or for other reasons, are considering adopting foot patrol. As noted in other parts of this volume, the study concludes that, although foot patrol (like routine motor patrol, as earlier research shows) does not appreciably reduce or prevent crime, it does measurably and significantly affect citizens' feelings of safety and mobility in their neighborhoods. Although crime did not go down as a result of foot patrol in test areas of New-

ark, foot patrol did make citizens feel more secure about their neighborhoods and shopping areas.

This conclusion reinforces the belief that citizens respond favorably to frequent, informal contacts with police officers of a kind that foot patrol (but not foot patrol alone) provides. Among other benefits, frequent police contacts with citizens can develop a reservoir of information about a neighborhood or an area which the police must have if they are to be successful in controlling crime and maintaining order. Information from citizens—whether developed through foot patrol, through such devices as regular police attendance at neighborhood meetings, or through such variants of patrol as neighborhood team policing—is the lifeblood of policing. Citizens often are the first to observe a suspicious activity, to learn the names of culprits in vandalism, to be aware of the sources of vice and other illegal activities in their neighborhoods. If citizens know and trust their police, particularly individual, familiar officers, they are more likely to provide information to those officers than they are to strangers in uniform who whiz by occasionally in patrol cars.

In reading this report, policymakers should keep in mind that whatever reduces police remoteness from the citizens they serve, whatever enhances the reservoir of useful police information, is vital to effective policing.

Many persons contributed to the Foundation's foot patrol study. Some of them are noted at the end of this volume; others deserving particular mention are noted here. Gov. Brendan Byrne and Atty. Gen. John J. Degnan of New Jersey are to be congratulated for their support of the study. Barry Skowkowski, Elmer Collins, and Richard Turner of the State Department of Community Affairs were of indispensable support in the conduct of the evaluation. Director Williams and his staff in Newark committed enormous energy to maintaining the experiment. State officials Dennis Bliss of the attorney general's office, Col. C. L. Pagano, director of the State Police, Director John Mullaney of the State Law Enforcement Planning Agency, and Edwin H. Stier, director of the State Division of Criminal Justice, are to be thanked for their critique of the report and their patience in the face of delays in publication.

Many current and former Police Foundation staff members were most helpful to the study. Mara Adams deserves special thanks for her untiring efforts to complete this and the accompanying volume. Her talent and persistence have enhanced the quality of the report. Amy Ferrara worked closely with the Newark Police Department and was singularly responsible for the Foundation's contribu-

tions to the success of the experiment. Dr. George Kelling, Antony Pate, and Dr. Mary Utne did their usual competent work and completed the project while involved in many other activities. Significant contributions were made also by Charles Brown, Thomas Fagan, and Dr. Victor Willson. Joseph Lewis, the Foundation's evaluation director at the initiation of the project, insisted on the usual high standards of performance. Thomas Brady provided full staff support for the project. Sheila Bodner typed draft after draft with skill and good humor. The Foundation's Evaluation Advisory Group, made up of Dr. Lee Sechrest of the Institute of Social Research at the University of Michigan, Dr. Albert Reiss of Yale University, and Dr. Hans Zeisel of the University of Chicago, is to be thanked for its review of the original draft and suggestions for modifications. Finally, the Foundation thanks Prof. Mark Moore and Harvard University's Kennedy School of Government for allowing Dr. Kelling time to finish his work on this report.

Because so many persons were involved in writing this report, it was decided to indicate authorship by chapter.

Patrick V. Murphy  
*President*  
*Police Foundation*



## *FOREWORD*

The critical challenge facing police executives in the 1980s is to do more with less. Fiscal stringency, the hallmark of American municipal government in recent years, cut a wide swath through the Newark Police Department, as it did many other major American police departments. These departments suffered severe cutbacks in personnel, either through attrition or through outright layoffs. There were reductions in resources ranging from patrol cars to computer facilities, and drumbeat admonitions to hold down costs in all possible ways.

But, to state the obvious, there were no similar reductions in citizens' demands for police services. In fact, the demands and needs of citizens increased, along with crime rates and other indices by which citizens judge the performance of their police departments. The effect of cutbacks on the one hand, and of increasing needs for police service on the other, has forced police executives to seek more cost-efficient and productive ways of accomplishing the police mission.

A key to realizing this mission is to capitalize on the fruits of reliable research. The products of such research are important not only to suggest ways that police departments can be more productive, but also to educate the public on the possibilities and limitations of police service within existing constraints. A case in point is the research reported in this publication. To illustrate, the report shows that the addition of foot patrol, in a mix of police strategies, measurably and significantly affects citizens' feelings of safety and mobility in their neighborhoods. This is something that no other police strategy has been capable of doing, a fact of great importance in urban America. It is useful for police executives to have this empirically derived information as they struggle to do more with less; it is useful also for citizens to digest and understand this information so that they can be aware of what foot patrol accomplishes.

In sum, research, of which this volume is a fine example, is of major importance to chief executives, especially as they seek productivity gains. But, research is equally, if not more, important when its products can affect public perceptions about what police and their crime-control strategies can and cannot do.

The Newark Police Department and I were proud to play a part in this research and to be a focal point of its examination of foot patrol. I congratulate the authors and others on the Police Foundation staff for their dedication and expertise.

Hubert Williams  
*Police Director*  
*Newark, New Jersey*



## *A NOTE ON THE EVALUATION*

This report once more underlines the Police Foundation experience with its police agency partners in conducting experiments in policing and rigorously evaluating them. Social experiments and evaluation research are inherently risky, difficult to design and implement, and even more difficult to sustain, monitor, measure, and interpret; it is worth it in the pursuit of many kinds of knowledge to accept the risks and try to overcome the difficulties.

This account includes interpretation of data about police foot patrol in 28 cities in New Jersey but concentrates most attention on an experiment in foot patrol in Newark. The design of the experiment, the preparation for its implementation, and the conduct of the evaluation all stressed knowing the degree to which the planned experimental changes took place and were sustained, as well as knowing the consequences, if any. It is a tribute to the courage and the intelligent understanding of the leadership of the Newark police that, despite extreme financial strains and turbulent relationships in the city and in the police agency during the experimental period, the experiment was in fact fully maintained as planned. It is a tribute to the leadership and field conduct of the evaluation that past Foundation experience was so effectively translated into this result. The experiment produced a superb example of operational and research collaboration at its best.

This evaluation, like most, could not produce all that might have been hoped for. It could not explore the full potential foot patrol may have: for many reasons foot patrol was not deployed and used in ways calculated to demonstrate its maximum potential in the cities studied in the course of this work; other objectives supervened. It is regrettable that accepted output measures simply do not exist that would allow cost/benefit comparisons between foot and motor patrol. Although some valuable insights were recorded, resource limitations did not allow the intensive observation and measurement necessary to show conclusively what foot patrol officers do or omit

that make some more effective than others and that may distinguish in full detail how best they might be employed.

But, again like most, this evaluation produced some results beyond what might have been expected. Foot patrol, as employed in this setting during this experiment, was not shown to reduce crime but, nevertheless, residents felt safer and more favorably disposed to the police agency as a whole, as well as to motor patrol, when they had foot patrol in their area. Foot patrol officers are shown to be more favorably disposed to citizens than are motor patrol officers. They are more satisfied with their jobs than are motor patrol officers.

Police Foundation and other studies have shown that citizens do not notice even quite wide variations in motor patrol when other police services are maintained at accustomed levels. This study shows clearly that residents notice the presence of foot patrol and that they change their behavior in response to its presence or absence. The effect of foot patrol on business people, despite the fact that when polled they always strongly favor it, was apparently obscured during this experiment in Newark by the fear campaign pursued by the police union in its struggle with the city and police management.

All these points are detailed in the report. Research readers will note the clear and careful separation throughout the analyses between those data and factors which enable straightforward analysis and interpretation and those which require reasoned choices to be made among methods of analysis and modes of interpretation. All such choices, their bases, and their consequences are fully, frankly, and straightforwardly presented in the report.

This is the first true experiment in foot patrol to be mounted since the small one conducted by Bright in the United Kingdom in 1969. The report as a whole, despite its regional and resource limits, constitutes the fullest examination of foot patrol yet made in the United States. For practitioner and researcher alike it provides a substantial further step in the direction of fuller understanding of the rational use of ever scarcer police resources in the troubled neighborhoods of American cities.

Joseph H. Lewis  
*Formerly Director of Evaluation*  
*Police Foundation*

## CONTENTS

<i>Preface</i>	iii
<i>Foreword</i>	vii
<i>A Note on the Evaluation</i>	ix
<i>Executive Summary</i>	3
1 <i>Patrol: A Discussion of the Issues</i> Antony Pate, Amy Ferrara, George L. Kelling	9
2 <i>Evaluation Designs and Hypotheses</i> Antony Pate	15
3 <i>A Description of Foot Patrol in New Jersey: The Safe and Clean Neighborhoods Program</i> Mary Utne, George L. Kelling, Antony Pate, Thomas Fagan, and Charles E. Brown	21
4 <i>The Newark Experiment: Implementation and Validation</i> Amy Ferrara and Antony Pate	33
5 <i>Reported Crime in Newark and Elizabeth and Arrests in Newark</i> Antony Pate, Victor Willson, and George L. Kelling	43
6 <i>Effects of Experiment on Attitudes and Victimization</i> Mary Utne, Antony Pate, Amy Ferrara and George L. Kelling	51

7	<i>Effects of Experiment on Officers' Attitudes and Performance</i> Mary Utne, Antony Pate, Amy Ferrara, George L. Kelling and Charles E. Brown	91
8	<i>Conclusions</i> George L. Kelling	111
	<i>References</i>	131
	<i>List of Acknowledgments</i>	135

### *LIST OF FIGURES*

<i>Figure</i>	<i>Page</i>	
1	<i>Quasi-Experimental Research Design</i>	16
2	<i>Research Design</i>	52
3	<i>Awareness of Foot Patrol Officers</i>	61
4	<i>Commercial Surveys: Awareness of Foot Patrol Officers</i>	76

### *LIST OF TABLES*

<i>Table</i>	<i>Page</i>	
1	<i>Foot Patrol in New Jersey</i>	24
2	<i>Distribution of Costs: Motor and Foot Patrol</i>	31
3	<i>Percentage Distribution of Foot Patrol Coverage Per Month During Experimental Year</i>	37
4	<i>Summary of Activities of Officers Assigned to Foot Posts in Experimental Year</i>	41

5	<i>Residential Samples: Perceived Street Traffic in Neighborhood</i>	62
6	<i>Residential Samples: Perceived Severity of Crime-Related Problems</i>	64
7	<i>Residential Samples: Perceived Safety of Neighborhood</i>	66
8	<i>Residential Samples: Victimitizations</i>	67
9	<i>Residential Samples: Evaluation of Police Services</i>	69
10	<i>Residential Samples: Protective Measures Taken Against Crime</i>	70
11	<i>Residential Samples: Perceived Likelihood of Neighbors Cooperating with Police</i>	78
12	<i>Commercial Samples: Perceived Street Traffic in Neighborhood</i>	80
13	<i>Commercial Samples: Perceived Severity of Crime-Related Problems</i>	81
14	<i>Commercial Samples: Perceived Safety of Neighborhood</i>	82
15	<i>Commercial Samples: Victimitizations</i>	84
16	<i>Commercial Samples: Evaluation of Police Services</i>	85
17	<i>Commercial Samples: Protective Measures Taken Against Crime</i>	86
18	<i>Commercial Samples: Perceived Likelihood of Residents Cooperating with Police</i>	87
19	<i>Officers' General Physical Condition</i>	95
20	<i>Officers' Activities Outside of Working Hours</i>	95

21	<i>Officers' Attitudes Toward Citizens</i>	96
22	<i>Officers' Perception of Foot Patrol</i>	97
23	<i>Correlation between Responses to Scales Rating Foot vs. Motor Patrol Performance, by Response Group</i>	98
24	<i>Officers' Perception of the Quality of Police Work</i>	99
25	<i>Rank-Order of Importance of Various Aspects of Police Job</i>	100
26	<i>Mean Importance of Various Aspects of Police Job</i>	101
27	<i>Officers' Job Satisfaction</i>	101
28	<i>Officer Characteristics</i>	103
29	<i>Causes of Working Time Lost from Sickness or Injury during Experimental Year</i>	104
30	<i>Mean and Median Working Days Lost from Sickness or Injury during Experimental Year</i>	106
31	<i>Percentage of Foot and Motor Patrol Officers Receiving Citations, by Years in Service</i>	107

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## *EXECUTIVE SUMMARY*

THIS IS A description of an experiment in foot patrol in Newark, New Jersey. This evaluation came about as a result of an invitation from Governor Brendan Byrne to Patrick Murphy, president of the Police Foundation, to observe a unique program: the Safe and Clean Neighborhoods Program, which provides funds for foot patrol officers and for upgrading and stabilizing neighborhoods in 28 cities in New Jersey. This evaluation concerns only the foot patrol aspect of the program.

The planning of the evaluation began in mid-1976, and all participants agreed on an evaluation design late in 1977. The Board of Directors of the Police Foundation allocated \$149,815 in December 1977 to initiate the experiment. Adding the planning costs and subsequent grants, the total cost of the evaluation exceeded \$442,000. The formal evaluation period ended in February of 1979.

The state of New Jersey paid for all the program costs and the Police Foundation bore all the evaluation costs. No funds were paid by the state of New Jersey to the Police Foundation, nor by the Foundation to the state.

The major portion of this evaluation was an experiment conducted in Newark. The evaluation rests heavily on this experiment. During its final stages, fiscal conditions in Newark necessitated that 200 Newark police officers be laid off. Although the experimental interventions were not affected (the reasons for this are discussed in Chapter 3), the announcement of this drastic personnel issue created an extremely serious conflict between the police (as represented by their unions) and the mayor and police director. Beyond calls for the resignation of the police director, the unions vociferously proclaimed the extreme dangers these layoffs would create for citizens in New-

ark. The uproar was prominently presented in the press. There is no alternative but to assume that these circumstances did affect the experimental outcomes. The report addresses the probable effects.

### *EVALUATION DESIGN*

Three designs were used to evaluate the effects of foot patrol.

#### *Design I:*

This design was to compare the attitudes of officers assigned to foot patrol with those of officers assigned to motor patrol in all 28 cities receiving state funding for foot patrol.

#### *Design II:*

In Elizabeth, two basic patterns of foot patrol coverage were found to exist. Some areas had steady foot patrol coverage both before and after the Safe and Clean Neighborhoods Program began; other areas had no foot patrol coverage before the program began. The levels of reported crime in these areas before and after foot patrol coverage was implemented were compared in those two types of areas. Initially, the plans were to use reported crime statistics from three additional cities. Although the cooperation of these other cities was high, the difficulty and cost of acquiring these additional data became prohibitive.

#### *Design III:*

In Newark, assignment logs of all existing foot posts were examined to determine which had been patrolled on foot consistently since the beginning of the Safe and Clean Neighborhoods Program. There were eight such beats. These beats were matched into four sets of two beats each, based on the number of residential and nonresidential units found on each beat. Out of each pair of beats, one beat was randomly assigned to continue foot patrol, and foot patrol was discontinued in the other. In addition, foot patrol was instituted in four areas (similar to those previously patrolled on foot) which had not had it before. Outcome measures included reported crime, arrests and victimization, fear, and satisfaction of residents and representatives of commercial establishments.

### *SUMMARY OF FINDINGS*

1. The first major finding, significant regardless of analytic approach used, was that *residents were aware of levels of foot patrol*. Although people seem to be only modestly aware of the levels of motor patrol (Kelling, *et al.*, 1974, 38-39), and are not particularly sensitive to team policing (Fowler, 1979, 136), they seem to be acutely aware of the presence of foot patrol. Given the different sizes

of beats and speed of movement, perhaps this is not surprising. It does suggest that, if a goal of a program is to make citizens more aware of police presence, foot patrol is especially useful.

Commercial respondents reported drops in their awareness of foot patrol in all three conditions. This is not surprising: the experimentally manipulated foot patrol posts were covered during times when most commercial establishments were closed. In addition, extensive press coverage of the reduction in the total number of police officers contributed to the fear campaign.

2. *Generally, crime levels, as measured by the victimization survey and reported crime (to the extent that reported crime measures it) are not affected for residents or commercial respondents at a significant level.* There seem to be no strong trends in the data.

3. In measures dealing with citizens' perception of crime, a different pattern emerges. *Consistently, residents in beats where foot patrol was added see the severity of crime problems diminishing in their neighborhoods at levels greater than the other two areas.* Street disorders, serious crime, drug usage, vandalism, victimization of the elderly, and auto theft all are perceived to be less of a problem. The greatest decreases occur in perceptions about street disorders, victimization of the elderly, and auto theft, all of which are street crimes potentially controllable by foot officers.

Commercial respondents report a different pattern. *When statistical significance is found (street disorder, drugs, teenage loitering, prostitutes, auto theft, rape, and shoplifting), the trend is that the perceived severity of the problem is greatest in the "added" beats (with the exception of auto theft) and least in the "dropped" beats.* Again, this finding is consistent with the fact that most commercial respondents were not exposed to the foot patrol experiment, but were exposed to the "fear city" campaign.

4. *In looking at the perceived safety of the neighborhood for residents, a pattern similar to that for perceived severity of crime problems emerges. Of the six times statistical significance is found, five favor the "added" beats.* The perceptions regarding likelihood of crime, of serious nighttime crime, of day street robberies, of daytime assaults, and of general feelings of personal safety either go down or increase less in the "added" areas. The second pattern was that the level of safety in the beats with new foot patrol increased in eight of the nine measures.

The pattern for commercial respondents again differs. Although no items were found to be of statistical significance, the perceived safety of *all* conditions decreased.

5. *A similar pattern emerges in responses to questions about what protective measures residents and merchants take to avoid crime. In three cases, crime avoidance efforts during the day, a composite of crime avoidance efforts, and non-weapon protection against theft, residents of the beats that added foot patrol indicated a greater reduction in the use of protective measures than persons in the other two conditions. No items of significance appeared in the analysis of the commercial respondents' responses.* However, 28 of the 42 measures were positive, indicating that there was a general trend in businesses to take protective measures.

6. *The final attitudinal dimension is the evaluation of police services by residents and commercial respondents. For residents, statistical significance is obtained in all 12 measures; more positive or less negative responses occur in the areas that added foot beats in 10 of the 12 measures.* Of these ten, two of the questions deal with police services generally and the rest deal with residents' evaluation of motor patrol services. The overwhelming impression is that positive attitudes gained from foot patrol generalize to other patrol services, an important finding in inner city urban areas, where both citizens and police protest police-citizen alienation.

*The pattern is again different in the commercial sample, where only five items achieve statistical significance.* This failure to achieve strong effects is consistent with the fact that the foot patrol experiment did not take place during normal business hours.

Thus, the general impression is gained that while foot patrol may not have a significant effect on crime, it does affect citizens' fear of crime, the protective measures they take to avoid crime, and the perceived safety of their neighborhoods in consistent and systematic ways. In general, when foot patrol is added, citizens' fear of typical street crimes seems to go down and generalized feelings of personal safety go up.

The report is in eight chapters. Chapter 1 discusses the literature on both motor and foot patrol. Chapter 2 presents the evaluation designs and hypotheses. Chapter 3 describes the New Jersey Safe and Clean Neighborhoods Program, the administration of the program, and a description of how foot patrol operates in New Jersey. Chapter 4 details the implementation and validation of an experiment conducted in Newark. Chapter 5 discusses reported crime and arrest, the problems associated with their use as evaluation tools, and a presentation of the findings. Chapter 6 presents the findings of an experiment regarding the effects of foot patrol on citizen attitudes

and victimization in Newark. Chapter 7 compares the attitudes of officers on foot and motor patrol. The final chapter summarizes the findings and discusses their implications.



## *Chapter 1*

### *FOOT PATROL: A DISCUSSION OF THE ISSUES*

*Antony Pate, Amy Ferrara, and  
George L. Kelling*

JUST AS THE patrol tactic is operationally central to policing, so is foot patrol historically central to the patrol function itself; the word “patrol” actually stems from the Middle French for “to walk or paddle in mud or dirty water.” Each member of the first bureaucratic police department, the Metropolitan Police of London, was instructed to walk so as to be able to see every part of his beat once every 10 or 15 minutes, so that if a citizen needed assistance, the citizen had only to remain in one location. The officer also was instructed to become acquainted with the inhabitants on his beat, and, if he made an arrest, to go to a particular spot on a beat so another officer could assist him.

In many countries, foot patrol is still a key element of police activity. In Japan, for example, police officers are addressed by the public as “Omawari-san”—Mr. Walkabout. In the United States, however, the methods of policing began to change dramatically in the 1930s. More and more police officers were deployed in motor vehicles, ultimately with two-way radios. At the time, there seemed to be many advantages: motor vehicles would increase the territory a police officer could patrol; officers would have radio contact with police headquarters; officers could be more readily supervised; and, less well publicized, placing police officers in motor vehicles, under closer supervision, would decrease the ever-present problem of police corruption.

Originally, according to O.W. Wilson, one of its chief advocates, motor patrol was to maintain many of the features of foot patrol. Police officers were still to observe, talk to, and interact constantly with citizens (Wilson, 1953). The automobile was to be used to increase the range of police officers, allowing them to go from beat

to beat, park their vehicles and patrol in the traditional way, by foot. But additional benefits were to come from motor patrol.

Wilson hypothesized that, through the rapid and unpredictable movement of police vehicles through particular geographical areas, either on a random basis or based on perceptions of hazards, a sense of the omnipresence of police would develop in a community. The belief was that preventive patrol would lead to deterrence of crime by developing fear in the mind of the criminal that there was a high probability of being discovered in a criminal act and to increased feelings of safety and security on the part of citizens by making the sight of a police vehicle commonplace. Further, deploying radio-controlled vehicles in relatively small geographical areas would make the police readily available for rapid response to calls for service, with the potential of deterring crime by making criminals fearful of immediate apprehension. Finally, through rapid response, motor patrol would cause citizens to feel safer in their neighborhoods, and more satisfied with police service.

As technology developed, motor patrol beats were structured on the basis of complex mathematical models; automated computer-based systems theoretically allowed dispatchers to know the exact location of vehicles; computer terminals were located in district stations and, later, in patrol cars to provide rapid access to information about vehicle registration, stolen vehicles, and other data. Such operations were in stark contrast to the old-fashioned foot officer, walking (without a radio) from callbox to callbox, almost totally isolated from all other members of the department. To make an arrest, such an officer had to bring the suspect to a callbox, call the district station, and then wait for a car to pick up the offender.

Serious concern about the results of the motorized tactical approach began to develop during the 1950s and 1960s. The work of Westley (1950), Cumming, Cumming, and Edell (1965), Wilson (1968), Reiss (1971), and the American Bar Association (1973), pointed out that the popular image of the police as primarily dealing with crime was inaccurate.\* By attacking the assumption that the police were primarily an organization dealing with crime, these authors implied that tactically deploying police primarily on the basis of reported criminal activity detracted from their delivery of other important and traditional public services.

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\*This research indicated that the police not only spent a relatively low percentage of their time on crime-related matters (less than 20 percent), but the vast majority of their services dealt with issues such as family fights, handling drunks, dealing with teenagers, and other wide-ranging public services.



During the 1960s the quality of relationships between citizens, especially minority citizens, and the police began to deteriorate. Radicals portrayed the police as alien occupying forces in minority and university communities, and residents of those communities became hostile to police, whether patrolling in cars or organized into tactical units. Confrontations developed between citizens and the police; arrests often led to more conflict and, on some occasions, to prolonged demonstrations and even rioting. Officers were portrayed as having little or no contact with citizens, except those who were victims of crime or targets of often aggressively conducted pedestrian or car checks. Isolated in their rolling fortresses, police seemed unable to communicate with the citizens they presumably served.

Despite these criticisms, police executives generally believed that the benefits of motor patrol exceeded the detriments. They were convinced that motor patrol reduced crime and citizen fear, increased citizen satisfaction, and led to arrests. Those sympathetic to the police, wanting to alleviate the growing problem of police-citizen alienation, proposed public service officers and community-relations programs as solutions.

Social scientists began to question the value of motor patrol. Although Bruce Smith had cast doubt on its deterrent value as early as 1930, there was remarkably little additional questioning until the 1960s. Kakalik and Wildhorn (1971) suggested that the desired effects of preventive patrol were reasonable, but unverified; the President's Commission on Law Enforcement and Administration of Justice Task Force on Science and Technology (1967) noted gaps in knowledge about the theories of preventive patrol and the input and output measures of police effectiveness; Larson (1972) cited the need for research to determine whether frequent patrols did pose a real threat of detection and apprehension; and the American Bar Association (1972) pointed out the growing awareness that relatively little was known about the deterrent value of police patrol.

Empirical challenges to the value of motor patrol began with the work of Reiss in 1966, who found that motor patrol seldom dealt with criminally related matters. Press (1971) found that reported crime was not consistently affected by increased levels of motor patrol. Interviews with prisoners suggested that fear of police intervention was not especially pronounced among prisoners (Institute for Defense Analysis, 1966). Fisk (1970) found that attempts to increase perceived police presence by allowing officers to use police cars for their personal use had no effect on crime. Kelling, *et al.* (1974) found crime, citizen attitudes, fear, and arrests did not change in response

to increases or decreases in levels of patrol. Schnelle, *et al.* (1975) and Lawler (1975) reported that burglary rates did not respond to saturation patrol. Finally, Schnelle, *et al.* (1977) found that preventive motor patrol resulted in no difference in burglaries during the day but did have some effect at night. The effectiveness of rapid response time was challenged by the Kansas City Response Time Study (1976), which found that victims allow considerable periods of time to pass before calling the police (often as long as 20 to 40 minutes) and by Pate, *et al.* (1976), who found that satisfaction with police response to calls for service was more strongly associated with citizens' expectations of how long it would take the police to respond than with the actual length of time it took for the police to respond.

Some police departments have increased the number of posts patrolled on foot as a way of combating police-citizen alienation and the ineffectiveness of motor patrol and rapid response time. For example, police departments in Boston; Baltimore; Arlington County, Virginia; Fort Worth; Washington, D.C.; Nashville; and many cities in New Jersey have announced return to foot patrol at substantial levels. In some cities, chiefs opposed to foot patrol have responded to public pressure and reluctantly reassigned officers to foot beats. In others, the high cost of automobiles and gasoline have forced departments to deploy officers on foot. In some areas, inaccessibility to rapid automobile movement has made the foot beat a reasonable alternative.

Despite the reemergence of foot patrol, the literature concerning its effectiveness is quite limited. Adams (1971) points to its importance, indicates that it is effective for certain kinds of problems and areas, and suggests cars should be used primarily for transportation rather than as a protective shell. Gourley (1974) suggests that police officers on foot can get to know citizens on their beats, but then dismisses foot patrol as inefficient and obsolete. Iannoe (1975) sees little difference between foot and car patrol in their basic functions, but most of his text presupposes the use of automobile patrol. The International Association of Chiefs of Police (IACP) (1970) identifies the following disadvantages and advantages of foot patrol:

*Disadvantages*

- It is restricted in mobility and area of coverage.
- Inclement weather curtails some activities.
- Capacity for pursuit is limited.
- The inability to carry certain equipment such as report forms, shotguns, first-aid kits, etc., is a handicap.
- Communication may present a serious problem, unless transistorized portable radio equipment is used.

- Because of difficulty in contacting them due to lack of radios, supervision of foot patrols is difficult. (To a large extent, the development of small portable radios seems to have eliminated this problem.)

*Advantages*

- The foot patrol officer makes more person-to-person contacts and therefore has a greater opportunity to improve police-community relations.
- Because the foot officer knows more people on his beat, he has the opportunity to develop more sources of information.
- He is probably more familiar with the physical characteristics of his beat.
- If suitable communications are available, he can respond to many calls for police service, especially ones of lower priority.
- His knowledge of patterns and characteristics of an area may help to anticipate an incident before it becomes more difficult to control.

In the balance, however, the IACP comes down on the side of motor patrol.

Because calls for police services seem to take up so much of regular motorized patrol units' time, occasionally little time is left for preventive patrol activities that should include most of the foot patrol techniques. . . . Whenever possible, motorized officers should take the opportunity to apply foot patrol operations to portions of their assigned beats.

Payton (1967) emphasizes the high cost of foot patrol, but recommends its continued use on a limited basis. Brown (1973), in perhaps the most interesting discussion of foot patrol, concludes that foot patrol has a legitimate place, but has to incorporate the principles guiding motor patrol, i.e., random patrol and thorough inspection of hazards.

The President's Commission (1967) concluded:

In congested business districts and those in high crime neighborhoods where the streets are almost always crowded, there are a number of advantages to foot patrol, on both law enforcement and community relations grounds, despite its expense. Otherwise, in view of the limited area that foot patrol officers can cover, the expense involved does not seem to justify foot patrol. The extreme mobility and coverage provided by motor patrol compels its use, despite losses in

neighborhood contact. Resumption of such contact would occur through the proposed community offices in the precincts.

While the references to foot patrol in texts are few, there are even fewer empirical studies of foot patrol. Bright (1970), in England, found that reported crime rates were significantly affected by an increase from no foot patrol in an area to the use of one foot patrol officer over a three-month period. Subsequent increases to two, three, or four officers per beat resulted in no further change.

Pendland and Gay (1972) described the effects of one year of foot patrol in a high-crime area of Fort Worth. Although the authors give no details, they indicate that reported crime levels decreased and citizen satisfaction increased in the areas where foot patrol operated. Because of lack of controls and the limited use of outcome variables, these results can only be considered tentative.

Bloch and Ulberg (1972) reported that, in a team policing experiment, attempts to improve community relations appeared to be successful. Foot patrol was one aspect of the program and, although the separate effects of the program components could not be allocated, they indicated that foot patrol was especially popular with business people.

"Prefecture de Police" (1973) gives the general impression that foot patrol in Paris was useful in dealing with public nuisance problems, stolen vehicles, and the public. Few data are presented, however, and conclusions appear to be based mainly on the recorded activities of foot officers. Hogan and Fagin (1974) reported the results of supplementing motor patrol with foot patrol. Although they present no data, they suggest that foot patrol not only reduced crime but also positively affected the attitudes of the citizens in the areas where they patrolled. A study conducted by the Arlington County, Virginia, Police Department (1976) found no strong effects from the implementation of a foot patrol program. Another study, conducted in Isla Vista, California, found strong citizen support for foot patrol but no clear effects on crime (Kinney, *et al.*, 1976). Finally, Schnelle (1975) found that reported crime increased significantly as a result of citizens' reporting crime directly to foot patrol officers.

Most research on foot patrol tends to support the strategy, but the evidence to date is fragmentary and sparse. The state of New Jersey provides a unique opportunity for the study of the effectiveness of foot patrol because of its Safe and Clean Neighborhoods Program. This study describes an attempt to evaluate the effects of foot patrol as it operates in New Jersey.

## *Chapter 2*

### *EVALUATION DESIGNS AND HYPOTHESES*

*Antony Pate*

THE POLICE FOUNDATION'S evaluation of foot patrol came about as a result of inquiries from representatives of state government in New Jersey regarding whether the expenditure of state funds for foot patrol was effective in achieving the program's objectives. Given the importance of the issue, Foundation staff considered the New Jersey program as an unusual opportunity to conduct an evaluation of the effects of foot patrol.

After several meetings with representatives of the New Jersey attorney general's office, the State Law Enforcement Planning Agency and the Department of Community Affairs to reach agreement about the goals of the research, members of the Police Foundation evaluation staff set about exploring alternative designs for evaluating the effectiveness of foot patrol. Staff members visited most of the police departments receiving funds under the Safe and Clean Neighborhoods Program, met with department members of all ranks, and investigated the nature of existing data sources. To gain further insight into the operations of foot patrol, staff conducted seminars with officers assigned to foot patrol and their supervisors. In addition, staff members walked foot patrol in several cities, in a variety of neighborhoods, at various times of the day. As a result of this process, the Foundation set up task forces in the four cities deemed most likely to become evaluation sites, based on the availability of valid data and the expressed level of commitment of department administrators. These task forces, each composed of two foot patrol officers and one supervisor, met frequently with members of the evaluation staff to discuss the operations of foot patrol, the feasibility of various evaluation designs, the availability of data, and hypotheses (and their rationales) concerning the effects of foot patrol. As a result of

these discussions, the following three research designs were agreed upon and carried out.

*Design I:*

This design was to compare the attitudes of officers assigned to foot patrol with those of officers assigned to motor patrol in all 28 cities receiving state funding for foot patrol.

*Design II:*

In Elizabeth, two basic patterns of foot patrol coverage were found to exist. Some areas had steady foot patrol coverage both before and after the Safe and Clean Neighborhoods Program began; other areas had no foot patrol coverage before the program began. The levels of reported crime in these areas before and after foot patrol coverage was implemented were compared in those two types of areas. Initially, the plans were to use reported crime statistics from three additional cities. Although the cooperation of these other cities was high, the difficulty and cost of acquiring these additional data became prohibitive.

*Design III:*

In Newark, assignment logs of all existing foot posts were examined to determine which had been patrolled on foot consistently since the beginning of the Safe and Clean Neighborhoods program. There were eight such beats. These beats were matched into four sets of two beats each, based on the number of residential and nonresidential units found on each beat. Out of each pair of beats, foot patrol continued on one beat and was discontinued on the other. In addition, foot patrol was instituted in four areas (similar to those previously patrolled on foot) which had not had it before. The resulting quasi-experimental research design is as follows:

FIGURE 1

Before	After	
T <sub>1</sub>	T <sub>2</sub>	CONDITION
O	X	4 Beats which Add Foot Patrol
*R X	O	4 Beats which Drop Foot Patrol
*R X	X	4 Beats with a Steady Level of Foot Patrol

\*As Campbell and Stanley (1963) represent experimental designs, the designation "R" indicates random assignment to a condition.

Staff agreed to test the following hypotheses. Although some of the issues may appear to be oversimplified in the hypothesis/rationale format used to focus the analysis, the complexity of the issues does become clear as the discussion progresses.

### *HYPOTHESIS I: RELATIONSHIPS WITH CITIZENS*

Proponents of foot patrol have argued that its greatest advantage over other strategies is that it helps improve relationships between citizens and the police. This assertion would be tested by the following hypothesis.

*Hypothesis I:* Citizens in areas served by foot patrol will have more positive attitudes toward the police than will citizens in comparable areas served only by officers in patrol cars.

*Rationale:* The accessibility of foot patrol officers to citizens makes it more likely that citizens will perceive greater concern on the part of the police.

### *HYPOTHESIS II: CITIZEN FEAR OF CRIME*

Advocates of foot patrol suggest that citizens in foot beat areas feel more secure from the threat of criminal victimization. The following hypotheses will test this proposition.

*Hypothesis II-A:* Citizens in areas patrolled by officers on foot will feel less likely to be criminally victimized than citizens in comparable areas without foot patrol.

*Hypothesis II-B:* Citizens in areas patrolled on foot will be less likely to employ anticrime measures than will citizens in areas not patrolled on foot.

*Rationale:* As compared with citizens who only infrequently notice a patrol car passing on the street, citizens who often see a police officer near their businesses and homes should be more likely to believe that criminals will be deterred and should therefore feel less fearful of victimization. This reduced fear should be reflected in a reduction in the felt need to protect oneself from crime.

### *HYPOTHESIS III: REPORTED CRIME*

From the earliest development of police departments, the belief has persisted that foot patrol tends to reduce the incidence of crime. The following hypothesis associated with that belief will be tested.

*Hypothesis III:* Fewer crimes will be reported to the police in areas patrolled on foot than in comparable areas without foot patrol.

*Rationale:* Many officers have suggested that, compared to motor patrol, foot patrol has a strong deterrent effect on crime because the intensity of coverage provided on foot is greater than that possible in a vehicle. Foot patrol officers, it is argued, are more visible, can spend more time conducting security checks, and can patrol in places not readily accessible by car. In addition, if arrest activity were greater in areas patrolled on foot, some have argued, the number of criminals in the area would be reduced, leading to a reduction in the number of crimes committed.

Unfortunately, because reported crime cannot be taken as an accurate reflection of actual crime, to predict the effect of foot patrol on reported crime is highly problematic. It is possible that, if citizens are more trusting of, and more accessible to, officers who patrol on foot, those citizens will be more likely to report crimes that otherwise would not have been reported to the more remote officers in motor vehicles. Moreover, it is possible that citizens may feel a greater sense of security as a result of the presence of foot patrol, and as a consequence may appear more frequently on the streets. As a result, the absolute number of victims could conceivably increase while the proportion of persons on the street who are victimized declines. (The opposite also could be true: the absolute number of victims could decrease. This would lead to an even steeper decline in the proportion of persons in the street who are victimized.)

#### *HYPOTHESIS IV: VICTIMIZATIONS*

As a result of the ambiguity of interpretation of reported crime, it is important to ask citizens whether they have been victims of crimes, even if they did not report the crimes to the police. The following hypothesis will test the interpretation of reported crime.

*Hypothesis IV:* A smaller proportion of citizens interviewed in areas patrolled on foot will indicate that they have been victims of crime than will those interviewed in similar areas patrolled only by police vehicles.

*Rationale:* As a result of the ability to patrol a small area more intensively, foot patrol officers will be more able to walk in places not easily accessible by car, and therefore to deter criminals from committing illegal acts, than will officers in vehicles.

#### *HYPOTHESIS V: PERCENTAGE OF CRIMES REPORTED TO POLICE*

The first obstacle in the process of conveying information about



crime to the police is the failure of citizens to report all criminal activity, either because they do not think it is important or useful to do so, or because reporting may be too much trouble. To determine whether the presence of foot patrol affects the reporting rate, the following hypothesis will be tested.

*Hypothesis V:* The percentage of crimes reported to the police will be greater in areas patrolled on foot than in similar areas patrolled only by police vehicles.

*Rationale:* Foot patrol officers should be in closer contact with citizens than are officers in vehicles; victims should therefore have more opportunity to report crimes. In addition, more rapport can be expected to develop between citizens and foot patrol officers than would develop with officers in vehicles; as a result, foot patrol officers might be seen as more "approachable." Finally, it is possible that citizens in areas patrolled on foot might believe the police would be better able to solve crimes than in areas where officers patrol in cars; such greater confidence could be expected to increase willingness to report crimes to the police.

#### *HYPOTHESIS VI: ARRESTS*

It is possible that the presence of a foot patrol officer in an area would affect the number of arrests made in that area. The following hypothesis will test this possibility.

*Hypothesis VI:* The number of arrests made in areas patrolled on foot will be greater than the number of arrests made in comparable areas without foot patrol.

*Rationale:* Officers patrolling on foot, because they can cover a small area intensively, will be more likely to arrest criminals who are in the process of committing crimes, or who have only recently fled from the scene of a crime, than will officers patrolling in vehicles.

#### *HYPOTHESIS VII: JOB SATISFACTION*

Officers with foot patrol assignments may have greater satisfaction with their jobs than officers assigned to motor patrol. The related hypothesis and rationales are presented below.

*Hypothesis VII-A:* Officers assigned to foot patrol will indicate more positive attitudes toward their jobs and citizens in the community than will officers assigned to other types of patrol activity.

*Rationale:* Because they should receive fewer calls for service, officers assigned to foot patrol will have more time than other patrol officers to pursue matters of interest to

them. Although aspects of foot patrol may be undesirable to some officers, this greater level of discretion in expenditure of their time should lead to higher job satisfaction levels among most foot patrol officers, compared with other patrol officers. Foot patrol officers also should be more likely to encounter citizens in informal situations rather than in stressful encounters, thereby enhancing the job and increasing the likelihood that citizens will provide support and encouragement. As a result, the attitudes toward citizens should be more positive than those held by other officers.

*Hypothesis VII-B:* There will be less injury time, less sick leave taken, and fewer requests for transfer per officer among foot patrol officers than among officers assigned to other types of patrol activity.

*Rationale:* Because officers who are unhappy with their jobs are more likely to try to avoid them, foot patrol officers would seem less likely to miss work than officers in other patrol assignments. Similarly, if foot patrol officers are more satisfied with their jobs than other officers, they should have fewer reasons for requesting a transfer to a different assignment or for resignation. (An alternate hypothesis could be developed which would predict higher injury rates, levels of sick time, etc., based on the higher degree of exposure to citizens that foot officers have relative to motor officers and their relative isolation. When almost all patrol was by foot, the injury rate for foot patrol officers was quite high.)

### *Chapter 3*

## *A DESCRIPTION OF FOOT PATROL IN NEW JERSEY: THE SAFE AND CLEAN NEIGHBORHOODS PROGRAM*

*Mary Utne, George L. Kelling, Antony Pate,  
Thomas Fagan, and Charles E. Brown*

THE POLICE FOUNDATION'S evaluation of foot patrol in New Jersey is directed as much to the description and documentation of foot patrol practices as to an assessment of the outcomes of this policing strategy. One of the primary purposes of this evaluation effort was to supply to policymakers information useful for deciding whether to implement foot patrol operations in local police departments. What the impact of such a strategy will be is central to that decision. Equally important for administrators is information about how to implement a foot patrol program; how, within existing department attitudes, resources, and experience, to establish a successful program of foot patrol. This chapter describes the New Jersey Safe and Clean Neighborhoods Program and foot patrol practices in an attempt to outline the characteristics of such a program, indicate what its impact was, and guide administrators who wish to implement a similar program.

The impetus for extensive use of foot patrol in New Jersey cities was the passage of the Safe and Clean Neighborhood Act by the New Jersey state legislature in February 1973. Maintained on an annual basis since then, it was made a permanent program in 1979 when the legislature passed New Jersey Public Law 1979, Chapter 118. Unique in the United States, the program attempts to develop and maintain safe and clean neighborhoods by expanding the presence and visibility of police protection by increasing the total number of walking police officers in high crime neighborhoods, and by providing resources to assist in upgrading and stabilizing the same urban neighborhoods by providing improvements to their physical appearance. The initial allocation in 1974 was \$12,000,000 and the program has continued at that level. The program is administered by the Division of Local Government Services of the Department of Community Af-

fairs (DCA). Eligibility for the program is based on four criteria. The municipality must have (1) a population in excess of 15,000 people or 10,000 people per square mile; (2) a tax rate (and its equalized valuation per capita) higher than the state's average; (3) at least one publicly financed dwelling unit; (4) at least 350 Aid to Families of Dependent Children (AFDC) in schools.

When plans for this evaluation were developed in 1975, 28 cities participated in the program. By early 1980, that number had increased to 32. The program matches dollar for dollar funds. Thus the state appropriation of \$12,000,000 is matched by a municipal share of \$12,000,000. Of these funds, 33 percent was allocated to the "clean" part of the program, and the balance to "safe."

The "clean" program has provided municipalities with capital equipment (45 street sweepers, 14 sewer cleaners, and more than 200 trucks, tractors, bulldozers, backhoes, front-end loaders, compactors, and trailers); funded maintenance projects (roads resurfaced, potholes repaired, curbs and sidewalks replaced, catch basins installed); demolished and removed 1,650 condemned and hazardous buildings; planted 4,500 trees; installed 3,750 litter baskets; and provided more than 10,000 person hours per week in clean-up work.

Briefly, the "safe" aspect of the program provided for the salary, wages, fringe benefits, and equipment (bullet-proof vests, walkie-talkies, uniforms) for 775 walking patrol officers patrolling approximately 28,000 hours per week on 392 beats in the 32 eligible cities.

The goal of the program is to develop safe neighborhoods through the use of walking police officers. Its philosophy is that "the uniformed walking patrol officers, by being highly visible on the streets, are not only helping to prevent crime and enforce the laws, but at the same time are helping to restore confidence in citizens and are improving public relations with merchants and residents."\*

In applying for the funds the city specifies the areas to be patrolled. In effect, this becomes a contract that foot officers will patrol in those places at the specified times. The Department of Community Affairs enforces the contract quite rigidly: it is expected, unless there is a major community problem, that police officers will patrol in those times and areas identified in the application.

Exploratory examination of foot patrol in New Jersey—groundwork conducted before the present study—indicated that there was no simple entity or program "foot patrol" in New Jersey, even across

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\*Elmer Collins, "The New Jersey Foot Patrol Program." Paper given at the American Criminological Society meeting, November 1979, Philadelphia.

the 28 cities where programs were coordinated and administered under terms of the state's Safe and Clean Neighborhoods Program during the period of the evaluation. The kinds of officers assigned to foot patrol, the times and places of patrol, and administrative practices varied from city to city. Among the evaluation design decisions was to study all departments in order to catalogue the variety of foot patrol practices occurring in New Jersey, as well as to gain insight into the factors associated with successful implementation of a foot patrol program. The intensive outcome-assessment portion of the evaluation was to be limited to three departments whose previous foot patrol procedures could be documented in exhaustive detail.

Project staff interviewed administrators of the Safe and Clean Neighborhoods foot patrol program in all 28 cities, as well as DCA staff, both individually and in groups. This chapter presents the findings that address the survey goals of:

- describing the variety of foot patrol practices in New Jersey;
- learning from practitioners of foot patrol what they consider to be its strengths and weaknesses; and
- discerning the factors related to successful and unsuccessful implementation of the policing strategy of foot patrol.

### *COORDINATION OF FOOT PATROL PROGRAMS*

Twenty-eight New Jersey cities, ranging from major urban centers to small towns, participated in the program when its evaluation began. Table 1 lists the participating cities by population, showing the total number of foot patrol officers and the percentage of the total police force that the foot officers constitute.

In order to be eligible for Safe and Clean Neighborhoods Program funds, cities had to satisfy eligibility criteria for state funding. As recipients of this funding, the police departments studied are subject to a degree of uniformity in their administration of foot patrol. These requirements provide only general contextual similarity, however. Most points of similarity across the foot patrol programs studied derive from the rules and monitoring efforts of the Department of Community Affairs.

DCA policies emphasize assuring high visibility of foot patrol officers. At the time of the program's inception, the DCA commissioner said that the main point of the program was to "give people something they can see, hear, touch and smell." Thus, officers were to be highly visible and accessible to members of the community. During interviews, DCA program monitors revealed their under-

TABLE 1

	Total Number of FPOs	Percent of Total Sworn Force in FP	Number of Funded Com- manding Officers	1977 Population in 1000s	Interview Type
Newark	56	4.5	3	324	P
Jersey City	62	6.7	10	323	P
Paterson	60	14.2	n.a.	156	P
Elizabeth	37	11.9	5	104	P
Trenton	48	14.0	6	98	P
Camden	60	15.8	7	89	P
East Orange	64	25.2	8	72	P
Bayonne	10	5.3	1	70	T
Irvington	19	12.7	2	56	P
Vineland	12	12.1	n.a.	53	P
Union City	16	17.8	n.a.	52	P
Passaic	32	19.4	1	51	T
North Bergen	4	4.1	0	46	P
New Brunswick	20	15.3	0	44	T
Plainfield	15	13.4	1	44	P
Atlantic City	47	22.4	4	43	P
Hoboken	35	21.7	6	41	P
Montclair	8	8.4	0	41	T
West New York	17	16.0	0	38	T
Perth Amboy	16	15.1	0	36	P
Lakewood	12	14.5	1	34	T
Long Branch	20	28.8	2	31	P
Orange	19	20.1	1	30	P
Neptune	10	15.6	1	27	P
Millville	6	13.3	0	24	T
Bridgeton	7	13.6	1	20	T
Phillipsburg	3	11.1	0	18	T
Asbury Park	11	19.2	1	15	P

Information based on data provided by each department to N. J.  
Department of Community Affairs.

P = personal  
T = telephone

60% in person

standing of the expected benefits of highly visible foot patrol officers:

Citizens would be assured that their tax dollars were being well spent (they could see the officer at work), generating good will toward the police department.

Citizens would feel safer and more secure. This would in turn generate good will toward the police, and would lead to greater use of the streets, so that they would in fact become safer and more vital places.

Street crime would be deterred.

Officers would be seen as human beings, and the rapport between police and citizens, lost when officers are in cars, would be reestablished.

DCA prohibits spending Safe and Clean Neighborhoods Program funds on cars, motorcycles, or motorbikes. Foot patrol officers are to remain in uniform and on foot, except when traveling to and from their posts, or when assisting a motor patrol officer in an emergency or arrest situation. All officers are to be visible on the street as much as possible, not spending more than a few minutes inside stores or homes on their posts. The maximum size of foot patrol beats is comparable across cities because of the DCA requirement that officers be able to cover their beats in 45 minutes.

Comparability across programs is encouraged—although not guaranteed—by other DCA policies. The state urges participating departments to assign foot patrol officers to their posts for at least one year so that they can become familiar with the neighborhoods they serve and gain the acceptance of the community. Most departments do so, but particular circumstances sometimes make it impossible. For example, in one city where some foot beats are in a very high-crime, low-income “battle zone” area, administrators rotate officers out of these posts every 90 days to avoid officer “burn out” and possible corruption. The police union rules in another city require routine rotation of all patrol officers every 90 days, and officers may specify preferred assignments (allocated on the basis of seniority).

DCA urges department administrators to assign foot patrol beats on the basis of crime analyses. DCA staff reported that police administrators typically determine foot patrol beat areas on the basis of informal working knowledge of “where the action is”; all too often, this knowledge is well-intentioned but inaccurate, or is a screen for assigning foot patrols for political reasons. (Observations in at least one city corroborated this information: the foot beats identified as the most active and heavily patrolled turned out—to the surprise of

the foot patrol commanding officer—not to be so when checked against official records of calls for service, incident reports, and officer assignments.)

DCA staff intervenes in the determination of a city's foot patrol area only in cases of "gross problems." Examples of "gross problems" included assigning two men to the front of the mayor's house, assigning officers to a very low-crime, low-density residential area, or assigning officers to a row of abandoned warehouses on a boardwalk in winter.

A final area of comparability across the foot patrol programs is the tendency to assign rookie police officers to foot patrol duty. In almost all participating cities the Safe and Clean Neighborhoods Program provides an absolute level of funding; it does not guarantee funds for a specified number of foot patrol positions. To get the most out of the state funds, departments tend to assign low-seniority, low-salaried officers to foot patrol, i.e., rookies. Thus, Safe and Clean Neighborhoods foot patrol programs generally are staffed by the most inexperienced officers in the departments. The most common exceptions are the assignment of older officers who are almost ready for retirement (in those departments where foot patrol is seen as a "cushy" assignment), and the assignment of less competent officers or those being punished (where foot patrol duty is seen as boring, less demanding, low-status, not "real" policing).

Two of the cities studies did have fairly extensive foot patrol before the beginning of this program, but, for the most part, its use was limited to occasional spot coverage. Now 12 cities fund some foot patrol independent of the program, but only eight use it regularly and those on a limited basis.

Departments report that the areas served by foot patrol generally are selected on the basis of reported crime rates, requests from merchants and residents, and traffic activity. In practice that means that the patrolled areas are central business areas; residential areas of high population density, and with a large proportion of low-income and elderly persons; areas around schools; and other areas containing both small businesses and residences.

In most departments the foot patrol units are located in the patrol divisions, and, when possible, their activities are coordinated with motor patrol units. When foot patrol shift coverage is different from the regular shift structure, foot officers have separate roll calls, but the general tendency is for foot officers to participate in the regular roll calls. Likewise, although some sergeants are specifically designated as foot patrol sergeants, most officers are supervised by both



regular and foot patrol sergeants. The form of that supervision varies widely. Almost all officers have two-way radios, used for radio checks on officers and for officers to call in on their own. Often the pattern is for officers to radio in their location on a regular basis—in some cities, several times an hour; in others, every two to three hours, or irregularly. Direct supervision ranges from fairly loose to fairly close. Most departments report that sergeants try to see officers at least once a shift; some departments report attempts at hourly personal contact. The observations of the project staff confirm that foot officers have more routine contact with supervisors than officers on motor patrol. (Whether this is a result of state supervision of the Safe and Clean Neighborhoods Program is hard to determine. There appears to be genuine administrative concern about state monitoring, but additional concerns regarding foot officers—e.g., safety, or “holding up”—could also result in increased supervision. Also, as a result of the limited size of the foot beats, foot officers simply could be easier to find.)

Almost all of the departments (27 of 29) indicate that foot patrol officers are dispatched routinely to calls for service; only five departments indicated that they do not assign “hot” calls to foot officers. Relatively few departments have developed any formal policy for use of backup cars (or, for that matter, for use of foot officers as backup). Evaluation staff observed that the dispatch system operates less formally than most departments indicate. Foot officers most often respond to calls in their area on their own initiative, rather than because of having been dispatched. When foot officers are dispatched or respond, they tend to be backed up by mobile units. Seven departments indicated that dispatchers, especially civilians, either did not know or did not remember that foot officers were available. Representatives of several departments mentioned the need to remind dispatchers to use foot officers more often.

In 16 of the cities all of the foot posts are one-person beats. The rest vary, depending on the time of day and the characteristics of the beat.

Generally, officers assigned to foot patrol are rookies or volunteers. Ten departments automatically assign new recruits (if available) and seven use new recruits and volunteers. Four departments use volunteers exclusively, and two use volunteer and assigned officers. Although the use of foot beats as punishment was never mentioned, except to say in another context that it should never happen, there were stories in many departments that it was a practice.

There was a wide divergence of opinion about what characteris-

tics make for a good foot patrol officer. Many believed that an experienced, more mature officer would have more street “savvy” and be better able to communicate with people. Others believed just the opposite—that a recruit would have more enthusiasm and be better able to communicate with youth on the street.

Administrators generally gave the impression that officers either strongly liked or strongly disliked foot patrol, with little middle ground. Of 25 responses to a question regarding what percentage of officers would transfer out of foot patrol, 12 thought that less than 50 percent would want to transfer out, and 13 believed that more than 50 percent would. The range of the responses was such that six (24 percent) indicated that fewer than 10 percent would transfer and six indicated that more than 90 percent would. The main reasons officers gave for wanting out of foot patrol were that a volunteer or new recruit should take their place; that it was on-the-job training; that there was not enough action; and that they should be rewarded for good performance by being transferred out.

Responses of department representatives to a question about general attitudes toward foot patrol assignments reflected once again its low status: eight indicated that it was a low prestige assignment. Many departments gave positive responses: helps officers realize people are police business; viewed as regular police work; officers enjoy it. Five departments indicated that older officers liked foot patrol, and younger officers did not.

It appears that police academies give relatively little attention to foot patrol. Only five departments indicated that any special training was offered in the academy and seven departments indicated that special on-the-job training was offered.

When asked about the types of activities foot officers engaged in, respondents most often referred to crime prevention activities, attending community meetings, contacting business people, providing escort service for business people, meeting with people, making security checks, and being at school crossings.

Among the benefits of foot patrol most often identified were: the good contacts with people, increased feelings of safety in the community, crime prevention, better community relations, and the increased access of the police to the public. The biggest drawbacks of foot patrol were considered to be expense and lack of mobility. When responding to drawbacks of foot patrol a few departments mentioned “Trenton”—referring to the administration of the program through the Department of Community Affairs—but only one department representative cited overwhelmingly negative reactions to state

administration. Complaints about the program tended to be about the lack of flexibility in switching assignments and about the refusal of DCA to allow foot officers to use cars or scooters, but many administrators indicated that they knew that foot patrol efforts would begin to decay if restrictions were relaxed.

When queried about what would happen to foot patrol in their communities if the state terminated the Safe and Clean Neighborhoods Program, almost all respondents indicated that, although foot patrol would have to be cut back, some foot patrol especially in downtown and business areas, would be maintained. The general impression was that foot patrol was overwhelmingly popular with merchants and supported by local politicians. These issues will be discussed again in light of the findings regarding foot patrol effectiveness.

### *COST OF FOOT PATROL*

As part of the evaluation a cost analysis of motor and foot patrol was conducted in Newark in 1977 and 1978. Appendix 6 presents this analysis in technical terms, identifying all assumptions and presenting the calculations. (To verify these figures, we also have calculated the costs in Elizabeth. These figures are also in Appendix 6). Briefly, the method used was the standard business accounting method which attributes costs of supporting units to producing units. This analysis attributes a proportion of city overhead as well as police overhead to producing units. (The rationale for doing this is included in Appendix 6. For those who object to this method we have also calculated costs without city overhead. These calculations also are in Appendix 6.)

Cost and cost/benefit analyses are currently in vogue. Potentially they are of great use as administrators, policymakers, and community leaders attempt to rationalize decisionmaking about what kinds of services can be delivered to communities, at what cost, and with what effect. This is especially true in times of declining tax bases, cutbacks in levels of taxation, and increasing interagency competition for scarce funds.

Yet cost and cost/benefit analyses are capable of creating mischief. Improperly done or inappropriately interpreted, they can lead to perverse decisions and only compound waste of resources. It is therefore important to make three major points that readers should keep in mind.

1. The units for which costs are calculated are *beats*, not police officers.

2. Motor and foot beats are different in size. The city of Newark is divided into 28 motor beats and 26 foot beats. The 26 foot beats cover a relatively small portion of the city, and motor and foot beats overlap. Although not all areas of motor patrol are covered by foot patrol, all areas of foot patrol are also covered by motor patrol. It is not unlikely, therefore, that any benefits derived from foot patrol could be the result of the interaction between these two patrol strategies. Cost comparisons between foot beats and motor beats are inappropriate. In most cities observed, the purposes of foot and motor beats often are quite different, making comparisons difficult. For the most part they are different strategies with different goals.
3. Appendix 6 concludes with a theoretical discussion of the implications of this cost analysis. A cost, rather than a cost/benefit analysis, was conducted because the goals of foot and motor patrol are so diffuse (i.e., maintenance of order, increasing citizen perceptions of safety, etc.) and some of the traditional indicators of productivity so unreliable (i.e., arrests, reported crime, etc.), that, at the present time, allocating costs to benefits can only be misleading. (For a more complete discussion of these issues, see Kelling, Wycoff, and Pate, 1979; Kelling, 1978; and Chelimsky, 1977).

In spite of these cautions, it is inevitable that comparisons will be made. They must be made very prudently, and in keeping with the above cautions.

One final note. The data are potentially deceptive if comparisons are made, because *foot patrol costs are calculated for five days a week, one shift per day*, which reflects the way foot patrol operates in Newark. *Motor patrol costs are calculated for seven days a week, three shifts per day*, again, as motor patrol operates in Newark. To make comparisons, adjustments would have to be made to reflect these differences.

Although at first glance the costs shown in Table 2 may appear high, this comparison confirms that policing is a very expensive enterprise. In Newark the costs of policing, when costs for education are eliminated, constitute approximately 30 percent of the city budget. These figures are generally comparable to those of U.S. cities having populations of more than 300,000, where police budgets represent 25 percent to 30 percent of the common municipal budget.

The implications of these costs are discussed in the final chapter.

TABLE 2

## Distribution of Costs: Motor and Foot Patrol

	1977		1978	
	Motor	Foot	Motor	Foot
Automotive	\$ 277,655 ( 1.4%)		\$ 277,655 ( 1.3%)	
Distribution of Labor	10,360,000 (51.9%)	\$ 873,200 (52.5%)	10,230,000 (49.3%)	\$ 868,000 (49.5%)
Patrol Overhead	1,705,700 ( 8.5%)	144,300 ( 8.7%)	1,314,469 ( 6.3%)	111,530 ( 6.4%)
Police Overhead	3,708,110 (18.6%)	313,701 (18.9%)	4,269,872 (20.6%)	362,292 (20.7%)
City Overhead	3,907,704 (19.6%)	331,161 (19.9%)	4,651,856 (22.4%)	412,522 (33.5%)
TOTAL	\$19,959,169 (100%)	\$1,662,362 (100%)	\$20,743,852 (100%)	\$1,754,344 (100%)
Cost per beat	\$ 712,827	\$ 63,937	\$ 740,851	\$ 67,474



## *Chapter 4*

### *THE NEWARK EXPERIMENT: IMPLEMENTATION AND VALIDATION*

*Amy Ferrara and Antony Pate*

THE FIRST STEP in implementing the Newark experiment was to secure the permission of the Department of Community Affairs (DCA) to alter the conditions of the contract with the police department under which foot patrol was funded. Under that contract, the department must specify the areas to be patrolled, the number of officers to walk the beats, and the times those officers would be present. The DCA takes such contracts seriously: it sends inspectors without warning to ensure that the conditions are being maintained. Violations, if they occur, can lead to the termination of state funding for foot patrol. After several meetings with state officials, Newark administrators, and Police Foundation representatives, it was agreed that the experimental design described in Chapter 2 should be implemented. DCA was to be advised of the changes in foot beats, but the actual decisions about changes were to be made by the Police Foundation evaluators.

State approval having been obtained, representatives of the Newark Police Department and the Police Foundation met several times to discuss the possibilities of implementing each evaluation design, as well as the potential difficulties in carrying out such studies. It was mutually understood that random assignment was necessary to determine which areas would continue to receive foot patrol coverage and which would have such coverage eliminated. It was also agreed that, to ensure objectivity, the evaluators should make the assignments, rather than the department itself. Random assignment constituted a clear violation of the usual procedures of decisionmaking in the police department. In addition, having the evaluators make the assignments rather than department administrators meant that an intrusion into the usual command structure would take place.

Furthermore, when foot patrol was removed from the selected areas, it was reasonable to assume that protests from resident and commercial associations would occur, perhaps channeled through the city council or the mayor's office. If such protests did occur, it was highly likely that the press would publicize them.

In any experiment, it is important to measure the extent to which the desired manipulations are carried out. The presence of the several potential problems associated with implementing the experiment suggested that maintaining the desired conditions would be unusually difficult, so that the measurement of compliance to the experiment's guidelines had to be as rigorous as possible.

Fortunately, the Newark Police Department provided the means for rigorous measurement of whether foot patrol officers were in fact on their posts. At least one of the two officers walking each post always has a "walkie-talkie" to provide radio contact with the department; the officers are also required to register their presence once an hour by pulling a lever on one of the call boxes located on their posts. This system has been in effect since the late nineteenth century.

Each call box in Newark is assigned a unique identification number. Hourly box pulls by foot patrol officers are recorded, at respective district station houses, on "signal tapes," paper tapes perforated to register each call box number and the time of the pull. A clerk then transfers this information (eight pulls for each tour of duty and for each foot post) from the signal tapes to the so-called "signal sheet" (the official daily record of assignments of all district personnel on duty during a particular day). Signal sheets from each district are submitted daily to patrol division headquarters. The data from each of these signal sheets were recorded by the evaluation staff and constitute the core of the empirical verification for the experimental manipulations.

To use call box data as a validation of the experiment involves two basic assumptions. The first assumption is that the box pulls are actually made by the foot patrol officers assigned to the foot post. This is a safe assumption, because it is unlikely that a foot patrol officer could easily succeed in making other arrangements—the risks of getting caught would be too great. Foot patrol sergeants (who cruise in cars), if they should want to "book" or communicate with their officers, often choose to meet them at a call box at the designated pull time. An officer who does not appear at the expected time and who cannot provide a good explanation can incur serious disciplinary action.

The second assumption is that foot patrol officers are actually



walking their assigned posts and performing their official functions during the intervals *between* pulls. This assumption may be somewhat more subject to question. Supervision of patrol units, whether the patrolling is on foot or in a vehicle, is by no means rigid. Nevertheless, a field sergeant may drive through an area in search of an officer or, by way of the radio dispatcher, ask a foot patrol unit for its location at any time. The officer who cannot be located will be liable to discipline. It is therefore not so much a question of whether a foot patrol officer is *on* an assigned post, but of the proportion of time spent indoors (for example, in business establishments) as compared to time spent walking on the street. Having contact with merchants is not in itself a violation of the patrol officer's duties. To assume that an officer is performing properly who calls in hourly is not unreasonable.

The call box data were not the only source of data concerning the validity of the experimental manipulations. Representatives from the Department of Community Affairs continued to make their unannounced inspections of all of the Newark foot posts to see that posts were patrolled according to the contract. The Internal Affairs Division, at the direction of the police director, made periodic inspections of the foot posts to make certain that officers were where they were supposed to be. And civilian observers, hired primarily to count the number of pedestrians on the sidewalks in the experimental areas, also noted the times when they saw foot patrol officers on the posts under observation.

The first step in analyzing the call box data was to compile a list of the identification numbers of the call boxes located on each experimental foot post. Each tour of duty was treated as the sum of eight one-hour segments. If a pull was made from a box known to be on an experimental foot post, the post was credited with one hour of coverage for that tour; if a pull came from a call box known to be off the post, the post was docked one hour of coverage.

The vast majority of hourly check-ins by foot patrol officers on duty were identified by a call box number. However, there are other acceptable ways in which officers' activities at pull time could be recorded. For example, at times when foot patrol officers are assigned to "look-outs" or special details on some part of their foot posts where no call box is located, the officers are not expected to check in. Under these conditions, the criteria used in calculating foot post coverage were that, if the special detail was known to be located somewhere on the foot post, the post was considered to be covered during that time, but if the detail was not located on the post, or if

no information was given on its whereabouts, the foot post was considered to be not covered.

In cases where no check-in was recorded at the appointed time and no special detail was authorized, a foot post was considered to be *not* covered for that period. Department officials contended that such omissions may be the result, not of the failure of foot patrol officers to check in, but of the failure of the station clerk to record the check-in accurately from the signal tapes. To produce the most conservative estimate, however, in all such cases it was assumed that foot patrol officers were *not* on their assigned posts.

Using these criteria, percentages of foot patrol coverage per month were calculated, with the base defined as the total number of hours on duty that would be required for 100 percent coverage of each post during the scheduled tour. These percentages are shown in Table 3. The annual average figures in the right-hand column of the table are unweighted means of the monthly data. The reference year is the experimental period: February 1978 through January 1979.

For the dropped foot posts, based on call box pulls, there was *no* evidence of a foot patrol presence during the entire experimental period. On the retained and added posts, average coverage fell below 65 percent on 12 of the 96 observations, or 12.5 percent of the time. Of these 12 instances of low coverage, 11 occurred in a patrol district in the "added" condition, in which personnel shortages were acute during the first half of the experiment. The range of average monthly coverage for the entire experimental year varied from 64 to 91 percent. The annual average level of coverage for all experimental posts scheduled to be covered was 81 percent.

The experiment was much easier to implement and maintain than was anticipated for such a radical departure from usual department operations, with such potentially volatile political impact, during a period punctuated with massive personnel layoffs. Police department objections to the random and external nature of the assignment of foot patrol beats were overcome by frequent and intense discussions with the operational commanders most threatened by the intrusions. The need for objectivity and, therefore, for randomness was made clear. As a result, with the endorsement of managers at the highest levels of the police bureaucracy, such evaluative "meddling" became accepted (and supported) by middle level operatives as a way of investigating the possible advantages of foot patrol.

Sporadic episodes of public outcry against the loss of foot patrol were dealt with by the police director at public meetings in which the need for sound evaluations of department policies was reiterated.

TABLE 3

Percentage of Foot Post Coverage, Per Month,  
During the Experimental Year

Experimental Condition	FEB*	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	Average Coverage:
													Experimental Year
Retained Posts: 1	82	88	66	86	74	58	71	96	83	91	88	94	81
2	84	81	93	93	93	98	74	98	96	96	97	93	91
3	74	87	93	73	76	74	86	76	97	86	83	92	83
4	88	92	87	71	79	83	84	87	100	97	88	62	85
<b>SUB TOTAL</b>	<b>82</b>	<b>87</b>	<b>85</b>	<b>81</b>	<b>80</b>	<b>78</b>	<b>79</b>	<b>89</b>	<b>94</b>	<b>92</b>	<b>89</b>	<b>85</b>	<b>85</b>
Added Posts: 1	88	71	77	80	88	77	79	93	74	94	94	87	84
2	88	89	85	65	38	73	75	82	92	95	96	83	80
3	83	52	70	42	54	50	97	92	96	97	94	95	77
4	19	12	16	58	60	75	97	68	82	93	96	92	64
<b>SUB TOTAL</b>	<b>70</b>	<b>56</b>	<b>62</b>	<b>61</b>	<b>60</b>	<b>69</b>	<b>87</b>	<b>84</b>	<b>86</b>	<b>95</b>	<b>95</b>	<b>89</b>	<b>76</b>
Dropped Posts: 1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>SUB TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*After February 2, the date on which the experiment officially began.

The director staunchly maintained the experiment, even when members of the city council expressed disgruntlement.

Most significantly, the experiment survived even during an unusually tempestuous period in the Newark Police Department, characterized by massive layoffs, sweeping transfers of personnel, abruptly implemented reorganizations of a number of highly revered, specialized units in the department, and dramatic confrontations between the police officers' bargaining agent and the police director regarding contract negotiations. This will be discussed in more detail.

There seem to have been three basic reasons why the experiment was so successfully maintained: (1) high-level department support; (2) strict enforcement of state guidelines for the Safe and Clean Neighborhoods Program; and (3) perception of foot patrol as a peripheral component of the department's operations. Each of these will be discussed below.

1. *High-level department support.* The Newark experiment was born of discussions between representatives of the Police Foundation, Newark's police director, the chief of police, the deputy chief of the patrol division and a task force of officers assigned to foot patrol. All department representatives became convinced that a controlled experiment examining the effectiveness of foot patrol was worthwhile, that Newark was a good place to conduct such an experiment, and that they were willing to take the risks of possible discomfiture that might accompany such an experiment. Throughout the experimental period, no one wavered in this commitment, even in the face of external and internal criticism. Indeed, all remained in accord on this task as a common purpose, even when there was strong disagreement over many of the other departmental issues that they were facing at the same time.

As a result of this support, the rest of the department cooperated fully in the experiment. Any failure to implement the letter of it became tantamount to a violation of department procedure, for which officers would be required to answer along the normal channels of accountability.

2. *Strict enforcement of state guidelines.* It was very fortunate that the mechanisms for deployment of Safe and Clean Neighborhoods foot patrols had been in place in Newark and functioning well for several years before the Police Foundation came on the scene. Newark's Safe and Clean Neighborhoods Program was instituted in December 1973 and, by early 1977, when the Foundation first became involved, procedures for administering the program had

long since become routine. Moreover, DCA indicates that Newark was among the exemplary cities in terms of compliance with DCA regulations and guidelines. Therefore, no new organization was necessary for the implementation of the experiment—only modification of the geographic assignments of certain foot patrol officers.

State control over the use of Safe and Clean Neighborhoods personnel also presented advantages when, during the latter part of the experimental period, staff shortages in the Newark Police Department became so acute that pressure began to mount for putting foot patrol officers in radio cars on an emergency basis. The Department of Community Affairs refused to allow such a possibility. Because the state provided funds to cover half of the cost of foot patrol operations, the Newark Police Department, although desperate for radio car officers, could ill afford to jeopardize the flow of state funds by ignoring the DCA's decision. The foot patrol officers, because of this significant external funding, became an island of stability in the midst of the tremendous instability that characterized the department at the end of the experimental year.

3. *Perception of foot patrol as a peripheral activity.* Despite the strong support and good fortune described above, there is serious reason to doubt whether the experiment could have survived the events which occurred in Newark during the experimental year, had it been *other than* a foot patrol experiment. Foot patrol is commonly viewed as a peripheral activity within the patrol division. Outside intervention concerning foot patrol is therefore much less threatening than attempts to manipulate the deployment of radio cars, for example. In addition, foot patrol occupies the time of relatively few officers in the department. Few persons therefore had vested interests which might be threatened by an experiment involving foot patrol.

#### *ACTIVITY ON THE FOOT POSTS DURING THE EXPERIMENTAL YEAR*

Theoretically, a foot patrol officer may be called upon to perform any of the police services (taking reports of criminal incidents, arrests, surveillance, etc.) commonly provided by a motor patrol unit, the obvious difference being only that the officer on foot is confined to a much smaller geographic area. In practice, however, dispatchers tend to give fewer assignments to foot patrol officers. To enhance understanding of what foot patrol officers actually do, the evaluation staff gathered data that give some indication of the activities of foot patrol officers on the eight posts covered as part of the Newark experiment (four "added" posts and four "retained" posts)

on the evening tour of duty during the period of February 1978 through January 1979. These data were derived from the officers' log sheets, a form all foot patrol officers must complete to record the types of activities on which they spend their time during each eight-hour tour.

The log sheets, because they are completed by the officers themselves, can by no means be taken as perfectly accurate measures of their actual activities. A full-scale activity analysis, conducted by observers systematically walking with foot patrol officers, would be required before a truly valid picture of foot patrol activity could be possible. Such observation and analysis, involving difficult methodological problems and requiring enormous expenditures of time and money, was beyond the scope of this study. The data presented here, as a result, should be recognized as being subject to distortion and bias, as self-reported data generally are, and therefore must be interpreted cautiously.

In addition to the problems of self-reported data, it is important to recognize that the most common activities of foot patrol officers (walking and talking to citizens) are not recorded on the log sheets.

Table 4 shows that foot patrol officers say they prepare very few offense reports—about one every ninth tour, on the average. These low frequencies may be explained partially by the fact that, even in a high-crime city such as Newark, the absolute number of crimes that occur in a small area, such as a foot post, is very low. In addition, because they have limited mobility, foot patrol officers often are *not* given the responsibility to respond to calls for service, even if they occur within the limits of a foot beat.

Foot patrol officers also say that they make very few arrests—only one every 12.5 tours—probably partly because dispatchers are reluctant to assign foot patrol officers to urgent calls in which an arrest seems quite likely. Their reluctance stems from the obvious inability of foot officers to respond as rapidly as officers in a motor vehicle. In addition, dispatchers recognize that even if a foot patrol officer makes an arrest, a vehicle will have to be sent to the scene in order to transport the person arrested to be booked and jailed. As a result, even routine calls that might lead to an arrest might be given to motor units in the first instance, rather than sending a vehicle to back up foot patrol officers.

The number of summonses issued, most of which are for traffic violations, vary from a low of 50 per year to a high of 487, the average being slightly more than one per tour.

TABLE 4

Summary of Activities of Officers  
Assigned to Foot Posts in the Experimental Year

Experimental Conditions	Number of tours patrolled	Offenses recorded	Arrests made	Summonses issued	Other police services rendered
Retained Posts 1	296	5 (.02)	5 (.02)	137 (.63)	1642 (5.55)
2	332	12 (.04)	8 (.02)	487 (1.47)	972 (2.93)
3	303	131 (.43)	115 (.38)	243 (.80)	1024 (3.38)
4	310	67 (.22)	53 (.17)	397 (1.28)	1521 (4.91)
Sub Total	1241	215 (.17)	181 (.15)	1314 (1.06)	5159 (4.16)
Added Posts 1	307	19 (.06)	4 (.01)	134 (.44)	610 (1.99)
2	292	8 (.03)	3 (.01)	111 (1.38)	638 (2.18)
3	281	10 (.04)	3 (.01)	241 (.86)	829 (2.95)
4	234	10 (.04)	6 (.03)	50 (.21)	810 (3.46)
Sub Total	1114	47 (.04)	16 (.01)	536 (.48)	2887 (2.99)
TOTAL	2355	262 (.11)	197 (.08)	1850 (.79)	8046 (3.42)

\* Figure in parentheses is average number per 8-hour tour patrolled.

“Other police services,” which primarily involve lookouts and business establishment visits, constitute the most frequently recorded activity of foot patrol officers, ranging from 2 to 5.6 per tour.

No comparable data exist for officers assigned to motor patrol. It is clear, however, from the few data that do exist, that Newark foot patrol officers produce more summonses but make fewer arrests and record fewer offenses than do officers in vehicles. In other cities in New Jersey having different policies for assigning calls for service, foot patrol officers are actually indicated to be making more than a proportionate share of the arrests made by the department.



## Chapter 5

### REPORTED CRIME IN NEWARK AND ELIZABETH AND ARRESTS IN NEWARK

*Antony Pate, Victor Willson, and George L. Kelling*

THE USE OF reported crime as an indicator of the effect of foot patrol is complicated by at least two factors: its unreliability and its ambiguity.

1. The use of reported crime as an outcome variable is difficult because of its unreliability as a measure of crime. An overriding problem with this measure is the question of what behavior is defined as criminal, and when. An action may occur which is in fact criminal, but which is not defined as such. An attack, or a threat of one, by a friend or relative may simply be dismissed as a disagreement, whereas, under strict interpretation of the law, it could be defined as a criminal offense. Forgery, shoplifting, and various forms of "white collar crime" may occur without the victim's ever being aware of it.

Even if an action is defined as criminal, information about it must be provided to the police before that action can be officially recorded. Except in the very few cases in which crimes are discovered by the police themselves (an estimated 1.6 percent of personal robberies and .4 percent of household burglaries, for example, are discovered by the police) (Skogan, 1976), crimes come to the attention of the police by citizen reporting. The result is that it is difficult to determine the extent to which the amount of reported crime represents the amount of actual crime.

Crimes may go unreported because victims may think that nothing can be done about the incident, may be embarrassed by the incident, may want private revenge, may fear their assailant, may be afraid of the police, or may find reporting inconvenient.

Once a report of a victimization has been given to the police, however accurate, it is not automatically entered into the official crime statistics. In fact, two recent research studies indicated that the

police are as likely to *record* reported crime as citizens are to *report* actual crime (Skogan, 1976).

There are many reasons why the police may fail to record a reported crime. An officer may decide that the victim's claim is false; decide that the citizen's complaint is perfectly legitimate but does not involve the breaking of the law; conclude that the reported incident, although apparently involving a crime, is one for which only minimal or no evidence exists, etc. Many incidents are resolved at the scene by the police officer. In such cases, prosecution would be pointless and, therefore, recording the incident may seem unnecessary. Assaults between family members or neighbors or disputes between landlords and tenants often are "handled by the officer" (the official disposition in many cities). An officer may face certain organizational pressures affecting the desirability of filing an official crime report.

Police may use such power to manipulate recorded crime to address specific organizational demands and problems officers face. For example, an officer may not record a crime in which a prominent civic leader is alleged to be the perpetrator. Charges made against police officers as suspects may not be readily recorded. Allegations of criminality which, in order to prosecute, would reveal undercover police operations often go unrecorded. The same may also be true of crimes that would reveal nonpolice informants.

The reporting and recording rates, of course, are not independent; they work in a multiplicative fashion. If the conclusions of the analysis of National Crime Survey data in the United States are accurate, approximately 40 percent of crimes are reported and about 50 percent of these are recorded (Skogan, 1976). Multiplying these two rates shows only 20 percent of crimes that actually occur appear fully in official statistics. The more rigorously derived estimates of Sparks, *et al.*, indicate that both the reporting and the recording rates are about 30 percent. (Skogan, 1976, 155). Multiplying these rates shows only 9 percent of crimes are recorded.

2. The second problem with reported crime is its ambiguity as an outcome variable. Given that reported crime seriously underestimates actual crime, foot patrol could yield dramatic *increases* in reported crime (as a result of citizens being more willing to report crime to foot patrol officers) without any increase in actual crime. In fact, actual crime could be decreasing as a result of foot patrol, while reported crime would be a positive outcome. Similarly, the presence of foot officers in a community could lead to increased informal handling of events by the police officer, resulting in a *decrease* in reported crime, while actual crime could be remaining the same, or,

for that matter, increasing. The problem is that it is impossible to understand what the data mean.

3. Research into the effect of police on crime has accelerated the debate over just how much impact the police can be reasonably expected to have on crime. Without retracing the entire debate here, there are those who argue that, given the nature of specific crimes, the location of crime, the limitations on police conduct, the full range of police responsibilities, the postcrime behavior of citizens, the behavior of criminals, the relationships between victims and offenders, etc.,\* the police can have only an extremely limited impact on crime. The research and the debate have changed significantly how the question is now asked. No longer is the question, "What effect do the police have on crime," but rather it has become, "What effect do specific police strategies have on specific crimes?" Thus, through crime analysis (for example, who are armed robbers; what kinds of stores do they rob; where do they live in relation to the target; what escape routes do they use after a robbery; how long does a robbery last; if robbers do not return to their homes, what sanctuaries do they flee to; how fast do they flee), police can develop strategies derived from empirical understanding of the nature of specific crimes and logical analysis of the possibility that carefully specified activities can have some impact on crimes of that type. Using this line of analysis, it is reasonable to ask, "What crimes would we expect foot patrol to affect?"

In attempting to answer this question, it is worthwhile to reflect on the basic purpose of the Safe and Clean Neighborhoods Program in New Jersey. Generally the program seems to be aimed at benefiting three groups: small merchants; persons, particularly vulnerable persons, using neighborhood streets; and residents of the neighborhood. Merchants would realize two potential benefits: directly, through less victimization, and indirectly, through increased willingness of citizens to use the streets to get to the stores. It appears, then, that merchants would be concerned about preventing robberies (while their stores are open for business) and burglaries (when they are closed). It is hard to decide whether merchants really expect or hope for an effect regarding shoplifting. It is conceivable that the increased availability of an officer could make both formal and informal handling of shoplifting easier. Indirectly, merchants benefit from the perceived safety of citizens as they use the streets and

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\*For a detailed discussion of this point of view see George L. Kelling, "The Quality of Urban Life and the Police," in John P. Conrad (ed.), *The Evaluation of Criminal Justice* (Beverly Hills: Sage Publications, 1978).

gain access to the stores. Thus it is to be expected that relevant crimes include muggings, assaults by strangers, pocketpicking, pursesnatching, and auto theft. But an important point is that the perceived safety of citizens seems to be a result, not only of the level of these actual crimes but, perhaps even more, of the orderliness of the streets as well. Youth gangs hanging around on street corners, the presence of panhandlers and drunks, persons lounging or sleeping in entrance areas, persons behaving in antisocial ways, represent a threat to citizens which may or may not be real but which can strongly affect their behavior.

Finally, if foot patrol does affect crime, residents of areas patrolled by foot should benefit from reductions in vandalism, burglaries (breaking and entering), and auto theft. Here, too, order maintenance functions would be important. Just as citizens could be threatened on streets or in shopping areas, so too they would be threatened by youths or panhandlers sitting on their steps, lounging in apartment hallways or doorways, or being noisy on the streets.

Reported crime is not categorized and stored in ways that make analysis of such issues possible. As indicated in Chapter 2, the original plan included use of reported crime from five cities. Given the problems of retrieving the data, and because foot patrol beats were changed so often that no meaningful analysis was possible, the analysis was limited to two cities which stored the data in such a way that they were easily retrievable. In Newark the data were computerized. In Elizabeth the data were collected manually.

Yet, in spite of the unreliability of reported crime as an indicator of the actual level of most crimes (auto theft is, perhaps, an exception), and the ambiguity of reported crime as an outcome variable, reported crime remains important, if for no other reason than because it has been important in the past. Evaluators, program managers, politicians, city officials, and the press use it as an indicator of police and program effectiveness. It remains an evaluator's bane because, if it is not included, it can be used to undermine confidence in an evaluation ("My data, reported crime, show that the program was/was not successful. The evaluator is wrong, the program should/should not continue to be funded."). If it is included, it can gain inordinate prominence as an outcome.

Reported crime is included in this evaluation less as an outcome variable than as a simple acknowledgment of its existence and a descriptive presentation of what crime was reported for the time during and before the evaluation. The reader should exercise caution in its interpretation.

## *Methodology*

Reported crime data were collected in two cities, Newark and Elizabeth, New Jersey. In Newark the data were collected for 12 beats. In four of the beats foot patrol was added, in four beats foot patrol was dropped, and in four beats foot patrol was retained (see Chapter 2 for the details of this design). In Elizabeth, data were collected for six foot posts. Three of those posts had steady foot patrol coverage both before and after the Safe and Clean Neighborhoods Program began. The remaining three had no foot patrol coverage before the program began, but were patrolled on foot after state funding was provided.

In Newark, data were available on robbery, aggravated assault, breaking and entering, larceny, auto theft, total Part 1 crimes, other assault, vandalism, drug abuse, total Part 2 crimes, and total Part 3 crimes.\* In Elizabeth, data were readily available for robbery, aggravated assault, and breaking and entering. These data appear in Appendix 3.

The period of intervention (change of foot patrol condition) in Newark began in February 1978. Data are available from February 1973 to January 1979. There are 60 preintervention monthly data points for reported crime. In Elizabeth, the period of intervention began after December 1973 (the beginning of the Safe and Clean Neighborhoods Program). Data are available from January 1970 to December 1976. There are 48 preintervention monthly data points.

The data and the time series statistical procedures used to analyze the data are described in Appendix 4, "Analysis of Reported Crime Data in Newark and Elizabeth, New Jersey."

*In sum, no significant differences were found between dropped, retained, and added beats in Newark on any reported crime. The findings in Elizabeth were essentially the same as for Newark. No differences were found between those beats which had steady foot patrol coverage and those in which it was added.*

### **ARRESTS IN NEWARK**

Arrests too, can present evaluators with problems when they are used as indicators of police effectiveness. If a program has as a goal the making of arrests, arrests are legitimate outcome variables. For example, in the Birmingham Anti-Robbery Unit evaluation

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\*Part 3 crimes in Newark are defined by state or local statute and consist of victimless crimes, including mental cases, loitering, and curfew violations.

(Wycoff, *et al.*, in press), arrests of robbers is the major goal of the project. In that case, it is possible to use arrests as an outcome variable.

But when a tactic is not specifically arrest-oriented, the situation becomes quite ambiguous. It is not clear that arrest is always a goal of patrol, whether motor or foot. For many crimes (e.g., vandalism, shoplifting) arrest is a matter of judgment for the officer and/or the supervisor. A variety of factors go into determining whether an officer makes an arrest or not. Previous record is important. For good or ill, the attitude of the offender is a major determinant (Piliavin and Briar, 1965) of whether an arrest is made. Thus for general patrol, some arrests can be "good" and others "bad." And unless considerable resources are available to make judgments about the quality of each arrest, it simply is impossible to tell if an arrest is a desirable outcome or not.

Preliminary research done by John Heaphy suggests that one of the most outstanding facts about arrests is that arrest productivity (number of arrests made by individual police officers) varies widely not only among departments, but also within departments, with some officers making a very high number of arrests, and others practically none.

This variation has two consequences for this evaluation. First, it contributes to the inability to conduct a cost/benefit analysis of foot patrol. Second, it precludes the possibility of using arrests as an outcome variable.

Nevertheless, because questions will be asked regarding arrests made by foot patrol officers, this evaluation presents an analysis of arrests, with the caveat that these data and analyses should be interpreted with extreme care.

*In sum, no significant findings or trends were found in the arrest data.*

### *Methodology*

Arrest data for the 12 experimental beats were gathered from the five-year period immediately preceding the beginning of the Newark experiment (February 1973-January 1978). They included data for total Part 1 crimes, robbery, aggravated assault, larceny, breaking and entering, auto theft, simple assault, vandalism, drug abuse, total Part 2 crimes, and total Part 3 crimes. The analysis of these data was in two steps. First a regression analysis was performed on the preintervention data. Where a significant trend was found, the value observed during the experimental year was compared with

the value predicted by that trend. Where no significant linear trend was found, the value was compared to the preintervention mean. See Appendix 3 for the data.





## Chapter 6

### *EFFECTS OF EXPERIMENT ON ATTITUDES AND VICTIMIZATION*

*Mary Utne, Antony Pate, Amy Ferrara  
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IN PREVIOUS EVALUATION efforts, the Police Foundation has made extensive use of victimization rates and citizen response to police practices as outcome indicators. Studying citizen response to women on patrol, Bloch, *et al.* (1973) incorporated citizen response as an indicator of police effectiveness. Cincinnati's "COMSEC" patrol plan (Schwartz and Clarren, 1977) and San Diego's field interrogation experiment (Boydston, 1975) used community surveys on a before/after basis as part of their evaluations. Finally, Kelling, *et al.* (1974) used before/after citizen surveys in an assessment of the impact of the policing strategy of preventive patrol. Citizen response is also an important effectiveness indicator in the present evaluation of foot patrol in Newark, perhaps more so than in any previous patrol strategy evaluation.

Likewise the use of victimization rates is the most reliable way to measure the impact of foot patrol on crime. As discussed earlier, both reported crime and arrest rates are unreliable as objective indicators of the effect of police strategy on crime. Because these outcome indicators are relatively useless, citizen attitudes and reports of victimizations become especially valuable for evaluating foot patrol.

It is axiomatic to both supporters and critics of foot patrol that this police practice promotes community goodwill toward the police. Regardless of whether the presence of foot patrol officers actually deters crime or merely delays or deflects it to a more convenient location, police practitioners and researchers alike believe that the physical presence of a walking police officer makes citizens *feel better*. Foot patrol probably affects noncriminal but disruptive street behavior, such as youths "hanging around" or panhandlers. Citizens feel safer; they can observe a tax-paid officer at work, and thus be

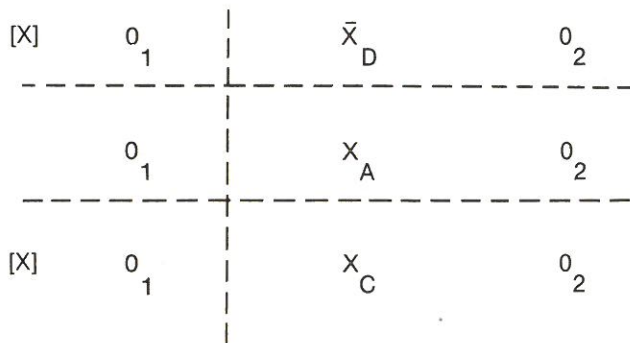
assured that he or she is “really” earning his or her pay; and they see a *person*, an individual man or woman, on a regular personal basis that is impossible with the physically more remote officer in a patrol car.

To determine whether this assumed benefit actually accrues from foot patrol, researchers must ask citizens who live in neighborhoods without foot patrol, as well as those whose neighborhoods are patrolled, what their attitudes toward police are and whether they feel safe on their local streets. Questionnaires were constructed and administered to random samples of 1,200 residents and persons in charge of commercial units (business, clinics, law offices, etc.) in the experimental areas. Six hundred respondents (from 430 residential units and 170 commercial units) were interviewed between November 1977 and February 1978, before the experiment began; a second sample of 600 respondents was interviewed between January and April of 1979.\* Responses from the residential and commercial groups were analyzed separately.

#### SURVEY DESIGN AND METHODOLOGY

Figure 2 makes explicit all major features of the Newark foot patrol program intervention and method of evaluation. Cook and Campbell (1979) describe this design as a “quasiexperimental non-equivalent comparison group design.” It has the added feature of separate samples and pretest/posttest design. Following their notational system, X in the figure stands for a treatment,  $\bar{X}$  is the removal

FIGURE 2



\*The sampling techniques are described in Appendixes 1 and 2.

of that treatment, O stands for an observation or data collection point, and subscripts 1 and 2 refer to the sequential order of recording observations. The dashed horizontal line between groups indicates that they were not randomly formed. The dashed vertical line indicates that separate pretest and posttest samples were used. The X in brackets describes one important basis of noncomparability between groups at the point of the first observation: the presence of the treatment variable.

In their discussion of this research design, Cook and Campbell (1979) note that while it presents threats to internal validity, the design is nevertheless “generally interpretable.” Creative and exhaustive consideration of the particular circumstances of the administration of treatment, context of the treatment events and characteristics of the treatment groups, and how these variables may be expected to interact, “can significantly increase our confidence in making causal attributions.”\* Two features of this design pose potential problems for the interpretation of results:

1. *Nonequivalence of treatment groups.* The design of the Newark foot patrol evaluation took into consideration that some areas of Newark had a continuous history of foot patrol, and other areas had no recent coverage. These preexisting conditions determined the treatment for the different beats. Any significant difference between responses, therefore, could possibly result from preexisting differences between the treatment areas, and not from the presence or absence of foot patrol. An example makes this possibility clearer.

By definition, the Add beats were different from the Drop and Retain beats before the first wave of observations because they had no foot patrol—the intervention *added* foot patrol. If the police department used distinguishing criteria to make its original foot patrol allocation decisions, this difference will be symptomatic of still other differences between the beats. Interviews with foot patrol command personnel revealed the factors they thought *should* be considered in allocating foot patrols to areas of cities: level of street activity, number of calls for service, crime rates, population density, and concentration of businesses. If these factors are in fact considered, and if *need* for police services is the basis of assignments, then the Add beats—to which police originally had *not* assigned foot patrols—would be characterized by lower levels of street activity, fewer calls for service, lower crime rates, lower population density,

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\*T. C. Cook and D. T. Campbell, *Quasi-Experimentation Design and Analysis Issues for Field Settings* (Chicago: Rand-McNally, 1979) 103.

and a smaller proportion of businesses among all beat buildings than the Drop and Retain beats. On the other hand, if assignments of foot patrols are politically determined and highly valued by local residents, it is likely that neighborhoods populated by the relatively disenfranchised—minorities and the poor, with little political power and few resources—would receive less foot patrol coverage. Thus, the Add beats would be found to have lower income levels, larger minority populations, higher crime rates, greater density, and fewer nonresidential units than Drop and Retain beats. Whatever the nature of any actual differences between Add, Drop, and Retain beats (which are examined below), it is possible that they could affect the reception and impact of foot patrol officers in the treatment areas. Interpretations of responses across groups and across time must consider the possible effects of the selective assignment of treatments to nonequivalent groups.

2. *Separate pretest/posttest samples.* This design feature was included because it was deemed highly likely that pretest measurement would affect posttest responses in a way that could lead to incorrect inferences about cause, or simply to uninterpretable responses. For example, one important dependent variable in this study was awareness of the presence of foot patrol officers in the neighborhood. Extensive questioning about local foot patrol officers at Time 1 could not fail to make respondents aware of these officers' presence in the future, rendering Time 2 awareness responses uninterpretable.

The separate pretest/posttest samples eliminate the problem of contamination of posttest responses from the pretest measurement (Campbell and Stanley, 1963), but it introduces the possibility of another serious threat to internal validity. For this design to yield interpretable results, it is essential that the pretest and posttest samples within treatment groups represent the same population. If this assumption is violated, it is virtually impossible to make causal inferences about differences between the groups' responses over time. For this reason, evaluation staff took particular care in designing and implementing the sampling procedure (Appendixes 1 and 2), and gave attention to variables used as checks on the comparability of samples. Personal characteristic variables such as age, race, and sex were chosen for this purpose because they are not affected by time or treatment and because such variables would be expected to influence posttest responses. Examination of these variables as soon as the posttest data were available satisfied the evaluators that it was reasonable to assume that the sampling design had been carried out as planned (see Appendixes 1 and 2 for these data).

## RESIDENTIAL SAMPLES

### *Scale Construction*

In order to combine items that were highly interrelated and therefore to avoid redundant and correlated tests of significance, separate factor analyses were performed on the Time 1 and Time 2 survey responses. The responses to items loading higher than .350 on the same factor at both times, and that were related conceptually, were combined to form scales. A summary of the measures appears below. The complete scales, including their composite items and factor loadings are presented in Appendix 5.

1. *Perceived Street Traffic in Neighborhood.* Three scales relating to perceptions about neighborhood street activity emerged:

*General pedestrian traffic*, composed of responses to four items concerned with residents' estimates of the number of people on their neighborhood streets in the day, at night, on weekdays and weekends;

*Resident pedestrian traffic*, composed of responses of two items asking residents to estimate the number of persons who live or work in the neighborhood, who are on the streets day and night;

*Auto traffic*, composed of responses to two items concerned with residents' perceptions of the heaviness of day and night auto traffic on local streets.

2. *Perceived Severity of Crime-Related Problems in Neighborhood.* The second major area of questioning examined residential respondents' perceptions of problems related to crime in their neighborhoods. Three scales that emerged from factor analyses and eight single item measures were analyzed:

*Street disorder*, a scale composed of responses to two items concerned with residents' views of the seriousness of the loitering situation on their streets;

*Serious crime*, composed of responses to four items concerned with residents' perceptions of local robbery, assault and burglary problems;

*Drugs*, composed of responses to two items assessing views of seriousness of problems of drug use and sales on neighborhood streets;

*Vandalism*, a single item;

*Victimization of elderly*, a single item;

*Prostitution*, a single item;  
*Auto theft*, a single item; and  
*Rape*, a single item.

3. *Perceived Safety of Neighborhood*. The third area of inquiry concerned the respondents' perceptions of the safety of their neighborhood. Seven scales were constructed, based on factor analysis, concerning the likelihood of each of seven types of crime; a composite summary of all seven of these measures also was calculated. In addition, a scale measuring the respondents' perception of the general safety of the neighborhood was constructed. The following measures were analyzed:

*Composite: Likelihood of crime*, a summary index composed of responses to all seven questions asking the likelihood of various crimes in the neighborhood.

*Likelihood of rape*, a scale composed of responses to four items concerned with residents' perceptions of the possibility of home and street rapes during daylight hours and after dark;

*Likelihood of serious nighttime street crime*, a scale composed of responses to two items concerned with residents' perceptions of the likelihood of robberies and assaults on local streets;

*Likelihood of residential burglary*, composed of responses to two questions concerned with citizens' views of the likelihood of homes being broken into while residents are away;

*Likelihood of residential robbery*, composed of responses to two questions concerned with citizens' views of the likelihood of homes being broken into while residents are at home;

*Likelihood of auto theft*, composed of responses to two items concerned with citizens' perceptions of the possibility of day and nighttime auto theft;

*Likelihood of daytime street robberies*, a single item;

*Likelihood of daytime street assaults*, a single item; and

*Safety of neighborhood*, composed of responses to two items concerned with residents' perceptions of the general safety of the neighborhood.

4. *Victimizations*. Each respondent was asked to indicate the number of times he or she had been a victim of crime during the previous year. Respondents were asked about eight different types of

crime. In addition, a summary measure of the total number of victimizations each respondent experienced was calculated. These measures were analyzed:

*Composite: All victimizations*, a summary measure of the total number of victimizations experienced in the past year;

*Victimizations by burglary, auto theft; theft of auto parts, theft of yard goods, purse snatch/pickpocket, mugging, assault, and personal theft while away from home*, each measured by the number of times respondents indicated a crime of each particular type had happened to them during the previous year.

5. *Evaluation of Police Service*. Respondents were asked to evaluate the delivery of police services in their neighborhoods. The particular measures analyzed were:

*Job done by police department*, one item among several which asked respondents to evaluate Newark service agencies; and

*Perceived severity of problem of police protection in the neighborhood*, a single item;

*Professionalism of motor patrol officers*, composed of responses to eleven questions regarding motor patrol officers' attitudes and behavior;

*Harassment by motor patrol officers*, composed of responses to three questions assessing inappropriate police behavior;

*Favoritism by motor patrol officers*, composed of responses to two questions about police doing things for or overlooking things done by particular people;

*Anticrime effectiveness of motor patrol officers*, composed of responses to two questions about citizens' perceptions of the effectiveness of motor patrol in dealing with crime;

*Motor patrol part of neighborhood*, a single item;

*Patrol coverage by motor patrol*, composed of responses to three questions regarding citizens' perception of police protection;

*Respondent familiar with motor patrol officers*, composed of responses to two questions assessing respondents' personal contact with motor patrol officers;

*Reporting preferences foot vs. motor*, composed of responses to three questions about respondents' preferences in reporting matters to the police;

*Extent to which motor patrol officers respond quickly to calls for service*, a single item; and

*Extent to which motor patrol are personally familiar with neighborhood*, a single item.

6. *Protective Measures Taken Against Crime*. Another issue of interest was the extent to which residents took measures to protect themselves and their property from victimization. Seven scales emerged from factor analysis of responses to these questions. Three additional scales are composites, constructed by combining the responses to all questions on the same topic. The following measures were analyzed:

*Composite: Use of protective measures*, a composite index of the number of protective devices and measures used by the respondent;

*Crime avoidance efforts: days*, composed of responses to three items assessing the frequency of particular actions taken during daylight hours to avoid criminal victimization;

*Crime avoidance efforts: nights*, composed of responses to four items assessing the frequency of particular actions taken after dark to avoid criminal victimization;

*Composite: crime avoidance efforts*, a composite index of the number of crime avoidance efforts undertaken by respondent to avoid crime;

*Defensive action against illegal entry*, composed of responses to two items assessing whether residents nailed shut their doors and windows;

*Protection against theft*, composed of responses to two items concerned with whether residents bought insurance for theft or vandalism and marked their property for identification;

*Failure to lock doors*, composed of responses to two items indicating whether residents leave their doors unlocked under various circumstances;

*Composite: possession of weapons*, a composite index of the number of weapons possessed by the respondent for crime protection;

*Possession of gun*, composed of responses to two items concerned with whether guns are kept in the house and whether those guns are loaded; and

*Carry knife*, composed of responses to two questions dealing with whether residents carry a knife or keep one on their person for protection.



7. *Likelihood of Neighbors Cooperating with Police.* The final area of questioning concerns residents' estimates of the likelihood that neighbors in the area would cooperate with the police. Four scales emerged from the factor analysis of responses to these questions. In addition, two single items were analyzed. The measures examined were:

*Likelihood of reporting burglary*, composed of the responses to two items concerned with the likelihood that residents would report a break-in at their neighbor's home and a break-in and theft at their own home;

*Likelihood of reporting suspected crime*, composed of the responses to two items concerning the likelihood that residents would report suspected drug users and suspicious persons in their area;

*Likelihood of reporting nuisances*, composed of the responses to two items concerned with the likelihood that residents would report a noisy dog or a loud family quarrel in their neighborhood;

*Likelihood of reporting a stranger being robbed*, a single item;

*Likelihood of reporting a possible rape*, a single item; and

*Residents' willingness to cooperate with police*, composed of three items asking respondents to indicate their neighbors' willingness to report crimes, identify criminals, and appear as witnesses.

#### *Analysis Techniques*

Responses were analyzed by two way analysis of variance, with treatment area (Drop, Retain, and Add) and time (before,  $T_1$ , and after,  $T_2$ ) as independent variables. A statistically significant interaction effect indicates a difference across treatment areas in the changes in response from Time 1 and Time 2. When an interaction effect was found to be significant at the .05 level, multiple comparisons were made to determine which particular differences created the statistically significant result.

Two analyses of variance were conducted on each dependent variable presented in this report. The first analysis used beats as the units of analysis. That is, the mean responses for each of the four beats in each treatment group at both points in time were entered into the analysis of variance. Such an analysis of beat means has one major problem—the small number of data points available for anal-

ysis. Because there were only 12 beats involved in the experiment, the total sample size in such an analysis can be only 12. Because statistical significance is greatly dependent upon sample size, only very large effects can be expected to be significant with such a small number of observations. Analyzing data in this fashion, therefore, tends to bias the results toward the conclusion of "no differences" and the social significance of the findings could be lost. To counteract this bias, a second form of analysis of variance was conducted, using individual respondents as units of analysis. Such analyses were carried out to provide a more powerful test of differences.

### *Respondents' Perceptions of Experimental Manipulations*

Although the "call box" data provide evidence of the validity of the experimental manipulations, it is also important to determine whether citizens were aware of the presence or absence of foot patrol officers in their neighborhoods. The issue is important because the hypothesized effects of foot patrol operations presumably are not only direct, e.g., through the prevention of crime, but indirect as well. Citizens' awareness of a foot patrol officer's presence or absence should in turn lead to citizens' perceptions of their neighborhoods as more or less safe.

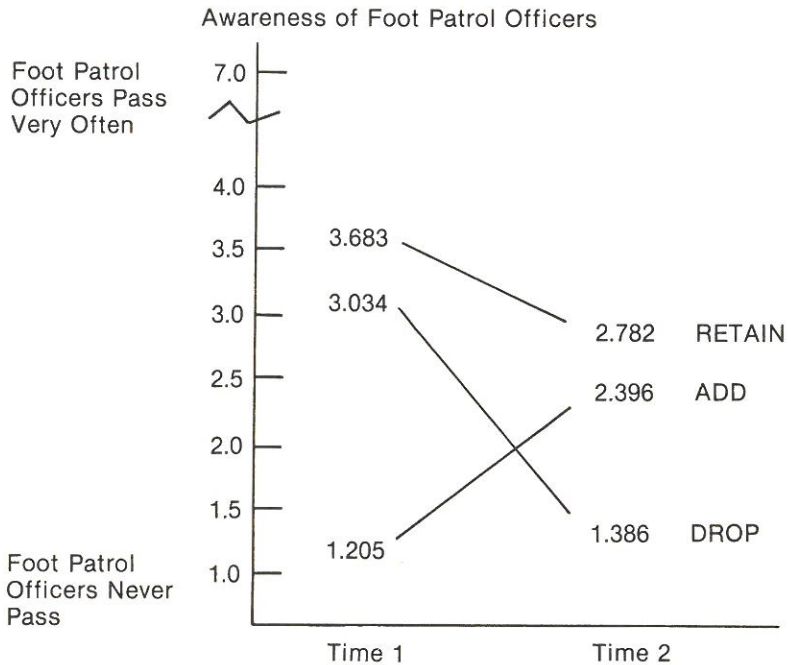
To measure the public perceptions of the level of foot patrol, survey respondents were asked how often they *saw* foot patrol officers walking by and how often they *believed* foot officers passed by. These responses, based on factor analysis results, were combined into a single scale—"Awareness of Foot Patrol Officers." Scale values range from 1, "Foot patrol officers never pass," to 7, "Foot patrol officers pass very often." Figure 3 presents a summary of the results of the analysis of that scale.

No matter whether beats or individuals are used as units of analysis, the interaction term is highly significant. The awareness of foot patrol in the "Drop" condition decreased noticeably; awareness in the "Add" condition increased markedly; awareness in the "Retain" condition decreased somewhat, but the change was less than in either of the other two conditions. Thus, the resident subjects of the experiment perceived the experimental manipulations accurately.

## **RESULTS**

1. *Perceived Street Traffic in Neighborhood.* The first major set of dependent variables to be examined concerns perceived neighborhood street traffic. The hypothesis was that the presence of foot patrol officers would make streets appear to be safer; as a result, more of the local residents would feel free to use surrounding streets.

FIGURE 3



Beats which added foot patrol, therefore, were expected to experience higher levels of general pedestrian traffic, more use of streets by local residents, and more auto traffic; beats which dropped foot patrol were expected to have decreased levels of all street activity; beats in which foot patrol was retained were expected to experience no significant change in street activity. A summary of the analyses of variance appears in Table 5. (Complete descriptions of these and all other analyses of variances are presented in Appendix 5).

The results indicate that significant interaction effects were obtained in two of the three analyses using beats as units of analysis. For both "general pedestrian traffic" and "resident pedestrian traffic," sizable increases occurred within the dropped beats, and notable decreases occurred in the other two conditions. The analysis of the third perceived activity measure, "automobile traffic," did not produce significant results using beats as the unit of analysis, perhaps indicating that automobile traffic is perceptually distinct from pedestrian traffic. Significance was achieved in the analysis of individual responses to this third measure, but it resulted from a decrease in traffic in both added and dropped posts.

TABLE 5

Residential Samples  
Perceived Street Traffic in Neighborhood

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
General Activity	+ .383	- 1.414	- 2.710	p < .001	.01 < p < .05
Resident Pedestrian Traffic	+ 1.046	- 1.917	- 1.600	p < .001	p = .01
Automobile Traffic	- .937	+ .182	- .795	p < .001	n.s.

n.s. = not significant

Both of the significant results are contrary to original expectations. One possible explanation for this anomalous finding appears in the factor analyses that led to the construction of the "general pedestrian traffic" scale. Among the items associated with the items composing this scale in the factor analysis of the second wave responses were two items that did not have particularly high associations in the factor analysis of the first wave responses. These items had to do with the neighborhood problems of "teenagers hanging around" and "groups of adults hanging around." The high associations of these items suggests that respondents consider high levels of pedestrian traffic on their neighborhood streets as undesirable, rather than desirable, as the original hypothesis suggested. If such an interpretation were applicable to both pedestrian traffic scales, the results of the analyses would indicate that eliminating foot patrol led to an increase in the level of local pedestrian traffic, perceived as a generally undesirable result, whereas the level of such traffic in the other conditions decreased.

2. *Perceived Severity of Crime-Related Problems in Neighborhood.*

It was expected that foot patrol activity in particular areas would decrease the severity of crime-related problems perceived in those areas. Beats that added foot patrol then should have a decrease in the level of perceived severity of such problems; respondents in beats where foot patrol was eliminated should perceive higher levels of such problems; no significant change should occur in the beats that maintained foot patrol coverage. A summary of the results appears in Table 6.

None of the eight comparisons was significant using beats as units of analysis. Nevertheless, six of the eight analyses produced significant differences using individual responses; in all six of these cases, the respondents in the beats adding foot patrol perceived a much greater decline in the severity of problems than did respondents in either of the other two conditions.

3. *Perceived Safety of Neighborhood.* As with the other measures examined, the presence of foot patrol was expected to affect the safety of an area as perceived by its residents. Table 7 presents a summary of the analyses conducted to measure this possible effect.

None of the nine analyses using beat means produced significant differences across the experimental conditions, although seven of the analyses using individual responses concluded there were significant differences; in five of those, residents in added beats perceived the most positive (or least negative) change. It is worthy of note that the perceived level of safety in the beats with new foot patrol *increased*

TABLE 6  
Residential Samples  
Perceived Severity of Crime-Related Problems

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Street Disorder	- .176	- 1.283	- 2.486	p < .001	n.s.
Serious Crime	- .224	+ .136	- 1.452	p < .001	n.s.
Drug Usage	- .448	+ 1.159	- 1.232	p < .001	n.s.
Vandalism	+ .581	- .128	- 1.370	p < .001	n.s.
Victimization of Elderly	- .661	- 1.526	- 2.871	p < .001	n.s.
Prostitution	- .687	+ .221	- .397	n.s.	n.s.
Auto Theft	- 2.954	- 1.431	- 3.113	p < .001	n.s.
Rape	- 1.146	- 1.249	- .754	n.s.	n.s.

with respect to eight of the nine measures studied here, whereas no such consistent trend was achieved in the other two conditions. Furthermore, the change in perceptions of safety in the beats that added foot patrol were more positive, *relative to the change in the other conditions* in six of the nine comparisons. These findings support the earlier suggestion that residents in areas with the added foot patrol noticed a decline in the severity of several crime-related problems.

4. *Victimizations*. The hypothesis was that the presence of foot patrol would reduce the number of victimizations experienced by residents of the areas receiving such patrol. A summary of the results of the analyses of nine measures used to test this proposition is in Table 8.

Only one significant difference appeared: Resident respondents in the retained foot beats experienced a significantly greater reduction in the number of thefts that occurred in their neighborhoods while they were away from home. Inasmuch as no changes in the level of foot patrol were carried out in these retained beats, no attribution of effects resulting from the experiment can be made. This difference was significant no matter what unit of analysis was used. Although the results were not significant, it is interesting that victimizations in the added beats declined in terms of eight of the nine measures examined; in five of these cases, the decline was the greatest of those in all three conditions.

5. *Evaluation of Police Service*. The hypothesis was that the presence of foot patrol in an area would improve the evaluation by residents of the police services they received. Table 9 presents the results of the analyses of the 12 measures used to test this effect.

Using the beat means in calculating statistical significance, only one significant difference emerged. In beats where foot patrol was added, motor patrol was viewed as responding more quickly to calls for service.

Using individual responses to calculate significance, statistical significance was detected in all 12 measures, and favored the added beats in 10 or 12. Further, in eight of the measures, areas where foot patrol was dropped show the least gain or most decrease.

There is evidence that the effect from foot patrol generalized to both motor patrol and the entire police department.

6. *Protective Measures Taken Against Crime*. The potential effect of foot patrol on the use of protective measures would be, at best, indirect. *If* residents notice the presence of officers on foot, they probably should feel more secure; *if* they do in fact feel more secure, they probably will take fewer precautions against crime, believing it to be

TABLE 7  
Residential Samples  
Perceived Safety of Neighborhood

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Composite: Likelihood of Crime	-.491	+.253	-.624	.001 < p < .01	n.s.
Likelihood of Rape	-.861	+.001	-.477	.01 < p < .05	n.s.
Likelihood of Serious Nighttime Street Crime	-.711	+.791	-.865	p < .001	n.s.
Likelihood of Residential Burglary	-.693	-.086	-.919	n.s.	n.s.
Likelihood of Residential Robbery	+.699	+.398	-.039	n.s.	n.s.
Likelihood of Auto Theft	-1.693	-.718	-1.671	.01 < p < .05	n.s.
Likelihood of Day Street Robberies	+.562	+1.472	+.066	p < .001	n.s.
Likelihood of Daytime Street Assaults	+.608	+1.555	-.013	.001 < p < .01	n.s.
General Safety	-.108	-.797	+.098	.01 < p < .05	n.s.

n.s. = not significant



TABLE 8

Residential Samples  
Victimizations

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Composite: All Victimizations	-.011	-.068	-.069	n.s.	n.s.
Burglary	-.056	-.148	-.295	n.s.	n.s.
Auto Theft	-.015	+.040	-.089	n.s.	n.s.
Theft of Auto Parts	+.136	+.603	-.026	n.s.	n.s.
Theft of Yard Goods	+.024	-.002	+.040	n.s.	n.s.
Purse Snatch/Pick Pocket	+.071	-.059	-.038	n.s.	n.s.
Mugging	-.012	-.046	-.064	n.s.	n.s.
Assault	-.025	-.031	-.009	n.s.	n.s.
Personal Theft While Away from Home	-.090	-.257	-.065	.001 < p < .01	.01 < p < .05

n.s. = not significant

less necessary. In dropped beats, if enough time elapsed, people might take more measures; in the added beats people are unlikely to sell their guns, get rid of their dogs, or unbar their windows. A mitigating factor affecting this prediction is that foot patrol officers, because they have more time to get to know citizens, may be able to provide more advice about protective measures and, therefore, contribute to *increase* in the use of such measures. A summary of the results of the analyses of ten measures taken to reduce the likelihood of crime is in Table 10.

None of the ten analyses showed significant differential changes across experimental conditions, using beats as the unit of analysis. Three of the analyses produced significant results using responses of individuals. In all three cases, persons in beats that added foot patrol indicated a greater reduction in the use of protective measures than persons in the other two conditions. Altogether, whether the differences were significant or not, respondents in "added" foot beats showed a greater reduction (or a smaller increase) in the use of protective measures in seven of the ten analyses conducted. This finding lends further support to the suggestions of beneficent effects of foot patrol noticed earlier.

7. *Perceived Likelihood of Neighbors Cooperating with Police.* Yet another measure of the effect of foot patrol was citizens' estimate of whether their neighbors would be likely to report each of several crime-related episodes to the police. The hypothesis was that, if citizens saw and interacted with foot patrol officers, the citizens would come to perceive the officers as more a part of the neighborhood and, therefore, more approachable. As a result, the likelihood that neighborhood residents would report episodes to the police or cooperate in general with the police should increase. The results of the six analyses conducted to test this possibility are in Table 11.

None of the six analyses produced significant results using beats as the unit of analysis. Only two significant effects were found when the responses of individuals were analyzed; in both cases, residents in "retained" foot posts indicated the greatest decrease in cooperation while those in "dropped" posts indicated an increase.

## SUMMARY

Residents of the areas under study perceived the experimental manipulations. Foot patrol was observed much more often in neighborhoods in which such patrol was newly created; officers on foot were seen much less often where they were no longer assigned; in

TABLE 9

Residential Samples  
Evaluation of Police Services

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Job Done by Police Department	-.450	+.040	+.834	.01 < p < .05	n.s.
Severity of Problem of Adequate Police Protection	+.361	+1.469	-.029	.001 < p < .01	n.s.
Professionalism of Motor Patrol Officers	+.524	+.889	+2.054	p < .001	n.s.
Harassment by Motor Patrol Officers	+1.064	+.107	-.117	.001 < p < .01	n.s.
Favoritism by Motor Patrol Officers	-1.406	-.240	-.315	.01 < p < .05	n.s.
Anticrime Effectiveness of Motor Patrol Officers	+.005	+1.576	+2.711	p < .001	n.s.
Motor Patrol Part of Neighborhood	+.429	-.143	+1.216	.01 < p < .05	n.s.
Patrol Coverage by Motor Patrol Officers	+.162	+1.279	+2.095	p < .001	n.s.
Respondent Favoritism with Motor Patrol Officers	+.640	-.479	-.685	.001 < p < .01	n.s.
Reporting Preferences Foot vs. Motor	-.447	-1.554	-2.284	p < .001	n.s.
How Frequently Motor Patrol Officers Respond Quickly to Calls for Service	-.229	+1.985	+3.177	p < .001	.01 < p < .05
Extent to Which Motor Patrol Officers are Personally Familiar with Neighborhood	+.266	+.143	+1.282	.01 < p < .05	n.s.

n.s. = not significant

TABLE 10

Residential Samples  
Protective Measures Taken Against Crime

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Composite: Crime Avoidance Efforts	- 1.407	- .731	- 1.602	p = .05	n.s.
Crime Avoidance: Daytime	- .934	- .241	- 1.281	.01 < p < .05	n.s.
Crime Avoidance: Nighttime	- 1.719	- 1.064	- 2.026	n.s.	n.s.
Composite: Use of Protective Devices	- .037	- .024	- .050	n.s.	n.s.
Defensive Action Against Illegal Entry	+ .035	+ .051	+ .015	n.s.	n.s.
Protection Against Theft	- .049	- .043	- .185	.001 < p < .01	n.s.
Failure to Lock Doors	+ .503	+ .073	+ .296	n.s.	n.s.
Composite: Weapons Carried	+ .033	+ .001	+ .016	n.s.	n.s.
Possession of Gun	+ .014	+ .024	- .007	n.s.	n.s.
Carry Knife	+ .066	+ .072	+ .138	n.s.	n.s.

TABLE 11  
 Residential Samples  
 Perceived Likelihood of Neighbors Cooperating with Police

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Reporting a Burglary	-.257	+.021	-.437	n.s.	n.s.
Reporting a Suspected Crime	-.373	-.774	-.997	n.s.	n.s.
Reporting a Nuisance	+.436	-.064	-.300	n.s.	n.s.
Reporting a Stranger Being Robbed	-1.314	-1.194	-1.078	n.s.	n.s.
Reporting a Possible Rape	+.320	-.914	-.832	.001 < p < .01	n.s.
Cooperating in General	+.096	-2.313	-.364	p < .001	n.s.

beats in which foot patrol was retained, such activity was seen somewhat less often than before the experiment began. These differences were highly significant.

Persons in the "added" beats noticed a marked decline in pedestrian traffic in their area; those in the "dropped" posts perceived a notable increase; respondents in the "retained" foot posts saw a slight decrease. Apparently, from examining the items most highly associated with those comprising the pedestrian traffic and street use scales, such traffic is perceived as undesirable. Thus, in the perceptions of the residents, the creation of foot patrol brought about a reduction in the level of street activity; the elimination of such patrol led to an unwelcomed increase.

Although none of the eight analyses produced statistically significant results when using beats as units of analysis, six of the eight analyses using individual responses were significant. In all six persons living in areas where foot patrol was created perceived a notable decrease in the severity of crime-related problems; the perceptions of those living in the other conditions showed no consistent pattern.

Using beats as units of analysis, no significant experimental effects were discovered. Seven of the nine analyses of individual responses, however, did indicate significant effects. In five of those seven, residents of the "added" foot beats perceived the most positive (or least negative) change.

Only one significant change in victimizations was found; no clear attribution to the experiment is possible since the most significant effect was a large decline in the "retained" foot posts.

Although the changes were not significant using beats as units of analysis, responses of individuals to both measures of job done by police indicated a significant change as a result of the experiment. Residents in areas where foot patrol was added provided a much better evaluation of the job done by the police department and by motor patrol officers. Persons living in areas where foot patrol was eliminated, however, reported just the opposite: a decline in the rating given the police department and motor patrol officers.

Only three of the ten analyses produced significant experimental effects among individual responses to the questions concerning use of protective measures; no significant findings occurred when analyzing beat means. All three of the significant differences came about because residents in "added" foot beats indicated a greater reduction in the use of protective measures than residents in the other experimental conditions.

None of the six analyses of perceptions of the likelihood of neighbors cooperating with the police indicated significant experimental effects among beat means, but analyzing individual responses produces two significant results. In both cases, residents in areas where foot patrol was dropped indicated a slight increase in the perceived likelihood of their neighbors cooperating with the police while persons in the other two conditions indicated a decrease.

## COMMERCIAL SAMPLES

### *Scale Construction*

In the same manner as for the residential samples, multiple item scales were formed when factor analysis indicated combining one or more items was appropriate. For the most part, the scales constructed were quite similar to those created for the responses of residents. The measures used are summarized below. Demographic information regarding respondents is in Appendix 2.

1. *Perceived Street Traffic in Neighborhood.* Three scales were created to measure respondents' perceptions of neighborhood street activity:

*General pedestrian traffic,* composed of four items concerning respondents' estimates of the number of people on the neighborhood streets in the daytime and nighttime, on week days and weekends;

*Resident pedestrian traffic,* composed of two items eliciting respondents' estimates of the number of persons on the neighborhood streets, day and night, who live or work in the area; and

*Nighttime auto traffic,* a single item inquiring about the level of automobile traffic on neighborhood streets after dark.

2. *Perceived Severity of Crime-Related Problems.* Respondents from commercial establishments were asked their opinions about the severity of each of several crime-related problems in the neighborhood. Three factor analysis-based scales and seven single item measures were analyzed:

*Street disorder,* a scale composed of the responses to two items concerning the seriousness of drunks and other adults loitering in the neighborhood;

*Serious crime,* composed of four items concerning the seriousness of local robbery, assault, and burglary;

*Drug usage*, made by combining the responses to two items concerning the seriousness of drug use and sales in the neighborhood;

*Vandalism*, a single item;

*Teenage loitering*, a single item;

*Prostitutes*, a single item;

*Auto theft*, a single item;

*Burglary*, a single item;

*Rape*, a single item; and

*Shoplifting*, a single item.

3. *Perceived Safety of Neighborhood*. Five scales were constructed, based on factor analysis, concerning the likelihood of the occurrence of five types of crimes. A composite of all five types was also created to provide an overall measure of the likelihood of crime. Finally, a scale measuring respondents' perception of the general safety of the neighborhood was constructed. The measures analyzed were:

*Composite: Likelihood of crime*, a summary index of all five items concerning the likelihood of various types of crime in the area;

*Likelihood of rape on the street*, a scale composed of responses to two items concerning the possibility of being raped while on the street;

*Likelihood of serious street crime*, a scale made up of the responses to four items dealing with the likelihood of being beaten up or robbed on the street either at night or during the day;

*Likelihood of robbery while inside*, a scale composed of responses to two items concerning the likelihood of being robbed while inside;

*Likelihood of auto theft*, composed of two items concerning probability of an automobile being stolen during the day or night;

*Likelihood of burglary*, made up of the responses to two items regarding the possibility of having a building broken into either at night or during the day; and

*General safety*, composed of the responses to two items regarding respondents' general estimate of the safety of the neighborhood.



4. *Victimization*. Representatives were asked to indicate the number of times their establishment or its employees had been a victim of each of four types of crimes during the previous year. A summary measure of the total number of victimizations was also computed. The measures analyzed were:

*Composite: All victimizations*, the total number of victimizations experienced in the past year;

*Victimization by burglary*, a single item;

*Victimization by robbery while respondent on the premises*, a single item;

*Victimization by robbery while respondent off the premises*, a single item;

*Victimization by malicious destruction of property*, a single item; each measured by the number of times the respondent indicated a victimization of each type had occurred.

5. *Evaluation of Police Service*. Each respondent's evaluation of the delivery of police service was estimated by 12 measures:

*Job done by police department*, a single item;

*Severity of problem of police protection in the neighborhood*, a single item;

*Professionalism of motor patrol officers*, composed of responses to sixteen questions assessing motor patrol officers' attitudes and behavior;

*Harassment by motor patrol officers*, composed of responses to two questions regarding inappropriate police behavior;

*Favoritism by motor patrol officers*, composed of responses to two questions about police doing things for or overlooking things done by particular people;

*Motor patrol giving unnecessary tickets*, a single item;

*Motor patrol officers overlooking minor crimes*, a single item;

*Reporting preference foot vs. motor*, composed of responses to three questions about respondents' preferences in reporting matters to the police;

*Extent to which motor patrol provides coverage*, a single item;

*Respondents' familiarity with motor patrol officers*, composed of responses to two questions assessing respondents' personal contact with motor patrol officers;

*Extent to which motor patrol responds quickly to calls for service*, a single item; and

*Extent to which motor patrol officers are part of neighborhood*, a single item.

6. *Protective Measures Taken Against Crime*. To estimate the extent to which representatives of commercial establishments took steps to protect themselves from crime, the following indications were analyzed:

*Composite: Use of protective measures*, a summary index of the number of protective devices and measures employed;

*Use of alarm systems*, a single item;

*Use of central alarms*, a single item;

*Use of reinforcing devices*, a single item;

*Use of guards or watchmen*, a single item;

*Use of watch dogs*, a single item;

*Use of cameras*, a single item;

*Composite: Possession of weapons*, a summary of the number of weapons the respondent possesses as safeguard against crime;

*Possession of firearms*, a single item;

*Possession of knives*, a single item;

*Possession of clubs*, a single item;

*Possession of chemical repellants*, a single item;

*Possession of other weapons*, a single item;

7. *Likelihood of Cooperating with Police*. To measure this item, the following scale was constructed:

*Perceived likelihood of commercial representatives' willingness to cooperate with police*, composed of the responses to three items indicating the respondents' estimates of the willingness of local residents to report crimes, identify criminals, and appear as witnesses.

#### *Analysis Techniques*

As with the analysis of the residential sample data, two-way analysis of variance was conducted, with time and treatment area as independent variables. Again, a statistically significant interaction effect reveals a differential impact as the result of the experimental

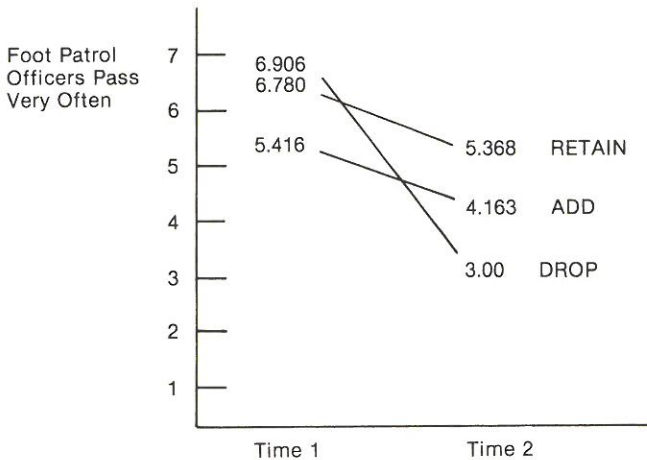
manipulations. The results are those from the analyses using beats and individual respondents as units of analysis.

### *Respondents' Perceptions of Experimental Manipulations*

Representatives of commercial establishments were asked how often they saw foot patrol officers in their neighborhood and how often they thought such officers passed by. Responses to these two questions, based on the results of factor analysis, were combined to form a single scale. Scale values range from 1, "Foot patrol officers never pass," to 7, "Foot patrol officers pass very often." Figure 4 presents a summary of the results of the analysis of the change in that scale.

The differences in the changes, although significant at between the .01 and the .001 levels when individuals are treated as units of analysis, are not significant when beat means are analyzed. There

FIGURE 4  
Commercial Surveys  
Awareness of Foot Patrol Officers



was, in fact, a sharp decrease in the frequency with which respondents saw foot patrol officers in the areas where foot patrol was eliminated, but there were decreases (albeit not as great) in both the other conditions as well. Thus, regardless of the experimental manipulations, respondents from nonresidential establishments perceived *less* foot patrol coverage during the experimental period than before.

In addition to the failure to affect respondents' perceptions, two notable differences should be pointed out between these results and those found for residential respondents. First, the overall level of perception of foot patrol presence is markedly higher among members of the commercial sample than among residents, probably because officers visit commercial establishments as part of the regular routine, whereas they would enter residence only rarely. Second, respondents in the areas which added foot patrol during the experimental period perceived quite high levels of foot patrol even *before* the experiment began—that is, during a time when there was no foot patrol per se. It is possible that such a finding could result from misperception of periodic visits to business by motor patrol officers as having been made by foot patrol units. Since the commercial respondents would be most likely to see the police inside their establishments, it is easy to imagine that the distinction between foot and motor units could become blurred.

Because the respondents in the commercial samples did not perceive the changes in the level of foot patrol, the analysis of their responses is a particularly good test of the indirect nature of the effect of presence of foot patrol as it was hypothesized. If such indirect effects prevail, no discernible effects should occur as a result of the experimental manipulations.

## RESULTS

1. *Perceived Pedestrian Traffic in Neighborhood.* It was expected that the presence of foot patrol, if perceived by representatives of commercial establishments, would result in higher estimates of safety, and therefore lead to greater use of neighborhood streets. A summary of the results is in Table 12.

There were no significant differential changes as a result of the experimental manipulations. In light of the failure to affect the perceptions of the level of foot patrol coverage, such a finding is not surprising. It is interesting, however, that the perceived level of street activity increased in all experimental conditions. If, as was suggested in the discussion of the residential findings, respondents perceived

street activity as an undesirable phenomenon, this would indicate that, regardless of the experiment, survey respondents believe their neighborhoods have become less safe than they had been previously.

2. *Perceived Severity of Crime-Related Problems.* Had the experimental manipulations been perceived accurately, it was to be expected that the presence of foot patrol in an area would reduce the severity of crime-related problems in that area, as perceived by representatives of commercial establishments. Table 13 summarizes the results of the analyses carried out to test this proposition.

Of the ten analyses, only two revealed statistically significant differences using beats as units of analysis. In one of these analyses, the severity of street disorder was perceived to have increased in areas where foot patrol was added, but to have decreased in the other two conditions. In the other analysis in which statistical significance was achieved, the problem of auto theft was perceived to have increased in all conditions, but noticeably more in the areas in which foot patrol was eliminated. These findings are, at best, contradictory and inconclusive.

Five other analyses produce significant results when individual respondents are the unit of analysis. In all five of these analyses, respondents in areas where foot patrol was added believed that the severity of the particular problems had increased more than did respondents in the other two experimental conditions. In four of these five cases, respondents in the areas in which foot patrol was eliminated indicated the smallest increase in the severity of the problems or, in the case of teenage loitering, said they noticed a *decrease* in the problem. Interpretations of these findings are discussed in the final chapter.

3. *Perceived Safety of Neighborhood.* Perception of the presence of foot patrol in an area was expected to lead persons in the neighborhood to feel more secure. A summary of the seven measures analyzed to test this idea is presented in Table 14.

Once again, no significant effects resulting from the experimental manipulations were discovered. What is striking, however, is that the perceived safety of *all* conditions decreased during the experimental period on all seven measures.

4. *Victimizations.* Foot patrol, it might be argued, could lead to a decrease in the number of victimizations in the areas being patrolled. The analyses of the victimizations reported by representatives of commercial establishments are summarized in Table 15. No signif-

TABLE 12  
 Commercial Samples  
 Perceived Street Traffic in Neighborhood

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
General Activity	+ .083	+ .429	+ 1.542	n.s.	n.s.
Resident Pedestrian Traffic	+ 1.544	+ .491	+ 1.376	n.s.	n.s.
Nighttime Auto Traffic	+ .760	+ 1.567	+ .746	n.s.	n.s.

TABLE 13

Commercial Samples  
Perceived Severity of Crime-Related Problems in Neighborhood

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Street Disorder	-.139	-.484	+2.417	p < .001	.01 < p < .05
Serious Crime	+2.267	+2.135	+1.805	n.s.	n.s.
Drugs	+.412	+2.546	+2.752	.001 < p < .01	n.s.
Teenage Loitering	-.624	+1.357	+2.433	p = .001	n.s.
Prostitutes	+.469	+.684	+2.366	p < .001	n.s.
Auto Theft	+3.193	+.022	+1.834	p = .001	.01 < p < .05
Burglary	+2.021	+1.807	+1.203	n.s.	n.s.
Rape	+1.236	+.285	+2.558	.001 < p < .01	n.s.
Vandalism	+1.886	+2.035	+2.199	n.s.	n.s.
Shoplifting	+.878	+1.204	+3.141	.01 < p < .05	n.s.

n.s. = not significant

TABLE 14  
Commercial Samples  
Perceived Safety of Neighborhood

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Composite: Likelihood of Crime	+ 1.705	+ 1.026	+ 1.137	n.s.	n.s.
Likelihood of Rape on the Street	+ 1.402	+ .428	+ 1.091	n.s.	n.s.
Likelihood of Serious Street Crime	+ 2.421	+ 1.689	+ 1.342	n.s.	n.s.
Likelihood of Robbery While Inside	+ 1.402	+ .428	+ 1.091	n.s.	n.s.
Likelihood of Auto Theft	+ 1.436	+ 1.09	+ 1.184	n.s.	n.s.
Likelihood of Burglary	+ 1.577	+ 1.509	+ .516	n.s.	n.s.
General Safety	- 1.108	- 1.158	- 1.158	n.s.	n.s.

n.s. = not significant



icant experimental effects emerged. It is notable, however, that 11 of the 15 changes in numbers of victimizations are increases.

5. *Evaluation of Police Service.* Had differential levels of foot patrol been perceived, persons in the area patrolled on foot might think they were receiving better police service than persons where no foot patrol existed. Table 16 presents a summary of the results obtained in the analyses of the two measures appropriate to this prediction.

Using beat means, no statistically significant patterns emerge. Using the individual respondent beat means, a contradictory pattern emerges. In three items—adequacy of motor patrol coverage, respondents' familiarity with motor officers, and motor patrol officers' rapid response to call for service—respondents make significant positive evaluations of the police. In two items—harassment of citizens, and giving unnecessary traffic tickets—the respondents in the "added" areas give negative evaluations of the police.

6. *Protective Measures Taken Against Crime.* If the presence of foot patrol were perceived and therefore led to a greater sense of security, respondents should feel less need to protect themselves against crime. The summary of the analyses conducted to test this hypothesis is presented in Table 17.

No significant effects attributable to the experiment emerged. Of the total 42 charge measures, however, 28 were positive, indicating an overall increase in the frequency of using protective measures, especially in the areas in which foot patrol was eliminated.

7. *Perceived Likelihood of Residents Cooperating with Police.* Greater citizen contact with the police was expected to occur in areas patrolled on foot. This increased contact was in turn expected to lead to a higher level of cooperation with the police. Table 18 presents the results of the analysis carried out to test this proposition.

Once again, the experimental manipulations failed to produce any significant effects. There was no generalized trend; respondents in the beats that added or eliminated foot patrol indicated decreased cooperation levels while those in the areas that retained foot patrol noted an increase.

## SUMMARY

Representatives of commercial establishments did not perceive the experimental manipulation of the presence of foot patrol. Regardless of the area in which they worked, respondents saw *less* foot patrol during the experimental period than before.

TABLE 15

Commercial Samples  
Victimizations

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Composite: All Victimizations	+ .587	-.901	+.082	n.s.	n.s.
Burglary	+ .695	-.052	-.443	n.s.	n.s.
Robbery: Respondent on Premises	+ .232	+.088	+.311	n.s.	n.s.
Robbery: Respondent off Premises	+ .500	+.273	+.059	n.s.	n.s.
Malicious Destruction of Property	+ .760	-.096	+.502	n.s.	n.s.

n.s. = not significant

TABLE 16

Commercial Samples  
Evaluation of Police Services

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Quality of Work by Police Department	-1.326	-1.132	-.077	n.s.	n.s.
Perceived Adequacy of Police Protection	+1.047	+.334	+.443	n.s.	n.s.
Professionalism of Motor Patrol Officers	.849	-1.646	-.219	n.s.	n.s.
Harassment by Motor Patrol Officers	-.142	+.496	+1.608	.01 < p < .05	n.s.
Favoritism by Motor Patrol Officers	-.157	-.751	+.109	n.s.	n.s.
Motor Officers Give Unnecessary Traffic Tickets	-.685	-1.204	+.688	.01 < p < .05	n.s.
Motor Officers Overlook Minor Crime	+.228	+.683	+1.647	n.s.	n.s.
Reporting Preference Foot vs Motor	+.747	+2.206	+1.739	n.s.	n.s.
Extent to which Motor Patrol Provides Coverage	-1.501	-.164	+.557	.01 < p < .05	n.s.
Respondent Familiarity with Motor Patrol Officer	-.302	-1.716	+.430	p = .01	n.s.
Extent to which Motor Patrols Respond Quickly to Calls for Service	-1.952	-1.258	+.809	.001 < p < .01	n.s.
Extent to which Motor Patrol Officers Are Part of Neighborhood	-1.275	-1.515	+.113	n.s.	n.s.

n.s. = not significant

TABLE 17  
Commercial Samples  
Protective Measures Taken Against Crime

Scale	Change from T <sub>1</sub> to T <sub>2</sub>			Significance (Individuals)	Significance (Beats)
	Drop	Retain	Add		
Composite: Use of Protective Measures					
Alarm System	+ .061	+ .050	-.019	n.s.	n.s.
Central Alarm	+ .062	+ .342	+ .122	n.s.	n.s.
Reinforcing Devices	+ .050	+ .003	-.012	n.s.	n.s.
Employ Guard or Watchman	+ .195	+ .068	+ .051	n.s.	n.s.
Watch Dog	+ .009	-.099	-.117	n.s.	n.s.
Cameras	+ .095	+ .053	+ .023	n.s.	n.s.
Other Security Devices	-.061	+ .054	-.050	n.s.	n.s.
Composite: Possession of Weapons	+ .030	-.060	+ .009	n.s.	n.s.
Possession of Gun	+ .041	-.004	+ .002	n.s.	n.s.
Possession of Knife	+ .090	-.004	+ .054	n.s.	n.s.
Possession of Club	+ .051	+ .056	-.007	n.s.	n.s.
Possession of Chemical Repellant	+ .107	-.032	+ .022	n.s.	n.s.
Possession of Other Weapon	-.049	+ .002	-.084	n.s.	n.s.
	+ .020	-.017	+ .057	n.s.	n.s.

n.s. = not significant

TABLE 18

Commercial Samples  
Perceived Likelihood of Residents Cooperating with Police

Scale	Change from T <sub>1</sub> to T <sub>2</sub>		Significance (Individuals)	Significance (Beats)
	Drop	Retain		
Perceived Likelihood of Residents Cooperating with Police	-.907	+ 1.153	-.589	n.s.

n.s. = not significant

Given the importance of perception of the experimental changes in bringing about the indirect effects expected as a result of the presence of foot patrol, it is not surprising that the results are inconsistent.

In general, regardless of experimental conditions, respondents perceived a deterioration in their neighborhoods: more activity on the street, more crime-related problems, reduced safety, more victimizations, poorer police service and greater use of protective devices.

It is essential to point out that the Newark Police Department was going through a chaotic period during the final stages of the experiment. As a result of fiscal problems, the mayor of Newark ordered that 200 police officers be laid off. The response from the police unions and other vested interest groups was extremely strong, with charges that the city would be increasingly unsafe for citizens, law and order would break down, and chaos would result. One could speculate that business people, with economic interests, as well as interests in personal safety, at stake, would be sensitive to such charges and fears.

### *CONCLUSION AND DISCUSSION*

Striking differences exist in the results of the analyses of the responses of residents and those of commercial institutions. Residents of the experimental beats clearly detected the changes brought about by the presence of foot patrol officers. Respondents in commercial units, however, perceived a decrease in the level of foot patrol in *all* experimental conditions. These results lend strong support to the validity of the experimental manipulations.

The differences in perception of the experimental manipulations were further reflected in the differences perceived on all other outcome measures. Although few analyses of beat means, using a sample of only 12, produced significant experimental effects, many significant results were obtained when the individual responses were analyzed. The generally consistent trend among these results was that residents of areas in which foot patrol was added indicated they perceived a marked improvement in their neighborhoods during the experimental period and a higher evaluation of police services. Results in the other two conditions were mixed.

Commercial respondents indicated an altogether different perception of the experimental period: In all conditions, they believed their neighborhoods had become worse. This finding is consis-

tent with the fact that the foot patrol experiment, unlike the "fear city" campaign, was not conducted during normal business hours.

This effect is amplified by the fact that business people, who make up the majority of the commercial respondents, have a different pattern of interaction with and perceptual image of police than residents have. Police, whether they are driving a patrol car or walking, enter commercial establishments for reasons other than official police business much more often than they do private homes.

These frequent contacts could have several consequences that might have affected the commercial respondents' perception, regardless of the foot patrol experiment. Business people often see officers on foot who are actually assigned to motor patrol or traffic. This effect is supported by the finding that the level of perceived foot patrol presence is much higher among the nonresidential samples than among residents, regardless of experimental condition. This confusion could have been compounded when, because of layoffs and reassignments, notable reductions in the numbers of officers in specialized units were made and the workload per motor patrol officer increased. As a result, there were fewer officers in nonpatrol units with whom to have contact and less time available to patrol officers to engage in other than police business. Thus, it is quite understandable, even predictable, that nonresidential respondents would be more susceptible to the changes in overall personnel in the police department and the publicity they generated than to the change in the level of foot patrol that occurred after they had closed for the day.





## Chapter 7

### *EFFECT ON OFFICERS' ATTITUDES AND PERFORMANCE*

*Mary Utne, Antony Pate, Amy Ferrara, George L. Kelling,  
and Charles E. Brown*

THE PRIMARY GOAL of this evaluation was to test the effectiveness of foot patrol as a police strategy. But a secondary goal was to find out, from the attitudes of police officers about foot patrol, how they perceive foot patrol operations, what effect they believe foot patrol has, how satisfied they feel about foot patrol as a way to work, and how foot patrol affected officers' actual policing performance. This is consistent with the evaluators' desire to look at foot patrol from various points of view, and to understand why foot patrol has the impact it has. It is also consistent with earlier studies of police strategies in which police officers' attitudes were considered relevant to an understanding of police practices (Kelling, *et al.*, 1974; Schwartz and Claren, 1978; Bloch and Anderson, 1974; Boydston, *et al.*, 1977; Tien, *et al.*, 1977). Finally, the attitudes of patrol officers toward foot patrol have important implications for implementation, training, assignments, and developing approaches to overcome resistance.

Two approaches were used. Evaluation staff surveyed police officers in all 28 cities that participated in the Safe and Clean Neighborhoods Program. The questions in the survey instrument covered issues that had come up time and again in interviews with civilian and police administrators of foot patrol, with police officers with whom we walked and rode, with citizens and merchants, and in scholarly articles. They include:

- costliness of the foot patrol strategy
- relative difficulty/boredom of job
- extent to which foot patrol is a basic/important part of police services; that is, is it "real policing" or an occasionally useful

auxiliary strategy, like helicopter patrol, or strictly a public-placating, non-utilitarian tactic

- effectiveness as an anticrime strategy
- effectiveness in crime prevention and importance as a preventive patrol strategy
- status of foot patrol in the departments, among police officers and commanding officers
- perceived and real capability of foot patrol officers as opposed to motor patrol officers
- appropriate form of organization (special unit vs. regular patrol)
- supervision
- lack of mobility
- opportunities for dishonesty
- schedules (regular, steady vs. rotating, irregular)
- training

Most of what appears in journals and texts about these topics is not based on systematic empirical inquiry, although it does have an empirical basis in personal experience. But personal experiences produce opinions all over the spectrum, some in direct opposition to others, as we learned from police administrators in interviews about the efficacy of foot patrol. What remains unknown is the *general* direction of police opinion on these issues. The findings of the survey are intended to describe police officers' opinions, practices, and beliefs about foot and motor patrol and to add to available knowledge about foot patrol for administrators making policy decisions.

Additionally, in Newark, data were collected on selected performance measures: absenteeism and awards received. They were analyzed to see possible behavioral effects foot patrol may have had.

### *SURVEY DATA*

Evaluation staff formulated questions in four general areas: officer work history, officer demographic characteristics, attitude items, and attitude items specific to foot patrol and how it is perceived among all officers.

1. *Officer work history* includes past and present assignments, hours and days worked, and satisfaction with assignments. These questions were taken from the Human Resource Development Ques-

tionnaire (HRD) used in Dallas (Kelling and Wycoff, 1978) and Kansas City (Kelling, *et al.*, 1974) and the stress questionnaire (Pate, *et al.*, forthcoming).

2. *Officer demographic characteristics* include age, sex, marital status, education, etc. These items were taken from the Kansas City and Dallas HRD questionnaires.

3. *Attitude items* include sensitivity to community expectations, attitude toward citizens, job satisfaction, and peer ratings. These items were drawn from the Kansas City and Dallas HRD questionnaires.

4. *Attitude items specific to foot patrol and how it is perceived among all officers.* These questions were both original and derived from the HRD.

In an attempt to survey patrol officers in all 28 police departments, evaluation staff contacted the chief of each department for permission to survey patrol officers. In Newark, which is the largest New Jersey city and the city in which the experiment was being conducted, more elaborate efforts were made to seek cooperation. These efforts were necessary because of the union-management conflict over the layoff of 200 police officers and the conflict between the Fraternal Order of Police and the Patrolmen's Benevolent Association over representation. In Newark, consultations were held with the chief and with representatives of the two unions and the superior officers' organizations. All reviewed the questionnaire and agreed not to oppose, either covertly or overtly, the administration of the survey.

### *Findings*

*The responding officers.* A total of 1,031 police returned the self-administered survey form (reproduced in Appendix 9). As requested, most respondents held the rank of police officer (893, or 86 percent). The remainder of the respondents were detectives (18), sergeants (79), lieutenants (22), captains (11) and other ranking officers (8). The 893 patrol officers represent approximately 30 percent of the estimated 3,045 patrol officers in the studied cities.

*Foot patrol experience.* The vast majority of all respondents (841, or 81 percent) reported having been assigned to foot patrol duty as a steady tour at some point in their policing career. (This figure corroborates the rough estimate given by most of the police administrators about their officers' foot patrol experience.) Of these, 70.7 percent (595) walked foot patrol as part of the Safe and Clean

Neighborhoods Program. At the time of responding, 307 officers were assigned to foot patrol, 89 percent of these (274) funded by the program. This figure represents 37.7 percent of all foot patrol officers currently funded by the Safe and Clean Neighborhoods Program.

Approximately 16 percent (134) of those with past or current patrol experience volunteered for their original foot patrol assignment and 72 percent (607) were automatically assigned to foot patrol because of their low seniority. Most officers (76 percent) received no special training for their foot patrol duties.

*Patrol officers' characteristics and nonwork activities.* Survey findings reported in this chapter are by patrol response group: foot and motor. "Foot patrol officers" are all survey respondents currently assigned to foot patrol duty under the Safe and Clean Neighborhoods Program. Not included in this group are the responses of 33 foot patrol officers funded some other way. "Motor patrol officers" are all patrol respondents not assigned to foot patrol duty at the time of response, regardless of previous foot patrol experience.

Foot and motor patrol respondents show no important differences in age, sex, marital status, or mean level of education. More than 99 percent of the foot and motor officers are male, and most (65 percent motor patrol, 61 percent foot patrol) are married. Mean age of the two patrol types is roughly 31 (foot patrol 31.1, motor patrol 30.3). Most foot and motor patrol officers had at least some college coursework (the modal response for both:  $\bar{X}$  = 6.4 foot, 6.3 motor).

Despite their perhaps greater opportunity for physical exercise, foot patrol officers describe their physical condition in the same way motor patrol officers describe theirs (see Table 19): as "somewhat above average" to "average."

Contrary to expectation, considering their far more regular working hours, foot patrol officers are not more likely than motor patrol officers to be attending school or working a second job. Foot officers are slightly more likely to report putting in overtime hours on the force, however (see Table 20).

*Officers' perception of citizens.* Both groups of responding officers have low levels of authoritarianism, and do not differ on this trait dimension (see Table 21). At the same time, foot patrol officers are significantly more likely to see citizens as being more supportive of the police; they have greater trust in people; they disagree more strongly with the suggestion that citizens see police as a hostile force;

TABLE 19

## Officers' General Physical Condition

	Motor		Foot	
	Percent	Number	Percent	Number
Much above average	11.46	59	12.50	32
Somewhat above average	32.82	169	39.45	101
Average	51.07	263	46.09	118
Somewhat below average	3.69	19	1.56	4
Much below average	.97	5	.39	1
Mean	2.33		2.30	

TABLE 20

## Officers' Activities Outside of Working Hours

## Percentage of Officers Currently Attending School

Motor	18.5%	(96)
Foot	17.0	(44)

## Percentage of Officers Currently Working Second Job

Motor	55.0%	(279)
Foot	47.4	(120)

## Officers' Overtime Police Work

	Motor		Foot	
	Percent	Number	Percent	Number
Put in voluntary overtime	50.4%	(255)	61.4%	(153)
Put in mandatory overtime	25.7	(130)	20.1	(50)
Do not work overtime	23.9	(121)	18.5	(46)

TABLE 21

## Officers' Attitudes Toward Citizens

Scale	Motor	Foot
Citizens are supportive of police	4.05	3.57*
Trust in people (1 = high trust)	3.34	2.89*
Citizens see police as a hostile force (1 = strongly agree)	2.94	3.30*
Authoritarianism (1 = highly auth.)	4.47	4.48
Family problem solving is not real police work	3.78	4.24

\*p < .00001

\*\*n.s. (p = .8505)

and they are much more likely to agree that family problem solving is an integral aspect of policing.

*Officers' perception of their work.* The attitudes of foot and motor patrol officers about the work of foot patrol were sharply different in several areas (see Table 22). Foot patrol officers much more strongly believed that foot patrol was a basic component of police services. They disagreed that foot patrol was a "soft" or "cushy" assignment; motor patrol officers, however, agreed. Foot patrol officers expressed significantly more disagreement with the idea that foot patrol was strictly a public relations job. Finally, foot and motor patrol officers gave significantly different responses to the assertion that motor patrol reduced fear more effectively than foot patrol.

Table 22 also reveals some similarity in foot and motor patrol officers' perceptions. Examination of the responses indicated that both groups of respondents rate the quality of police service delivered by motor patrol higher than the quality of police service from foot patrol, and they agree that while foot patrols have better relations with citizens, motor patrols get along better with their fellow officers. The two groups disagree only in their views of who gets better crime-related information in the course of their patrol duties. Foot patrol

TABLE 22

## Officers' Perception of Foot Patrol

## Mean Response to Scales by Response Group

Scale	Motor Patrol	Foot Patrol
Foot patrol is a basic component of police science (1 = strongly agree)	3.47	2.50*
Foot patrol is an undesirable assignment	3.70	3.69**
Foot patrol is a "cushy" assignment	2.50	3.67*
Foot patrol officers are isolated in the department (single item)	3.55	3.62**
Foot patrol is strictly a public relations job (single item)	2.85	3.32*
Motor patrol reduces fear more effectively than foot patrol (single item)	3.39	4.13*

\* $p < .001$ \*\* $p = n.s.$ 

officers believe they get much better information; motor patrol officers see no difference in the quality of information.

Further analysis of the responses to these items illuminates an additional trend in officers' responses. Spearman correlations were computed for each group's responses to questions about foot and motor patrol. The correlation between foot patrol officers' attitudes about the quality of police service from foot and motor was computed, as was a correlation between their attitudes about foot patrol and motor patrol in their relationship to citizens. These correlations are presented in Table 23.

The correlations between officers' ratings of foot and motor patrol performance on the same dimension are remarkably low, ranging from .03 to a maximum of .39. The correlations of .08 and .03 in the first row of Table 23, for example, show that police officers' judgments about the quality of police service provided by foot patrols is unrelated to their rating of motor patrols. An officer's attitude toward motor patrol alone did not allow prediction of his or her attitude toward foot patrol, particularly with respect to the first

TABLE 23

Correlations Between Responses to Scales Rating Foot vs. Motor Patrol Performance, by Response Group

Scales	Response Group	
	Foot Patrol	Motor Patrol
Quality of Police Service	r = .08	r = .03
Quality of Relations with Citizens	r = .26	r = .39
Quality of Relations with Other Police	r = .27	r = .31
Quality of Information Obtained	r = .09	r = .10

and last scales in the table. There is a modest correlation between attitudes about relations with citizens and other police (rows 2 and 3). Nevertheless, it is apparent from Table 23 that officers are able to make independent, absolute judgments about the quality of police work of foot and motor patrols.

Finally, officers were asked: "If your department had unlimited money and manpower, would you recommend that it invest any more in foot patrol operations?" Almost two-thirds of the foot patrol officers said "yes" they would recommend further investment in foot patrol (64.7 percent,  $n = 165$ ). Less than half (41 percent,  $n = 210$ ) of the motor patrol respondents said they would ( $\chi^2_{(1)} = 37.54$ ,  $p < .0001$ ).

When officers were asked to compare the quality of the service delivered from motor and foot patrol, the groups again disagreed at significant levels (see Table 24). In each case, when the attitudes of foot officers are compared with the attitudes of motor officers regarding the quality of foot patrol, foot officers rated foot patrol much higher than did motor officers. Interestingly, with one exception, foot patrol officers also had more positive attitudes toward motor patrol than did motor officers.

*Job Satisfaction.* Table 25 rank-orders the importance to police officers of various aspects of police work. Table 26 compares the responses of the two groups. In the rank-ordering, it is interesting



TABLE 24

## Officers' Perception of the Quality of Police Work

Scale	Response Group	
	Foot Patrol	Motor Patrol
Quality of police service		
Foot	2.53	3.69
Motor	1.99	2.22
Quality of relations with citizens		
Foot	1.98	2.42
Motor	2.49	2.82
Quality of relations with other police		
Foot	2.67	3.08
Motor	2.05	2.41
Quality of information obtained		
Foot	2.09	2.94
Motor	2.93	2.84 n.s.

1 = very positive; 6 = very negative

that foot officers rank helping the public as the second most important part of their work (in comparison to motor patrol, which ranks it fifth). Differences between the groups become more apparent, however, when the mean importance scores of the two groups assigned to the various job components are compared (Table 27). Although job security is important to all officers, it is significantly more important for foot officers. However, foot officers also score significantly higher on the importance of enforcing the law, delivering services to the community, helping the public, the possibilities of promotion, freedom to operate independently, and being involved with the community.

Three scales and three single items were used to compare job satisfaction experienced by the two patrol groups.

**Have you ever asked to be transferred from your current assignment?**

	No	Yes
Motor Patrol Officers	71.9% (379)	28.1% (148)
Foot Patrol Officers	85.6% (220)	14.4% (37)

$\chi^2 (1) = 17.19836$   
 $p < .000$

**How happy are you working in your current assignment?**

(1 = very happy; 6 = very unhappy)

Motor Patrol Officers	$\bar{X} = 2.641$	
Foot Patrol Officers	$\bar{X} = 2.212$	$F(1,800) = 15.349$ $p < .0001$

**Overall, how satisfied are you with police work in general?**

(1 = very satisfied; 6 = very dissatisfied)

Motor Patrol Officers	$\bar{X} = 2.63$	
Foot Patrol Officers	$\bar{X} = 2.03$	$F(1,808) = 31.078$ $p < .00001$

TABLE 25

Rank - Order of Importance of Various Aspects of Police Job

Aspect of Job	Motor	Foot
Job security	1	1
High income	2	6
Enforcing the law	3	4
Delivery of service to the community	4	3
Helping the public	5	2
Promotion	6	7
Freedom to operate independently on the job	7	5
Recognition from fellow officers	8	9
Being involved with the community	9	8
Prestige in the community	10	10
Making arrests	11	11

TABLE 26

Mean Importance of Various Aspects of Police Job

Aspect of Job	Motor	Foot	F	P
Job Security	1.47	1.30	5.779	.0165
High income	1.58	1.66	1.027	.3111
Enforcing the law	1.66	1.52	4.170	.0415
Delivery of service to community	1.69	1.48	9.260	.0024
Helping the public	1.72	1.45	15.487	.0001
Promotion	1.73	1.91	4.381	.0367
Freedom to operate independently	1.79	1.55	10.117	.0015
Recognition from fellow officers	2.32	2.17	2.673	.1025
Being involved with community	2.44	2.02	23.372	.0000
Prestige in community	2.53	2.28	5.771	.0165
Making arrests	2.81	2.77	0.213	.6443

Scale: 1 = very important; 6 = very unimportant

TABLE 27

Officers' Job Satisfaction

Scale	Level of Satisfaction	
	Motor Patrol	Foot Patrol
Job satisfaction	2.65	2.40*
Satisfaction with recognition for work	2.95	3.09**
Job autonomy	2.71	2.72**

\*p < .0049

\*\*n.s.  
1 < very high

Although significant differences were not found in recognition for their work or job autonomy, foot officers scored significantly higher in all other indicators of job satisfaction.

Summarizing, when foot patrol officers are compared with motor officers they are more likely to believe that citizens are supportive of police, tend to see foot patrol as a more important function in policing, emphasize community service delivery as a more important aspect of their work than do their motor colleagues, and indicate far greater satisfaction with their jobs.

### *PERFORMANCE DATA*

Because foot patrol and motor patrol duty are qualitatively different types of assignment, the question arises whether officers engaged in such divergent activities, and their performance characteristics, may also be different. The previous section provided evidence that foot and motor patrol officers do differ in important attitudinal areas. In this section, another group of foot and motor patrol officers is examined to see whether they differ in performance as well. Two groups of Newark police officers who either walked foot patrol or were assigned to motor patrol continuously throughout the experimental year (February 1978 through January 1979) were identified. The foot patrol group contains 28 officers; the motor patrol group contains 153 officers.

Information readily derived from department records in Newark were used in the analysis of differences between these two groups. It included the officer's current age (as of the beginning of the experimental year), age at joining the Newark Police Department, length of time on the force, and the two performance measures: working time lost from sickness or injury, and number of citations received. Comparative data on each of these measures are presented below.

#### *Findings*

*Officer Characteristics.* The data in Table 28 show that officers in the foot patrol group are considerably older than those in the motor patrol group. The difference in tenure of the two officer groups is similarly striking: foot officers have been in the Newark Police Department twice as long as motor officers.

*Performance Characteristics.* Data on absenteeism and awards received also were collected. The Newark Police Department's personnel policies contain no official limit on the amount of paid sick leave an officer may take, although the Police Surgeon's Office does

TABLE 28

## Officer Characteristics

Patrol Group	Median	N*
Age at February 1978		
Foot patrol	43.2 years	27
Motor patrol	33.5	152
Length of Time in Department		
Foot patrol	17.2	27
Motor patrol	8.8	152
Age at Joining Newark Police Dept.		
Foot patrol	27.2	27
Motor patrol	24.5	152

\*Data for one officer in each group were not available.

attempt to identify and control flagrant abuses of the sick leave privilege on a case-by-case basis. Because those instances where an officer is physically incapacitated or otherwise clearly unsuitable for duty are relatively infrequent, an officer's decision to "book off sick" often represents a discretionary response to a range of less serious health conditions. Absenteeism therefore is regarded here as a negative indicator of each officer's dedication to and satisfaction with the job. Similarly, meritorious actions are viewed as officers' positive expressions of their levels of job motivation and satisfaction.

1. *Absenteeism*. In the Newark Police Department, each day of scheduled working time lost is categorized as either sick time or time lost because of injury on or off duty (see Table 29.) The categories are self-explanatory, but one important recording practice in the allocation of a lost work day to sick or injury time should be mentioned: any lost working time attributed to an old injury (either on or off duty) is treated as injury time. Because the records did not contain enough consistent detail to allow a distinction between the two types of injury time in all cases, there was no attempt to partition in-

TABLE 29

Causes of Working Time Lost from Sickness or Injury  
During the Experimental Year

Patrol Group	Number (%) With Working Time Lost			
	Sickness	Injury On Duty	Injury Off Duty	All Other Causes
Foot	22 (78.6)	2 (7.1)	3 (10.7)	23 (82.1)
Motor	131 (85.6)	38 (24.8)	19 (12.4)	144 (94.1)

jury time used during the experimental year that involved previous injury.

However, if one accepts:

- (1) that categorizing a lost work day as sick or injury time is independent of the primary event being addressed (i.e., the officer makes a decision not to go to work), and
- (2) by extension, that there may be some interaction between the amount of sick and injury time accrued by an officer during a given year (e.g., an officer decides to go to work with a touch of flu because he lost so much time when he broke his leg),

then working time lost during the experimental year, but resulting from injuries sustained before the experimental year, properly belongs to the total of working time lost during the experimental year.

Injury time is therefore presented with the warning that it is unsuitable as a measure of relative risk of the two groups,\* but the definition of total time lost fits the usual criterion. No precise definition of sick time appears in the few other studies where such data have been presented, so there is no basis for comparing the Newark data on time lost with those from other city departments.

\*For example, "injury time" incurred by foot patrol officers may relate to injuries sustained during their former years in a radio car.

Data on sick and injury time for the patrol groups are presented in two ways: Table 29 shows the percentage of officers within each group who lost *no* working time during the experimental year from sickness or injury; Table 30 shows the median and mean number of working days lost by officers in each patrol group.

Table 30 indicates that, as might have been expected, the experience of the two groups is very similar in the proportion of officers losing no time as a result of off-duty injury. However, the other columns in the table show that the foot patrol group maintained a better attendance record than officers assigned to motor patrol duty during the experimental year. Proportionately more foot officers never had a working day off (21.4 percent vs. 7.8 percent) and proportionately fewer lost any work days because of on-duty injury. It appears, then, that foot patrol officers may be somewhat more conscientious about reporting for work than their counterparts in patrol cars. (Speculations on the possible reasons for this pattern are offered in the discussion section, below.)

The data shown in Table 30 relating to median and mean sick days lost during the experimental year also suggest a better work attendance record for the foot patrol group than for the motor patrol group. Although the differences between foot patrol and motor patrol groups in terms of mean sick and total time lost are in the expected direction (i.e., foot patrol officers "book off sick" less often than motor patrols), the difference is small—less than two days. Differences in median values are more impressive, however, and do lend empirical support for the claim that foot patrol officers, for whatever reasons, may have better attendance records, because of the finding that the Newark foot patrol group was generally older and perhaps more stable than the motor patrol group.

2. *Meritorious Action (Citations)*. Based on information received from various members of the Newark Police Department, it appears that the number of citations or commendations an officer receives could be a function of three general conditions: opportunities for meritorious action (i.e., being in the "right place at the right time"), access to recognition, and the climate for commendable behavior.

The principal factors affecting an officer's opportunity for meritorious action are the place and nature of the officer's duty assignments and whether he or she gets dispatched to action calls. Access to recognition may depend on the relationship between the officer and superiors, as well as the superior officers' general philosophy about what constitutes commendable behavior. The broader climatic con-

TABLE 30

Mean and Median Working Days Lost from Sickness or Injury  
During the Experimental Year

Patrol Group	Working Days Lost										
	Sick		Injury				Total				
	Median	Mean	On Duty		Off Duty		On Duty		Off Duty		
		Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean
Foot Patrol	4.0	8.89	0.0	3.61	0.0	1.00	0.0	4.5	13.43		
Motor Patrol	7.0	10.76	0.0	3.33	0.0	1.04	0.0	9.0	15.13		



ditions include the state of police-community relations, the level of department morale during the period, and the officers' length of time on the force and degree of motivation and initiative.

Table 31 shows the frequency distribution of citations officers in each patrol group received during the 1978 calendar year by three categories of officer tenure: ten years or fewer of service; 11 through 19 years; and 20 years or more. The table indicates that the foot patrol group received fewer citations during the year than the motor patrol group, even taking into account differences in officer seniority.

### DISCUSSION

Taken together, these data suggest that the foot patrol officer in Newark during 1978 was, compared to officers in motor patrols, a considerably older and more seasoned veteran of the department, with a better work attendance record, but who received fewer commendations. Interviews with commanding officers in Newark disclosed that the age of foot patrol officers results from the system by which those officers are assigned to that duty. In recent years, money has not been available to hire new officers: foot patrol therefore has been given to officers who volunteer for it. Younger officers are more

TABLE 31

Percentage of Foot and Motor Patrol Officers Receiving Citations by Years in Service

Time in Service (years)	Patrol Group	Number of Citations			
		0	1	2	3+
< 10	FP	55.6	22.2	11.1	11.1
	MP	25.2	6.8	16.5	100.0
11 - 19	FP	100.0	0.0	0.0	0.0
	MP	54.3	20.0	8.6	17.1
< 20	FP	100.0	0.0	0.0	0.0
	MP	71.4	21.4	0.0	7.1

likely to seek motor patrol as an exciting, action-oriented assignment, whereas older officers prefer what they see as the more relaxed pace of foot patrol; hence the difference in the ages.

There are several possible explanations for the relatively low rate at which foot patrol officers used sick and injury time, compared to motor patrol officers. One obvious explanation concerns differences in the physical job environment: officers who ride in a patrol car for much of the tour and then burst into sudden periods of perhaps dangerous activity can be expected to suffer illness as a result of stress. The rapid change in temperature from within an automobile to the out of doors could also be a source of illness. Differences in the regularity of working hours could be a factor. In Newark, while officers assigned to motor patrol work rotating shifts; foot patrol officers work the same shifts five days a week with regular days off. It is also possible that foot patrol officers develop a greater sense of personal responsibility for their posts than officers in patrol cars, and are therefore less willing to abandon it by taking sick leave. If such a sense of responsibility exists, then the foot patrol officer's knowledge that "his" or "her" post probably will not be patrolled on foot during an absence may serve as a positive incentive to go to work. In contrast, the duty slots filled by motor patrol officers are more interchangeable. Even in the "beat cars" in Newark, which are oriented primarily to a specific sector of the city, a motor patrol officer's territory of responsibility is not clearly delineated, depending more on the *ad hoc* requirements within the district (and sometimes beyond) during a tour, than upon the definition of a particular beat area.

The low number of citations awarded to foot patrol officers may be because such officers receive fewer assignments to respond to calls for service at which they may behave so as to justify receiving such awards. Secondly, foot patrol officers in Newark serve under only one regular field supervisor, limiting the number of superiors who might write letters of commendation. Finally, the general orientation of the officers who walk foot patrol may be quite different from that of officers in motor patrol. If officers volunteer for foot patrol duty because the activity on such an assignment is lighter than in motor patrol, it is not unlikely that those officers would also not zealously seek commendations. Older officers walking foot patrol, still having the rank of patrol officer after several years on the job, might be expected to have decided that their chances of promotion are quite slim, and that seeking commendations would be fruitless.

## *CONCLUSION*

There are significant differences in the attitudes and the performance indicators of foot patrol officers and motor officers. Generally, foot patrol officers are more satisfied with police work. They have a more benign view of citizens, a lower absenteeism record, and a more community-oriented view of the police function. Caution must be exercised in interpreting these data. We know that foot officers are not randomly assigned to foot patrol, and, where foot patrol is staffed by volunteers, it could be that those who volunteer are a select group who enter foot patrol with the attitudes noted. This concern is somewhat mitigated by the finding that only 16 percent of respondents with foot patrol experience reported volunteering for the assignment. The sample of motor officers was not random. It is possible that those responding were not a typical group, but a self-selected group of officers with a particular story to tell.

Regardless of their source, profound differences were found to exist in particular attitudes and behavior of foot and motor patrol officers. The areas where differences were found in basic orientations to the citizens and the job are areas of concern to civilians and police administrators alike as they evaluate police services. Although the findings reported in this chapter are not conclusive, what they suggest is potentially important for police administrators: namely, that foot patrol is associated with police officers who have significantly different attitudes from their colleagues in motor patrol.



## *Chapter 8*

### *CONCLUSIONS*

*George L. Kelling*

THERE HAS BEEN debate regarding what the police function ought to be, and what proper police strategies are, since the beginnings of the modern police in England in the 1800s. This debate carried over to America, and any discussion of the use of foot patrol in contemporary American cities must anchor itself in these historical issues. This summary and conclusion attempts to bring together the findings of this study with the more general debate about police functions. In particular, it attempts to show how the more general issues regarding police functions are mirrored in the issues involved in the use of foot patrol.

Typically in the United States, foot patrol has been rejected by police as antiquated, expensive, and irrelevant to contemporary policing. It is not too strong to say that in New Jersey, foot patrol was foisted on police departments and that, at least initially, most police executives did not want it. Currently, if the state did not enforce guidelines, foot patrol would rapidly decay; if officers in the program were allowed to have vehicles, they would walk very little. In most cities foot patrol is a "tack-on" program that, generally, is not integrated into overall patrol strategies. Walking a foot beat often is a position of low status, perhaps one of the lowest positions in police departments, and, as a result, often is used as punishment duty for officers. When use of foot patrol is justified by police administrators, it generally is seen as a public relations activity. When foot patrol is adopted, police officials often see it as the result of "caving in" to the public and politicians. Generally, foot patrol is seen as a luxury activity which, if more money were available, would be an acceptable, but not a central, "police" activity. Nor is it to be too cynical to suggest that a good share of the popularity of the Safe and Clean Neighborhoods Program with chiefs of police in New Jersey stems from the

reality that it provides funds directly for police budgets, funds that probably would not be available from the city coffers. (And the funds for city maintenance sweeten the pot considerably.) There seems to be little doubt that, in many cities, if the state program were ended, or if state guidelines for the program were relaxed, foot patrol would rapidly disappear, whether by formal decision or informal fiat.\*

There is no suggestion here that chiefs of police were cynical or untruthful when they praised foot patrol as a means of delivering police services in legislative hearings on the Safe and Clean Neighborhoods Act. In the four years the evaluators worked in New Jersey, chiefs who were vociferous in their opposition to foot patrol became genuinely convinced that foot patrol had important contributions to make to a complete police strategy. But, always, support for foot patrol was qualified with an "if" — "If we can respond to calls for service"; "If we weren't overwhelmed with calls"; "If we have full motorized coverage." Administrators make clear that their first responsibility is to provide services that have come to be defined as essential. Then, if there was slack, foot coverage would be of benefit.

It is easy to sympathize with this point of view. The problems police administrators deal with are extensive. Though it is arguable that there are respects in which the police occupation has created many of its own problems regarding the expectations citizens and politicians have of them, those sociological and historical arguments are of little comfort to a competent police administrator confronted with an unbelievably wide range of problems. Correctly, she or he can think, "I didn't create those expectations; I am simply expected to meet them." Confronted with desperate cities, reduced budgets, militant unions, an ever-increasing demand for services, the police administrator, not surprisingly, says or thinks, "Thanks a lot," when social scientists or evaluators find that one more police strategy fails to deal with crime.

Yet in spite of the systematic rejection and abandonment of foot patrol, there is something about it that remains attractive. Citizens and merchants seem to like it. The bobbies in London seem to do something for the city. Most citizens, even those who have had bad experiences with the police, seem to appreciate contact with the

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\*Some years ago the authors of this study were invited to evaluate foot patrol in a large eastern city where it was regaining its popularity. Although administrators *believed* that foot beats were covered up to 90 percent of the time, in fact, the vast majority were covered less than 20 percent of the time. When "other" things had to be done, foot patrol officers did them. In other words, foot patrol was seen as organizational "slack," to be used to deal with whatever contingencies developed.

police, maybe hoping that it will be different in some way— that the officer will be helpful, neutral, pleasant, rescuing, whatever. Perhaps those who live and work in cities and deal almost exclusively with strangers find comfort that there are available police officers whose behavior generally can be predictable. There is some evidence that many cities are experimenting with foot patrol and that it seems to have a unique appeal for citizens and politicians. This popularity and appeal make it necessary to context foot patrol as a way of delivering police service in a broad understanding of the overall police function.

The public sees the police, and the police see themselves, primarily as crimefighters and law enforcement officers. Evidence is to be found not only in policing itself but in the support system that is developing for policing. If other than city funds are made available to the police, it is only as it is related to their crime functions. If courses are taught about police in universities, the police are conceived as part of the criminal justice system. They are seen as central to the “war on crime.” The concept of police as being part of a public service system generally is met with derision and scorn by police and, often, even by police educators. The phrase, “We’re not social workers” (as if it is self-evident that if one is part of a public service delivery system, one is automatically a social worker), is a constant theme of police. Regardless of whether Manning (1977) is correct when he asserts that the belief in this proactive, aggressive, crime-fighting image has been central to the search for occupational legitimacy by the police in America, he is correct when he asserts that the crimefighting image has achieved mythological status among police and has very important symbolic elements. It is central to how the police present themselves and is a central factor in their occupational culture.

During the past 15 years there have developed a series of challenges to this definition of the police primarily as crimefighters. These challenges have come from three basic lines of inquiry.

The first of these challenges has come from a growing number of historical inquiries into policing. Authors such as Fogelson (1977), Miller (1977), Critchley (1967), and others, make clear that the definition of the police primarily as crimefighters fails to recognize that, although dealing with crime was and remains important, the police had many other public order and regulating functions associated with the breakdown of public order and the emergence of the crowd as a potent political force in the early 1800s, both in England and in the United States. Fogelson traces the emergence of the

crimefighter/preventive orientation of the police to the political reform efforts during the early 1900s in the United States. (In fact, out of fear of the consequences of a too-active police force, the proactive, preventive crime model was specifically precluded in America before that time.)

The second line of inquiry that has undermined the image of the police as primarily crimefighters resulted from studies analyzing what police do and what they are asked to do. Briefly, all analyses of police activities indicate that only a small portion of police time is spent on crime-related matters: The vast majority of time is spent in order maintenance and public service activities.

The third argument stems from the research, conducted over the past five to ten years, evaluating police strategies. This research suggests the effect that police can have on crime is relatively limited and that proactive police activities are remarkably unproductive of arrests and other crime-related outcomes.

These three lines of inquiry suggest that, although the crime-related functions of the police historically were important and continue to be so, it is insufficient to define the police either predominantly or exclusively on the basis of those functions. Their functions are far broader, and consist of peacekeeping and management functions essential to urban life. Taking this point of view, the police are not just a part of the criminal justice system, but also are a key element of urban government. They are the primary contact citizens have with government. In the cities we have studied, police services constitute more than 30 percent of the cost of city government. The police are available 24 hours a day. They resolve conflicts between families, groups, interests, and individuals. All police rhetoric about crimefighting aside, it is clear, from observing the needs of citizens and what the police actually do, that the order and service functions are the functional heart of policing.

The crimefighting emphasis had distracted from conflict and public order problems in America's massive cities. This is dramatically illustrated in aging northeastern cities where the police mandate and community needs continue to reflect the historical debate about what the police ought to do. To examine this issue further, the discussion will focus on Newark, a city central to this evaluation.

### *CITIES AND FOOT PATROL*

In Newark are all the strengths and weaknesses, vitality and decay, and problems and opportunities of urban centers as they struggle to make cities livable for citizens who have always lived in



them, for those now moving into them, and for people who come to work in them. When Mayor Gibson said, "Where America's cities are going, Newark will get there first," he was referring to the problems Newark was facing. Certainly the ethnic divisions that tore the city apart in the 1960s seem less painful now. The new construction in downtown Newark is a source of pride as evidence of a city turning around. Yet for Newark, as for most American cities, problems remain. Resources are diminishing. Tax bases are high. Large proportions of the urban population cannot find work and receive unemployment insurance or welfare. Many citizens work in the city by day and return to the suburbs at night. The insurance businesses which center in downtown Newark draw people to Newark during the day, but many are commuters who work in Newark, but live elsewhere. Many businesses a block or two off the main intersection give the impression of marginality. Some storefronts are boarded up. Many of the businesses that remain cater to business persons during the day and close early. In some areas, after business hours, the streets are lined with street people, youths, and drunks. Persons leaving late from work wait at corners for buses.

Most residential areas where foot officers walk are the high crime areas. Buildings, homes, public housing often are decrepit and decaying. Many of the small businesses in the residential areas foot officers patrol give the impression of just barely hanging on.

The people using and living in these areas, in many respects, are the most vulnerable people in society. The residents of these slum areas, the vast majority of them law-abiding citizens, are the minorities and aged who suffer from criminal victimization at the highest levels. These citizens are fearful, and with good reason.\*

Most of the police who patrol these areas on foot are white. They walk in pairs. Few, if any, live in the areas they patrol. Most live outside of Newark, in keeping with a state law permitting them to do so. Most of them are older than their colleagues in cars. They are on foot for a variety of reasons: they are bored in cars, they like to meet peo-

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\*All the above does not suggest that Newark, nor most other American cities, does not have many areas that are vibrant and attractive. To the contrary, many areas of Newark are exciting and interesting. The authors of this report have enjoyed good restaurants, interesting street life, and other benefits of cities, not only in Newark, but in many other New Jersey cities. Likewise, the above does not suggest that because some of the citizens of urban areas have become demoralized by urban problems and have responded pathologically that anywhere near a majority has. In fact, the vast majority of urban residents are eager to work, live peacefully with their neighbors, and be productive. In fact this report suggests that it is these citizens for whom foot patrol has the greatest benefit.

ple, and so on, but the regular hours are a definite attraction. For the most part, they are consistently civil with citizens. While not particularly aggressive in seeking out contact with people on the street, they seem generally to be familiar with their areas. They stop regularly in business establishments and are well known in them. They are concerned about these small business people. Whether the policy is explicit or not, officers understand that part of their responsibility is to try to keep these businesses in the city. The police officers are deferential; they respect the territory of the business person. If a dispute begins between a business person and a customer, the rights of property, territory, and ownership are respected. The customer, right or wrong, is encouraged, in a variety of ways, to leave.

Citizens shopping or waiting for public transportation are a concern of the officers. On one beat on which one of the authors walked, street people, winos, drunks, and persons using drugs, understood that they had better not panhandle from or hassle people waiting for buses. They knew that if they persisted, arrest was likely. They did not challenge this rule, in fact, they teased one of their peers when he did persist in bothering a young mother and child waiting for a bus, indicating that he must have wanted to be arrested. He was.

Street people also turned to the police for assistance. When a youthful stranger came on the beat, inviting other street people to "roll someone" with him, the street people, fearful for their own money and possessions, discreetly contacted the officers, who, in turn, drove the youth off the beat with threats of arrest. With the street people, the police maintained a distant familiarity. Although they were generally civil, one could feel disdain in many of these officers for some of the street people; many were drunk or drugged, smelly, drooling and vomiting, and filthy. At the end of shifts, over a beer, feelings of bewilderment, frustration, hostility poured out of the officers. Yet that doesn't suggest they withdrew services from these people. While they might have felt some disdain, the officers did attempt to protect and monitor the street people. Although their attitudes toward them often may have been negative, their behavior, for the most part, was civil.

The primary concern of foot patrol officers seemed to be for two groups of people: merchants, and residents using the streets and the services of these merchants. That primary concern seemed to express itself in the following way: foot patrol officers were there to reassure people using the street who, for a variety of reasons, feared other people also using the street. It seemed clear that it was not just an abstract notion of being victimized that created fear in people using

the streets. (The relationship between victimization and fear has always been unclear. Many people are fearful in areas that are relatively safe.) People using the streets during the day and at normal shopping times are threatened and made fearful by other people. In the areas of the experiment, people seemed most fearful of:

- groups of youths;
- drunks panhandling;
- noisy teenagers with blaring radios;
- people pushing through queues;
- people loitering;
- youths sneaking on buses;
- drunks sitting or sleeping in doorways or on home or business stoops;
- mentally disturbed people, whose behavior is peculiar and unpredictable

What these people triggered was a fear of strangers and of public order breaking down. When city streets work well, when areas are thriving, even though almost all of a citizen's contacts on streets are with strangers, the citizen feels reassured by the "hustle and bustle" of urban life. While there might be drunks and panhandlers in the area, most of the people seem familiar. Rules with which citizens are familiar seem to operate. When rules are broken, there is perhaps no redress, but there is, at least, a community feeling of disapproval. People do not feel alone. If a situation begins to deteriorate, there is potential help. There are people with whom the person can feel a kinship. But there seems to be some point of turnover, at which the number and kind of strangers who elicit fear becomes so threatening that people lose confidence in their ability to manage by themselves.

The point is, fear is only partially related to crime and publicity about crime; it is also related to the experiences people have on the streets that are not related to criminal events. These public order issues give rise to the fear that people, especially the weak and vulnerable, experience when dealing with strangers and events which to them are alien, uncivil, or threatening. In fact, the youths on a corner, the teenager with a blaring radio, may be ignorant of the threatening aspect of their behavior and may be no threat at all.

This helps to explain what at first seemed the anomalous finding reported in Chapter 6. The evaluators anticipated that areas patrolled by foot would have an increase in street use and that residents would react positively. Instead, area residents perceived heavy pedestrian traffic as undesirable. For them it was associated with teenagers

and groups of adults "hanging around," an undesirable presence. Their perception seemed to be that withdrawal of foot patrol increased such activities and adding foot patrol decreased them. It is also consistent with the findings of the Asylum Hill Project in Hartford, Conn., in which it was found that "those people who saw prostitution, teenagers and loitering men as the most serious problems [in the neighborhoods] were also most concerned about crime" (Fowler, 1979), and a recently reported study by the American Association of Retired Persons which found that a third of senior citizens go to some lengths to avoid passing youths on the street.

Thus the often heard dismissive sentiment that "foot patrol just makes people feel better; it doesn't really make them safer," is irrelevant from this point of view. Citizens are threatened by noncriminal behavior and that threat dramatically affects their behavior. Those feelings and that behavior are not inconsequential. They directly threaten the viability of major urban areas and undermine attempts to make city life tolerable, much less pleasant, for residents. If vulnerable and weak people feel safe as a result of a specific police activity and if that feeling improves the quality of their life, that is terribly important. This is not to encourage the development of false security which lures people into activities in times and places that are dangerous. The idea is to help reduce the fear that results from non-criminal public conduct by strangers, as well as the fear that stems from crime.

The specific police activities which seem to have the possibility of effecting this have been described by one of the authors of this evaluation as public order management activities (Kelling, 1978).

The Police Foundation is now conducting a multi-city study of foot patrol in a group of Eastern cities. In preparation for that, several of my colleagues and I spent time walking with foot patrol officers in those cities. Many of the cities are old, confronted with all the urban maladies. In one of the older cities, which has gone through abrupt changes in its population and is considered one of the "tough" cities in this country (I mean tough in the sense of having all of the urban problems), I spent several evenings walking with a particular officer. I will call him Kelly. The area was in the heart of the city—one of the busiest intersections. Although a large department store was nearby, most of the businesses were marginal jewelry stores, drugstores (all with display cases filled with straight-edge razors and knives), bars, and the like. Many buildings nearby were abandoned. The methadone maintenance center was two or three blocks away.

Yet the area was important. It was close to the train station (for commuters entering the city in the morning and fleeing at night);

the largest department store in the city was within blocks; and one of the intersections on the beat was *the* main bus transfer nexus. If the downtown was to survive, people had to be comfortable using that intersection. "Street people," primarily black, lined the streets. Kelly was white. This was his "beat." Everyone who was a "regular" referred to him as "Kelly."

Drunks and addicts could sit on the stoops of shops, but could not lie down. Bottles could be carried in brown paper bags. People could drink on the street, but not on the main intersection. Talking to, hassling, or begging from people using the bus transfer points was forbidden. There would be only one warning; if hassling persisted, criminal or vagrancy sanctions would be imposed. And in an event I witnessed, when sanctions were imposed, the violator was held up to ridicule by the street people because he was so drunk and dumb as to challenge clearly understood rules. When "strangers" joined the street people, "regulars" pointed them out to Kelly; especially if they didn't have money. If the stranger didn't have money, he was perceived of as a threat to all, and Kelly sent him on his way, monitoring his leaving, and with the support of the "regulars."

I could go on. The managing worked. People used the streets. The "regulars" turned to the police for assistance. (I had forgotten just how fearful and in need of protection these people felt.) The rules emerged out of a collaboration between Kelly and the people of the area and all perceived of it as legitimate. I am certain that had Kelly worked another area the rules would have been different. But in this area those rules worked, and when they were violated, Kelly intervened, and the *violator* then was perceived of as deviant and Kelly's intervention legitimate.

The point of these examples of police management of public activities is that the police have become more and more essential in cities where problems are severe, the potential for conflict high, and merchants and citizens have less private resources and capacity to obtain relief. Given those circumstances, debate about basic police functioning is not a small matter of academic quibbling about definitions. It is a question of maintaining the viability of cities during periods of great social change.

Against this background, the findings of this study gain particular importance. Before discussing those findings, however, two more issues must be discussed; the effect of the management-union conflict, and the decision to emphasize the less conservative statistical analyses.

### *METHODOLOGICAL ISSUES*

First, there are at least two good reasons to believe that the management-union conflict regarding the layoff of 200 police officers had a differential effect on the two samples. During the explora-

tory phases of this evaluation, foundation staff spent considerable time walking on foot patrol. Although the amount of contact and recognition between residents and police was somewhat limited, there was considerable contact between merchants and foot officers. Merchants knew officers by name; they held brief conversations regularly; they were aware when an officer's partner had been transferred and a new officer was assigned. Often a foot officer stored rain gear in shops on the beat. When informally queried, merchants were effusive in their praise of foot patrol. Representatives of every New Jersey city visited during the evaluation had produced many letters from small businesses and associations testifying to the importance of foot patrol. It was this closeness to merchants, the evaluators believe, that led to the differences between the residential and the commercial samples.

The routine conversations between police and merchants gave the police more than ample opportunity to express their acrimony about the layoffs. The police believed that they were "the thin blue line" between what civility remained and utter chaos in the city. Police officers "knew" that crime was running away with Newark at an unprecedented level. Given the frequent conversations between police and merchants, it is likely that merchants were well aware of these police views. Whether the union and its members were right or wrong in their beliefs about the consequences of the layoff, their arguments would have a special logic and appeal to business people. If crime were to escalate, business people could perceive themselves as doubly jeopardized, personally and occupationally. They would fear not only the personal and financial effects of being victimized, but also the slow economic consequences of citizens' reluctance to use the streets and shop in their stores, the basic threat to commercial survival.

The conflict was well documented and dramatized in the press. A "fear city" campaign was run, with charges of irresponsibility flying in both directions. Reported crime statistics were hauled out to demonstrate how dangerous the city had become. (The evaluators analyzed the reported crime statistics and could not confirm that there had been such an increase. Two major snowstorms in 1977 created an artificially low reported crime rate for that period, but generally no upward trend existed.)\*

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\*The evaluators by no means wish to take any sides in this dispute. Administrators were doing what they believed best. Unions were fighting for members and their jobs. Whether we agree with either strategy is irrelevant to this study.

Commercial respondents were not only more vulnerable to the word of mouth campaign carried out by the police officers, but their interest could well have caused them to be more alert to press accounts of the conflict than were residents. These two factors, contact with officers and more familiarity with press accounts, probably led to a differential effect of a condition independent of the experiment: conflict between the police union and city and police officials. It is not unreasonable to assume that this conflict had greater impact on commercial respondents than on residents.\*

The second issue has to do with the statistical analysis. In evaluating programs, at least four outcomes are possible. A program can have the desired effects and the evaluation can reflect them. A program can fail to obtain its goals and an evaluation can reflect that. Both of these circumstances result in a successful evaluation. But there are two other alternatives, feared by both evaluators and program managers. It is possible to have a program that achieves its goals, and a negative evaluation, or to have a program that fails and a positive evaluation. These alternatives can stem from a variety of problems: poor design, contamination, measurement error, use of inappropriate surrogate measures of outcome, etc. Concerned that the New Jersey evaluation might represent a positive program and an evaluation that failed to show that, the evaluators analyzed the data in two ways.\*\* These analyses are discussed in detail in Chapter 6. One method, in which beat means are used in statistical analysis, is a conservative approach. The other, in which individual respondent mean scores are used in analysis, is less so.

For a variety of reasons mentioned earlier, which bear repetition, the evaluation staff believes the findings which resulted from less conservative analysis. *It is essential to clarify for researchers and program managers that this belief could be wrong. The evaluation could be attributing positive results to a program that has no effect. The evaluators do not believe that to be so, but it is a possibility.*

The reasons for choosing the less conservative model of analysis are as follows:

1. There is a definite pattern in the findings. Consistently, when statistical significance is achieved or approached, the positive

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\*To explore an alternative interpretation—i.e., that the difference in the responses between residential and commercial respondents could be explained by the race of the commercial respondents—the commercial respondents were analyzed by controlling for race. Race does not distinguish the responses of the business people.

\*\*This is consistent with Blalock's suggestion when he advocated flexibility in drawing inferences including shifting units of analysis (Blalock, 1961, 186).

(or less negative) results favor the "added" beats. In research of this type this consistency is uncommon, and therefore persuasive.

2. This consistency persists *in spite* of an exacerbated conflict between the police union and the city, in which a "fear city" campaign was conducted during the experiment and the T<sub>2</sub> survey. There is no way this campaign could have failed to have an impact on citizens. It was impressive that consistently positive or less negative findings were found in the midst of this campaign.

3. It confirms the impression from the early qualitative analysis that foot patrol is recognized and has beneficial results. These impressions were gained interviewing chiefs, city officials, merchants and other relevant persons, and walking foot patrol in many New Jersey cities, as well as in London and Manchester, England; Glasgow, Scotland; and Sydney and Melbourne, Australia.

4. This effect is powerful because it reflects the activities of police officers who, for the most part, are untrained in foot patrol practices, who often do not want to be on foot patrol, who are not well integrated into the patrol force, and who are on the foot beat *one* shift per day. Given the modest strength of the stimulus, the consistency of the findings is impressive. (This point can cut both ways. It can be used to argue that the stimulus was so slight that choosing the less conservative analysis was inappropriate. Given points 1, 2, and 3 above, the evaluators choose to believe the former interpretation.)

#### SUMMARY OF FINDINGS

1. The first major finding, significant regardless of analytic approach used, was that *residents were aware of levels of foot patrol*. Although people seem to be only modestly aware of the levels of motor patrol (Kelling, *et al.*, 1975, 38-39) and are not particularly sensitive to team policing (Fowler, 1979, 136), they seem to be acutely aware of the presence of foot patrol. Given the different size of beats and speed of movement, perhaps this is not surprising. It does suggest that, if a goal of a program is to make citizens more aware of police presence, foot patrol is especially useful. Commercial respondents reported drops in their awareness of foot patrol in all three conditions, probably because the experimental manipulations took place in the evenings, after business hours.

2. *Generally, crime levels, as measured by the victimization survey and reported crime* (to the extent that reported crime measures it) *are not affected for residents or commercial respondents at a signifi-*



*cant level.* There seem to be no strong trends in the data.

3. In measures dealing with citizens' perception of crime, a different pattern emerges. *Consistently, residents in beats where foot patrol was added see the severity of crime problems diminishing in their neighborhoods at levels greater than the other two areas.* Street disorders, serious crime, drug usage, vandalism, victimization of the elderly, and auto theft all are perceived to be less of a problem. The greatest decreases occur in perceptions about street disorders, victimization of the elderly, and auto theft, all of which are street crimes potentially controllable by foot officers.

Commercial respondents report a different pattern. *When statistical significance is found (street disorder, drugs, teenage loitering, prostitution, auto theft, rape, and shoplifting), the trend is that the perceived severity of the problem is greatest in the "added" beats (with the exception of auto theft) and least in the "dropped" beats.* Again, this finding reflects the exposure of commercial respondents to the "fear city" campaign, but not to the foot patrol experiment.

4. *In looking at the perceived safety of the neighborhood for residents, a pattern similar to that for perceived severity of crime problems emerges. Of the six times statistical significance is found, five favor the "added" beats.* The perceptions regarding likelihood of crime, of serious nighttime crime, of day street robberies, of daytime assaults, and of general feelings of personal safety either go down or increase less in the "added" areas. The second pattern was that the level of safety in the beats with new foot patrol increased in eight of the nine measures.

The pattern for commercial respondents again differs. Although no items were found to be of statistical significance, the perceived safety of all conditions decreased.

5. *A similar pattern emerges in responses to questions about what protective measures residents and merchants take to avoid crime. In three cases, crime avoidance efforts during the day, a composite of crime avoidance efforts, and non-weapon protection against theft, residents of the beats that added foot patrol indicated a greater reduction in the use of protective measures than persons in the other two conditions. No items of significance appeared in the analysis of the commercial respondents' responses.* However, 28 of the 42 measures were positive, indicating that there was a general trend in businesses to take protective measures.

6. *The final attitudinal dimension is the evaluation of police services by residents and commercial respondents. For residents, statistical significance is obtained in all 12 measures; more positive or less nega-*

*tive responses occur in the areas that added foot beats in 10 of the 12 measures.* Of these ten, two of the questions deal with police services generally and the rest deal with residents' evaluation of motor patrol services. The overwhelming impression is that positive attitudes gained from foot patrol generalize to other patrol services, an important finding in inner city urban areas, where both citizens and police protest police-citizen alienation.

*The pattern is again different in the commercial sample, where only five items achieve statistical significance.* This failure to achieve strong effects is consistent with the fact that the foot patrol experiment did not take place during normal business hours.

Thus, the general impression is gained that while foot patrol does not have a significant effect on crime, it does affect citizens' fear of crime, the protective measures they take to avoid crime, and the perceived safety of their neighborhoods in consistent and systematic ways. In general, when foot patrol is added, citizens' fear of typical street crimes seems to go down and generalized feelings of personal safety go up.

Finally, foot patrol officers surveyed in New Jersey generally seem to have higher levels of job satisfaction, a more benign view of citizens, and a more community-oriented view of policing than their colleagues on motor patrol.

#### *Cost Analysis*

As discussed, the initial plan was to conduct a cost/benefit analysis and to make comparisons of the benefits of motor and foot patrol. State officials in New Jersey were especially interested in this aspect of the study. Although *cost* analyses of motor and foot patrol are included in this report (Appendix 6); it has not been possible to do *cost/benefit* analyses, nor to make the comparisons. The inability to do a cost/benefit analysis has not been for lack of trying. Although staff of the Foundation and this particular evaluation team have struggled with the issue for some time (Kelling, 1978; Kelling, Wycoff, and Pate, 1979), the lack of specific outcomes and the inability of the field to identify measures of police productivity that are specific and unambiguous (Wycoff and Susmilch, 1978; Kelling, Wycoff, and Pate, 1979) have made the calculation of the cost of derived benefits and the comparison between different patrol approaches impossible at this time.

Nevertheless, cost analyses such as the one included in this report are valuable for several reasons. They answer the questions, what are the functions (patrol, investigation, etc.), what is the total

cost of each function, and what is the average cost of each function. Typically, costs in government budgets are organized on a "line item" basis. In essence, police costs are broken down by salaries, equipment, gas, etc. The major reform instituted in the Department of Defense by Secretary of Defense McNamara during the early 1960s was to implement a program budget. As a result, defense analysts could determine how much money was spent on each program/function and could compare the costs of Strategic Forces, General Purpose Forces, Tactical Forces, etc., with their perceived benefits. The line item defense budgets left defense planners with little rationale concerning how to allocate funds or how funds were wisely spent. The same could be said for the current line item nature of police budgets.

Functional cost accounting or program cost accounting gives the police administrators at least some idea of what one function costs in comparison with another. If the functions appear to yield similar results, then more money should be channelled into the cheaper function. If functions cost the same, but one function yields dramatically higher perceived benefits, then more money should be shifted into the function that yields higher benefits.

Through time, functional cost accounting can also yield other important dividends for police administrators. The current inflationary environment obscures and confuses increases in functional services with increases in functional costs. Assume, for sake of an example, that two functions each cost one million dollars and yield similar benefits in 1978. If both cost \$1.1 million in 1980, an increase of 10 percent, should the administrator be indifferent about the cost increase? It depends. It could be that function A costs 10 percent more because the salary of the workers and the cost of materials involved increased by 10 percent. On the other hand, it could be that function B costs 10 percent more because 10 percent more workers were hired at the 1979 wage and, consequently, a 10 percent increase in services resulted. Clearly, without functional cost accounting, this difference is obscure.

For these two reasons, the matching of services to costs and the evaluation of cost increases through time, a wider use of functional cost accounting by city officials in general and by policy administrators in particular could yield important benefits.

Beyond this long-term benefit however, the closing discussion of the cost analysis is suggestive for police development. The argument there simply is that as more and more police officers conduct the same activities, the benefit derived from those activities begins to

diminish, so that even if the initial productivity of a motor patrol officer is ten times that of a foot officer (a questionable assumption, given the research on preventive patrol and rapid response to calls for service), a point is reached at which the benefits accrued from a foot officer are greater than those accrued from the addition of the  $n^{\text{th}}$  motor officer. If it can be shown that there are definite benefits from foot patrols—and the evaluators believe that that has been demonstrated—and if those benefits are of value to police agencies and communities, they can be attained at relatively nominal cost, given the expense and known lack of effectiveness of motor patrol.

Reviewing, then, this study has found that foot patrol significantly affects citizens' feelings of safety and fear, as well as their evaluation of police services. The argument has been that foot patrol attains these goals under the most difficult of urban circumstances and for people who are relatively weak and vulnerable.

The goals have been achieved despite the lack of training for foot patrol officers; the low status of foot patrol as an assignment; the lack of integration of foot patrol into overall patrol strategy; and the patrolling of beats for only one shift per day.

This is not to suggest that these findings warrant a wholesale return to foot patrol. There are many cities and areas within cities where the physical distances between residences and businesses are so great that it would be unreasonable to expect foot patrol to have a great effect. Further, the empirical literature regarding police strategies is beginning to suggest a variety of strategies that might have effect, depending upon the nature of the community problem, the available resources, the mix of strategies available, etc. But it is an oversimplification to say that foot patrol is too expensive or that it is simply a public relations technique. In fact, there are powerful suggestions in this study that foot patrol may well be an important ingredient in any mix of police strategies that attempts to deal with current problems in congested areas of large cities. If we are concerned about the problems of the management of the interactions of strangers in cities, foot patrol can be an important factor. It will not solve all of the community needs. But for those citizens who live, work, and conduct business in the hearts of our cities and who are threatened and made fearful by the conduct of strangers, it offers promise of fear reduction and by so doing, improvement in the quality of urban life. But it may offer promise of even more.

The earlier discussion of the historical and current issues regarding the function of the police argues for what can be called a public service model of policing, one that acknowledges a multiplicity of ur-

ban police functions with crime control, investigation, and prevention being one set of important functions, but only one among many. Further, public disorder and strangers on streets generate as much fear as crime itself, and maybe more, and that attempts to manage public order are, perhaps, as essential to reducing fear as to dealing with crime.

In the past, many advocates of the crimefighting model have argued that crimefighting and public service are mutually exclusive functions. There is another point of view, however, that, to the extent police can affect crime, that effect will come about as a result of their public service functions. (For a discussion of both of these points of view, see Kelling and Fogel, 1977). Given that most crime is solved through information provided by citizens to patrol officers, it is plausible to expect that if the police were to take advantage of foot patrol's potential for developing good relations with community residents, they could gather much information of potential value for carrying out their crime-related functions. Although these issues need to be more thoroughly discussed and their implications drawn out, it is reasonable to suggest that this is an important area for research and program development.

### *CONCLUSION*

It is not for this evaluation to recommend to the state of New Jersey whether it should continue the Safe and Clean Neighborhoods Act. That is a political and administrative issue for the leaders and citizens of New Jersey to decide. A combination of circumstances resulted in the evaluation's focus on Newark. Foot patrol has demonstrated value to urban residents who are in great need of it. If the goal of the Safe and Clean Neighborhoods Act was to increase the feelings of safety for citizens using the streets, it has attained that goal. The data here do not show that the program has reduced crime, but there are reasons to believe that if foot patrol were properly integrated into a total police strategy, the potential for doing so exists.

For communities considering the use of foot patrol, we believe it could be strengthened in the following ways:

1. Raise the status of foot patrol officers to equal that of other units. The rationale behind this recommendation is that if foot officers are to make their maximum contributions to a complete patrol strategy, their work must be seen as being at least as important as motor patrol. If it is, there are indications that many officers would be drawn to foot patrol both because of inherent characteristics of

the work and the potential for regular assignments. As it is, motor patrol still tends to be a magnet which draws many good officers out of foot patrol. If foot patrol is considered important and rewarding, the resulting potential for continuity of assignments can further the officers' familiarity with residents, merchants, and citizens generally. This in turn will enhance all the benefits of foot patrol and provide the best opportunity to test foot patrol's potential to deal with crime.

2. Increase the use of foot officers to respond to calls for service. Research into police response to calls for service indicates that rapid response rarely is warranted. Citizens properly handled by telephone are comfortable with predicted delays. The use of foot officers to respond to all but those rare calls when speedy response is justified will increase the familiarity of the officer with the citizen and vice versa. In addition to having important consequences for citizens' attitudes, the use of foot officers to respond to calls for service in their beats can increase their stock of information about citizens, crimes, and victims. This has a crime reduction potential.

3. Provide specific training for foot patrol reflecting its functions. Although not codified, we believe that knowledge and skill exists about foot patrol that could be systematically taught to officers both pre- and in-service. Foot patrol is not a slow version of motor patrol, but has distinct goals and methods. Our review of existing literature suggests that though there is relatively little valuable literature regarding foot patrol, materials (perhaps especially case materials) could be developed that could be useful for teaching purposes. The lack of training materials for foot patrol probably is a result of the lack of serious recognition of foot patrol's potential.

4. Attempt to find ways of using the information foot officers can get about criminal activities and individual criminal events as a result of their closeness to a neighborhood. There is research suggesting that effective information-gathering and -processing has the greatest potential of all current police strategies to increase police effectiveness in dealing with crime. Foot patrol officers have a unique potential to gather information and place it in context. If this information is to be of strategic use, police agencies have to learn both to reward its organization and distribution and to process it effectively.

5. Emphasize closer integration of officers into neighborhood activities. This is not to be confused with recommendations that officers move into communities or become public service officers. It suggests instead that officers could become neighborhood consultants regarding crime and public order issues. This will require training and flexibility of hours but may have great anticrime value.

6. Increase the flexibility of hours so that officers are in beats at times of highest street activity, and when residents most want to use the streets. This might require data-gathering and analysis by the foot officer, but such activities could bring the officers into closer relations with citizens.

The limited paperwork and small bureaucracy associated with the administration of the state program have been impressive. Decisions came easily and appear reasonable. There is every reason to suspect that if the state's overview of the program were to end, foot patrol would slowly evaporate. Finally, the size of the sample and the limitation on evaluation funds do not allow conclusions about the probable impact of foot patrol in areas different from those observed. Its value in middle class and other areas remains a subject for further exploration. But where foot patrol is most needed, where people are weak, vulnerable, and afraid, it has a demonstrated effect.





## REFERENCES

- Adams, T. F. *Police Patrol Tactics and Techniques* (Englewood Cliffs, New Jersey: Prentice-Hall, 1971).
- Ahearn, J. F. *Police in Trouble: Our Frightening Crisis in Law Enforcement* (New York: Hawthorne Books, Inc., 1972).
- American Bar Association. *Standards Relating to the Urban Police Function*. American Bar Association Project on Standards for Criminal Justice. Institute of Judicial Administration (New York: March 1972).
- American Bar Association. *The Urban Police Function*. Approved draft (Chicago: American Bar Association, 1973).
- Ashburn, G. "Changing the Rhetoric of 'Professionalism'" in *Innovation in Law Enforcement*. United States Department of Justice. Law Enforcement Assistance Administration (Washington, D.C.: U.S. Government Printing Office, June 1973).
- Bertram, D. K. and A. Vargo. "Response Time Analysis Study: Preliminary Finding on Robbery in Kansas City." *The Police Chief* May 1976, 74-77.
- Bittner, E. *The Functions of the Police in Modern Society*. Department of Health, Education, & Welfare Publication # (HSM) 72-9108 (Washington, D.C.: U.S. Government Printing Office, 1970).
- Bloch, P. B. and C. Ulberg. "The Beat Commander Concept." *The Police Chief* 39 (9) September 1972, 55-63.
- Blumberg, A. S. and A. Niederhoffer. "The Police in Social and Historical Perspective" in *The Ambivalent Force: Perspectives on the Police* (Waltham, Massachusetts: Xerox College Publishing Co., 1970) 1-15.
- Bright, J. A. *Beat Patrol Experiment* (London: Home Office, Police Research and Development Branch, October 1970).
- Brown, W. "Patrol Deployment: An Analysis." *Canadian Police Chief* 62 (3) July 1973, 17-38.
- Clark, R. *Crime in America: Observations on its Nature, Causes, Prevention, and Control* (New York: Simon & Schuster, 1970).
- Critchley, T. A. *A History of Police in England and Wales, 900-1966* (London: Constable, 1967), 45.
- Cumming, E., I. Cumming, and L. Edell. "Policeman as Philosopher, Guide, and Friend." *Social Problems* 12, 1965.
- Fisk, D. *The Indianapolis Police Fleet Plan* (Washington, D.C.: Urban Institute, October 1970).
- Fogelson, Robert M. *Big City Police* (Cambridge, Mass.: Harvard University Press, 1977).

- Germann, A. C. "Changing the Police—the Impossible Dream?" *Journal of Criminal Law, Criminology, and Police Science* 62, 1971, 416–21.
- Gourley, G. D. *Patrol Administration* 2nd Edition (Springfield, Ill.: Charles C Thomas, Inc., 1974).
- Hogan, E. J. and J. Fagin. "Integrating the Policeman into the Community." *The Police Chief* 41 54–56, December 1974.
- Iannoe, N. F. *Principles of Police Patrol* (New York: McGraw-Hill, 1975).
- Institute for Defense Analysis. "Part III: Analysis of Response to Police Deterrence," (Washington, D.C.: 1966) (Unpublished study cited with permission).
- International Association of Chiefs of Police. *The Patrol Operation* (Washington, D.C.: 1970).
- Kakalik, J. S. and S. Wildhorn. "Aids to Decision Making in Police Patrol" (Rand Corporation, 1971). Cited in T. J. Sweeney and W. Ellingsworth, Kansas City Police Department, Kansas City, Missouri, 1973.
- Kelling, G. L., T. Pate, D. Dieckman, and C. E. Brown. *The Kansas City Preventive Patrol Experiment* (Washington, D.C.: Police Foundation, 1974).
- Kinney, J. A. *Isla Vista Foot Patrol*. Paper presented at American Society of Criminology Annual Meeting Philadelphia, Pennsylvania. November 7–10, 1979.
- Larsen, R. C. *Urban Police Patrol Analysis* (Cambridge, Massachusetts: MIT Press, 1972).
- Locke, B. and A. B. Smith. "Police Who Go to College" in A. Niederhoffer and A. S. Blumberg, eds. *The Ambivalent Force: Perspectives on the Police* (Waltham, Massachusetts: Xerox College Publishing, 1970), 144–47.
- Miller, Wilbur R. *Cops and Bobbies* (Chicago and London: University of Chicago Press, 1977).
- Milner, C. and R. Milner. *Black Players* (New York: Bantam Books, 1962).
- National Commission on the Causes and Prevention of Violence. *To Establish Justice, To Ensure Domestic Tranquility: Final Report*. (Washington, D.C.: U. S. Government Printing Office, 1969).
- Pate, T., A. Ferrara, R. Bowers, and J. Lorence. *Police Response Time: Its Determinants and Effects* (Washington, D.C.: Police Foundation, 1976).
- Payton, G. T. *Patrol Procedures* (Los Angeles: Legal Book Corporation, 1969).
- Pendland, M. B. and W. G. Gay. "Foot Patrols: The Fort Worth Experience." *The Police Chief* 39 (4) April 1972, 46–48.
- Prefecture de Police, Paris. "The Beat System in Paris." *International Criminal Police Review* 271, October 1973, 248–58.
- President's Commission on Law Enforcement and Administration of Justice. *Task Force Report: The Police* (Washington, D.C.: U.S. Government Printing Office, 1967).
- Press, J. S. *Some Effects of an Increase in Police Manpower in the 20th Precinct of New York City*. Report R704–NYC, New York City Rand Institute (New York, October 1971).
- Reiss, A. J., Jr. *The Police and the Public* (New Haven, Connecticut: Yale University Press, 1971).
- Report of the National Advisory Commission on Civil Disorders (Washington, D.C.: U.S. Government Printing Office, 1968).

- Richardson, J. F. *Urban Police in the United States* (Port Washington, New York: Kennikat Press, 1974).
- Saunders, C. B., Jr. *Upgrading the American Police: Education and Training for Better Law Enforcement* (Washington, D.C.: The Brookings Institute, 1970).
- Schnelle, J. F., R. E. Kirchner, J. D. Casey, P. H. Useltor, Jr., and M. P. McNeese. "Patrol Evaluation Research: A Multiple Baseline Analysis of Police Patrol During Day and Night Hours." *Journal of Applied Behavior Analysis* 10, 1977, 33-40.
- Schnelle, J. F., R. E. Kirchner, M. P. McNeese, and J. M. Lawler "Social Evaluation Research: The Evaluation of Two Police Patrolling Strategies" *Journal of Applied Behavior Analysis* 4, Winter 1975, 353-65.
- Smith, B. *Police Systems in the United States*. 2nd rev. ed. (New York: Harper & Row, 1960).
- Sparks, R. F., H. G. Genn, and D. J. Dodd. *Survey Victims* (New York: John Wiley & Sons, 1977).
- Westley, W. A. *Violence and the Police* (Cambridge, Massachusetts: MIT Press, 1970).
- Wilson, J. Q. *Varieties of Police Behavior*. (Cambridge, Massachusetts: Harvard University Press, 1968).
- Wilson, O. W. "Put the Cop Back on the Beat." *Public Management* June 1953, 182.



## *ACKNOWLEDGMENTS*

### *DIRECTOR'S OFFICE*

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 Officer Carmine Dalessandro  
 Officer Frank T. Flarity  
 Officer Rudolph R. Kaufman  
 Officer Louis J. Martins

In connection with the officer surveys, we would like to acknowledge the cooperation of Lieut. John J. Golba, Jr. (President), Lieut. Nicholas Gesualdo, and Lieut. Peter P. Nevargic, of the Superior Officers' Association; Detective Thomas Possumato, Jr. (President), Detective Patrick Meehan, and Officer Michael F. Sica of the Fraternal Order of Police; and Detective Lee E. Williams (President) of the Bronze Shields.

For their valuable advice and support during our data collection phase, we would like to express our deep appreciation to Chief Investigative Officer Joseph B. Nellegar, chief of the Records and Identification Bureau, and his able staff, especially STMO William A. Zuzzio, ASTMO Albert L. Adelizio, and the police records clerks.

Finally, we wish to thank the following individuals who made important contributions to many phases of the experiment and the evaluation effort.

Officer Allen E. Abbott  
 Officer Otis Alford, Jr.  
 Officer Richard L. Allen  
 Megan Ambrosio  
 Jody Angelo  
 Detective Robert L. Barr  
 Lieut. Rubin J. Battle  
 Councilman Michael P. Bottone  
 Officer Gus T. Bryant, Jr.

Dolores Caponetto  
 Officer Charles F. Catrino  
 Carrie Coleman  
 Officer Francis T. Collins  
 Captain Thomas J. Corcoran  
 Steve Cordes  
 Luther Cruse

Officer Clarence Daniels  
 Officer Walter M. Davis

Officer James J. Decker  
 Officer James Donahue  
 Officer Edward Donaleski  
 Officer Angelo A. D'Onofrio  
 Lieut. Thomas E. Dougherty  
 Detective James E. Dubose  
 Victoria Duda  
 Detective David G. Dzibela

Officer Willie J. Evans  
 Dr. Modi Esoka

Dr. Earl V. Farrow  
 Lieut. John F. Feind  
 Officer Thomas A. Fisher  
 Officer Joseph H. Foushee  
 Officer Joseph E. Fuller

Detective Robert T. Galler  
 Cynthia Graham  
 Lieut. Jay A. Grau

Officer Rudolph Graves  
Officer James M. Guarino

Officer Joseph P. Haveron  
Deputy Chief George P. Hemmer  
Carol Hixon  
Pamela Hocutt  
Detective Allen J. Howard  
Detective Frank Howard, Jr.  
Agnes Hynes

Officer Robert T. Iacobucci  
Officer Charles Igus

Detective Reginald Jackson

Lieut. George J. Lepre, Jr.  
Officer Nicholas F. Lordi  
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Officer James V. Maguire III  
Officer Teodore M. Malamug  
Deputy Chief Thomas W. Martin  
Officer Juan A. Martinez  
Detective Helen S. Mason  
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Officer Charles F. McGuire  
Officer George E. McHenry  
Officer Henry McNair, Jr.  
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Lieut. Thomas A. McParland  
Detective Alexander M. Melillo  
Officer Abraham Mickens  
Deputy Chief Irving J. Moore  
Captain Robert Morris  
Abdul Muhammad

Detective Ernest L. Newby, Jr.

Dr. Paul A. O'Connor  
Officer Alfred J. Ott

Officer Jackie A. Peterson  
Officer Joseph Pilonero  
Officer Thomas C. Pluciennik  
Lieut. Michael Pocchio  
Officer Larry Policastro  
Officer Willie Powell

Officer John P. Reilly  
Officer Lee H. Reynolds  
Beatrice Rosamilia  
Barbara Ross  
Officer Kenneth P. Rox  
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Barbara Sacks  
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Officer Raydell Scroggins, Jr.  
Officer Chester H. Shon  
Sergeant Lizzetta M. Smith

Officer Carmine J. Troiano

Officer Willie E. Underwood

Officer John G. Valle  
Lieut. Richard H. Villee

Louis Watson, Jr.  
Betty Ann Williams  
Richard Williams, Esq.  
Lieut. Kenneth Wilson  
Officer Ivory Wise  
Richard E. Woodford

Officer Joseph Young  
Mary Yurow

