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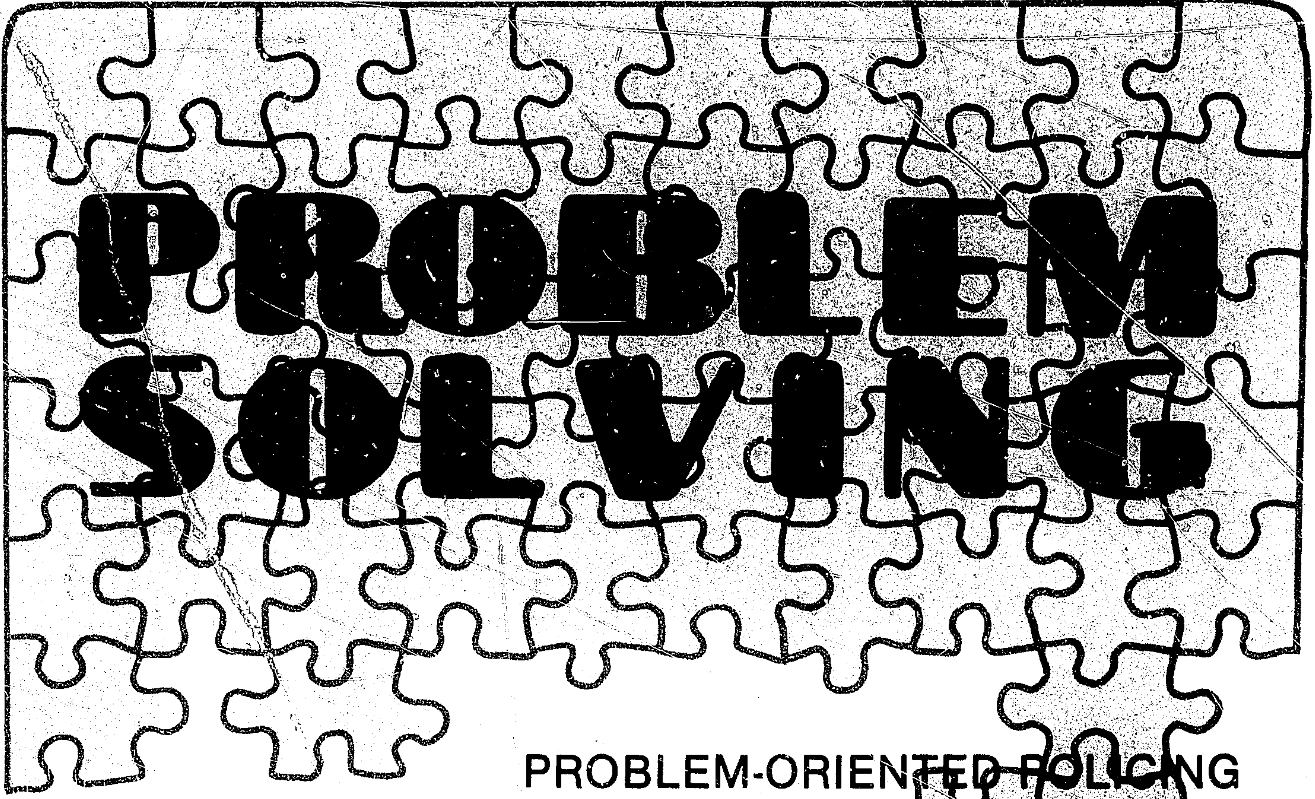
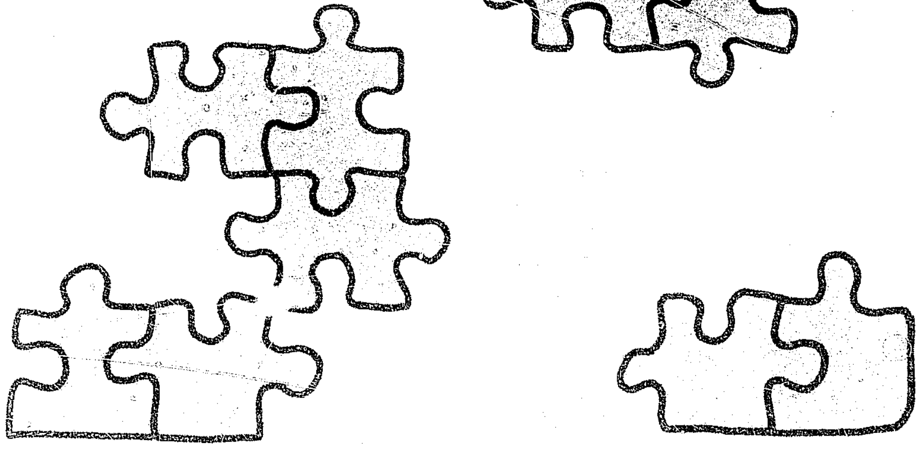


PROBLEM-ORIENTED POLICING
IN NEWPORT NEWS



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Police Executive Research Forum

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- the exercise of strong national leadership;
- public debate of police and criminal justice issues;
- research and policy development;
- the provision of vital management and leadership services to police agencies.

Forum members are selected on the basis of their commitment to the Forum's purpose and principles. The principles which guide the Police Executive Research Forum are that:

- research, experimentation, and exchange of ideas through public discussion and debate are paths for development of a professional body of knowledge about policing;
- substantial and purposeful academic study is a prerequisite for acquiring, understanding, and adding to the body of knowledge of professional police management;
- maintenance of the highest standards of ethics and integrity is imperative in the improvement of policing;
- the police must, within the limits of the law, be responsible and accountable to citizens as the ultimate source of police authority;
- the principles embodied in the Constitution are the foundation of policing.

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PROBLEM-SOLVING

PROBLEM-ORIENTED POLICING IN NEWPORT NEWS

John E. Eck and William Spelman

with

Diane Hill
Darrel W. Stephens
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Preface

I had been a police officer on the streets of Kansas City, Missouri for over three years before I began to question the crime fighting role and methods I had learned in college, the academy, and from experienced officers. In fact, it wasn't until I participated in a Police Foundation project initiated by Chief Clarence Kelley, where I encountered the likes of Dick Ward (now Vice Chancellor at the University of Illinois, at Chicago Circle) and Tom Sweeney (now Deputy Commissioner, Westchester County Police Department), that I considered the possibility that the foundation of police strategy was sand instead of rock. Before Chief Kelley exposed the department to people with different outlooks, my solutions to problems were traditional: more patrol, more investigations. The experience of that project and the influence of people outside the department set me on a course that led to the Newport News Police Department serving as a laboratory for problem-oriented policing.

I think it important and appropriate, however, to talk about the road from Kansas City to Newport News. Many changes took place in law enforcement during that decade, which were of significance to me and problem-oriented policing. Understanding these changes helped me in my role as Chief of Police in Newport News during the implementation of problem-oriented policing, and now as Executive Director of the Forum.

After having spent eighteen months as the Kansas City Police Department's Staff Director for the Apprehension Oriented Patrol Deployment Project, I spent a year on loan to the National Institute of Justice, which gave me a much broader view of policing. I returned to Kansas City in July 1974 and was assigned to a department-wide task force. The task force used the knowledge gained from research by the Kansas City Police Department and by others to develop a new patrol strategy. The task force laid out the new strategy in a report called, *Directed Patrol: Community-Specific, Crime-Specific, and Service-Specific Policing.* The key elements of that strategy were a crime analysis system, workload management procedure, officer involvement in program development, and a focus on problems.

It was during that task force effort that I was first introduced to Herman Goldstein; a consultant to the department, whose thoughts influenced the final product. Unfortunately, the department did not have the resources to implement the project fully. It would have lain dormant had Bob Heck from LEAA not provided funding for implementation through the Integrated Criminal Apprehension Project (ICAP). ICAP was implemented in over fifty cities throughout the country including Lawrence, Kansas where I spent three and one-half years as the assistant police chief.

During the years 1974 through 1979, a great deal of research was being conducted and made available to policing. However, researchers seemed to be more interested in showing what the police could not do rather than in showing what they could do to improve efficiency and effectiveness. Though we learned much about response time, criminal investigations and patrol methods, few police departments put this knowledge to use. These findings were most fully applied, in my judgement, in eight to ten of the ICAP cities. They developed centralized crime analysis units and improved records and reporting systems. They implemented workload management and resource allocation procedures with a view toward managing patrol time so the officers could use crime analysis information to direct their efforts toward specific crime targets. They applied crime prevention concepts to crime patterns. They encouraged officers to conduct more comprehensive criminal investigations and implemented other case management procedures.

In looking back, however, ICAP limited its effectiveness by focusing almost exclusively on crime, by placing an excessive burden on centralized crime analysis units for identifying patterns and

solutions, and by focusing primarily on tactics which were within the exclusive control of the police. Nevertheless, the program made a significant contribution to policing by demonstrating that operational decisions and effectiveness could be improved by using and analyzing information.

As ICAP faded, others continued to improve police policies through analysis. The National Institute of Justice funded Herman Goldstein to work with Chief David Couper's Madison Police Department to develop this approach further. The approach was also advanced by the Baltimore County Police Department under the direction of Chief Cornelius Behan, with the assistance from the Florence V. Burden Foundation. This agency created Citizen Oriented Police Enforcement (COPE) units to address specific neighborhood fear problems. The Metropolitan Police under Sir Kenneth Newman studies the approach in four districts of London. Common to all these efforts, as well as to the Newport News study, was the guidance of Herman Goldstein.

Although pleased and encouraged by the results of these studies, several people thought problem-oriented policing needed additional testing. William Saulsbury and James K. Stewart at the National Institute of Justice felt the concept needed a clearer process and analysis model before it could be broadly applied and transferred to the field. Gary Hayes and Herman Goldstein believed the concept needed to be applied to problems by officers on routine patrol assignments in order to demonstrate its utility in improving police service delivery. It was about that time that I assumed the chief's position in Newport News after a three-year stint as police chief in Largo, Florida. I soon became involved in the discussions on problem-solving with Gary Hayes and Bill Saulsbury. By September 1984, a joint effort of the Institute, the Forum, and the Newport News Police Department was underway.

This report, *Problem-Solving: Problem-Oriented Policing in Newport News*, tells the story of that two-year effort to develop and implement a problem-solving process in a police department and community. It is a story that needs to be read by the police, community, and government administrators on the local, state and federal levels.

Problem-Solving describes the experiences of a police agency that attempted to develop a better understanding of and better solutions to crime and service problems by working with the people and institutions affected by those problems. The significance of these experiences lies in the approach used by the department. Instead of creating a special unit or function, we asked line officers and supervisors to work problem-solving into their daily routine. Many officers did, and this paved the way for the police to become more effective while handling the daily workload and increasing both officer and citizen satisfaction. Its impacts are very clear.

Problem-Solving provides practical guidance to administrators facing the incredibly complex problems of managing police organizations in today's environment. The problems addressed and the examples given will be recognized by most as being prevalent in cities throughout the nation. I urge you to learn and build on these experiences, just as Newport News did from the experiences of others.

Problem-Solving is also a story about people. It is about the people in policing--from the managers in the office to the supervisors and officers on the street. It is about their willingness to do something new and more than is generally expected by the organization or community. Some of these individuals are mentioned by name and their efforts are presented in case studies. And it is about people in the community and their willingness to become involved with a police department they had often viewed with a great deal of mistrust. Moreover, it is about people on the staff of the Police Executive Research Forum who once again put forth tremendous effort in their work with a police department in an attempt to make a contribution to policing.

One final note. Several people who worked on the project need to be recognized. First, the members of the Newport News Police Department need to be commended for the tremendous effort put forth during this project. As discussed in the book, the Department was engaged in a very ambitious program of change while dealing with the normal range of problems associated with a community of 157,000 people. The Forum staff deserves a great deal of the credit for the success of the project. Under the able guidance and direction of John Eck, the project achieved much more than anyone thought possible. Moreover, although

several of us contributed to this book, the bulk of the writing and its outstanding quality was due to the hard work of John Eck and Bill Spelman. I also want to thank Bill Saulsbury and Chips Stewart for the trust and confidence shown in me by selecting Newport News as the site for this project. In addition, I want to thank the Forum members who responded so well to our surveys and allowed us to visit their departments. I especially want to thank Chief Cornelius Behan and Chief Lee Brown for sending staff to Newport News on several occasions during the project to assist with implementation.

Darrel W. Stephens
Executive Director
Police Executive Research Forum

Foreword

Police, much like physicians, have traditionally treated calls for assistance or service as individual episodes. Yet research has shown that what appears to be an isolated incident can in fact be connected to a series of events, a cycle that will again require police action. In this respect, they have a history and a future--sometimes tragic.

The relationship among these incidents may hinge upon the characteristics of the individual involved--offenders, victims or any others. It may be the social setting in which these people interact or the physical environment. Regardless of what the link might be, it offers both the clue to the best intervention and the opening to intervene. Police action may be able to significantly alter future events, thus reducing repeat calls to police, violence in communities and victimization.

The Newport News Police Department's problem-oriented policing effort is carefully focused to reduce need for repeat calls for service. The approach was originally conceptualized by Herman Goldstein and given a field test by The National Institute of Justice. The site selected through the Police Executive Research Forum was the excellent Newport News Police Department, then under the leadership of Darrel Stephens, a former National Institute of Justice fellow and strong supporter of program research methodology. Jay Carey, who took over from Darrel Stephens as chief of police in Newport News, and the Police Executive Research Forum were receptive collaborators in the effort. We are indebted to the leadership and staffs of both these organizations for testing problem-oriented policing.

The collaboration of the Police Executive Research Forum and the Newport News Police Department meant a department-wide effort to question the tradition that police operations must be primarily incident driven. It is possible to go beyond police activities solely aimed at resolving individual incidents. To this traditional practice can be added an emphasis that addressed the underlying problems that give rise to a series of associated incidents.

The problem-oriented approach to policing described in this report represents a significant evolutionary step to help law enforcement work smarter not harder. Problem-oriented policing emphasizes analyzing groups of incidents and deriving solutions that draw upon a wide variety of public and private resources.

Problem-oriented policing is as much a philosophy of policing as a set of techniques and procedures. It integrates 20 years of research on police operations that show the need to:

- increase effectiveness, not just efficiency,
- use analytic techniques to inform police decisions,
- listen to the public and work closely with the private sector and communities to address common concerns, and,
- recognize beat officers' knowledge and commitment and allow them the discretion to exercise these in their jobs.

The results achieved in testing problem-oriented policing are both provocative and encouraging. Problem-oriented policing fits with the growing interest of law enforcement in "community policing". The full potential of both has yet to be realized. For now, problem-oriented policing offers promise. It doesn't cost a fortune but can be developed within the resources of most police departments.

Problem-oriented policing suggests that police can realize a new dimension of effectiveness. By coordinating a wide range of information, police administrators are in a unique leadership position in the communities, helping to improve the quality of life for the citizens they serve.

James K. Stewart
Director
National Institute of Justice.

Acknowledgements

Many people made this study possible and first among them is Gary P. Hayes, late Executive Director of the Forum. We owe him a debt, for his foresight and leadership, which we can never repay.

Herman Goldstein, Professor of Law at the University of Wisconsin in Madison, has been a constant source of help and inspiration. He is one of the very few people who can develop theoretical concepts that work on the street, and he had a strong influence on how this project was designed and carried out. This study would not have been undertaken if it had not been for his vision of policing, and would have achieved much less if it had not been for his wisdom.

Bill Saulsbury, our project monitor at the National Institute of Justice, not only gave us encouragement while he tried to keep us focused on the bigger picture, but provided us with a wealth of practical and theoretical advice.

Finally, we want to thank Darrel Stephens for his consistent leadership throughout this study. As Chief of Police in Newport News he created an environment in which problem-oriented policing could thrive. As Executive Director of the Forum, and as a friend, he has given us the support and encouragement we needed. In both of these roles, he has provided us with a combination of sound management advice and probing theoretical critiques.

These four gentlemen gave us unswerving support throughout the project. This study began as their brainchild, and their help, work, and timely criticisms made this project a success. We hope that this report reflects their vision of the future of policing.

We are also grateful to Jay Carey, now Chief of Police in Newport News, for his hard work and thoughtful assistance. As Deputy Chief for Administration when the project began, he was responsible for leading the development of the problem-solving process and problem analysis guide, and for ensuring that the first, few critical problems were successfully solved. Since becoming chief last year, Carey has continued to keep the department moving toward institutionalization of problem-oriented policing.

We owe a great deal of thanks to James K. Stewart, Director of the National Institute of Justice, for his willingness to support this study. When this study began, the outcome was far from certain. Director Stewart had the courage to see that this project, by building on earlier work of the Institute, could result in substantial advances for policing and the public.

Others at the National Institute of Justice also were important to the success of this project. Robert Burkhart's quiet but strong support during this project is greatly appreciated. We also were aided greatly by Lawrence Bennett, who provided direction at key points throughout the study.

Gil Kerlikowske, then a Lieutenant with the St. Petersburg, Florida, Police Department on loan to the National Institute of Justice, and now the recently appointed Chief of Police for Port St. Lucie, Florida, helped to make sure that this study could be generalized to other police agencies.

Thomas Sweeney, Deputy Commissioner for the Westchester County, New York, Police Department, and William Bieck, head of the Operations Support Group of the Houston Police Department, helped train members of the Newport News Police Department. They also gave us advice and comments on our reports, which improved them greatly.

Barry Poyner, of the Tavistock Institute of Human Relations, was kind enough to visit Newport News and introduce the Task Force to the theory of situational crime prevention. His work on crime prevention analysis in Great Britain had a great influence on our work in Newport News, and his critique of an earlier draft of this report resulted in major improvements.

The London Metropolitan Police have long had an interest in problem-oriented policing. We were fortunate, therefore, to have had the aid of

two of its members. Chief Inspector Stephen Pilkington spent six months with the Forum, helping us to conduct this study. Chief Superintendent Anthony Burns-Howell not only shared with us his experiences with applying problem-oriented policing in a London police division, he also provided excellent comments on a draft of this report, thus improving the introductory and concluding chapters.

We would like to thank David Nee, Executive Director of the Burden Foundation, for his willingness to serve as a sounding board and his consistently insightful advice throughout the project.

Mary Ann Wycoff, of the Police Foundation, was kind enough to review an earlier draft to this report; more important, her suggestions, descriptions of parallel efforts in other agencies, and encouragement helped us more than she can imagine.

The Home Office Crime Prevention Unit and Research and Planning Unit provided very helpful information early in the project. Kevin Heal, Clair Austin, Peter Southgate, John Burrows, Gloria Laycock, and Lorna Smith were kind enough to take time from their schedules to describe their research during our trip to London.

Several police agencies were particularly supportive and helpful throughout this project. The Baltimore County Police Department, under the leadership of Chief Cornelius Behan, not only hosted a visit by the Task Force early in the project, but also contributed documents, advice, and staff. We are especially grateful for the help of Colonel Phillip Huber. Chief Lee Brown of the Houston Police Department substantially aided this project in similar ways. The Houston Police Department hosted several visitors from Newport News, and contributed the time of William Bieck. Chief Behan and Chief Brown deserve credit for their vision of what policing can be and for their willingness to share their efforts at making this vision a reality.

The hard and, ultimately, the most useful work on this study was conducted by members of the Newport News Police Department, first under the leadership of Darrel Stephens and then Jay Carey. The strong support of the department's management committee, especially Deputy Chief Tony Farmer, Deputy Chief Joe Gaskins, Major Bobby Campbell, Captain John Saunders, and Captain James Harrison needs to be recognized.

We are deeply in the debt of members of the project Task Force and the Problem Analysis Advisory Committee. Without their commitment to this effort, the results reported here could never have been achieved. We are especially appreciative of their willingness to spend much of their own time, without reimbursement, to ensure the project's success. Their names are listed below. Other department members who tackled problems are named in the text. We deeply appreciate their efforts and commend their creativity and willingness to undertake a new approach to policing.

The lion's share of the research work was carried out by the Forum's two Field Research Associates based in the department. Judi Frist served in this role for the first year of the project. Her dedication and persistence in these early stages greatly contributed to the development of the problem-analysis process and analysis of several problems. Diane Hill served in this role during the second year. Her hard work at institutionalizing problem-oriented policing greatly expanded the application of this approach in Newport News. Both of these women deserve recognition for their tremendous contributions. Without them, this project could not have been conducted.

Throughout this project various other Forum staff members contributed time, effort, and advice. Gerard Murphy helped document several problem-solving efforts in the form of case studies. His research gave us a better appreciation for the complexity of problem-solving, and the ingenuity of police officers engaged in these efforts. John Stedman also prepared case studies, and provided very useful advice on problem-solving training. David Geiger and Karen Olson did a fine job of designing and producing the layout for the report. We are also grateful for Ms Olson's proofreading, as well as for her good humor in the face of our constant badgering. Through their daily support, reviews of reports, and excellent advice, Martha Plotkin, Sheldon Greenberg, Clifford Karchmer, Peter White, and Elizabeth Camelo aided and improved this study. Lexta Taylor's financial management ensured that the project ran smoothly. The numerous critical tasks carried out by Hilda Flowers and Elizabeth

Shawen made our work easier, and helped us avoid many difficulties. David Jones did an excellent job of editing this report.

We view this project as a collaborative effort of many individuals and police agencies, one that builds on earlier efforts, and an effort that we hope will spur others to develop the concept of problem-oriented policing further. We hope that our efforts at describing this project has done justice to the ideas and work of these individuals. Any short-comings of this report are ours, not theirs.

John E. Eck
William Spelman

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Sergeant Susie Mowry
Detective John Pearson
Detective Linda Robinson
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Summary

Every Friday and Saturday night, residents of a suburban neighborhood complain to the police about teenagers who come in from another part of town. The youths make noise, drink, and commit minor acts of vandalism.

The parking lots around a large manufacturing plant are a haven for thieves. Thefts from autos parked in these lots account for 10 percent of all crimes reported in the city.

An apartment complex is notorious for its high burglary rates. One of every four residents are burglarized each year; followup investigations--and occasional arrests--seem to do no good at all.

Patrol officers and detectives spend millions of hours each year responding to incidents like these. Despite their efforts--and despite the arrests, convictions, and incarcerations that sometimes result--the incidents persist.

Research results spanning two decades have converged on a new approach for delivering police services, aimed at solving persistent problems like these. It is called *problem-oriented policing*. Using this approach, police go beyond individual crimes and calls for service, and take on the underlying problems that create them. To understand problems, police collect facts from a wide variety of sources, from outside as well as from inside police agencies. To develop and implement solutions, police enlist the support of other public and private agencies and individuals.

Problem-oriented policing is a department-wide strategy aimed at solving persistent community problems. Police identify, analyze, and respond to the underlying circumstances that create incidents.

The Problem-Oriented Policing Project was conducted by the Newport News (Virginia) Police Department and the Police Executive Research Forum, with guidance and funding from the National Institute of Justice. In this summary, we describe the origins of problem-oriented policing, the approach that was designed and implemented in Newport News, and some of the problems officers have addressed. But first, in order to show why this approach is new, let us review current police practice.

Incident-driven Policing

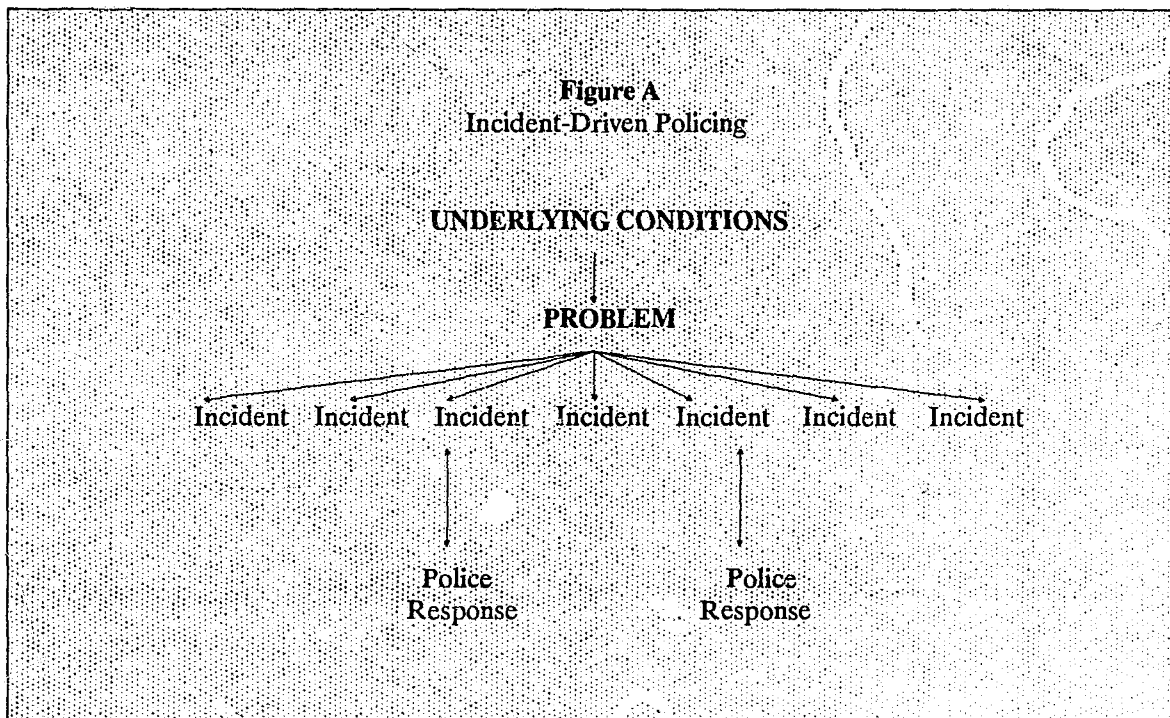
Current police practice is primarily incident-driven. That is, most police activities are aimed at resolving individual incidents, rather than groups of incidents or problems. The incident-driven police department has four characteristics.

First, it is *reactive*. Most of the workload of patrol officers and detectives consists of handling crimes that have already been committed, disturbances in progress, traffic violations, and the like. The exceptions--crime prevention and narcotics investigations, for example--make up but a small portion of police work.

Incident-driven police work relies on *limited information*, gathered mostly from victims, witnesses, and suspects. Only limited information is needed because the police objectives are limited: patrol officers and detectives are only trying to resolve the incident at hand.

The primary means of resolving incidents is to invoke the *criminal justice process*. Even when an officer manages to resolve an incident without arresting or citing anyone, it is often the threat of enforcing the law that is the key to resolution. Alternative means of resolution are seldom invoked.

Finally, incident-driven police departments use *aggregate statistics* to measure performance. The department is doing a good job when the city-wide crime rate is low, or the city-wide arrest rate is high. The best officers are those who make many arrests, or service many calls.



No department is purely incident-driven; but this is what all agencies do, almost all of the time. Appropriately responding to incidents can be effective: victims are aided, serious offenders are caught, and citizens are helped every day. But too often it fails. Handling calls for service is time-consuming, and rarely produces a tangible result. Officers become frustrated after they handle similar calls time and again, with no sign of progress. Citizens become frustrated when the difficulties that provoked their calls remain unresolved. The constant repetition of similar calls indicates that the incident-driven police department has been unable to do anything about the underlying conditions.

Problem-Oriented Policing

An alternative to incident-driven policing was described by Herman Goldstein in 1979. Goldstein contended that reacting to calls for service was only the first step. Police should go further, and attempt to find a permanent resolution of the problem which created the call. Goldstein called his alternative the "problem-oriented approach." Problem-oriented policing, as it has developed in Newport News, is a direct extension of Goldstein's approach.

The theory behind problem-oriented policing is simple. Underlying conditions create problems. These conditions might include the characteristics of the people involved (offenders, potential victims, and others), the social setting in which these people interact, the physical environment, and the way the public deals with these conditions.

A problem created by these conditions may generate one or more incidents. These incidents, while stemming from a common source, may appear to be different. For example, social and physical conditions in a deteriorated apartment complex may generate burglaries, acts of vandalism, intimidation of pedestrians by rowdy teenagers, and other incidents. These incidents, some of which come to police attention, are symptoms of the problem. The incidents will continue so long as the problem that creates them persists.

As described by Figure A, the incident-driven police agency responds by dealing with each incident. Like aspirin, this symptomatic relief is valuable but limited. Because police typically leave

untouched the condition which created the incidents, the incidents are very likely to recur.

A problem-oriented police agency would respond as described in Figure B. Officers continue to handle calls, but they do much more. They use the information gathered in their responses to incidents, together with information obtained from other sources, to get a clearer picture of the problem. They then address the underlying conditions. If they are successful in ameliorating these conditions, fewer incidents may occur; those that do occur may be less serious. The incidents may even cease. At the very least, information about the problem can help police to design more effective ways of responding to each incident.

Problem-solving is not new. Police officers have always tried to solve problems. But officers have received little guidance and support from police administrators. In fact, supervisors and other officers have often discouraged problem-solving: the more time officers spent dealing with problems, the less time was available for reacting to incidents.

Problem-oriented policing--the routine application of problem-solving techniques--is new. It is based on two premises. The first premise is that problem-solving can be applied by officers throughout the agency as part of their daily work. Previous problem-solving efforts have been confined to special projects or units. The second premise is that routine problem-solving efforts can be effective in reducing or resolving problems. The National Institute of Justice, the Forum, and the Newport News Police Department undertook this project to test these premises.

Although problem-oriented policing is new, it relies on twenty years of research on incident-driven policing.

The Research Basis of Problem-Oriented Policing

Five areas of research contributed to the development of problem-oriented policing. The initial impetus for an alternative to incident-

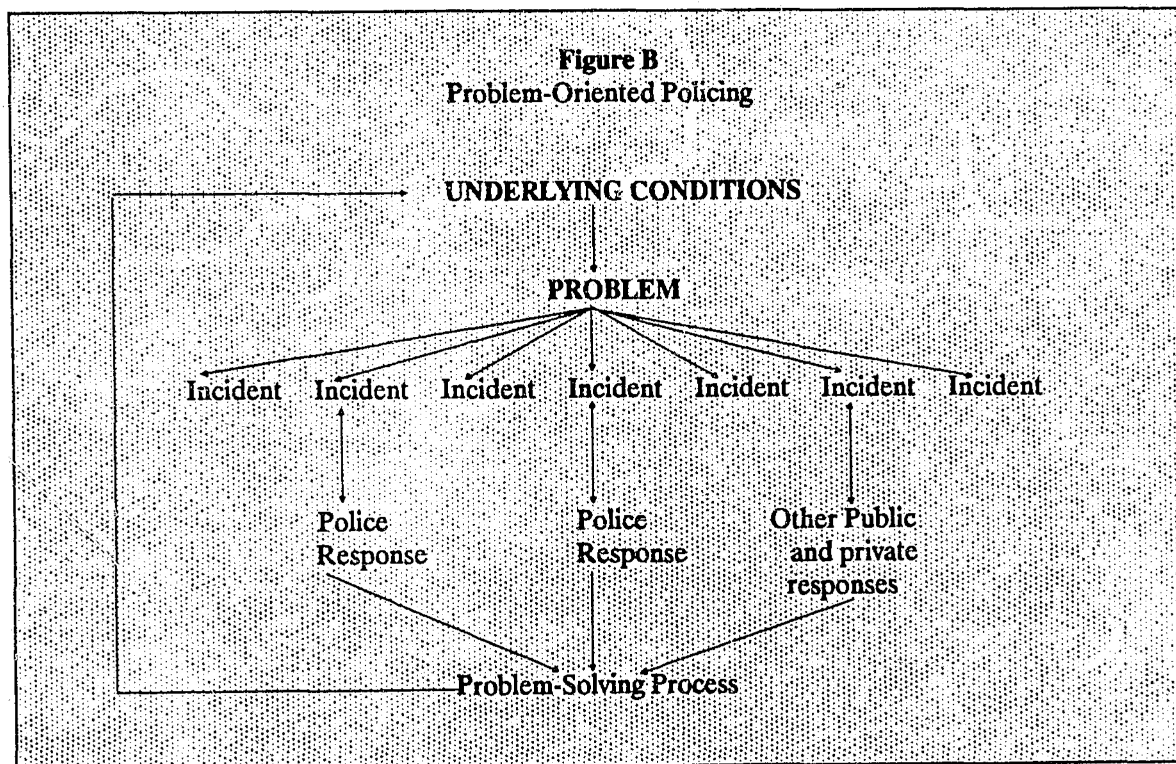


Figure B
Problem-Oriented Policing

driven policing was contributed by research on police effectiveness.

Effectiveness

Studies of preventive patrol, response time, and investigations showed that reacting to incidents had, at best, very limited effects on crime and public satisfaction. For many incidents, rapid patrol responses or lengthy followup investigations were not needed, suggesting that police managers could deploy their officers more flexibly without reducing effectiveness. Experiments in flexible deployment such as split force, investigative case screening, and differential response to calls confirmed that time could be freed up for other activities. To make better use of this time, managers turned to crime analysis. Crime analysis focused attention on groups of events, rather than single incidents. By identifying crime-prone locations, times, and offenders, crime analysts hoped to direct proactive, rather than reactive patrol and detective activities, thus using officer time more effectively. Crime analysis was restricted to crime problems, traditional police data sources, and criminal justice responses. Still, it marks the first attempt at routine problem-solving.

Crime analysis, directed patrol, and proactive investigations were an important advance over the incident-driven tradition, but the demands of the public and of officers themselves suggested that even bigger changes were needed. Community policing experiments and in-depth studies of public problems were influencing police to adopt a broader concept of their role; studies of police discretion and management were showing that changes in the police bureaucracy were needed, as well.

Community

The riots of the 1960's made police aware of their strained relation with minority communities. Community relations units, stringent shooting policies, and civilian review boards were all attempts to reduce dissatisfaction with police among minorities. By the mid-1970's, police were going further, providing storefront police stations and foot patrols in an effort to improve public attitudes through increased personal contact with police officers. These programs increased communication between police and citizens. And as police began to recognize the vital role of citizen action in controlling crime and disorder, some agencies began to work closely with citizens to reduce crime and fear. Problem-oriented policing draws on experience showing that joint police/community activities are often the best methods for solving problems.

Problem Studies

Over the last twenty years there have been a number of studies of problem areas that the police are called upon to handle. They aimed to develop a deeper understanding of the nature and causes of these problems, which would in turn lead to better police responses. The research of the late 1960's and early 1970's focused police attention on burglary, robbery, and other street crimes. In the later 1970's and the 1980's, research began to focus on problems that had not been considered central to police work: domestic violence, drunk driving, the mentally ill, and fear of crime, for example. Through these studies, researchers and practitioners learned that they would have to collect more information to understand these problems. It also became clear that other organizations needed to be involved if responses were to be effective. Finally, the variety of problems examined suggested that police needed to seriously consider many other issues besides crime.

Discretion

In the 1960's, researchers called attention to the fact that police officers exercised much discretion. This raised questions about the equity and efficiency of police service delivery. It was apparent that discretion could not be eliminated; but police have succeeded in preventing abuses by structuring discretion. Through guidelines and policies, police agencies provide direction to their officers as to the best means of handling sensitive situations. But where do the guidelines and policies come from? In 1979, Herman Goldstein described what he called the "problem-oriented approach" as a means of developing these guidelines. Goldstein's approach is the core of problem-oriented policing.

Management

While these studies were being conducted, the characteristics of American police officers were changing. More and more officers were getting college degrees and thinking of themselves as professionals. Like workers in private industry, officers began to demand a greater decision-making role in their agencies. Many police managers, recognizing that satisfaction and participation influence job performance, began to make better use of the skills and talents of their officers. Through job enrichment, managers gave their officers more interesting and challenging work, and made working conditions more flexible. And many departments made decision-making more participative, by establishing task forces, quality circles, or management-by-objectives programs. Problem-oriented policing incorporates job enrichment, flexibility, and participative management, to make the fullest possible use of the skills and talents of street-level officers.

Problem-oriented policing applies findings from these five streams of research. As suggested by the effectiveness research, problem-oriented policing uses time management and thorough analysis to address groups of similar incidents, or problems. But it recognizes a broader role for police than just crime control, focusing on problems besides crime, and involving police with citizens, businesses, and other agencies to identify and resolve citizens' concerns. Finally, problem-oriented policing involves substantial changes in the police organization. It is a means for structuring discretion; it draws on the expertise of police officers and applies their desire to have decision-making roles.

Designing Problem-Oriented Policing

This was the research background when the Problem-Oriented Policing Project began in Newport News. Some departments had implemented problem-solving approaches as part of special units or projects. But no department had implemented a problem-oriented approach agencywide. So an operational system had to be designed and tested. The National Institute of Justice required that the problem-solving system follow five basic principles:

- Officers of all ranks and from all units should be able to use the system as part of their daily routine.
- The system must encourage the use of a broad range of information, including but not limited to conventional police data.
- The system should encourage a broad range of solutions, including but not limited to the criminal justice process.
- The system should require no additional resources and no special units.
- Finally, any large police agency must be able to apply it.

Newport News was chosen to design and implement the system for several reasons. It is a moderately sized agency, with 280 employees serving a population of 155 thousand. So it was small enough that changes could be made in a reasonably short time, but served an urban population with many of the crime problems of big cities. Because Newport News was close to Washington, D.C., Forum staff could conveniently spend a great deal of time in the field. And its chief of police, Darrel Stephens, was well-versed in the background research, felt the project would be worthwhile, and was committed to its success.

To design the system, the Newport News Police Department assembled a task force of twelve department members, representing all ranks and units. As this group had no experience at solving problems, they decided to test the system they were designing on two, persistent problems: burglaries from an apartment complex, and thefts from vehicles. It was understood, however, that all subsequent problems would be handled by officers in their normal assignments.

As shown in Figure C, the Task Force designed a four-stage Problem Solving Process. During the *Scanning* stage, an officer identifies an issue and determines whether it is really a problem. In the *Analysis* stage, officers collect information, from sources inside and outside the their agency. The goal is to understand the scope, nature, and causes of the problem. In the *Response* stage, this infor-

mation is used to develop and implement solutions. Officers seek the assistance of other police units, other public and private organizations, and anyone else who can help. Finally, in the *Assessment* stage, officers evaluate the effectiveness of the response. Officers may use the results to revise the response, collect more data, or even to redefine the problem.

The heart of this process is the Analysis stage. To help officers analyze problems, the task force designed a *Problem Analysis Guide.* This guide (summarized in Table A) breaks the events that comprise a problem into three components:

1. **Actors** -- victims, offenders, and others involved in the events;
2. **Incidents** -- the social context, physical setting, and actions taken before, during, and after the events; and,
3. **Responses** -- the perceptions and responses of citizens and private and public institutions to the problem.

The guide is a checklist of issues that officers should consider when they study a problem.

All officers of the rank of sergeant and above were trained in the use of the process and the guide, as well as on the research background of problem-oriented policing. The training also emphasized the need to encourage officer initiative in finding problems, collecting information, and developing responses. Officers throughout the department then began to apply the process and the guide.

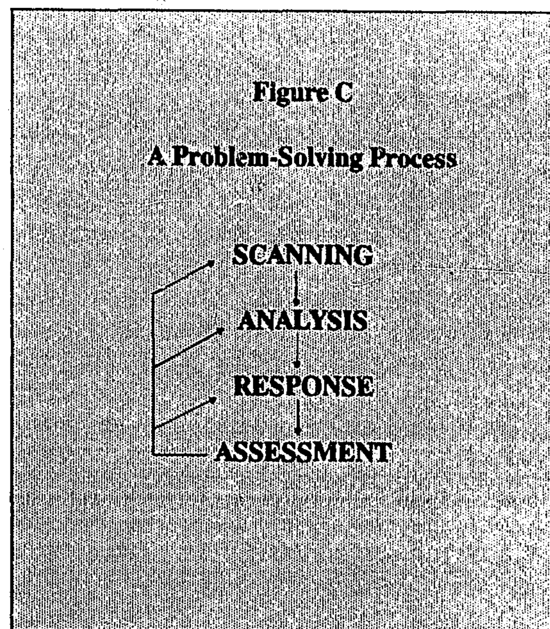


Figure C

A Problem-Solving Process

Problem-Oriented Policing at Work

There were two basic questions about this process that needed to be answered:

- Can officers use it routinely to solve problems?
- Are these problem-solving efforts effective?

To answer them, the Forum staff undertook an evaluation of problem-oriented policing in Newport News.

By June 1986, some two dozen problems had been identified, and were in various stages of analysis, response, and assessment. As Table B shows, officers considered a wide range of problems. Some problems affect citizens throughout the city; others are confined to neighborhoods. Some problems are criminal; others are related to the order maintenance, regulatory, or service roles of the police. Officers and their supervisors identified, analyzed, and responded to these problems during the course of their normal work by applying the process and guide. The number and diversity of problems tackled by department members shows that *police officers can solve problems routinely.*

The second test of the problem-solving process is the effectiveness of the responses. Three efforts have advanced far enough for us to judge their effectiveness. The results are encouraging:

- Burglaries in the New Briarfield Apartment complex were reduced by 35 percent;
- Robberies in the central business district were reduced by 40 percent;
- Thefts from vehicles parked outside Newport News Shipbuilding were reduced by 55 percent.

These results show that problem-solving efforts can be effective. To illustrate how problem-solv-

Table A
The Problem Analysis Guide
(List of topic headings)

Actors
- *Victims*
  - Life style
  - Security measures taken
  - Victimization history
- *Offenders*
  - Identity and physical description
  - Life style, education, employment history
  - Criminal history
- *Third parties*
  - Personal data
  - Connection to victimization

Incidents
- *Sequence of events*
  - Events preceding act
  - Event itself
  - Events following criminal act
- *Physical context*
  - Time
  - Location
  - Access control and surveillance
- *Social context*
  - Likelihood and probable actions of witnesses
  - Apparent attitude of residents toward neighborhood
- *Immediate results of incidents*
  - Harm done to victim
  - Gain to offender
  - Legal issues

Responses
- *Community*
  - Neighborhood affected by problem
  - City as a whole
  - People outside the city
- *Institutional*
  - Criminal justice system
  - Other public agencies
  - Mass media
  - Business sector
- *Seriousness*
  - Public perceptions
  - Perception of others

Table B
Newport News Officers are Considering a Range of Problems

	Citywide	Neighborhood
Crime problems	Domestic homicides Gas station driveoffs Assaults on police officers	Personal robberies (Central business district) Commercial burglaries (Jefferson Avenue business district) Vacant buildings (Central business district) Residential burglaries (New Briarfield Apts) Residential burglaries (Glenn Gardens Apts) Larcenies (Beechmont Gardens Apts) Thefts from autos (Newport News Shipbuilding) Drug dealing (32d and Chestnut)
Disorder problems	Runaway youths Driving under the influence Disturbances at convenience stores	Rowdy youths (Peninsula Skating Rink) Shot houses (Aqua Vista Apts) Disturbances (Marshall Avenue 7-Eleven) Dirt bikes (Newmarket Creek) Disturbances (Village Square Shopping Center)

ing works, let us examine the first of these efforts below.

Burglaries in the New Briarfield Apartments

Briarfield Apartments, a complex of 450 wood-frame units, was built in 1942 as temporary housing for shipyard workers. After World War II the postwar housing shortage was acute, so it remained standing. By 1984, the complex was generally regarded as the worst housing in the city. It also had the highest crime rate in the city: 23 percent of the occupied units were broken into each year. The Task Force decided to use Briarfield as a test of problem-oriented policing. Detective Tony Duke of the Crime Analysis Unit was assigned to study the problem.

To find out how residents felt, Duke arranged for patrol and auxiliary officers to survey a random sample of one-third of the households in January 1985. The residents confirmed that burglary was a serious problem. But they were equally concerned about the physical deterioration of the complex.

Indeed, as Detective Duke interviewed employees of city departments, he found that the burglary problem was related to the general deterioration of the complex. The fire department considered New Briarfield to be a firetrap. Public works was concerned about flooding because the complex had no storm sewers. Standing water rotted the floors, a cause for concern to the codes compliance department. Cracks around the door and window frames let in the cold and rain, and made breakins easy. And many units were vacant and uninhabitable, providing hiding places for burglars and drug users.

Immediately after the survey, the patrol officer responsible for the area around New Briarfield, Barry Haddix, decided to clean up the grounds of the complex. By working with the apartment manager and city agencies he was able to fix a variety of unsanitary and unsafe conditions. Trash and abandoned appliances were removed; abandoned cars were towed; the potholes were filled and the streets were swept.

Meanwhile, Detective Duke found that the owners of the complex were in default on a loan from the U.S. Department of Housing and Urban Development, and that HUD was about to foreclose. This presented the city with a possible solution. Duke wrote a report on New Briarfield, describing the crime problems, the views of the tenants, and the concerns of other city agencies. Chief Stephens used this report to mobilize other city agencies to make a joint recommendation to the city manager: help the tenants find better housing and demolish New Briarfield. The city manager accepted the recommendation. In June 1986, the city proposed that Briarfield be replaced with a new 220-unit apartment complex, a middle school, and a small shopping center. Negotiations are pending with HUD.

This long-run solution will take many months to implement. To hold the line until then, the police department assigned Officer Vernon Lyons to the full-time job of organizing residents of Briarfield and the surrounding neighborhood. Since January 1986, the New Briarfield Community Association has influenced residents to take better care of their neighborhood, and lobbied the resident manager and city agencies to ensure that the complex is properly maintained.

The activities of the police department and the community association have resulted in visibly better living conditions, and in a 35 percent drop in the burglary rate since the police began work.

New Information, New Responses

One reason these efforts have been successful is that police managers have used the process and guide to encourage officers to gather more information, from a wider variety of sources than before. The survey of New Briarfield residents, and the extensive discussions with the apartment manager and public officials are examples. While studying other problems, officers have conducted literature reviews, interviewed prostitutes and thieves, surveyed businesses, held conferences with local public and private officials, photographed problem sites, and searched title and tax records.

As a result, the responses are more comprehensive than standard incident-driven reactions. This, too, is strongly encouraged by the department's managers. Some of the responses are improvements on standard tactics. For example, the department responded to the

problems of downtown robberies and parking lot thefts by identifying, arresting, and incarcerating the most frequent offenders. But even in these examples, the involvement of people outside the criminal justice system was important. Other responses, such as the actions taken in New Briarfield, hardly involve the criminal justice process at all. While responding to other problems, officers have worked with businesses, the military, citizens' groups, state and federal agencies, and non-profit organizations. So the resources used are as diverse as the problems themselves.

Implementing Problem-Oriented Policing

Problem-oriented policing involves a substantial change from current practice. The fully problem-oriented police agency will be different from present agencies in several ways.

- Problem-solving will be the standard method of policing, not just an occasionally useful tactic.
- Problem-solving efforts will focus on problems of the public, not police administration.
- When problems are taken on, police will establish precise, measureable objectives.
- Police managers will constantly look for ways to get all members of the department involved in solving problems.

These characteristics will be true of all agencies that have committed themselves to problem-oriented policing. As these agencies gain experience with problem-oriented policing, they should develop three additional characteristics:

- Officers will consistently undertake thorough analyses, using data from many sources.
- Officers will engage in an uninhibited search for solutions to all problems they take on.
- All members of the department will be involved in problem-solving.

Developing these characteristics will take time; police executives should plan to implement problem-oriented policing over a period of many years, rather than weeks or months.

As a result, there are no police departments with all seven of these characteristics yet. Newport News has the first four characteristics; several other departments will be initiating or increasing problem-oriented efforts over the next year. Nevertheless, problem-oriented policing represents an enormous change in the way officers think about their jobs, and in the way the entire department does business. While it will take a long time to develop, the Newport News experience has demonstrated that police executives interested in pursuing the problem-oriented approach can make their agencies more effective in a short time.

Problem-solving will be most successful if the department sets the stage by changing practices that may pose barriers to success. For example, many Newport News officers reported that time was a major constraint to their problem-solving activities. So the police manager should consider such tactics as differential police response and case screening. Use of crime analysis and proactive patrol and investigation tactics can also help the department get ready for less conventional activities. Constantly changing assignments and rotating shifts can make problem-solving activities inconvenient and difficult; police executives should consider stable assignments and shift schedules to remove these obstacles. A tough line on incidents of police corruption will show officers that the discretionary management style that problem-oriented policing requires is not an invitation to illegal or inappropriate behavior. Changes in promotion and reward procedures, implementation of management-by-objectives, and explicit training in effective problem-solving techniques can both motivate officers to solve problems and show them that the administration is serious about its efforts.

Getting support from institutions outside the police department is critical, since they provide information about problems and assistance in solving them. However, the problem-oriented approach may be difficult to sell to those outside policing: there is no unit, equipment, or other physical evidence to which the police can point; some will assume the police department has been

solving problems all along. This puts a burden on police executives to begin teaching local government officials, members of civic organizations, the press, and others about the nature of the changes as soon as they decide to make them.

This process of educating the department and the public will continue once the police executive has committed the department to problem-oriented policing. Aside from education, the most important task for the police executive will then be to provide leadership and direction to street-level supervisors. Sergeants and lieutenants are especially important to the success of problem-oriented policing, because problem-solving efforts will rarely be cut-and-dried. Supervisors must be prepared to give their officers lots of discretion, assistance, and support, but they must also ensure that officers are putting in their best efforts. Supervisors must be patient, and emphasize performance; but they must also insist that officers keep at their work until they do what can reasonably be done. Under problem-oriented policing, the first-line supervisor's job becomes one of continually balancing conflicting objectives.

In the beginning, police managers at all levels will face a tension between the quantity of problems solved and the quality of problem-solving efforts. If they set standards too high or encourage officers to take on very large problems, they may scare others off; but if standards are set too low, problem-solving may appear trivial. Police executives will have to manage this tension carefully, although both quality and quantity are possible in the long run.

Conclusions

The Problem-Oriented Policing Project was undertaken to test two premises: that officers throughout a police agency could apply problem-solving techniques as part of their daily routine, and that their problem-solving efforts could be effective. The Newport News experience suggests that these premises are correct. Many officers were able to get involved; their efforts were effective at reducing the size and seriousness of the problems they attacked.

This does not imply that all problem-solving efforts will be successful, of course, or even that all departments will be able to implement the problem-oriented approach. But it does demonstrate that problem-oriented policing can be successful, and that it deserves further experimentation. As other departments begin to adopt the approach, they will need to develop it further, fitting it to local conditions. If many departments adopt and develop the approach--if problem-oriented policing eventually replaces incident-driven policing as the basic organizing principle of American police work--its present stage of development will look primitive, indeed.

At base, however, it will remain the same. Problem-oriented policing emphasizes cooperation between the police, the public, and other agencies. It helps to ensure that police consider and respond to a wide variety of problems affecting the quality of life, not just crime. It gives line officers a chance to use their knowledge and experience to improve the communities they serve.

But it is much more than that. Problem-oriented policing represents a fundamental change from incident-driven policing. The Newport News Police Department--and other departments that adopt this approach--will continue to respond to incidents. But they will go beyond this first step, becoming much more than a crime control and emergency services agency. Instead, the Newport News experience suggests that the police department will become the front line in a comprehensive, human services system that includes the criminal justice system, other government agencies, private institutions, and private citizens themselves. The result will be more effective responses to crime and other troubling conditions.

PROBLEM-SOLVING

PROBLEM-ORIENTED POLICING IN NEWPORT NEWS

Chapter 1

Introduction

Handling Incidents

Police agencies provide a myriad of services, from providing advice and direction for visitors to probing the workings of organized crime networks. Although the image of officers investigating major offenses and pursuing dangerous criminals has some basis in fact, most police work does not focus on serious crime. A variety of other concerns--such as noise complaints, disturbances, traffic violations, and medical problems--dominate calls for police help (Scott, 1981).

Not all police work, however, arises from citizen calls for service. Traffic enforcement, for example, is often police initiated: Officers look for infractions instead of waiting for the public to report them. Patrol officers spend considerable time on other self-initiated activities (Gay, Schell, and Schack, 1977), such as aiding people needing help and intervening in situations that could develop into more serious crime or disorder incidents. In addition, most large police agencies have one or more special units--like a vice/narcotics section--that start their own investigations. Finally, crime prevention units help people protect themselves by showing them how to secure their homes and organize their neighborhoods.

Still, reacting to incidents remains the primary mode of police work and most of these incidents come to police attention through citizens' calls. Even many police initiated activities are reactive because these activities take place *after* an incident has occurred. Instead of waiting for a citizen to report the incident--which is highly unlikely in many circumstances--an officer intervenes directly. The proportion of total police time devoted to proactive operations is small. And the fact that these proactive tactics are often called "special" operations and are performed by "special" units suggests that these tactics are atypical.

Calls for service dominate police operations (Gay, Schell, and Schack, 1977). Police agencies are geared toward ensuring that officers rapidly answer citizen's requests for help, from the technology employed in communications, to the policies and procedures that regulate shift schedules, officer deployment, and workload allocations. Patrol officers are organized so they can handle calls at a moment's notice. Detectives are organized so they can investigate cases within 24 hours.

When a citizen calls, often a dispatcher sends an officer.[1] Upon arrival, the officer talks to the caller and others who may have useful information. Then the officer tries to resolve the complaint. This may involve trying to negotiate a resolution without creating an official record, as often happens in domestic disturbances or noise complaints. But if a criminal complaint is made, a report may be written. By passing the information on to detectives, the first step in the criminal justice process is taken. Sometimes the officer invokes criminal law, as when an offender is present or citizens become unruly and hostile. In fact, the threat of the officer using the criminal law often helps achieve a negotiated resolution. Once a call is handled, the officer returns to patrolling the streets until the next call comes in.

Judging performance of handling calls for service is difficult. Officers may be judged on the accuracy, style, and neatness of their reports, or on the absence of citizen complaints. In most agencies unofficial work rules have developed regarding how certain types of calls should be handled (Manning, 1977; Skolnick, 1966). As a result, performance also may be judged by colleagues as well as by supervisors. In a very few agencies, the agency calls back randomly selected citizens to get their opinions of the quality of officers' work.

By and large, call handling is reviewed using aggregate statistics. Performance on handling criminal calls often is measured by the number of crimes, clearances or arrests. For non-crime calls, commonly used measures include calls for service and the absence of complaints against officers.

This is *incident-driven policing* and it serves as the basis for current police practice.[2] In general, incident-driven policing has four characteristics.

First, it is reactive. Incidents that have already occurred control the workloads of patrol officers and detectives. Most of these incidents are reported by citizens, though some are first detected by police. There are some exceptions; the work of vice officers and crime prevention officers, for example, is usually proactive. However, these exceptions make up a small portion of police work.

Second, patrol officers and detectives gather information primarily from victims, witnesses, and suspects. The goal of information-gathering is to resolve the incident, sometimes by leading to the identification and arrest of suspects.

Third, the threat of enforcing laws by invoking the legal system is the primary tool of incident-driven policing. Although people call the police to resolve a wide variety of difficulties, the responding officer's primary authority rests with the criminal law. If a solution to the difficulty is found, it is often because the presence of the officer is an implicit threat that the criminal law can be applied. Although efforts have been made to give officers non-criminal law alternatives for resolving certain types of disputes, the criminal law remains their single most important tool.

Finally, the performance of incident-driven police agencies is gauged primarily by aggregate statistics which group a variety of incidents over wide geographical areas. These performance measures include the FBI Index Crimes, clearance rates, arrest rates, drunk driving arrests, and many other sets of numbers.

Although no large police agency is purely incident-driven, this is how virtually all large agencies function, almost all of the time.

There are three consequences of incident-driven policing. First, call handling produces few tangible results and takes a great deal of time. Second, officers become frustrated with handling the same types of calls, without seeing any progress toward preventing future crimes. And third, the public becomes frustrated because the difficulties that provoked the calls often remain unresolved. The constant repetition of similar calls indicates that handling each call separately does not deal with the underlying conditions.

These results occur regardless of the quality of the call handling. They will be exacerbated if officers are uncivil, sloppy in their work, or unresponsive to citizens. This is because the consequences of incident-driven policing stem from its inherently limited objectives; it responds to calls without solving the problem. High-quality call-handling is the minimum that police agencies should provide their citizens. They should provide much more. *Police agencies need to have their officers solve the problems that create the incidents.*

Solving Problems

The concept of problem-oriented policing was first described in a 1979 article by police scholar Herman Goldstein. Goldstein (1979) contended that police work is *inherently* one of solving problems, "the incredibly broad range of troublesome situations that prompt citizens to turn to the police, such as street robberies, residential burglaries, battered wives, vandalism, speeding cars, runaway children, accidents, acts of terrorism, even fear. These and other similar problems are the essence of police work. They are the reason for having a police agency."

Since publishing this article, Goldstein has developed a list of twelve tasks on which an executive should focus to build a problem-oriented police agency. As a set of principles, this list,

shown in Table 1, provides a good introduction to problem-oriented policing.

The theory behind problem-oriented policing is simple. Underlying conditions create problems. These conditions can take many forms. They include, but are not limited to, the characteristics of the people involved (offenders, potential victims, and others), the physical setting and social environment, the interactions of the people involved, and the way the public deals with the difficulty.

The problem created by the condition generates one or more incidents. These incidents, while stemming from a common source, may appear to be disparate. For example, a deteriorated housing complex may generate break-ins, thefts, destruction of property, rowdy teenagers, abusive drug dealers, injuries, abandoned vehicles, and a host of other incidents. *These incidents, some of which come to police attention, are symptoms of the problem.*

As shown in Figure 1, in an incident-driven police agency, officers respond by dealing only with the reported incidents. Certainly responding to incidents is important; Officers can provide valuable aid to citizens. Yet, for the most part, the underlying conditions that create the incidents remain untouched. So although a particular incident may be dealt with, it is likely that similar incidents will recur. Officers often recognize that many of the incidents that they handle stem from a common problem, and that if this single problem were solved, many incidents could be prevented or better handled. Unfortunately, most police agencies fail to routinely use these insights, and few encourage officers to act on them. Therefore, incidents continue to arise and are handled ineffectively.

In a problem-oriented policing agency, however (Figure 2) officers continue to handle calls, but they do much more. Using information gathered from similar incidents handled by their department, as well as information from other sources familiar with a problem, officers try to address its underlying conditions. If officers are successful, then the incidents may cease, decrease in number, lessen in severity, or be dealt with more effectively.

Police officers have always tried to solve problems, despite incident-driven policing, but typically they have been individual efforts. Officers receive little guidance on the best ways of solving problems, and agencies seldom encourage routine problem-solving. In fact, officers who want to handle problems are usually discouraged from doing so by supervisors and other officers, who fear that prolonged attention to a single problem will take time away from reacting to incidents, and that this may result in a citizen complaint.

To shift a police agency from incident-driven policing to a problem-oriented approach, solving problems must become routine for all officers. The agency must provide guidance on the best methods for dealing with problems, and managers must actively encourage and support officers to take on problems.

If police are to solve problems, they first must understand the causes and consequences of

TABLE 1
What a Problem-Oriented Policing Agency Should Do

1 Focus on problems of concern to the public.
2 Zero in on effectiveness as the primary concern.
3 Be proactive.
4 Be committed to systematic inquiry as first step in solving substantive problems.
5 Encourage use of rigorous methods in making inquiries.
6 Make full use of the data in police files and the experience of police personnel.
7 Group like incidents together so that they can be addressed as a common problem.
8 Avoid using overly broad labels in grouping incidents so separate problems can be identified.
9 Encourage a broad and uninhibited search for solutions.
10 Acknowledge the limits of the criminal justice system as a response to problems.
11 Identify multiple interests in any one problem and weigh them when analyzing the value of different responses.
12 Be committed to taking some risks in responding to problems.

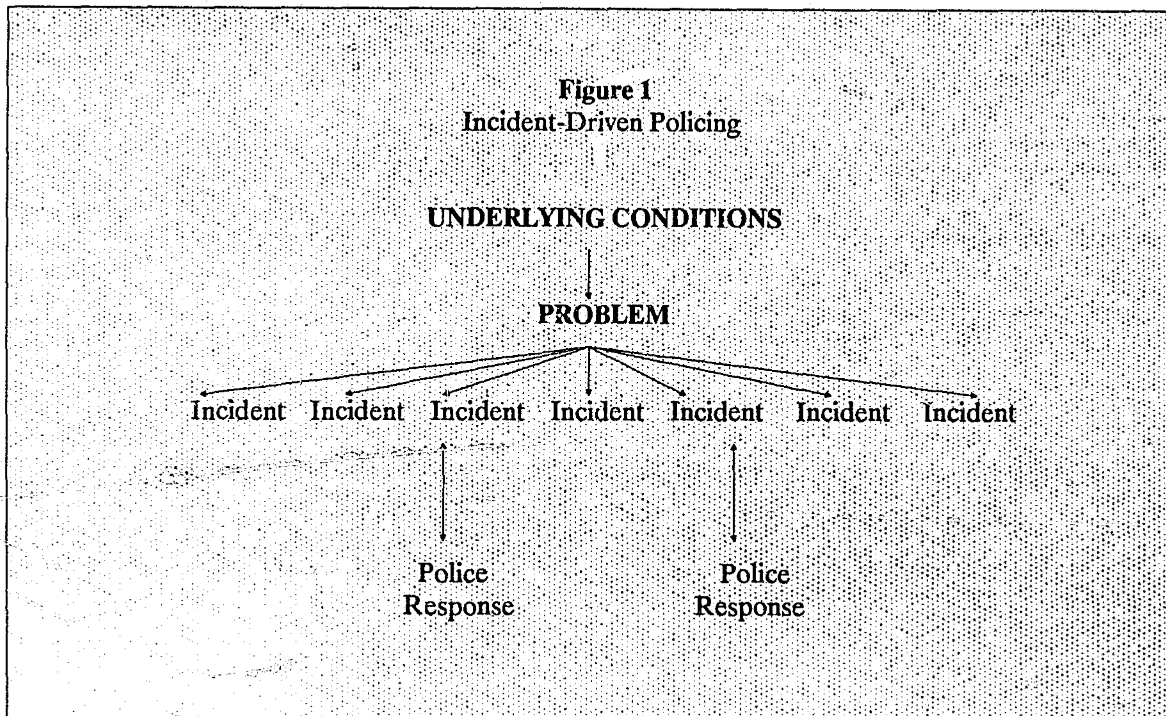


Figure 1
Incident-Driven Policing

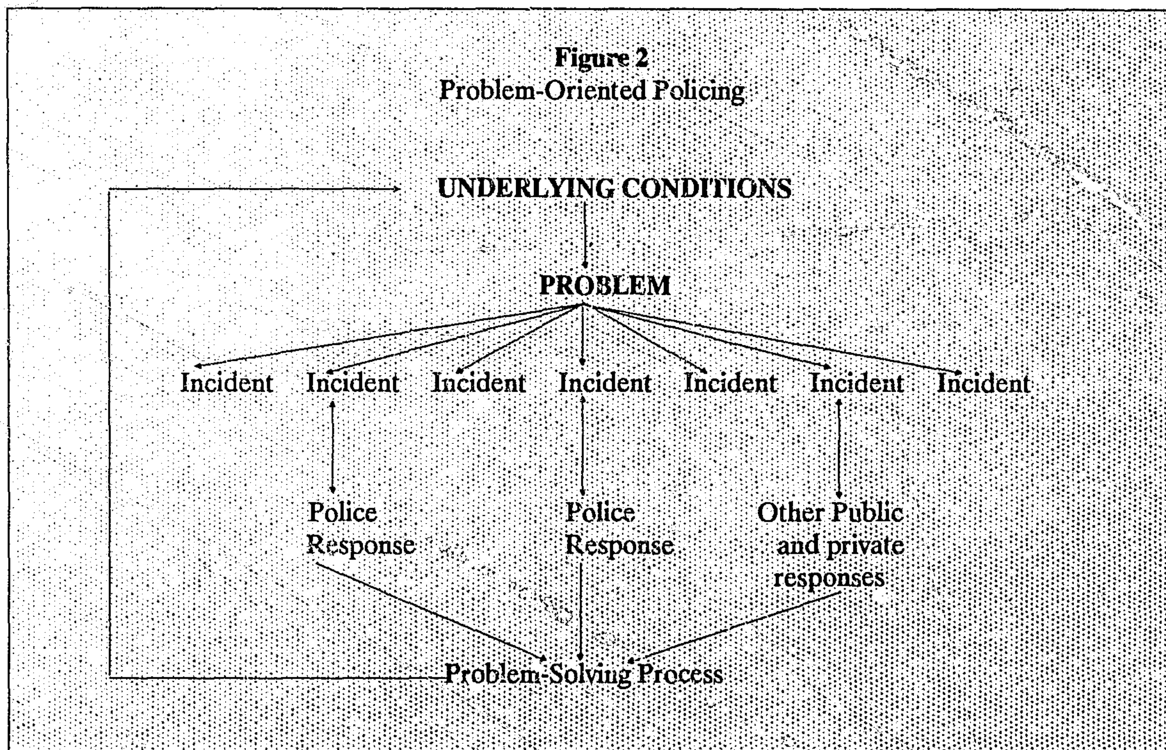


Figure 2
Problem-Oriented Policing

problems. For this they must collect information from a wide array of sources (including sources within the police agency, especially experienced officers). But they also must go outside the agency to collect information from other public organizations, the private sector, and individual citizens.

Police must then develop responses that are tailored to the problem. These responses should not be limited to the criminal justice process; instead, a variety of alternatives need to be explored. These include working with other public agencies, private organizations and businesses, and local citizens. The objective of these efforts can be to eliminate the problem, reduce its impact, or develop clear, sound policies to handle the incidents that make up problems. Whatever the objective, a single problem-solving effort will, in all likelihood, address a number of incidents.

An important distinction must be made between problem-solving and problem-oriented policing. *Problem-solving is a tactic used by individuals or small teams of officers to address a specific problem, but it may or may not be encouraged and guided by the agency.* The fact that some officers in an agency engage in problem-solving does not imply that the agency has adopted problem-oriented policing.

Problem-oriented policing is an agency-wide strategy to encourage and guide all its members to engage in problem-solving. A primary mission of problem-oriented policing agencies is the effective handling of problems. Problem-solving efforts are viewed as the principle means for addressing public concerns. To ensure that as many problems as possible are addressed, and that problem-solving efforts are successful, the agency explicitly encourages and guides these efforts.

Developing a Problem-Oriented Approach

The National Institute of Justice (and its predecessor the National Institute of Law Enforcement and Criminal Justice) has long recognized the need to develop an alternative to incident-driven policing. Institute research showed that major improvements are needed in the patrol and investigative units of most police agencies. This research, in turn, led to a search for improvements. The Institute has sponsored experiments with directed patrol, investigations management, and how citizen's calls are handled. These studies showed that police agencies could exercise much more flexibility in deploying their officers. The Institute also underwrote the development of problem-oriented policing by funding a small-scale test in the Madison Police Department which indicated that problem-solving may be a useful alternative.

The results of these efforts convinced the staff of the National Institute of Justice that a study of the feasibility of routine problem-solving was needed. The Police Executive Research Forum was selected to conduct this research.

The Newport News, Virginia Police Department was chosen as the site agency for several reasons. First, it was a moderate-sized agency of 280 employees and, as a consequence, changes could be made in a reasonable amount of time. Second, Newport News is close to Washington, D.C., thus allowing staff to spend more time in the field at lower costs. Third, its chief of police, Darrel Stephens, was well versed in the background research; felt that such a project would be worthwhile; and was committed to its success.

The study undertaken by the Forum and the Newport News Police Department addressed two distinct questions. The first was: *Can police agencies get their members to routinely identify, analyze, and solve problems without adding personnel or forming special units?* This is a question of capability. Do officers and supervisors have the time and resources? Are they motivated? Do they have the skills required? Can the process be managed? Do they get the cooperation they need from other agencies and the public? Can they identify problems? Do they collect a variety of information? Are the responses to problems tailored to the characteristics of the problem?

The second question was: *Are these problem-solving efforts effective?* There are five ways problems can be solved, and the measure of effectiveness depends in large part on the characteristics of the problem.

1 *A problem can be solved by totally eliminating it.* In this case, effectiveness is measured by the absence of the types of incidents that this problem creates. It is unlikely that most problems can be totally eliminated, but a few can.
2 *A problem can be solved by reducing the number of incidents it creates.* A reduction of incidents stemming from the problem is a major measure of effectiveness.
3 *A problem can be solved by reducing the seriousness of the incidents it creates.* Effectiveness for this type of solution is demonstrated by showing that the incidents are less harmful.
4 *A problem can be solved by designing methods for better handling the incidents* (treating participants more humanely, reducing costs, or increasing the effectiveness of incident handling). Improved victim satisfaction, reduced costs, and other measures can show that this type of solution is effective.
5 *A problem can be solved by removing it from police consideration.* The effectiveness of this type of solution can be measured by looking at why the police were handling the problem originally and the rationale for shifting the handling to others.

Not all of these types of solutions are equally satisfying in the abstract. The first type is clearly preferable to all others, and the last two the least preferable. However, all are potentially useful solutions in the proper context. When the effectiveness of problem-solving efforts are assessed, we first must consider whether the solution makes sense for the problem; if so, then we should see whether it works.

To answer these two questions, the *theory* of problem-oriented policing had to be translated into a *practice* of problem-oriented policing. Though some police administrators believe that organizations will react if direct orders are given, simply telling officers and supervisors to go out and slay problems usually proves fruitless. Each person in the agency has a different idea of what is expected and confusion will result. A process had to be created to direct officers' efforts.

The Forum project staff and the members of the Newport News Police Department began with a set of five principles to guide the development of the problem-solving process.

1 The final process must involve all department members--all ranks and units, all sworn officers and non-sworn department members--in the identification, study, and resolution of problems;
2 The final process must foster the use of a wide variety of data sources--from internal records and officers' knowledge to other government agencies and private individuals and organizations--to understand the causes and consequences of problems;
3 The final process must encourage police department members to work with members of other public and private agencies to devise effective and long-lasting solutions to problems;
4 The final process must be capable of becoming an integral part of police decision-making, without creating special units or requiring additional resources; and,
5 The final process must be capable of being applied to other law enforcement agencies.

The process designed and tested in Newport News follows all five principles. The remainder of this chapter describes how the members of the Newport News Police Department and the Police Executive Research Forum staff developed and implemented the process.

The Newport News Project

The process was designed by a task force of police department members and Forum staff, with support from consultants. The Task Force was composed of eleven volunteers: Five members were patrol officers and detectives, and the remaining six represented the ranks from sergeant through deputy chief, plus the civilian head of the planning unit. Task Force members came from the two patrol areas, investigations, crime scene search, planning, crime prevention, vice, and the Services Bureau. Members of the crime analysis unit attended meetings and participated in discussions. Also attending and engaging in discussions

were the deputy chief of the Administration Bureau (who served as the department's project director), the chief of police, and members of the Forum's project team.

Developing a Process

The Task Force's primary goal was to develop and implement the problem-solving process. This was accomplished by collecting information, brainstorming, and refining ideas. The Forum staff surveyed police agencies to find departments that were conducting innovative programs that could help the Task Force develop a problem-solving process. Members of the Task Force, accompanied by a member of the Forum's project team, made short site visits to ten of these agencies.

The programs they investigated included crime-prevention initiatives, crime analysis units, fear-reduction efforts, persistent offender apprehension projects, and neighborhood safety and clean-up campaigns. Some of these projects were solely police efforts, while others combined the efforts of the police with outside public and private agencies. The knowledge gained from these trips gave Task Force members a better idea of the variety of options available to handle problems. One of the most useful results of the visits was to convince Task Force members of the need to evaluate programs and document activities; agencies that documented program effects were much more convincing to Task Force members than those agencies that only provided opinions.

The Task Force also received assistance from experts on solving problems in policing. Barry Poyner, a British expert on situational crime prevention, discussed his research on robbery prevention with the Task Force. He also explained his approach to analyzing crime data which helps break large, unsolvable problems into smaller, solvable pieces. Herman Goldstein conducted two training sessions on the fundamentals of problem-solving. These sessions described the principles shown in Table 1 and reviewed the types of questions that officers need to ask when analyzing problems.

The Task Force then put to use the information collected during the site visits and the discussions with Poyner and Goldstein. The process they developed has four stages:

- *Scanning*, or problem detection and identification;
- *Analysis*, or learning the problem's causes and consequences;
- *Response*, or designing and implementing a solution; and
- *Assessment*, or evaluating the effectiveness of the solution.

A series of brainstorming sessions was held to develop an "analysis guide" for use in the analysis stage of the process. The results of the brainstorming sessions then were organized and edited by the Forum staff and given back to the Task Force for revisions. The guide produced by these efforts was used by officers studying problems.

Taking on Problems

While the process and analysis guide were being designed, the Task Force oversaw, and some members participated in, efforts to solve two problems: burglaries in a low income apartment complex and thefts from vehicles in a large group of downtown parking lots. Work on these two problems accomplished three objectives. First, the two problems provided sources of information about the "real world" of problem-solving that could be used to develop the process and guide. Second, officers working on these problems received a great deal of recognition from senior officials. The experience provided by working on these problems demonstrated that department members would be rewarded for innovative approaches. Third, the successes in addressing the two problems convinced members of the Task Force, as well as other members of the department, that problem-oriented policing could work.

Even before the Task Force had completed work on the guide, two Task Force members initiated problem-solving efforts of their own. Sergeant Janice Thurman, the Internal Affairs investigator, began a study of assaults on officers. While Sergeant Marvin Evans, then a detective in the Homicide section, started to investigate ways of reducing killings. These self-initiated actions provided more useful information to the Task Force.

Other department members who were not on the Task Force saw that addressing problems was being encouraged, leading to more problem-solving efforts. For example, a patrol sergeant on the night shift had one of his officers begin a study of ways of curbing prostitution-related robberies in a district known to have a great deal of both of these activities. This effort, too, helped in the development of the guide.

When the Task Force had completed work on the process and the guide, members decided that they should each select problems to solve. The only restriction was that the problem selected had to be within the scope of normal duties. Problems they began to address included drunk driving, trail-bike damage and noise in a residential area, and repeat calls from convenience stores. In addition, Task Force members began to encourage other department members to initiate their own problem-solving efforts.

Training

Official implementation of problem-oriented policing was scheduled for early July, 1985. To prepare middle managers, a three-day training session was held at a local hotel. All department members of the rank of sergeant and above were required to attend. The only exceptions were day-shift patrol sergeants, who were needed to supervise patrol operations. The training had three goals. The first was to show supervisors how to manage their officers' time so that problems could be addressed without diminishing police capability for handling calls. The second goal was to describe how problems should be analyzed. The third was to ensure that all supervisors knew what was expected of them and their officers.

The training covered research on police operations, time management, directed patrol, crime analysis, problem-solving, and the problem-solving process and analysis guide. These topics were presented by Tom Sweeney, Deputy Commissioner of the Westchester County Police Department, William Bieck, head of the Operations Support Group of the Houston Police Department, Herman Goldstein, and Chief Darrel Stephens. The analysis guide, and an explanation of how to use it, were distributed to participants. Participants were encouraged to seek the help of Task Force members or the Forum's on-site Field Research Assistant if they needed help.

By October, 1985 a large number of problems were being addressed. However, department members, including Task Force members, felt that additional training was required to explain in greater detail the problem-solving process and the problem analysis guide. The Task Force and the Forum project team agreed that, since it was impossible to train everyone in the department, street-level supervisors were the key to implementation. The training thus focused on sergeants and lieutenants. Four classes of 12 to 16 participants each were held between November 1985 and April 1986. During the eight hours of class time, participants learned about the four stages of the problem-solving process. The Forum's project director conducted the training and members of the Task Force gave presentations on their problem-solving efforts. All patrol sergeants and lieutenants received training, as well as over half the investigation sergeants and several sergeants and lieutenants in other parts of the department. In addition, 19 patrol officers and detectives, including the two officers assigned to foot beats in high-crime areas, received this training. In all, 51 of the 236 sworn members of the department received this additional training.

Since this project began, 18 problems have been identified and are either being addressed or have been solved. At no time during this project did the Newport News Police Department hire new personnel to conduct problem-oriented policing. All problem-solving efforts described in this report were conducted by existing personnel, who worked on problems while carrying out their regular police duties.

Evaluating Problem-Oriented Policing

In addition to developing a process for solving problems, the Problem-Oriented Policing Project collected information to determine how well this

process has worked. This information can be divided into two parts:

1 Information about efforts to solve problems and answering the question, *Can police agencies get their members to routinely identify, analyze, and solve problems without adding personnel or forming special units?* and,
2 Information about the success of efforts to solve problems and answering the question, *Are these problem-solving efforts effective?*

Answering the first question is difficult. Although the Newport News Police Department has long collected a great deal of data on incidents--numbers, descriptions, and dispositions--it had no data describing the problems of which these incidents were symptoms. Like all incident-driven agencies, baseline data did not exist on the number of problems addressed by the department before the project began.

Discussions with police department members, however, revealed that such efforts had been conducted in the past, but only sporadically. For example, in 1982 an effort was made to reduce burglaries in the New Briarfield Apartments, a low-income housing project. Two officers were provided with an apartment in the complex to use as an office. While the police used the apartment, burglaries were reduced substantially. But when the officers were reassigned, the numbers of burglaries returned to--and then surpassed--their previous level. Another example is an undercover operation in progress when the project began. This patrol operation attempted to stop a drug-dealing network from pushing its wares in a residential neighborhood. Many arrests were made, and the leaders of the ring were sentenced to long prison terms. As a result, drug dealing declined in the area.

As in other agencies, these efforts were notable because they were exceptions, not the rule. It seems clear, therefore, that the current problem-solving activities represent a marked increase over previous problem-solving efforts. An improvement in quality would not be surprising, given that no guidance on how to analyze problems had been provided in the past. The quality of solutions has been difficult to determine, however. We can only be certain that no personnel were added, and no special units were formed, in order to conduct problem-oriented policing.

Difficulties also arose in evaluating individual problem-solving efforts. Evaluations had to be conducted so as not to disrupt the problem-solving activities of the officers involved. An intrusive evaluation design would have disrupted police routines, thereby confounding attempts to discover whether officers can solve problems as a part of their normal work. In addition, the diversity of problems that could be selected required flexible evaluation methods. Some solutions take a great deal of time to become effective, while others may be effective only for a short period. Finally, data describing effectiveness often was inaccessible. For example, the number of reported incidents usually was easy to gather, but the number of unreported incidents could only be gathered through very expensive surveys. Although observations could provide useful information on changes in the physical characteristics of an area, it was much harder to learn whether the residents or workers in the area noticed or liked the changes. Reductions in vice activities were almost impossible to document with quantitative data.

The Forum staff decided to evaluate three of the first problems to be identified, analyzed, and solved. These problems were the New Briarfield Apartment burglaries, thefts from vehicles in downtown parking areas, and downtown prostitution-related robberies. Because they were addressed in the project's early stages, sufficient time had elapsed to determine if the solutions were working. The evaluation design for all three problems involved tracking the reported incidents created by the problem over several months, both before and after the solutions were implemented. In addition, incidents reported in areas adjacent to the problem areas were tracked to determine whether the problems were being displaced, or if, instead, target incidents in the entire area were decreasing. Finally, observations of the problem area and interviews with the officers and citizens involved in the problem-solving were used to determine the course of events.

Report Summary

This report describes the Newport News Problem-Oriented Policing Project. This project is the first attempt to implement problem-oriented policing, agency-wide. As a first effort, it produced a wealth of information about the potential for problem-oriented policing. The project shows that problem-oriented policing can work in an agency as part of routine police work. Further, it shows that officer problem-solving efforts can be effective. The project also raises a number of questions. Many of these questions are addressed throughout this report, with possible answers supported by reasonably good evidence. Often, however, only educated guesses can be offered regarding the answers.

This project should be viewed as an early effort to develop and explore the strategy of problem-oriented policing. As more research is conducted, and other agencies experiment with problem-oriented policing, our knowledge of this strategy will grow. It will take a long time and much systematic inquiry to gain the definitive answers to many of the important issues raised here.

This chapter has described project activities in Newport News. The following chapters expand upon many points raised here. Chapters 2 and 3 set the context for this study. Chapter 2 reviews the extensive research that led up to this project. It traces the origins of problem-oriented policing back twenty years to early research on police operations and dissatisfaction with police-community relations. Chapter 3 discusses the environment within which the process was implemented--the City of Newport News and its police department--and how aspects of the environment aided or hindered implementation.

The following two chapters deal with the development and implementation of the problem-oriented policing program in Newport News. Chapter 4 discusses the problem-solving process developed by the Newport News Police Department's Task Force. This chapter presents the four stages of the process and shows how officers and supervisors applied it. Chapter 5 provides a detailed description of the analysis stage of the process, with examples drawn from various problem-solving efforts.

Chapters 6 and 7 describe problem-solving efforts. Chapter 6 looks at problem-solving effectiveness. It describes the three evaluated problem-solving efforts: New Briarfield burglaries; downtown thefts from vehicles; and prostitution-related robberies. For each of these efforts, we provide the evaluation results. Chapter 7 contains capsule summaries of other problem-solving efforts in which Newport News Police officials have been, or are currently, engaged. By showing the diversity and scale of the problem-solving efforts, this chapter addresses the question of efficiency: Can police agencies get their members to routinely identify, analyze, and solve problems without adding personnel or forming a special unit?

The concluding chapter summarizes the evaluation findings, reviews concerns regarding implementing problem-oriented policing in other agencies, and outlines implications of this approach for the future of policing.

Notes

[1] Increasingly, large police agencies are implementing procedures to handle many types of calls in ways that do not require the immediate attention of an officer. These procedures are generally grouped in what is called a "differential police response" strategy, or DPR (Farmer, 1981; McEwen, Connors, and Cohen, 1986). Differential police response has major implications for problem-oriented policing, which will be discussed later.

[2] See Sherman (1986) for a similar description of general police practice.

CHAPTER 2

HISTORICAL BACKGROUND

Introduction

Policing is dominated by a work style that may be called "incident-driven." Incident-driven policing is a set of work habits, standard operating procedures, and management practices that guides the activities--and the perceptions and attitudes--of the police officers who practice it. This style of police work grew out of the reforms of the early 1900s; it marks the natural extension of scientific management and hierarchical, rule-based organization. The reforms certainly represented a marked improvement over the politically-oriented and frequently corrupt policing style of the turn of the century. Nevertheless, research conducted over the last twenty years shows that incident-driven policing is a severely limited means of controlling crime and meeting the demands of the public.

In this chapter, we examine these research results. We then identify two lines of progress which the police must undertake if they are to become more effective. Police must become more attentive to the changing demands of the public; managers must alter their management style so that line officers have the freedom to meet these demands in innovative ways. Finally, we describe problem-oriented policing, a new approach to policing that integrates these two lines of effort. But first, let us consider where incident-driven policing came from, and what made it such an improvement over what went on before.

Reforming Police Work--Origins of Incident-Driven Policing

Police reform was an integral part of the progressive movement, an attempt in the early decades of this century to wrest control of city government from the political machines which had taken control of it. The machines controlled the police department, and the police helped the machine maintain control of the rest of city government. Because the police were an integral part of the machine, police reform was an integral part of the progressive program of urban reform (Fogelson, 1977).

The reformers took issue with a number of police practices of the day. They pointed out that police officers did a variety of favors for the bosses and their cronies, running political errands, supervising elections, driving ambulances, and conducting housing inspections; often, officers were detailed to guard private concerns, such as manufacturing plants, docks, or railway stations. These odd jobs drained staff time and increased the potential for graft. And the typical police chief of the pre-reform era was a figurehead, usually a political ally of the machine boss, with little authority over precinct commanders and street-level officers. The reformers claimed that this decentralization of authority led to a lack of discipline and leadership, and provided a constant temptation to corruption (Walker, 1977; Monkonnen, 1981).

Their prescription was to subject it to the methods of "scientific management." Authority should be centralized and hierarchical; police administrators should be chosen according to merit, independence, and proven leadership ability. Officers should be put in a stringent, civil service system, with merit-oriented selection and promotion procedures governed by objective tests; their activities should be governed by impersonal standard operating procedures. The catch-all urban service functions of the police department should be curtailed, and the police should concentrate on their primary objective, crime control. And, of course, police administration should be completely divorced from electoral politics. The rhetoric changed over the years; in the 1920s, progressive police administrators used the military as a model for organizational structure and management style; by the 1950s, big business had taken its place. But the substance of the reform prescription remained the same: the police should become a hierarchically structured, crime-fighting force based on depersonalized rules and procedures (Fogelson, 1977; Walker, 1977).

Centralized police decision-making promised a variety of benefits to the progressives, the weakening of the political machines first among them. But the reforms really began to take hold when police administrators began to see their benefits. Most obviously, progressive police chiefs saw an opportunity to increase their own control over the activities of their officers. And they saw the chance to increase the status of the police in the eyes of the public. A professional, corruption-free department would, they felt, be more effective at fighting crime. This, in turn, would help police to obtain better cooperation from the public, allowing them to do their job more effectively (Vollmer, 1933; Wilson, 1950).

As the basis of police legitimacy shifted from the political machine to the professionalism of the organization, control of serious crimes took on added importance. There were many reasons for this. For one thing, other agencies were becoming available to provide social services, monitor elections, and the like; but crime remained the specialty of the police. For another, serious crime was uncontroversial: various interest groups might disagree over the importance of regulating gambling, prostitution, or public drunkenness; but few would argue with the need to control burglary and robbery. Focusing on crime would reduce the potential for graft: street crimes were usually reported to the police by the victim or a witness, and were officially recorded; thus they could be followed up by a watchful supervisor, and presented few opportunities for payoffs. Finally, measures of crime were readily available. Especially after the development of the Uniform Crime Reporting system (itself a product of the police reform movement), police managers had available simple, if flawed measures of the effectiveness of their activities.

But the main reason police emphasized crime control was public interest. Throughout the reform period, as today, serious crime was one of the primary concerns of city residents; police administrators used this concern to increase their autonomy and their budget. And the underlying claim--that police could reduce crime by substantial amounts, if only they had the resources they needed and the autonomy to use them efficiently --seemed reasonable, particularly given the obvious inefficiency of the pre-reform era police (see, for example, National Commission on Law Observance and Enforcement, 1931).

New developments in technology made a police chief's claims of effective crime control even more credible. The most important of these developments was the growing availability of the telephone. Citizens could use the telephone to alert the police to a crime or disturbance more quickly and surely than through the old system of police call boxes. When combined with the help of the patrol car and the two-way radio, police officers were able to reach the scene quickly, in some cases before the suspect had made good his escape. Fast response led to some spectacular arrests, and seemed to make spectacular reductions in crime possible (National Commission, 1931). Police administrators moved quickly to reap the benefits of the new technology, moving many officers out of foot beats and into patrol cars between the 1920s and the 1950s.

The growing emphasis on rapid response to calls had a number of side effects. Despite the urging of such police thinkers as O.W. Wilson (1950), officers chose to stay in their cars while waiting for the next hot call, rather than get out and patrol

their beats on foot. To leave the car was to risk missing the next call. Slow response could lead to a citizen complaint, or--worse--a missed opportunity to make an arrest. Making an on-scene arrest was exciting, and obviously effective. In many cities a "good bust" could be the key to promotion or a better assignment. And officers' resistance to leaving their cars was reinforced by their supervisors. Of course, by staying in their cars, patrol officers lost contact with residents of their beats who were neither offenders nor victims. Their knowledge of community problems became more and more limited. But to many police administrators this was simply irrelevant. As Los Angeles Police Chief William Parker put it, police could only apply "emergency treatment" to "surface wounds"; any community problems other than crime problems were best handled by social service agencies (Wilson, 1957).

To make better use of officers kept always at the ready, police managers developed the theory of preventive patrol. Through highly mobile surveillance, police would presumably inspire an illusion of omnipresence among potential offenders, thus deterring them from committing crimes. The theory was an inspired afterthought: police managers only emphasized the importance of establishing a watchful, mobile police presence after it became clear that this was what their officers were going to do, anyway (For example, compare Wilson, 1950 with Wilson, 1963).

The new-found focus on crime control had a similar effect on the activities of detectives. During the era before reform, detectives were expected to work offenders, rather than cases. They relied on a network of informants and an extensive knowledge of the community to identify active offenders and link them to crimes. With the advent of better crime reporting, detective performance began to be measured differently. Clearance rates and the sheer volume of arrests were considered the most useful indicators; detectives began to shift their attention to cases rather than offenders, in an effort to better their showing on the official scorecards. Detective training became more professionalized, and began to emphasize case-oriented investigation procedures; detective supervisors began to implement rudimentary case management systems. So detective work, too, became incident-driven (Eck, 1982).

By the 1950s, incident-driven policing was well-entrenched in most urban police departments. Patrol officers and detectives focused their attention on criminal incidents, rather than community problems or offenders. Their activities were supported by supervisors who relied on a set of standard operating procedures and a centralized decision-making structure, with the aim of closely regulating officer responses to these incidents. This is the style of policing that prevails today.

The Dubious Effectiveness of Incident-Driven Policing

The Effectiveness of the "Traditional" Approach

The first shot in the battle over incident-driven policing was fired in 1974, with the publication of the results of the Kansas City Preventive Patrol Experiment. Still one of the most elaborate police research studies ever conducted, the Kansas City experiment was aimed at testing the usefulness of random, preventive patrol.

The results of the experiment are well-known: crime rates and citizen satisfaction with police service remained unchanged, whether random patrol levels were doubled, tripled, or even completely eliminated (Kelling and others, 1974). As other researchers pointed out, the study was flawed in a variety of ways. In particular, the department found that it was hard to maintain the experimental conditions. And even if the experimental conditions had been maintained perfectly, the range of patrol levels tested in Kansas City was relatively narrow; some departments regularly patrolled their cities more heavily than Kansas City did, even in its experimental beats (Larson, 1976; Fienberg, Larntz, and Reiss, 1980). Still, the report was influential. It crystallized the skepticism of many police administrators toward preventive patrol, and it showed that all patrol beats need not be covered at all times. Instead, police managers

could remove officers from an area for a limited time to direct their attention to specific problems.

The Kansas City experiment was the first important study of preventive patrol, but others followed. Researchers in Nashville conducted an experiment similar to that conducted in Kansas City, and obtained similar results (Schnelle and others, 1975). Then they increased the level of patrolling in selected districts to 30 times its ordinary level. Saturation patrol proved successful in reducing crime rates--but only at night, not in the daytime (Schnelle and others, 1977). Less rigorous studies of patrol levels conducted in Denver, Cleveland, Albuquerque, and other cities produced similarly mixed or negative results (Dahman, 1975; Wagner, 1978; Lewis, Greene, and Edwards, 1977.) Finally, studies of serious crimes revealed that most were not committed where a passing officer could see them--thus there was little reason to suspect that they could be deterred through preventive patrol at all (Skogan and Antunes, 1979; Kansas City Police Department, 1980).

The conclusion most drew from these studies was that preventive patrol could probably help to reduce crime, but only some crimes, only at saturation levels, and only in certain circumstances. That is,

> a virtual doubling or tripling of police or on the other hand a halving of police presence might yield no measurable change in crime levels (Larson and Cahn, 1985).

In short, use of preventive patrol to "fill in" between calls for service did not seem to be a very effective use of patrol officer time.

Shortly after completion of the preventive patrol experiment, the Kansas City Police Department began work on another study, this time examining the effectiveness of rapid police response to calls. Their conclusions again challenged the conventional wisdom of incident-driven policing: fast police response was simply irrelevant for over 90 percent of the crimes reported to the police. True, a fast response dramatically increased the chances that an offender would be arrested if the crime were reported quickly; but the chances of an arrest at or near the scene dropped to nearly zero if the citizen delayed reporting as much as 5 or perhaps 10 minutes. And in 90 percent of the crimes reported, citizens were unable or unwilling to report the crime to the police within 5 to 10 minutes of its commission (Kansas City Police Department, 1980).

Similar results were found in other cities: fast police response was only particularly useful in 8 to 12 percent of reported crimes (Spelman and Brown, 1984). Further, because most calls for service were unrelated to crime or medical emergencies, the proportion of all calls requiring an immediate response was only about 2 percent (Scott, 1981; see also Cumming, Cumming, and Edell, 1965; Reiss, 1971; Rush, 1974). And citizens were willing to accept a delayed response to a nonemergency call, so long as they knew when to expect the police (Kansas City Police Department, 1980; Pate and others, 1976). The basic assumption behind incident-driven patrol--that patrol officers needed to respond quickly to most calls for service--was found to be simply incorrect.

Finally, research on the activities of detectives questioned the utility of reactive, incident-driven investigations. Detectives only gave very superficial attention to most reported crimes; few crimes could be solved unless the victim or a witness told the investigator who committed them; differences in investigator training, staffing, workload, or organization appeared to have no effect whatever on the clearance rate (Isaacs, 1967; Greenwood, 1970; Ward, 1971; Greenwood and Petersilia, 1975). Later, more carefully controlled studies indicated that this view was a bit too pessimistic--detectives devoted considerable attention to some crimes, and they were able to use their time to develop leads in these cases and solve them (Eck, 1982). But one fact was confirmed in study after study: the vast majority of crimes were essentially unsolvable, because there were no apparent clues.

Thus the three, main elements of incident-driven policing--preventive patrol, rapid response to calls, and follow-up investigation--were found to be of very limited effectiveness at preventing crimes and arresting offenders. Of course, patrol, response, and investigation were effective in some circumstances, so researchers and practitioners began to focus their efforts on redeploying police resources, to use them more efficiently.

Making Incident-Driven Policing Efficient

Although research suggested that random, preventive patrol did not deter criminals, experience indicated that a few crimes (6/10 to 8/10 of one percent) were intercepted while in progress (Elliott, 1973; Kaplan, 1979). Thus some departments set about increasing their chances of interception, by deploying their patrol forces in order to ensure the highest levels of patrol for the most crime-ridden areas. They did this by splitting the patrol force: *basic* patrol officers would continue to answer calls, full-time; *structured* officers would answer only emergency calls, and devote their time to patrolling the districts with the highest crime rates. Split-force experiments in Chicago, Wilmington, and other cities were successful in increasing the amount of time devoted to patrol, while keeping constant or even decreasing response times. But they were unsuccessful in increasing arrest rates or reducing crime (Bottoms and others, 1972; Reagan and others, 1974; Tien, Simon, and Larson, 1978; Lewis, Greene and Edwards, 1977).

A less radical approach to increasing the efficiency of patrol work was provided by crime analysis, adopted by many departments in the 1970s as part of the federally funded Integrated Criminal Apprehension Program (ICAP). Crime analysis units used police records to analyze the nature of crimes and criminals. The analysts focused on burglaries, robberies, and, in a few agencies, rapes and auto thefts. Crime analysts looked for patterns, plotting the locations and times at which crimes were committed to direct patrol officers to the most likely targets (Reinier, Greenlee, and Gibbens, 1976).

Most often, crime analysis was used to direct the activities of patrol officers. But the combination of crime analysis and directed patrol proved no more effective than split force (Franks, 1980; Gay, Schell and Schack, 1977; Gay, Beall, and Bowers, 1984). One directed patrol experiment was successful in increasing the percentage of crimes intercepted while in progress--but it involved a 400 percent increase in the number of patrol officers, and was quickly disbanded (Elliott and Sardino, 1971; Elliott, 1973).

These studies showed that patrol activities could be directed to specific areas and specific times by patrol managers. As a result, the patrol force could be deployed more flexibly and (presumably) more efficiently than in the typical incident-driven police department. But these gains in efficiency did not make the police more effective at controlling crime.

At the same time, police began to respond to findings that a fast police response was not needed for all calls for service. Complaint operators in several police departments began handling "cold" crime calls and calls for information and referral services in more cost-effective ways. In many cities, reports were taken over the phone; in others, the reporting citizen was asked to come into the neighborhood police station to make a report; in cases when an on-scene response was deemed necessary, a nonsworn paraprofessional could be dispatched, or dispatch of a sworn officer could be delayed by twenty minutes or more until the beat car was available to handle the call (Farmer, 1981; Tien and others, 1975). A careful evaluation of such a "demand management" program in Wilmington, Delaware, showed that implementation of alternative responses did not reduce citizen satisfaction with police services, even though many of the citizens would have preferred immediate dispatch of a patrol car (Cahn and Tien, 1981). Due in part to findings like these and to the support of the Federal government, many local police departments have begun to implement "differential police response" or "DPR" programs (McEwen, Connors, and Cohen, 1986). Although DPR is doubtless a more efficient way of structuring patrol response to calls, it was never intended to make the police more effective at preventing or solving crimes.

Finally, police began to make detective operations more efficient. Many cities developed formal methods of case screening: cases with no or few clues were not followed up, and detectives devoted their time and energy to cases which could conceivably result in the identification and arrest of a suspect (Greenberg, Yu, and Lang, 1973; Eck, 1979). Crime analysis units collated offender descriptions and methods of operations, to help detectives identify crime series (Chang and others, 1979). And some cities developed team policing units in which followup investigation of

all but the most serious crimes were assigned to a patrol officer (Schwartz and Clarren, 1976; Sherman, Milton, and Kelly, 1973). Team policing proved difficult to administer, and few efforts survive today. But the team policing experiments made it clear that many followup investigations require little specialized experience; as a result, patrol officers in many cities are assigned to follow up less serious cases when they are not needed to answer calls (Police Executive Research Forum, 1981). Although these innovations have clearly helped to allocate resources to where they are most needed, clearance and incarceration rates have not increased as a result (Greenberg and Wasserman, 1979). Again, investigative case management is more efficient, not more effective.

The police efficiency work of the 1970s and early 1980s showed that local departments could free up the time of patrol officers and detectives. Many districts did not need continuous patrol; many calls did not need an immediate response by a patrol officer; many crimes did not need to be investigated. Because the objectives of administrative efficiency could be easily met, efficiency became an end in itself (Fogelson, 1977). Incident-driven policing had played a vital role in police professionalization, and was clearly effective within limits. In the long run, however, incident-driven policing proved to be a dead end.

The Broadening Scope of Police Action

Even as research was pointing up the limitations of incident-driven policing, it was becoming harder and harder for police departments to practice it. The expectations and needs of the public were changing; so were the expectations and needs of many police officers. Over time, it became clear that the police had to change their daily activities, their management practices, and even their view of their work in order to cope with these external pressures.

Let us divide these pressures into two parts. First, we will consider pressures to change the *scope of department action*. Outcry from minority communities over undue use of force led police to change their methods, and (eventually) to work closely with these communities to identify ways of serving them better. Police found it necessary to consider as important many problems not directly related to crime. At the same time, criminal justice professionals were discovering that crime was inextricably linked to other community problems. It had always been thought (though it was difficult to prove) that such problems as chronic unemployment and drug abuse were related to neighborhood crime rates; but now researchers speculated that apparently minor problems such as abandoned buildings and poor property maintenance tended to increase the severity of crime problems, as well. So crime control was not simply a matter for the criminal justice system to handle. Other agencies, businesses, and private citizens could all play a part in the solution to crime problems. And the old focus of police action--crime control and criminal justice system responses to the exclusion of all else--came to seem more and more outdated.

Second, we consider pressures on police administrators to change the *scope of individual officer discretion*. To some degree, these pressures were the same as those affecting other government agencies and private industry. Like workers in other fields, police officers were becoming better educated; they expected more autonomy, challenge, and flexibility in their work. Changes in police activities added to these pressures: community policing programs, interagency cooperation, the need to handle problems that were not directly criminal, all required that officers be prepared to exercise their initiative and judgment, free from the tight constraints of typical standard operating procedures. In response, a few police administrators began to change the way police departments were run. They began to recognize that officers had always had considerable discretion, but now they structured the discretion in such a way that it could be appropriately limited and controlled. Again, the focus of the incident-driven police management--under which the model police officer would be expected to execute standard operating procedures like a robot--began to seem obsolete.

Figure 3 illustrates these changes in the role and structure of the police. Incident-driven policing

Figure 3
The Role and Structure of the Police are Changing

Scope of Individual Decision-making	Scope of Departmental Action: limited	Scope of Departmental Action: broad
limited	incident-driven policing	focus on disorders, services
broad	participative management	problem-oriented policing

is represented by the upper left-hand corner; it is characterized by a limited scope of police action, and by a limited grant of decision-making authority for individual officers. Conditions are forcing policing to move along both the horizontal dimension (increasing the scope of departmental action to include problems not directly related to crime) and the vertical dimension (increasing the authority of individual officers to make thoughtful decisions). Problem-oriented policing represents the confluence of these two trends.

Let us examine these trends in more detail. Consider first the pressures on police to change the scope of departmental action.

The Broadening Scope of Department Action

Ever since police administrators took up the mantle of the Reform movement in the 1940s, most police professionals have tried to define themselves as "crime fighters." This was a natural reaction to the kitchen sink role forced upon the police in the 19th century. But the definition is needlessly limiting, and the public knows it. Most calls for police assistance require the police to maintain order or provide services, rather than to respond to a serious crime. Similarly, most activities initiated by patrol officers are related to the regulatory, order maintenance, or service functions of the police. Even so, the crime fighter image is important, because it limits the activities that police are willing to take most seriously.

The image is changing. More and more, the public expects that the police take seriously incidents and conditions not obviously related to serious crime. And the police are responding to these expectations, for a variety of reasons. To some degree, of course, they are succumbing to public pressure; the pressures are particularly strong for departments that have worked to strengthen communication between their officers and the public. Perhaps more important, as experience shows that the police can affect the quality of life in more ways than by just controlling crime, many police professionals are redefining their role. "Crime fighters" are now becoming "service providers." Finally, research is making clear what many officers understood intuitively: crime and noncrime problems are closely linked, and police can often attack crime most effectively by providing services or maintaining order.

For many of these noncrime problems, the standard responses of the criminal justice system are inappropriate. As a result, some departments have begun to work closely with citizens' groups, businesses, and other government agencies to

design more appropriate responses (see, for example, Reiss, 1985). Sometimes these responses have only been formalized versions of what police had always done informally; but sometimes they involved new grants of authority to the police, or police involvement in brand-new social service systems (Goldstein, 1977). Thus public demands for police to take on a greater array of problems have led the police to work with a wider variety of resources. In responding to these problems--and in identifying and responding to related problems on their own--the police have grown beyond the boundaries of the criminal justice system.

These demands for a broader police role have come from two important directions. Some demands have come from the bottom up, from citizens' groups or individuals. Their demands have typically focused on incidents or conditions that affect a single neighborhood. Other demands have come from the top down, from national organizations or pressure groups. These demands are broader in scope, often affecting police departments throughout the country. These two sets of demands are different in kind, and should be considered separately. Let us consider first those demands arising from and focusing on individual neighborhoods.

Neighborhood Pressures. The riots of the 1960s made police acutely aware of their strained relations with minority communities. Black and Hispanic communities were concerned largely with controlling police use of force. The police were concerned with defusing the dissension, preventing violence, and creating a more favorable image for themselves.

Perhaps because these aims were so politically charged, these first attempts were formal. Formal structures such as community relations units and civilian review boards were established. Both were limited: community relations units were sometimes able to manage conflicts and prevent violence, but they had little effect on the behavior of street officers; line officers objected so strenuously to civilian review boards that most were dismantled or rendered impotent shortly after they were implemented. The only actions which can be credited with working were purely internal: stringent policies on police use of force, enforced by internal affairs units, helped reduce the number of violent incidents. But citizens often viewed internal investigations as "whitewash" attempts by the police department; more important, these investigations could not, by themselves, solve the community relations problem.

Dissatisfied, some police administrators began efforts aimed at bringing police officers closer to the neighborhoods they worked. The most ambitious of these efforts, team policing, involved a radical restructuring of the police organization. Officers would no longer be assigned to a beat or shift, or to a squad in the detective bureau; they would instead be assigned to a team that had responsibility for delivering all police services to one section of town. Each team leader would be, in effect, a neighborhood police chief. Team policing emphasized constant contact with the community, participative management, and a generalist, rather than a specialist orientation. In theory, these operational changes would make police more responsive to the needs of the communities they served. In practice, team policing proved too radical a departure from the incident-driven tradition. Few efforts survive today. But three tactics often adopted by neighborhood teams did survive: storefront police stations, foot patrol, and community crime watch.

Storefront police stations put police officers in the community at all times, forcing them to deal with the public constantly. And, presumably, members of the public would be more willing to walk into a station located in an unpretentious setting in their own neighborhood if they wished to provide information or make a complaint. Officers who did not staff the storefronts often regarded these jobs as "public relations," far removed from "real police work." But storefronts often were well-accepted by the communities they served, and increased the amount of communication between police and citizens. There were indications that they helped to reduce fear of crime, too (Holland, 1985; Brown and Wycoff, 1987).

Foot patrols cast police in the most traditional of roles. Because they are in direct contact with the public at almost all times, foot officers become informal authority figures (Kelling, 1987). The bulwark of policing at the turn of the century, foot patrols were enjoying a comeback as early as the mid-1960s. The trend has become more pronounced in the last few years. Evaluations of foot patrol programs conflict over whether they

reduce serious crime. However, they agree that foot patrols lead to increased communication between police and citizens, often leaving the citizens feeling safer and more satisfied with their police services (Trojanowicz, n.d., Police Foundation, 1981).

Finally, community crime watches emerged as an important means of police-citizen communication in the 1970s. At first, police just provided citizens with crime prevention information. Later, police grew more ambitious, and began to organize communities. Organized communities were supposed to exert more control over rowdy youths and wayward adults, thus reducing illegal and threatening behavior. Despite some notable successes (for example, Cirel and others, 1977), crime watch programs have led to few sustained crime reductions. Nor do they seem to make people feel much safer; indeed, there are indications that the organizing tactics usually used by police leave people more afraid than before. Again, however, many departments obtained much information about neighborhood conditions and problems through crime watch groups (Lavrakas, 1985).

By incident-driven standards, storefronts, foot patrols, and crime watches were mostly failures. Most evidence suggests that they do little to control crime. But they have all been successful in increasing communication between the police and the public, and sometimes this has made people feel safer. Surely this is a gain, particularly in light of research which suggests that citizens may be more harmed by fear of crime than by victimization itself (Taub, Taylor, and Dunham, 1984; Greenberg, Rohe, and Williams, 1984). And to the degree that fear of crime is a vague and somewhat irrational sense of unease, sighting an officer on foot, in a local station, or standing before a neighborhood meeting can help to reduce it. But most research indicates that fear of crime is quite rational, grounded in reasonable expectations of vulnerability (Spelman, 1983; Skogan, 1987). To the degree that fear of crime is rational, we can expect that fear will return to its prior levels, so long as the conditions which cause it do not change. Indeed, there are indications that fear-reduction strategies based on increased police-public communication are only effective in the short run (Fowler and Mangione, 1983).

More important, however, the community policing projects showed the disparity between the problems that people face and the problems that incident-driven police departments attack. Police found that most citizens' concerns were not directly related to serious crimes. Trash on the streets, noise, abandoned and ill-maintained buildings, barking dogs, and the like form the bulk of calls for police service, and the bulk of problems identified by officers assigned to storefronts, foot patrols, and crime watch groups. In many areas, residents judged these problems to be more serious than street crime (Spelman, 1983).

Officers assigned to community policing projects began working to solve these problems. In one foot patrol project, for example, evaluators found that calls for service had diminished by 42 percent in the patrolled neighborhoods. Looking more closely, the evaluators found that

> the less serious complaints, such as abandoned cars, neighborhood children, or barking dogs, were being handled informally by the foot patrol officer (Trojanowicz, 1983).

It became clear that energetic foot officers were organizing communities, mediating disputes, and even advocating increases in the level of local government services for residents in their beats (Trojanowicz, 1984). Similar activities were undertaken by foot and storefront officers in other jurisdictions. Community police officers had strayed far from their traditional mandate to control crime.

Some police administrators would argue that this is what police should have been doing all along. If the purview of the police encompasses public health, safety, and welfare, this is no doubt true. But recent research also suggests that it is true, even if the primary job of the police is to control crime. Deterioration, neglect, and incivilities appear to be very much crime-related.

Perhaps the best-known linkage between social and physical disorder and crime is what has become known as the "broken windows" hypothesis (Wilson and Kelling, 1982; Kobrin and Schuerman, 1983). This hypothesis states that signs of deterioration in a neighborhood (a broken window that is left unrepaired, for example) suggest that no one cares what happens there. The inter-

nal controls that prevent most people from contributing to the deterioration--what Wilson and Kelling call "the sense of mutual regard and the obligations of civility"--no longer apply. So ordinarily law-abiding citizens may begin to neglect their homes, or fail to control rowdy youths, or drink in public, thus contributing to the sense of disorder. Most important, disorder signals active or potential criminals that their offenses will be tolerated, thus increasing the neighborhood crime rate.

Disorders such as broken windows, unruly youths, or public drunks are considerably more visible than burglaries and robberies. Disorders are the best cues most people have as to the crime rate in a neighborhood. As a result, it is not surprising that fear of crime is closely related to visible signs of disorder, and almost unrelated to reported crime rates (Taub, Taylor, and Dunham, 1984; Greenberg, Rohe, and Williams, 1984). This has led many researchers to conclude that activities that restore the neighborhood's sense of order should reduce fear. The conclusion is difficult to prove, and recent research suggests that direct elimination of these "signs of crime" may have little effect on fear (Pate and others, 1986). Still, it is probably the best explanation for the often-cited finding that high-visibility police tactics reduce fear, even though they have no effect on reported crime (Bahn, 1974; Police Foundation, 1981).

Behind these common-sense notions lies a broader conception of crime causation. In the past, the police have operated on the assumption that crime is caused entirely by criminals. The appropriate means of controlling crime--the *only* means--is to control these criminals. Thus police have emphasized deterrence and incapacitation strategies.

The view emerging from recent research is more complicated. Offenders are still important, of course. But so are aspects of the physical environment that make crimes easy to commit: houses surrounded by shrubs and hidden from the street are prime targets for burglary; a broken street lamp may entirely obviate the offender's need for hiding places (Newman, 1972; Poyner, 1983). Some aspects of the social environment may increase the opportunities for crime: pickpockets thrive on crowds, whereas muggers prefer to work areas with little traffic and few "eyes on the street" (Jacobs, 1962; Jeffrey, 1977). People may unwittingly adopt daily routines which provoke offenders to single them out (Cohen and Felson, 1979; Skogan, 1981). And institutions such as the family and the schools may fail to control behavior as expected: many daytime burglaries are committed by truants; early delinquent behavior is often a small step forward from "acting out" at home (Hirschi, 1983; Reppetto, 1973). Every crime problem thus has multiple "causes."

Multiple causes suggest multiple responses. For example, the authors of the "broken windows" hypothesis suggest that the police should undertake to reduce incivilities and signs of deterioration by strictly enforcing (or threatening to strictly enforce) laws regulating such behavior (Wilson and Kelling, 1982). Some departments have gone further, coordinating their own community cleanup programs aimed at eliminating the "signs of crime" (Pate and others, 1986), or making crime prevention recommendations to local architects (Clark, 1985; Pima County Sheriff's Department, n.d.).

Other departments have shown that the police need not be restricted to what they can do on their own. In Oakland, California, the police convinced downtown developers to underwrite the costs of foot and mounted patrol officers; private security guards report "soft crimes" such as loitering, panhandling, and drinking in public to the Department through use of a postcard-sized form; and the Department works regularly with developers and real estate owners to ensure that interior and exterior spaces are planned with crime prevention in mind (Reiss, 1985). The Fort Lauderdale Police and the Broward County Housing Authority collaborated on a program designed to better the quality of life, and reduce crime and fear, in public housing projects. The program regularly relies on the assistance of the local codes enforcement agency, merchants, and landlords (Lindsey and others, 1985). An even more ambitious program has been implemented in Baltimore County, where members of the Citizen-oriented Police Enforcement (COPE) unit regularly work with a wide variety of local agencies, businesses, and community groups to solve neighborhood crime and fear problems (Taft, 1986; Cordner, 1985).

In these cities, the police searched for the weak link in the causal chain that produced each neighborhood's crime problem. Depending upon the nature of the problem, the results of their search have led them to work with many of the institutions which govern the physical and social structure of a neighborhood and the actions of its residents. Their experience suggests that these responses work better than simple criminal justice system actions.

We may conclude that, in some departments at least, the increasing demands on the police from the neighborhoods have had far-reaching consequences. Police have moved to meet these demands, partly to reduce the hostility that had gotten in the way of getting the job done, partly because many police officers feel it is their job to do so, and partly out of the realization that noncriminal neighborhood problems can have substantial effects on neighborhood crime problems. Handling these noncriminal complaints has led the police to work with many agencies not inside the criminal justice system. Thus, in an important sense, neighborhood demands have led police out of the criminal justice system, and into a lead role in the human services system.

Nationwide Demands. Over the last twenty years a combination of changing social conditions and the activities of nationwide pressure groups have resulted in important new demands on police time. In searching for ways to respond to these demands, police have found that they were unable to respond adequately by themselves. It became important to involve other agencies in the problem, in order to form an effective response. These changes have reinforced the trend of police moving from the criminal justice system to the human services system.

The changing condition of the mentally ill provides a representative case. Before the mid-1960s, the mentally disabled posed little problem for the police. The most disabled were, by and large, in institutions. In 1955, for example, some 559,000 Americans were in state asylums, most receiving long-term care. In the early 1960s, however, a combination of factors began to bring the mentally disabled out of the asylums and into the community (Murphy, 1986). By 1981, the asylum population had been reduced by more than 75 percent (Lamb, 1984).

In theory, the needs of the uninstitutionalized mentally ill were to have been served by community mental health centers and other support services. In reality, these services have been slow to develop; many regard the available services as inadequate (Bachrach, 1984; Teplin, 1984). As a result, many of the mentally ill have been left to fend for themselves. The mentally ill are no more dangerous than anyone else; but their erratic and occasionally bizarre behavior aroused fear in the people who saw them, and some were unable to take care of themselves. Police had the authority to handle these incidents, they were available 24 hours a day, and they rarely refused to handle cases. As one psychiatrist put it, "Police have become the streetcorner psychiatrists; moreover, their 'office' never closes" (Teplin, 1984).

Streetcorner psychiatrists or not, police knew from the beginning that they could only hope to provide emergency dispositions. The primary services needed by the disabled citizens with which they dealt would have to be provided by mental health professionals. Nonetheless, various police departments have established special units to deal with the problem, implemented better training for line officers, established close working relationships with local mental health centers and hospital emergency rooms, and created procedures which delineate the responsibilities of the various mental health agencies and the police (Murphy, 1986).

Only a small minority of the contacts between police and the mentally disabled involve crimes, or require arrest and adjudication. Yet changing conditions have forced police to devote considerable resources to handling these incidents. In short, deinstitutionalization of the mentally ill has put police in a central role in the mental health services system.

There are many other examples of changing conditions and top-down demands.

- The recent impetus to reduce the incidence of drunk driving and related auto accidents has come largely from national pressure groups such as Mothers against Drunk Driving; the brunt of the burden for enforcing the drunk driving statutes falls, of course, on the police.

- Women's groups have been in the forefront of changing societal attitudes and police responsibilities in domestic violence situations. Until the 1970s, many police departments assigned domestic assaults cases low priority; now police face political pressures and the threat of civil suits if they do not arrest the assailant. The complexity and likelihood of recurrence of many of these incidents has caused many police departments to work closely with social workers, battered women's shelters, and others to form joint responses (Loving, 1980).
- Most recently, police have considered the problem of fear of crime, an example of a national concern that led to the development of several grass roots, community-oriented programs (Pate and others, 1986; Taft, 1986).

As described above, the riots and demonstrations of the 1960s led to the adoption of conflict-management techniques and community policing programs. Rape, missing children, arson--all are problems which led to innovative police actions as a result of nationwide pressures.

In searching for effective responses to problems like these, police practitioners found that they needed to collect more information than was typically available to them in order to understand these problems. It also became clear that organizations besides the police would have to be involved if responses were to be effective. This was particularly important since other organizations were often responsible for drawing police attention to the problem in the first place. Finally, the variety of problems brought to police attention suggested that police were regularly confronted with many issues besides crime, and that these issues were an important part of the police function.

The variety of neighborhood and nationwide demands placed on the police since the 1960s made it clear that the role of the police could not be limited to crime control. It certainly could not be limited to deterring and catching crooks. Police learned to communicate better and more frequently with people outside the police force, both to identify what they should do, and how they could get it done.

The Broadening Role of the Individual Police Officer

Even as the public was making new demands of the police, the police themselves were finding it difficult to meet existing demands with a rigid organizational structure. Whether responding to incidents or solving neighborhood problems, line officers needed--and used--a great deal of discretion to handle sensitive situations as they thought best. But police administrators found the rigid structure ill-suited to controlling discretionary decisions to make arrests, to issue citations, and to use force. It was only after the public began to protest discriminatory and arbitrary police actions in the 1960s that many police administrators acknowledged the importance of controlling discretion. Throughout the 1960s and 1970s, researchers and police administrators tried to find ways to prevent abuses, while still granting line officers the decision-making authority they needed to get the job done. To further confuse matters, the need for closer ties to the public and to organizations outside the criminal justice system meant that, in some ways at least, the autonomy and discretion of the individual police officer would have to be increased. Research on officer use of discretion and on corporate management suggested that these conflicting demands could be met; some departments have done it successfully.

Our description of the broadening role of the officer will be in two parts. First we consider efforts to reform the organization within the existing, incident-driven framework by acknowledging and guiding the discretion of the line officer. Then we consider changes of broader reach, aimed at allowing the police department to better respond to the changing demands placed upon it.

Reforming the Organization: Structured Discretion

The ideal incident-driven police department was hierarchical, impersonal, and rule-based. Strategic decisions--laws--were made by the civilian authorities; the command staff identified how these strategic decisions could be most faithfully carried out; the sergeants and lieutenants made sure that the line officers did in fact carry them out. In theory, all the important policy decisions were made at the top. Line officers

could legitimately make no decisions on their own, except perhaps the decision to quit the force.

This began to change in the 1940s and 1950s. Police administrators began to consider themselves professionals, and worked to broaden their own sphere of discretion. They protested civilian control over management decisions as "political meddling," and claimed that only trained, experienced, professional administrators were in a position to make decisions on resource allocation, hiring, promotion, and similar policies. But few administrators claimed a right to decide which objectives the police should pursue, or even which laws the police should use their limited resources to enforce. As a result of the movement to professionalism, civilian authorities granted a modicum of policy-making discretion to the upper ranks of the department. But their discretion was limited, and the line officer was still supposed to carry out orders and no more (Fogelson, 1977).

These organizational models were never realistic, but this did not become an issue until the 1960s. As public outcry over misuses of police discretion grew, observers of the police began to examine the nature of these misuses. Their investigations revealed that much decision-making authority rested in the hands of mid-level and line officers--and that this authority was seldom subject to review by higher-ranking officials. Moreover, much of this discretion was appropriate and even necessary. As Goldstein (1977) puts it,

> The decisions of individual police officers often reflect a desire to make the best of a troublesome situation. Through the exercise of discretion, police officers--against great odds--often demonstrate a remarkable ability to arrive at effective and fair solutions to the problems they must handle.

Goldstein also notes that the public provides the police with only limited resources, making full enforcement of all laws practically impossible; that statutes and ordinances often conflict, in spirit if not in letter, and only the police can decide how these conflicts are to be reconciled; and that the public demands that the police be sensitive to the unique characteristics of individual situations in deciding how they should be handled. All these factors make it necessary for line officers to make complex judgment calls whenever they handle sensitive situations.

Of course, sometimes officers make illegal or inappropriate decisions, and these bad calls must be prevented. The question is, how?

When this question was first posed in the 1960s, the simplest solution seemed to be to eliminate discretion. The highest ranking officers, the legislature, judges, or some combination of the three would set enforcement priorities, resolve conflicts among statutes and ordinances, and prescribe actions to be taken in sensitive situations. Line officers would simply obey this complex set of rules. Although reasonable in theory, police work proved too complex. Again, in Goldstein's words,

> [A]nyone who has tried to develop a detailed policy covering a common aspect of police functioning--such as, for example, the manner in which police are to handle street gatherings or domestic disputes--quickly discovers that it is impossible to prescribe with any precision what should be done, since an infinite number of possible circumstances could occur (Goldstein, 1977).

It proved easier to spell out what could not be done, or factors that could not be taken into account in making a decision (Davis, 1975). So discretion could be narrowed. But it could not be entirely eliminated; police work was just too complicated.

A more promising approach proved to be to *structure* discretion. Instead of inflexible rules, line officers would be provided with guidelines, explaining the department's objectives and outlining the factors which the officer would need to take into account in making the correct decision. The guidelines could be made more or less stringent, depending upon the situation or policy covered; they might even proscribe certain actions entirely. But, generally speaking, they would not tell the officer what to do. As a result, this structured approach left a lot of decision-making authority to the line officer.

The structured approach was described by Goldstein (1977) and Kenneth Culp Davis (1975); it has since been embraced by such disparate organizations as the American Bar Association, the

International Association of Chiefs of Police, the U.S. Civil Rights Commission, and the Commission on Accreditation for Law Enforcement Agencies. In fact, the structured discretion approach can be viewed as the philosophical basis for most of the Accreditation Commission's standards (Mastrofski, 1986).

As police departments began to draw up the policies and procedures needed to structure discretion, it became clear just how little was known about police effectiveness. Two decades of research had, for the most part, shown up the ineffectiveness of the traditional, incident-driven responses. By focusing on efficiency and pretending that line officers did no more than enforce the laws by rote, police officials had always been able to avoid these questions. Now, forced to prescribe the most effective responses to given situations, many departments found themselves at a loss.

To help police develop effective policies and procedures, Goldstein (1979) developed what he called the "problem-oriented approach." Central to Goldstein's approach was the concept of the "problem." Any group of similar incidents that the public expected the police to handle could be considered a problem. Thorough data collection and careful analysis were needed if police were to frame the most appropriate and effective responses to each of these problems. Very often, Goldstein argued, this response would extend beyond the criminal justice system.

Because it focused on effectiveness, rather than efficiency, a police department that adopted the problem-oriented approach would have to focus its efforts on external conditions, rather than internal conditions. Streamlined administration and efficient chains of command were appropriate goals if the department knew how to respond to the public's problems; but these goals were clearly secondary to identifying and implementing the proper responses in the first place.

As the current success of the Accreditation Commission's work shows, many police administrators have taken the first steps toward structuring discretion through administrative rule-making (Mastrofski, 1986). Police are formally recognizing that individual officers must have the authority to make decisions, albeit within a strictly delimited envelope of possibilities. Thus structured discretion has begun to bring formal decision-making authority down through the ranks. But conditions are forcing administrators to give officers even more authority, resulting in a fundamental change in the police department's structure.

Changing the Organization: Participative Management

Structuring discretion was a natural and necessary response to the problems posed by line officers acting in sensitive situations. But it is a conservative response: rules may effectively prohibit officers from taking inappropriate actions, but they are less effective at motivating officers to identify and take the *most appropriate* action. This is particularly true when the officer must do some creative thinking to develop that most appropriate response (Brown, 1981). Changes in police work and in police officers themselves are making it more and more necessary for police administrators to allow and even to encourage their officers to take initiative and to develop creative responses.

As we have shown above, police work is changing. In the past, the incident-driven police officer had only to make a relatively passive choice among several standard remedies to situations in which he has been explicitly called in. As described above, however, the public has begun to expect more from its police department. The police have become involved in a broader array of functions than ever before. They have to work more closely with the public and with other public agencies, responding to their ever-changing demands. And they are expected to be proactive, looking for community problems rather than waiting for the public to bring them to their attention. So police work requires more than just good judgment: it requires initiative and a measure of creativity. Motivating officers to accept these new responsibilities, and to discharge them well, has become an important consideration for police administrators and the public.

Police officers are changing, as well. Administrators began recruiting college educated officers, and encouraging officers already on the force to go back to school. For officers with college degrees, opportunities were available for fulfilling, well-paying work outside the police force,

so administrators were often faced with the choice of changing job requirements or losing their best people. Departments began recruiting members of minority groups and women, as well, and these new officers brought with them different expectations of police work. To some degree these changes were generational: workers in all fields were demanding more autonomy and more satisfaction from their work (Yankelovich, 1974).

These changes in the characteristics and job requirements of line officers suggested that administrators should change their management style and the structure of their organizations to encourage initiative, creativity, and autonomy. At the same time, police administrators began to receive confirming messages from their colleagues in the business sector. Management theorists of the "human relations" and "integrationist" schools were telling corporate executives that their employees were imaginative, ingenious, and creative; that employees sought responsibility and opportunities to excel; that organizations which encouraged these creative, responsibility-seeking impulses motivated their employees to work harder, and obtained higher profits as a result (McGregor, 1960; Likert, 1967; Argyris, 1965). The importance of motivation and satisfaction struck many police executives as good, common sense. Police administrators began to follow, if tentatively, their private sector counterparts in implementing the human relations program of decentralized decision-making, job enrichment, and participative management (Sweeney, 1977).

By the mid-1970s, many police administrators recognized that the rigid, hierarchical model was obsolete. Many departments began to experiment with alternatives, many of them adapted from private sector models: decentralization, task forces, management-by-objectives, and quality circles are among them. Many of these proved useful. Before considering why, however, let us consider more carefully what they were supposed to accomplish. How could these new organizational structures stimulate motivation, creativity and initiative?

Stimulating Motivation. Motivation and job satisfaction are emotional reactions, influenced by experiences at work and connected to certain attributes of job tasks. Research suggests that three key psychological conditions must be present to bring about this internal motivation and satisfaction (Hackman and Lawler, 1971; Hackman and Oldham, 1980):

- The work must be *meaningful:* it must be important or worthwhile, based upon some system of values which the worker accepts.
- The worker must feel personally *responsible* for the outcomes of his work.
- The worker needs *feedback*--he must know how well he is doing the job.

Incident-driven policing fails to motivate many line officers, because it presents limited opportunities for meaningful work, responsibility, and feedback.

Consider first the meaningfulness criterion. A job is most meaningful when it has three characteristics: variety, task identity, and significance (Hackman and Oldham, 1980). Jobs high in variety will challenge workers and allow them to use skills and abilities which they value. Task identity occurs when workers are involved in the job from beginning to end, and thus can see whether they have accomplished something of consequence. And task significance reflects the amount of influence the job has on the lives of others.

Police work is teeming with variety (Tifft, 1975), and evidence confirms that the more variety, the higher the levels of officer satisfaction and commitment to the organization (Jermier and Berkes, 1979). But while there is variety in what officers encounter, their responses to these encounters have traditionally been standardized--officers take a report, call social services, and the like. This limits the potential for motivation and satisfaction considerably (Macfarlane and Morris, 1981). Perhaps more important, some administrators have further limited the variety of situations officers encounter, through job specialization.

Specialization reduces the potential for task identity. Patrol officers are often responsible for doing a preliminary criminal investigation, for example; then they turn the case over to detectives. In major vice or narcotics investigations, patrol officers may not be allowed to know how information they have provided is used in an investigation,

or if it even helped. And the phenomenon is not limited to crimes:

> Police leave community-service and peacekeeping calls with no sense of having solved, ended, or "closed out" a problem... After many such calls, the police are left with the feeling that they have accomplished little or nothing, and that they have wasted their time. Patrolmen contrast the frustration experienced after such calls with the "best" type of call in which the police apprehend a felon during an illegal act, arrest him, book him, and put him in jail. This "best" call has a beginning, a middle, and an end and feels like a good job well done (Rubin, 1973).

Such observations provide a clue as to why police officers prefer to focus on law enforcement, rather than service and order maintenance activities. Of course, even incident-driven police work can be high in significance. There are many opportunities to help other people and contribute to the well-being of the community. Available evidence suggests that this is where police work succeeds in motivating and satisfying line officers (Van Maanen, 1975).

But significance is the exception. Standardized responses to unique situations and specialization reduce the potential for meaningfulness in police work. This suggests that organizational changes aimed at encouraging varied responses and reducing the role of specialization will improve officers' motivation and satisfaction.

Autonomy at work influences a person's feeling of responsibility for the work he does. Research conducted in a wide variety of organizations shows that people are most satisfied and motivated by their jobs when they are provided sufficient freedom to schedule their work and carry it out in the way they think best (Herzberg, Mausner, and Snyderman, 1959; Hackman and Oldham, 1980). As a recent text on police management concluded,

> [T]hrough the design of jobs that permit increased self-regulation, self-evaluation, self-adjustment, and participation to set goals, increases in . . . positive attitudes have resulted (Whisenand and Ferguson, 1978).

The central issue is the "locus of control," the source of constraints on the employees' activities. If the locus is primarily external--in the case of police work, if the department's work rules or the public prevent officers from exercising their judgment--then the employee will feel powerless and unmotivated (Angell, 1971; Anastasi, 1982).

Police officers feel that incident-driven police work, by emphasizing fast and routine responses to individual calls or crimes, provides them with little autonomy. Van Maanen (1975) reports that "most patrolmen feel 'handcuffed' or constrained by a variety of audiences, including their own department." As a result of these external constraints, many officers show little self-confidence and high levels of stress (Lester and Tappert, 1981; Lester, 1982). But those few officers who feel that they are able to at least partly control their own environment are more creative and productive (Knowles, 1984).

Such results suggest that police administrators should provide their officers with more autonomy, in order to satisfy and motivate them. Of course, this conflicts with the traditional response: supervisors want to limit the discretion of their employees, in order to prevent abuses and mistakes. In part, then, research on autonomy and motivation provides an argument in favor of the structured discretion approach. Supervisors could prevent misuses of discretion, but line officers would still retain a substantial amount of decision-making responsibility. Perhaps more important, the need for autonomy argues for development of a wider repertoire of alternative, effective responses that may be adopted by line officers (Goldstein, 1979). With more choices available, officers would have more responsibility; but if the choices were unlikely to infringe on civil liberties or otherwise offend the public, the potential for abuse need not increase as a result.

Feedback is vital. Positive feedback (encouragement for a job well done) motivates officers to continue their efforts and encourages others to follow their lead. Negative feedback (formal or informal punishment for poor performance) does not by itself motivate or satisfy, but does help to provide the employee with a coherent picture of the organization's objectives (Etzioni, 1964). Feedback is particularly important when

employees have been granted substantial autonomy. As Peter Drucker (1974) puts it,

> Responsibility requires self-control. That in turn requires continuous information on performance against standards.

So the degree to which a worker receives direct and clear information on the effectiveness of job performance is important to his satisfaction and motivation to achieve the organization's goals.

Police work provides several sources of feedback. Most sources are internal, from supervisors and fellow employees; but complaints and commendations from the public, and visible results of doing the job itself can also provide officers with information as to how well they are doing.

Although few officers are isolated from the public, they receive little feedback--positive or negative--from citizens. And because officers rarely get a chance to "solve, end, or 'close out' a problem," the job itself provides little feedback to the officer. So the most important sources of feedback are internal.

In police departments, as in most organizations, the internal feedback is overwhelmingly negative. This, in turn, leads officers to act cautiously and traditionally.

> [T]he rookie discovers few connections between his efforts and the system rewards. In fact, he soon learns that the best solution to the labyrinth of hierarchy, the red tape and paperwork, the myriad of rules and regulations and the dirty work which characterize the occupation is to adopt the group norm stressing "stay out of trouble." And the best way to stay out of trouble is to minimize the set of activities he pursues. Those officers who persist in approaching their job from what police like to call a "gung-ho" perspective are distrusted and eyed cautiously by field supervisors. They may even be rated by their sergeants as less able policemen that their more prudent colleagues (Van Maanen, 1975).

As a result, often the best data the officers receive about their work comes from their peers. Group norms reinforce the need for caution. In most departments, traditional approaches have been adopted and enforced as part of the organizational culture (Manning, 1977; see also Mayo, 1933). The traditions are reinforced by community expectations. All this ensures that police behavior will remain stable as new officers join the department.

Because feedback is rarely based on performance, and even more rarely positive, police departments have been unable to motivate their employees to develop innovative, effective approaches (Angell, 1973). To be effective, departments must develop formal and informal systems to show officers how effective their activities have been at achieving the organization's goals.

Experiments in Organizational Reform

Many administrators recognized that police officers would be better motivated and more satisfied if they felt their work to be more meaningful, and if they felt they had more autonomy, responsibility, and feedback. As a result, a variety of organizational reforms have been implemented. Let us consider the success of a few of the best-known and most widely implemented of these reforms: team policing, task forces, community policing, management-by-objectives, and quality circles.

Team policing was the first of the major reforms to be implemented widely. Recommended by the President's Commission in 1967, team policing was a far-reaching and somewhat amorphous plan aimed at reducing a long shopping list of faults with the traditional police organization: overspecialization, fragmented intelligence and operations planning, and lack of communication between shifts and divisions would all be ameliorated through the team concept. Team policing took many different forms, but most teams involved four elements.

- Teams would have complete responsibility for delivery of police services within their geographic area;
- Patrol and investigative functions in each geographic area would be combined into a single command, and patrol officers would take over many follow-up investigations;
- Line officers would be involved in operational decision-making; in some teams, all major decisions were to be made democratically;

- Teams would choose their tactics flexibly, with emphasis on building a better rapport between the police and the community.

By increasing the discretion of the district commanders and involving line officers in decision-making, team policing was supposed to encourage officers to show initiative and creativity; integrating the patrol and investigative functions was supposed to ensure better feedback and (sometimes) the chance for patrol officers to follow through on their cases. In some cities, there is evidence that these ambitious reforms worked, at least for a while. In Cincinnati, officers reported "positive changes in the breadth of their jobs, in their independence, and in their influence over decisions... Satisfaction with the amount of freedom available and with supervisors [also] rose" (Schwartz and Clarren, 1977). Similar results were obtained in other cities--many officers did in fact receive more discretion, enriched jobs, and better feedback--and they liked it (Sherman, Milton, and Kelly, 1973).

With few exceptions, however, the gains were short-lived. In Cincinnati, central administrators progressively took back more and more of the power they had delegated to team leaders (Schwartz and Clarren, 1977). In Dayton, mid-level managers blasted the teams as a "left-wing liberal attempt to undermine law and order." And in New York, team policing was watered down as it spread from one precinct to the next (Sherman, Milton, and Kelly, 1973). To be successful, team policing required considerable training for street supervisors, and (much more difficult) an enormous modification in the organizational culture. This proved almost impossible to do within the short period usually available for planning and implementation (Sweeney, 1977).

Community Policing. Although team policing proved too difficult to implement, some of the tactics adopted by police teams are still in use today. As mentioned above, foot patrol, storefront police stations, and neighborhood watch programs were designed to improve community involvement in crime reduction, reduce the incidence and fear of crime, and improve police/community relations. But several departments that have implemented community policing programs have also reported improvements in satisfaction, motivation, and willingness to innovate among the line officers who participate in these programs (Police Foundation, 1981; Trojanowicz and Banas, 1985; Cordner, 1985).

It is easy to see why this might be so. Community police officers are typically provided with greater responsibility to handle problems they encounter. This increases both the variety of tasks the officers may undertake, and their autonomy to choose the option that best fits the situation. In Flint, Michigan, for example, foot patrol officers are "catalytic agents" and "neighborhood advocates" who respond to the conditions they find in a wide variety of ways (Trojanowicz, 1984). Community policing strategies may also provide officers an opportunity to follow their actions through from beginning to end (Cordner, 1985). And many receive positive feedback, both from the neighborhoods they serve and from their own ability to accomplish significant, visible tasks (Taft, 1986).

So community policing programs can help to satisfy and motivate officers. Unfortunately, most police administrators consider community programs to be a "frill," an "extra" to be undertaken only when slack resources are available. As a result, these programs are relatively small, and cannot satisfy or motivate too many officers at one time. The largest such program, the Flint foot patrol program, only includes about 20 percent of the sworn officers in the department. Worse, such special programs implicitly reserve the responsibility for community contact for a select group. This may reduce the present, limited degree of contact maintained by regular line officers. So long as police administrators consider "community policing" to be the job of specialized officers in a separate unit, then, its utility as a motivating tool will remain limited.

Task Forces. Many departments have attempted to both motivate their employees and make broader changes in the management structure through the use of task forces. These special project groups typically include officers of various ranks, from several divisions of the department. They meet at regular intervals to oversee routine activities, to accomplish specialized but routine tasks, or to design new management structures. Task forces are supposed to enhance innovation by bringing together new combinations of people and functions, and by freeing these people to

adopt new modes of thinking (Wickesberg and Cronin, 1962). A group of task forces can ultimately form a "collateral organization," separate from the hierarchy, but able to influence routine operations (Zand, 1974).

Widespread use of task forces was pioneered by the Kansas City Police Department in the 1970s, and many other departments have had success with these groups (Sweeney, 1977). Available evidence is only anecdotal, but it suggests that task forces are often successful in stimulating innovation, and in satisfying and motivating their members (Weisbord, Lamb, and Drexler, 1974).

Although a collateral organization may be the best way to design and monitor changes in the daily routine, task forces themselves provide only limited changes. Like community policing strategies, only a relatively small percentage of the officers in most departments are members of task forces at any one time; thus the benefits are usually narrowly distributed. Of course, a department could avoid this limitation by rotating task force membership regularly, or by establishing more task forces. A more important limitation is inherent in the concept of collateral organization: with rare exceptions, task forces can study, recommend, or oversee--but they cannot implement. Because they do not undertake daily tasks or make daily decisions, task forces do not by themselves provide an answer to the problems that officers face in their daily tasks--routine responses, specialization, and lack of autonomy and feedback. They may ameliorate these daily problems by changing the daily work rules and hierarchical structures. But in the end task forces beg the question--what can be done to change the daily routine?

Management By Objectives programs, unlike task forces, are aimed at changing the line divisions directly. Although first implemented in the business sector, public administrators began adapting MBO systems for use in local government in the 1970s. MBO programs are in widespread use in police departments today (Whisenand and Ferguson, 1978; Hatry and Greiner, 1986a). Use will probably become even more widespread soon: all agencies seeking accreditation are required to have implemented a rudimentary form of MBO (CALEA, 1983).

MBO focuses on management personnel. Individual managers identify objectives for the coming year, and make what amount to contracts with administrators to meet these objectives. The managers then periodically review their progress in meeting these objectives with the administrators. In theory, MBO increases the autonomy of managers and the amount and relevance of feedback they receive. And MBO should increase task identity as well: identifying, working toward, and meeting an objective provides the "beginning, middle, and end" that helps to motivate and satisfy employees.

Available evidence suggests that a well-run MBO program can, in fact, satisfy supervisors and help motivate them to do their jobs better. But most MBO programs have not succeeded, mostly because the departments that adopted them did not fully understand the technique. Managers in most departments identified "process" objectives (reducing response times, calling back all witnesses to crimes, and the like), rather than effectiveness or efficiency improvements. The reporting systems used often did not compare actual performance with targets. Few departments required their managers to specify action plans for achieving their objectives (Hatry and Greiner, 1986a).

Such flaws can be avoided through proper implementation. Two other flaws are more basic, and probably more important. First, MBO programs have generally been limited to relatively high-level supervisors--usually lieutenants or captains and above. MBO is unlikely to satisfy and motivate first-line supervisors and line officers; yet it can be argued that they are the ones most in need of satisfaction and motivation. Second, MBO encourages caution. Because they only look good if they attain their objectives, managers are likely to choose those that are easy to attain through known methods. Indirectly, this discourages innovation and creativity. An assessment of current police MBO programs confirms that, although there are exceptions, this is the rule (Hatry and Greiner, 1986a).

Of course, it may be possible to design an MBO program that includes participation from all ranks; if the incentives are properly structured, MBO need not encourage caution. Moreover, MBO is not just a device for stimulating satisfac-

tion and motivation. It is primarily used to make operations more effective: the explicit pursuit of objectives can force managers to question and perhaps revise the services they and their officers provide. In Newport News, MBO had helped to instill a problem-solving orientation even before the problem-oriented policing project began.

Quality Circles complement MBO programs by focusing on line officers. Quality circles are small groups of employees who meet regularly to identify better ways of getting work accomplished. First adopted by Japanese industry, quality circles have been in vogue in America since the late 1970s. Since about 1980, this vogue has extended to municipal policing (Norman, 1984; Nielsen and Steele, 1984; Melancon, 1984). A recent survey showed that about one in every six big-city police departments have experimented with quality circles (Hatry and Greiner, 1986b).

In theory, quality circles provide line officers with a significant means of participating in departmental decision-making and of solving service delivery problems. In practice, circles have been limited by the minor nature of the problems they attack. A recent review of police quality circles found that they

> focused much of their attention on problems associated with the quality of the working environment, rather than on the quality, effectiveness, or efficiency of the services delivered. . . . The relatively few problems relating to service delivery issues tended to be minor and indirect in their impacts on service quality (Hatry and Greiner, 1986b).

Circle members avoided more serious problems for several reasons. Circle facilitators (usually mid-level managers) steered them toward minor problems that were easy to solve; the typical circle only lasted a few months, not long enough to analyze and develop solutions to complex problems; the circles did not have the authority to coordinate their activities with other divisions of the police department or with organizations outside the department.

Because the circles emphasized minor administrative issues, many officers were reluctant to take the time and trouble needed to participate. As a result, virtually all circles died out less than a year after they were formed. And only five to ten percent of employees have ever participated in a circle, even in departments that continue to encourage their use (Hatry and Greiner, 1986b).

Quality circles have accomplished some worthwhile objectives, and they may yet prove successful. The mixed success of present efforts suggests, however, that officers will not participate in department decision-making if their participation is limited to small problems. Officers need to be encouraged to handle bigger problems, and they need to be granted the time and authority to do so effectively.

Practical, basic changes in police administrative practices are needed if police departments are to satisfy their employees and motivate them to be more effective. But previous experiments in new methods of administration have all had limited success.

Team policing was impractical. It represented an enormous change in the organizational structure of the department and the daily activities of its members. Because it undermined the authority of mid-level managers, and confused everyone else, team policing has been abandoned in all but a few cities.

Community policing and task forces provide the right kind of changes and have been sustained in many departments. But they are incomplete solutions to the problem: both are limited to only a small proportion of the department, or only to a small proportion of an officer's daily routine.

Management-by-objectives and quality circles have been artificially limited by the fact that they are oriented to systematically different levels of hierarchy. As a result, members of quality circles are reluctant to take on basic changes in the way work is done; line officers are often unmotivated to work on MBO objectives, because they have little or no influence over objectives chosen by their bosses' bosses. On the other hand, both MBO and quality circles have succeeded in making operations more effective and efficient in several departments, and their limitations may well be overcome through further experimentation.

To be successful, new methods of police administration must overcome these objections. They must provide line officers with substantial decision-making responsibility, but within sufficient constraints to prevent abuses of authority.

They must provide officers with performance-based, positive feedback. These methods must apply throughout the department, to officers at all levels of the hierarchy; they must become an integral part of their daily routine. And they must be well within the experience of most officers.

Problem-Oriented Policing

Incident-driven policing is obsolete. The police can no longer restrict their tactics to preventive patrol, fast response to calls, and reactive investigation; such tactics are incapable of preventing or solving most crimes. Such innovations as crime analysis, differential police response and investigative case management have helped police to manage their time better, to implement these tactics more efficiently. But they have not helped to reduce crime.

In fact, crime itself can no longer be the sole concern of the police. As the community policing projects have shown, disorderly conduct, trash on the streets, abandoned buildings, and other "signs of crime" provoke fear among residents of urban neighborhoods. When the police have acted to reduce these minor incivilities in some neighborhoods, citizens have become more satisfied and less fearful. At the same time, nationwide pressure groups have begun to influence the police to consider a broader range of problems and solutions than before. The police can no longer regard themselves only as part of a criminal justice system; they must become part of a larger, human services system.

Likewise, the police can no longer achieve their objectives through the use of a rigid, hierarchical management style. This style emphasizes standardization, specialization, and fragmentation of responsibility; it kills the motivation, initiative, and creativity needed to implement proactive tactics and accomplish broader objectives. Instead, line officers and their supervisors need to be granted substantial discretion, structured through clearly defined policies and rules, if they are to respond to the new demands. Perhaps even more important, police work should be restructured so that it is more meaningful and provides performance-based feedback. Such innovations as foot patrol and storefront police stations, task forces, and management-by-objectives are important steps toward this restructuring.

For almost twenty years, police administrators have been moving away from incident-driven policing and its focus on crime control and centralized management. But it has only recently become clear what they are moving toward. Prior research suggests that the effective police department of the future will have the following characteristics.

- The department will be prepared to take on the full range of social problems the public expects it to handle, not just crime.
- Police officers will maintain a close, working relationship with the public, in order to identify problems before public demands force their hand.
- The police will design and implement those responses that are most likely to work, rather than standardized responses that are easy to implement but are unlikely to solve the problem.
- The department will support initiative and creativity among its officers with an organizational structure that provides opportunities for meaningful work, responsibility, and constant feedback as to the effectiveness of officer activities.

These four elements complement one another. As we have argued above, few officers will be willing to risk innovative responses that may fall flat without a supportive organizational structure. Without close ties to the public, the police may feel free to implement responses that are repressive or unethical. And unless the department is prepared to pursue objectives beyond crime control, officers will be unable to serve the public adequately.

In the last five years, several police departments have taken the first steps toward implementing a new form of policing that has these characteristics. The first step was taken by the Madison, Wisconsin, Police Department, with the assistance of University of Wisconsin Professor Herman Goldstein. Building on Goldstein's problem-oriented approach to managing discretion, the

Madison Police identified two serious and recurring problems in 1981--drunk driving and repeat sexual offenders. Goldstein and his colleagues at the university analyzed these problems in detail, on the theory that knowing why the problems came about would help the police to develop a strategy for solving them. Then the police used Goldstein's findings to develop new solutions. The Madison experience showed that innovative solutions were sometimes available, and that problem analysis could help lead police to them (Goldstein and Susmilch, 1982).

The problem-oriented approach was taken a step farther by the Baltimore County, Maryland, Police Department in 1983. Again working closely with Goldstein, members of the 45-member Community Oriented Police Enforcement unit began to identify, analyze, and respond to problems on their own. COPE officers developed close ties, not only to citizens and community groups, but to other government agencies and private corporations in order to gain assistance in analyzing and solving problems. A recent evaluation credited COPE's problem-solving approach with substantial reductions in crime and fear, and increases in citizen satisfaction with police and local government services. And officers in the unit were more satisfied with their jobs, citing the informal but results-oriented management style adopted by their supervisors, and the fact that they could see a "beginning, middle, and end" in their problem-solving efforts. It is particularly interesting that COPE combined elements of community policing, MBO, and even quality circles in order to get results (Cordner, 1985; Taft, 1986).

The problem-oriented approach continued to spread. The London Metropolitan Police recently focused on serious problems in four London neighborhoods (Hoare, Stewart, and Purcell, 1984). Foot patrol officers in Flint, Michigan adopted explicit problem-solving techniques (Trojanowicz, 1984).

This, then, was the background when the Forum began its work in the Newport News Police Department in 1984. Preliminary tests of the problem-oriented approach suggested that it could be the foundation for a new kind of police work, one which could replace incident-driven policing. Over the past two years, the Newport News Police Department, with the assistance of the Forum, has designed and implemented this new system. Their system, called *problem-oriented policing*, is the subject of the rest of this report.

CHAPTER 3

THE ENVIRONMENT

Introduction

Police departments are not laboratories. Researchers do not control the police environment in which they try to implement change. While a new approach is being developed, implemented, and tested, other things are going on. Citizens call for help and assistance. Officers patrol streets, investigate incidents, and fill out reports. Crises create confusion and stress. Some officers receive recognition for heroic action, and some receive notoriety for corrupt practices. Managers change procedures and rules. The media focuses attention on good and bad deeds. For the average officer, the researcher's questions are not very important, and sometimes are just another nuisance.

This would be of only minor interest if not for the fact that all of these other things going on in a police department can have an impact on the program being studied. But how these things actually influence the implementation of the new approach is very difficult, if not impossible, to determine. In this chapter we describe the environment within which problem-oriented policing was implemented in Newport News. For many of the conditions described here, however, we do not know how they influenced the project. Social science has not developed sufficiently to provide a theory that would allow us to link specific environmental conditions to the success or failure of project objectives. When we suspect that an aspect of the environment has a specific influence, we describe the link. Still, for most of the conditions described we can only describe them and leave it to the reader to draw his or her own conclusions. In the future, as other agencies attempt to implement problem-oriented policing, and their efforts are documented, the comparison of environmental factors among successful and unsuccessful agencies may lead to a better understanding of how specific factors in the environment affect implementation.

This chapter is divided into four sections. The first section briefly describes Newport News. In the second section we discuss the police department and the administrative changes it has undertaken since 1982. The third section explores an internal investigation that had a major impact on the department during the later stages of the project. Finally, we look at several changes in the department that probably helped the implementation of problem-oriented policing.

The City of Newport News

The Newport News Police Department serves a city of 155,000 people in a 70-square-mile area. It is a narrow city, 25 miles long but only four miles wide at its widest point--about the size and shape of Manhattan. Two highways, separated by a set of railroad tracks, connect the predominately black southeast to the mostly white northwest. Newport News is 66 percent white, and 34 percent black. Per capita income, according to the 1980 census, is $6,828.

To the east is the City of Hampton, Virginia. Across a body of water created by the James and

Warwick Rivers entering the Chesapeake Bay lie the cities of Norfolk, Virginia Beach, Portsmouth, and Chesapeake. Two bridges link these cities to Newport News and Hampton.

The largest employer in the city, and the largest private employer in the Commonwealth of Virginia, is the Newport News Shipbuilding and Dry Dock Company. Located in the southeastern part of the city, the shipyard employs over 30,000 workers to build nuclear aircraft carriers and submarines. The northwestern part of the city abuts the Fort Eustis Army Base.

The years 1981 through 1986 have been characterized by growth and change for the city, in part because of the policies of the city council and city manager, and in part because of natural growth. During this time the city's population grew by over nine percent, spurring on and spurred by over $1 billion in residential construction, mostly in the northwestern part of Newport News. Construction was begun on a factory for manufacturing photocopiers, a shopping mall, a military exchange warehouse, and a nuclear research facility. Although most of this development went into the northwest area of the city, plans for a $290 million downtown redevelopment were moving ahead for the southern part of town as well.

The Police Department

Relations With the Public

During the latter part of 1982, the chief of police announced his retirement after 36 years of service to the department, of which eight were as chief of police. Darrel Stephens, the first chief ever hired from outside the department, began work on March 1, 1983. He came to the department with a mandate to professionalize the department and improve the quality of service provided to the community. This mandate was supported by over 100 recommendations made by an outside consultant after a comprehensive review of departmental operations. While most of the recommendations suggested changes in internal conditions, it also was clear that the department had communications difficulties with members of the public. The department had followed a traditional practice of being a relatively closed organization. This was of major concern to the city council and the city manager because of several incidents involving use of force by police officers during 1982. These incidents were reported in the media and were based on information from unofficial sources, because the department, officially, would provide no information. This only exacerbated the communication difficulties.

By the time the problem-oriented policing project began in September 1984, the department of 234 sworn officers and 46 civilians had made substantial progress toward improving communications with the public. The primary vehicles for enhancing communications were the implementation of a public information office to deal with the news media and an intensive effort aimed at organizing neighborhood watch groups. These groups were generally organized when a particular neighborhood problem arose, causing the members to look to the police for a solution. Patrol beat officers, supervisors, and managers were required to attend these meetings. They helped open lines of communication and to open the department.

At the same time, the department was faced with several other concerns from various members of the public. Black community members complained of the lack of police resources in the southeast area. Many blacks complained that they had called the police for aid and no one had responded. In other areas of the city, citizens complained that the police were never seen patrolling their neighborhoods. Some members of the public believed that the police placed too much emphasis on arresting drunk drivers and ignored other equally serious crime problems. (In 1982 the department had led the state in drunk driving arrests with over 3,000.) Other members of the public, including the news media, felt that this emphasis was justified.

Crime in Newport News

Table 2 shows the number of serious crimes reported to the police in the year this project began. Although these statistics only reflect a small part of the department's workload, they are useful when comparing Newport News to other agencies.

Changes in the Department

The Newport News Police Department experienced more changes during the three years beginning in 1983 than over the entire previous decade. These changes were a major part of the organization's environment. Some viewed the changes as the worst thing that could possibly happen to the department; for others, they were a breath of fresh air. Everyone in the organization, however, experienced the trauma associated with moving from the known (even if disliked) to the uncertainty of the unknown as new programs and organizational relationships were introduced. Some of the most significant changes included reorganizing the department, developing policies and procedures, and developing personnel programs. We will review each in turn.

Table 2

Number of Crimes in Newport News in 1984

Crime	Number
Murder	20
Forcible Rape	78
Robbery	283
Agravated Assaults	515
Burglary	2141
Larceny	4472
Arson	44

A top-to-bottom reorganization of the department was initiated in September 1983 and completed in January 1984, when sixteen supervisory and middle-manager positions were filled. There were three significant features of the reorganization.

Improved Internal Communications. The reorganization addressed significant internal communication difficulties by bringing the patrol and investigative divisions under one command. It also created a Services Bureau to control all support functions, instead of having them parceled out to operational units that tended to focus on their own objectives rather than on the department's.

Improved Patrol Accountability. The reorganization replaced the five patrol shifts, operating city-wide, with three shifts in two patrol areas. Each patrol area was headed by a captain who had 24-hour responsibility. Under these captains were lieutenants and sergeants (acting as shift commanders and supervisors) and officers who were responsible for specific times of the day and geographic locations. Officers were expected to remain on the same patrol beat for about twelve months.

Improved Patrol Efficiency. The reorganization changed patrol schedules. The department moved from a four-day/ten-hour rotating shift plan to a five-day/eight-and-a-half hour plan. This required fewer people for staffing. It also complemented the department's efforts to improve patrol accountability and contact with the public. Under the old rotating plan, officers changed their time of work, and often their geographical location, weekly. This prohibited an officer from doing anything that required a time commitment longer than a single-shift cycle.

Policy and Procedure Development

In spring, 1983, the department began developing a set of policies and procedures to guide the actions of officers. At the time, officers were using an outdated procedure manual, written in 1972. Major policy concerns, such as use of force, vehicle pursuits, citizen complaints, and internal affairs investigations, needed to be addressed through revised policies. Therefore, the department decided to develop and issue a new policy manual to all officers.

In a two-year period the Newport News Police Department moved from an organization with little written guidance to a department with a clear set of policies. The first version of a policy and procedure manual was issued in early 1984. The manual was continually and significantly revised and expanded as the department prepared for accreditation, which was awarded in March, 1986.

Personnel Programs

The department initiated a wide variety of programs designed to improve the skills and abilities of personnel in providing service. The

more significant programs included: changes in training; revisions in the promotion process; a new salary plan; and the creation of a Master Patrol Officer program.

Training. The department went from a 40-hour biannual in-service program conducted by a regional academy to an annual in-house program. A Field Training Officer Program was implemented, establishing a set of standards that new officers must meet prior to being released for independent patrol. The program included training for special skill areas. It also focused heavily on supervisory and management training that provided opportunities for officers to attend such programs as the Southern Police Institute, the FBI National Academy, and the Police Executive Research Forum's Senior Management Institute for Police.

Promotional Process. The department established more stringent requirements for promotion and a new process for developing eligibility lists. The most significant change in the requirements for promotion was the inclusion of educational standards for supervisory and management positions. Although the full impact of these changes would not be felt for several years, since they were phased in over a six-year period, they revived a debate within the department over whether police officers needed college education. Though the experience requirements did not change, some officers also complained that the new educational requirements meant that experience was of little value. The new procedure also allowed officers to skip ranks--for instance, police officer to lieutenant and sergeant to captain.

In addition to the new standards, the department changed the process for developing eligibility lists. The old process consisted of a written test, an oral board and discretionary points awarded by the chief. The new system used a written test and an assessment center for developing the list, with the final score on the assessment center weighted most heavily. The chief then made the selection from the top three candidates for sergeant, the top ten for lieutenant, and the entire list for captain. The methods used for developing the promotion list proved to be the least controversial aspect of the promotion process, since the department followed the practice of promoting based on the individual's position on the list.

Salary Plan. In July, 1983, the department implemented a new pay plan that allowed officers to progress through three levels with five steps. The plan also included the implementation of a new system of *performance appraisal* and annual *knowledge testing*. Knowledge testing was closely tied to performance appraisal and officers were required to pass a multiple-choice test on policy, procedures and laws on an annual basis to be considered for merit increases.

Master Police Officer. In January 1986, the department received authorization to establish a program for providing monetary incentives and recognition to officers at the third, and highest level. Officers received these monetary rewards for developing and maintaining skills needed by the department. These skills included field training officers, instructors, and breathalyzer operators. In addition to ensuring the department had individuals with these skills, it provided another opportunity for officers to gain status and recognition by means other than promotion.

It is difficult to determine what impact these changes had on problem-oriented policing. Did they distract attention from problem-solving, or discourage department members from making additional changes? Or did the environment of change encourage officers and supervisors to make the additional changes needed to implement problem-solving? Most likely, the climate of change discouraged some department members while encouraging others. There are, however, several changes and events that had definite influence on the project. In the next section we look at one event that probably had a negative impact.

The Internal Investigation of Drug Dealing

In late summer, 1985 the Newport News Police Department created a special team to investigate complaints that several officers were involved in illegal gambling activity. Within two weeks of initiating the investigation, one team member found evidence of a more serious violation: A vice officer was implicated in the sale of drug evidence stored by the department. An inventory of the

property room revealed that marijuana, cocaine and heroin were missing. The team put the gambling inquiry aside to address this more serious problem. Over the next two months, five officers were fired or resigned from the department, and two were charged with criminal conduct. In subsequent grievance hearings, two of the five officers were reinstated. The gambling investigation was resumed and concluded in early summer, 1986, with initial allegations found to be unsubstantiated.

The department experienced nine months of negative publicity from these incidents. There was positive media coverage of other department activities during the same period, but the negative attention dominated the views of department members. One reason is that the officers who had been fired used the public grievance hearings to air complaints about the chief of police and the manner in which the internal investigation was handled. However, many of the complaints voiced by the fired officers, and by others still within the department, focused on dissatisfaction with many of the changes described above.

The biggest tangible impact of the drug investigation and its aftermath was that it required much of the time and attention of the chief and the command staff. Instead of implementing changes in the agency, they were forced to deal with charges and counter charges that arose from the scandal. Less visible impacts were the investigation's effect on how the public viewed the police, and the willingness of department members to pursue changes. Problem-oriented policing was never mentioned as a concern during this period, but the question remains: could the project have achieved more if these events had not occurred? It probably could have. All changes of this magnitude require the support and attention of the chief and other senior managers. During the period described, the support remained, but attention was diverted. In addition, problem-oriented policing requires the officers and supervisors to be innovators and risk takers. But risk-taking is difficult to foster in an uncertain environment. We can only speculate, but had this scandal never occurred, more department members may have become involved, more problems may have been addressed, and these problems addressed may have been handled even better than they were.

One thing is virtually certain: If the investigation had been conducted in the early stages of the project, the project would have failed. Fortunately, the drug investigation came late in the project, and the department had already implemented several changes, independent of problem-oriented policing, that supported problem-solving. We turn to these next.

Factors Supporting Problem-Oriented Policing

Prior to and during the Problem-Oriented Policing Project, the Newport News Police Department implemented several programs that aided problem-solving. Though initiated independently of problem-oriented policing, these efforts reinforced the philosophy behind the approach, and made conducting the approach much easier. Among these changes were: stating the department's philosophy of service delivery; applying an open management style; specifying of organizational values; implementing a management-by-objectives process; freeing up officer time through differential police response strategies; and forming a crime-analysis unit.

Philosophy of Service to the Public

The chief and other departmental managers placed a higher premium on resolving problems than on arrest, crime statistics, and rapid response to all calls for service. The department encouraged the development of neighborhood watch groups throughout the city and insisted that officers and managers participate in their meetings. Through these efforts, the number of neighborhood watch groups grew from 40 in March, 1983 to over 140 three years later. The department communicated with these groups through newsletters and personal correspondence from the chief. The purpose of the newsletters, correspondence, and meetings was to provide information on neighborhood conditions and

departmental activities to city residents. The department also fostered and encouraged the notion that the police and the public share the responsibility for addressing conditions that create crime and disorder.

Management Style

At the same time, efforts were underway to create a management style that would foster creativity and effective decision-making. For management to encourage creativity, officers at all levels had to have opportunities to participate in all aspects of the organization. Individuals had to sense they had the freedom to depart from tradition, and would not be punished if the departure did not achieve the expected results. This was accomplished in several ways.

The department used *task forces and committees* on every major effort, including the Problem-Oriented Policing Project, policy development, accreditation, shift scheduling, and equipment purchases.

A *management committee*, comprising bureau heads and unit commanders, was created. It participated in all major policy decisions.

An *operations advisory committee* of patrol officers and detectives was formed and met regularly with the chief to discuss their concerns.

A formal *policy and procedure* was prepared to give middle managers and supervisors the authority to leave some patrol beats vacant, so that supervisors could use officers more flexibly.

The department also developed a *formal reward system* to recognize officers showing creativity and initiative. *Informal rewards,* such as representing the department in dealing with the news media and important officials, also were used to encourage innovation.

There is evidence from two surveys of employee attitudes indicating that these efforts had positive effects. The first survey had been conducted in 1980 and the second in 1985, four months after the project began. (Turnover probably contributed to some of the changes listed, since only 63 percent of the 1985 officers had been with the department in 1980). The 1985 survey showed that 68 percent of the officers agreed that the department was open to change, while only 13 percent felt that way in the 1980 survey. In 1985, 52 percent agreed with the statement that "command keeps us in the dark about things we ought to know," but 73 percent felt that way in 1980. In 1980, 88 percent felt they had no influence in deciding change while 69 percent felt that way in 1985. In addition, the 1985 survey indicated that 77 percent were satisfied with their job; 39 percent felt that way in 1980. All of the questions indicated progress was being made with the development and communication of a new philosophy.

Organizational Values

In spring, 1985, following the lead of the Houston Police Department, the Management Committee initiated an effort that resulted in the specification of organizational values. The values (see Table 3) reinforced the department's service delivery philosophy and its management style.

Management By Objectives Process

This process included an overall goal or mission statement and a series of sub-goals in the crime, service, and internal management areas. Each organizational unit and shift was then responsible for developing objectives relating to specific sub-goals.

The process of objective setting took place during the two months prior to the beginning of the fiscal year and work on the objectives progressed throughout the year. This process supported problem-oriented policing in several ways. First, specifying the goal and sub-goals gave equal attention to crime, service, and internal management of the department.

Second, the objective-setting process itself emphasized the identification of service delivery and public problems. This assisted the Problem-Oriented Policing Project because it created the need to determine the nature of these problems and what could be done about them. During the two years between the initiation of management-by-objectives and the implementation of the problem-solving process, objectives were achieved; but, since department members were uncertain as to how to proceed, the primary methods were forms of traditional patrol and investigations work. During the Problem-Oriented Policing Project, several of the problems ad-

dressed came from objectives officers had set in their areas of responsibility.

Third, it helped focus the attention of patrol officers and detectives on long-term accomplishments instead of short-term crises. The objective action plans spelled out involvement over most of the fiscal year. This helped officers look at problems over longer periods of time. Since an objective did not have to be completed in a single tour of duty, officers could divide the work among many shifts. This encouraged officers to look for increments of time during their normal work

Table 3
Newport News Police Department Values

VALUE #1

The Newport News Police Department is committed to protecting and preserving the rights of individuals as guaranteed by the constitution.

VALUE #2

While the Newport News Police Department believes the prevention of crime is its primary responsibility, it aggressively pursues those who commit serious offenses.

VALUE #3

The Newport News Police Department believes integrity and professionalism are the foundation for trust in the community.

VALUE #4

The Newport News Police Department is committed to an open and honest relationship with the community.

VALUE #5

The Newport News Police Department is committed to effectively managing its resources for optimal service delivery.

VALUE #6

The Newport News Police Department is committed to participating in programs which incorporate the concept of a shared responsibility with the community in the delivery of police services.

VALUE #7

The Newport News Police Department actively solicits citizen participation in the development of police activities and programs which impact their neighborhood.

VALUE #8

The Newport News Police Department believes that it achieves its greatest potential through the active participation of its employees in the development and implementation of policies and programs.

VALUE #9

The Newport News Police Department recognizes and supports academic achievement of employees and promotes their pursuit of higher education.

schedule to work on tasks designed to achieve objectives.

Time Management

The question of having enough time to implement problem-oriented policing was of major importance in Newport News and will be in other cities. One of the key factors that supported the project was the implementation of a system for managing calls for service, or what has been called differential police response. That system involves three components. The first is assessing each call when it is received, to determine if it requires a police response and whether the response should be immediate. If the response can be delayed, and the officer who should handle the call is involved in another activity, the call is delayed for up to thirty minutes.

The second component is a telephone reporting system. Reports that can be handled without dispatching an officer are handled over the phone. The department had used telephone reporting for several years, but it had been largely ineffective: only 10 percent of the reports had been taken over the telephone. By adjusting some procedures and obtaining greater cooperation from the communications department, which was not under the control of the police, the police department was able to take 35 percent of reports over the telephone. This provided much of the time needed by officers for problem-solving.

Crime Analysis

Another change that helped problem-oriented policing was the creation of a centralized Crime Analysis Unit in September, 1983, staffed by two crime analysts (sworn officers) and an operations analyst. Prior to the initiation of the project, the unit issued occasional bulletins describing crime patterns, and kept a spot map of burglaries and robberies in the city. In general, patrol officers and detectives felt that the unit was of little help. In part this resulted from the necessity of developing a data base so that analysis could be accomplished. However, the unit also suffered from many of the standard weaknesses of specialist crime-analysis units: it was centralized and far from the activities on the street; field officers were not accustomed to using data, saw little need for analysis, and had trouble articulating the questions they needed answered; and the types of problems the unit tracked were limited to burglaries and robberies.

Despite these limitations, the Crime Analysis Unit provided a valuable service under problem-oriented policing. One of the first steps officers took when addressing problems was to ask the unit for relevant data. Although this information was seldom sufficient to provide a thorough understanding of the problem, it usually was a good start. Just as management-by-objectives helped create a need for problem-solving, problem-solving helped to create a demand for crime-analysis data.

Conclusion

Problem-oriented policing was implemented in an environment of change. The City of Newport News was growing and changing, as was its police department. Department members were involved in changing operating philosophy, management style, personnel practices, and the organization's framework. Although the climate of change undoubtedly had an impact on the project, it remains uncertain whether it helped or hindered. However, we are reasonably confident that the changes made supported problem-oriented policing. Police executives considering implementing such an approach also should consider the degree to which these other programs, procedures, and philosophies should be implemented as well.

CHAPTER 4

A PROBLEM-SOLVING PROCESS

Introduction

As we saw in Chapter 2, research over the last two decades laid the groundwork for problem-oriented policing. By fall, 1984, several agencies had experimented with the concept. The Madison Police Department had been the initial test site for an earlier study of problem-solving (Goldstein and Susmilch, 1982), and the Baltimore County Police Department used Goldstein's problem-oriented approach as the operating style for a special unit designed to address fear of crime (Taft, 1986). In Great Britain, the London Metropolitan Police, after consulting with Goldstein, experimented with problem-solving in four sections of its jurisdiction (Hoare, Stewart, and Powell, 1984). In addition, aspects of problem-solving were being applied, formally or informally, by officers assigned to foot beats in other agencies (Police Foundation, 1981; Pate and others, 1986; and Trojanowicz, 1984). But no agency had gone so far as to make problem-solving an integral part of daily police practice. And no set of procedures and guidelines for doing so had been developed.

This meant that the theory of problem-solving had to be translated into a set of procedures and guidelines before the approach could be tested on the street. In this section we describe a problem-solving process as implemented in Newport News. This process was developed through the joint efforts of the Newport News Police Department Task Force, Herman Goldstein, Thomas Sweeney, William Bieck, and the Forum's project team.

This group designed the process to be applied to substantive problems affecting the public rather than administrative problems that affect only the police. They designed it to be used at all levels of a police agency, not just in a specialized unit. They designed it to identify problems, using a variety of information sources from inside and outside the agency. They designed it to accommodate a large variety of methods for analysis, with varying levels of detail. Finally, they designed it to allow for a variety of solutions to police problems. Within the scope of this process, virtually any police employee would be able to undertake a broad range of activities to handle a wide variety of problems.

Defining Problems

The problem-solving process provides police agencies a routine method for identifying, analyzing, and solving problems. But *what is a problem*? This is a difficult question because the term "problem" is used in different ways. However, there are several features that capture the essence of what is considered a police problem.

First, a *problem must involve a group of incidents*. Although it must be dealt with effectively, a single occurrence that will not be repeated is difficult to analyze; and, since it will not come again, it does not require a future solution. A problem, then, can be a group of incidents that are expected in the future, though none have yet occurred. Fur-

ther, the entire group of incidents need not come to police attention. Many of the incidents may not be reported to the police.

Second, *the events that make up a problem must be similar in some way.* There are a number of possible similarities: they may have occurred at the same place or time; the people involved may have similar characteristics; the people involved may engage in the same type of behavior; the social or physical environment may provide a similar context for each event. If there is no way of grouping the incidents, then there can be no common solution that could prevent further incidents.

Third, *a problem must be of direct concern to the public.* Purely administrative matters such as overtime, case screening, or shift scheduling are not problems in the sense we use them.[1]

Finally, *a problem must fall within the broad range of the police function.* A water shortage will not usually meet this criteria, neither will an outbreak of Legionnaires Disease or the flu, nor will difficulties in floating a bond issue to finance construction of a bridge. All crime-related concerns meet this criteria, as do questions related to traffic regulation, order maintenance, and many emergency services. There can be no clear cut definition of what constitutes a police matter, however. Indeed, this definition will vary from agency to agency depending on the traditions of the agency and the political and social attributes of the community. For example, a police agency that supplies emergency ambulance services will have problems concerning medical emergencies that might not confront other agencies.

Combining these elements, a problem can be defined as

> *A group of incidents occurring in a community, that are similar in one or more ways, and that are of concern to the police and the public.*

This definition covers a broad range of concerns. It encompasses traditional police matters, such as crime and order maintenance. But it also includes fringe concerns--matters over which people may disagree whether the police should be involved. Often these fringe problems are related to agreed-upon police concerns. In the case of burglaries in the New Briarfield Apartments (see Chapter 6), the accumulation of trash became a matter of police concern and the police were involved with ensuring its removal. The police were involved, despite the fact that trash removal is not normally a police concern. Ultimately, whether a concern is a police problem will involve a combination of police and public expectations. If either the police or the public expects the police to be involved, then the problem is one to which this process can be applied.

The remainder of this chapter describes the process used in Newport News, as well as the manner in which officers and supervisors applied it to their work. Like all plans, the reality of practice on the street often differs from the original blueprint for action.

The Process

The process for solving problems that the Task Force developed was derived from problem-solving processes developed in other fields. These approaches begin with detecting a problem, then move to collecting information about it. Next, actions are planned, based on the analysis of the information. The final step shows whether the actions had the desired effect on the problem. Based on these results, changes are made in earlier steps. Examples of such processes can be found in the fields of systems theory (von Bertalanffy, 1969), operations research (Larson and Odoni, 1981), and management (Churchman, 1968).

The problem-solving process tested in Newport News comprises four stages:

SCANNING – identifying the problem;

ANALYSIS – learning the problem's causes, scope, and effects;

RESPONSE – acting to alleviate the problem; and,

ASSESSMENT – determining whether the response worked.

This process fits well with the Newport News Police Department's management-by-objectives process. Long-term problems, identified as part of the scanning stage, become objectives in department plans. This means that resources can

be earmarked for analysis, response, and assessment. Problems that require substantial resource commitments can be accounted for in the budget cycle, reducing difficulties created by incurring large expenditures on short notice. Further, because the problem-solving process dovetails with the department's management-by-objectives process, agency members can plan efforts to deal with long-term problems. This reduces anxieties created when unforeseen problems are thrust upon managers. An example of the synergistic effects of problem-solving and management-by-objectives is the work of the evening shift in the South Precinct on prostitution-related robberies (see Chapter 6).

Long-term solutions to large-scale problems are not the only outcomes of the problem-solving process. The process also may be applied to less complex problems (both serious and minor) in order to achieve quick solutions. Chapter 7 illustrates a quick solution to a problem--dealing with the disturbances created by a skating rink. Detecting short-lived crime waves that can be eliminated by the appropriate patrol or investigative response is another example.

In Chapter 5 we will elaborate on one aspect of the process, the analysis stage, by describing the problem analysis guide. Figure 4 summarizes the relationship of the stages.

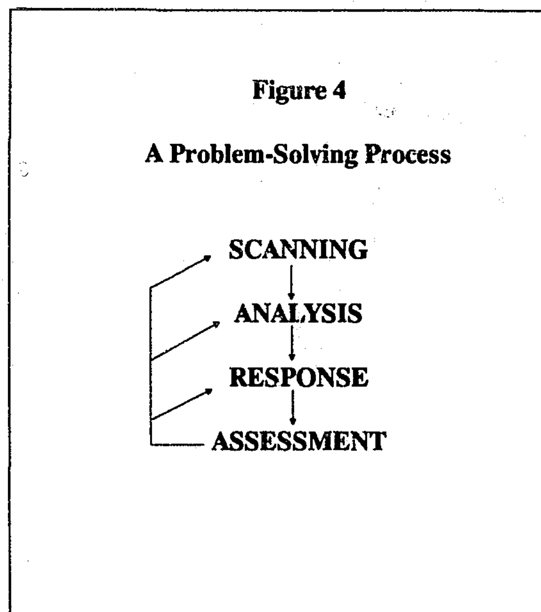


Figure 4

A Problem-Solving Process

Scanning

Scanning involves looking for and identifying problems, and then bringing them to the attention of a supervisor. It is a vital part of the process, since it initiates the problem-solving cycle. Although scanning is the responsibility of everyone in the department, during the first phase of the Problem-Oriented Policing Project, scanning was conducted in a limited manner by the Task Force. The manner in which the Task Force went about scanning shows how scanning works in the department as a whole.

Task Force members were asked to list important problems in the areas they served. Seventeen problems were listed originally, and are shown in Table 4. If all members of the department had been asked, the list doubtless would have been much longer.

Task Force members then collected information on their possible problems to determine whether they were real, and if they were, whether they were worth pursuing. One possible problem, school gangs, was eliminated because Task Force members discovered that the problem did not exist. Task Force members felt that two other problems, fatal accidents on Jefferson Avenue and commercial burglaries on J. Clyde Morris Boulevard, were temporary and likely to disappear because of decisions already made. Fatal accidents would probably be reduced once construction on Jefferson Avenue was complete; commercial burglaries would be reduced once a planned change of beat boundaries was implemented, since this would increase patrol coverage of the area during the times these crimes took place. Concern about serial crimes was eliminated from consideration because the question was framed in terms of improving investigative procedures--that is, it was an administrative rather than a public problem.

The Task Force discussed the remaining problems, their seriousness, their characteristics, expected benefits from solving them, and the difficulties in taking them on. Based on these discussions, the Task Force agreed on the two problems it would tackle: thefts from vehicles in the

it would tackle: thefts from vehicles in the downtown parking lots, and burglaries in the New Briarfield apartment complex. A patrol officer who was a member of the Task Force was assigned to handle the theft-from-vehicles problem, and a detective from the Crime Analysis Unit was assigned to handle the burglary problem. Analysis and development of solutions for these two problems gave the Task Force experience that they used to develop the process and the problem analysis guide. Chapter 6 describes how these two problems were handled.

Table 4
Problems Originally Considered by the Task Force

- Groups of workers from a large industrial complex engaged in drug dealing, drug usage, and drinking during their lunch break.
- Thefts from vehicles in the downtown parking areas (Handled by Task Force).
- Prostitution and robberies in District 1 (Handled by District 1 patrol officers).
- Burglaries in New Briarfield Apartments (Handled by Task Force).
- Business Burglaries in District 9.
- Confrontations between students from rival high schools.
- Jefferson Avenue traffic accidents.
- Serial crimes.
- Disorder problem in a small area of bars and a motel, near a military base.
- Traffic congestion in the downtown area when day shift workers leave the industrial area.
- Non-reporting of suspicious circumstances by citizen witnesses.
- Disturbances around and near a meeting area of people looking for dates.
- Groups of youths drinking, using marijuana, making noise and littering near a residential community.

The actions of the Task Force illustrate the objectives of the scanning stage. These objectives are:

1 Looking for possible problems;
2 Making a preliminary identification of possible problems;
3 Conducting a preliminary analysis to determine if a real problem exists and whether further analysis is needed; and,
4 Setting priorities among problems and assigning responsibilities for conducting further analysis.

Every member of the police department now has the responsibility to scan for problems. This means that each member, regardless of assignment, rank, or sworn status, has the duty to look for possible problems, and bring them to the attention of his or her supervisor. Once a potential problem has been identified, the supervisor has the responsibility for ensuring that the preliminary analysis of the problem is conducted, and for determining whether the problem should be pursued.

By assigning the responsibility of problem identification to all members, the Task Force underscored the importance of this stage of the process. No one can claim it was not his or her responsibility alone, as would be the case if a special unit had the responsibility.

The ability and willingness of members to identify problems will vary, however. Some members will be in units that hinder them from detecting problems easily. For example, one member of the Task Force was an evidence technician and his contacts with citizens were so structured that he found it difficult to detect problems. There also are differences in the willingness of members to bring problems to the attention of supervisors; to do so runs the risk of having to handle the problem. Some officers do not view this as a risk, but as an opportunity to do something new, interesting, and important. Other officers view problem-solving as extra work that they would prefer to avoid. Researchers' discussions with supervisors consistently focused on the variations in officer's abilities and desires to get involved.

Supervisors also varied in their abilities and desires to identify problems, set priorities, and make assignments. The Forum's field researcher observed an officer complaining to his lieutenant

that enforcement of a parking ordinance in a commercial area was creating difficulties. To the field researcher, this was a concern to which problem-solving could be usefully applied, one that the officer would have relished tackling because the solution could be the elimination of an undesirable task. The supervisor, however, did not recognize the opportunity, so nothing was done.

Consider another example. Few problems were found in one section of the city during the first nine months of implementing the process. However, when a new lieutenant and sergeant were transferred to that part of the city, they discovered four problems in as many weeks. These two supervisors had been particularly aggressive in identifying and analyzing problems in their previous assignments.

Department members have a wealth of possible sources for discovering problems. Table 5 lists these.

Despite the large number of possible sources, the single most-used source is personal experience. Most of the problems described in Chapter 6 and 7, such as thefts from vehicles, the Marshall Avenue 7-Eleven disturbances, domestic violence, and prostitution-related robberies, were identified by officers and supervisors who had responsibilities for the areas concerned. Complaints from citizens to the chief of police and to city officials also revealed several problems: corner drug dealing and rowdy youths leaving a skating rink are examples of this, and are described later. Several of these complaints, in addition, originated with community leaders, elected officials, business groups, or neighborhood watch organizations.

The Crime Analysis Unit was a potential source of information, but it served more as a source of information once a problem was identified than as a means to detect problems. In part this was because the Unit failed to aggressively look for patterns that might be symptomatic of problems.

Crime Analysis Units are, unfortunately, limited in their ability to be a good primary source for detecting problems. They are far from the problem location, so their data sometimes can be misleading. For example, data supplied by the Crime Analysis Unit indicated that a particular reporting area, consisting primarily of the Beechmont Gardens Apartments, was experiencing a large number of larcenies. An officer was assigned to analyze the problem in the apartment complex. Few larcenies were found. Instead, the officer found that the larcenies were reported by a gas station owner who had organized his business in such a way as to make it easy for customers to fill their tanks and leave without paying. As a result of this discovery, which added to an existing police concern about such gas stations, the analysis of theft-prone filling stations was undertaken (see Chapter 7).

Most of the time, officers relied on their own experiences and the chain of command for identifying possible problems. Other sources of information then were used to determine if a real problem existed. Officers were hesitant to announce the discovery of a potential problem before first checking it out. Many expressed concern about the effects of determining that a potential problem really was not a problem at all. As a result, some possible problems may have been found, but never reported, because the officers looked into them and concluded that they were not real problems.

"Unfounding a problem" concerns officers most when a supervisor assigns it. We found no evidence of officers being criticized, even mildly, for discovering that a supervisor's assignment was not a real problem. In two cases, high-ranking officials were told by patrol officers that possible problems were not the problems they thought they were. In both cases the ranking officials deferred to the weight of evidence collected by the officers. In one case, a senior official thought there was a problem of larcenies in an apartment complex. A patrol officer was able to demonstrate, based on her analysis of the crime reports, that the larcenies were coming from a neighboring filling station. In the other case, a memo from another senior official described a problem as drug dealing on a street in front of several stores. The problem was assigned to a sergeant, who then interviewed the owners and offenders. The sergeant found that there was little or no drug dealing, but rather that loiterers were scaring local residents away from the stores. The officers were even praised for their efforts. Despite these examples, many department members in the bottom ranks remain hesitant to contradict supervisors. Any police executive and manager trying to implement

Table 5
Potential Sources of Information for Identifying Problems

Crime Analysis Unit – Time trends and patterns (time of day, day of week, monthly, seasonal, and other cyclical events), and patterns of similar events (offender descriptions, victim characteristics, locations, physical settings, and other circumstances).

Patrol – Recurring calls, bad areas, active offenders, victim types, complaints from citizens.

Investigations – Recurring crimes, active offenders, victim difficulties, complaints from citizens.

Crime Prevention – Physical conditions, potential victims, complaints from citizens.

Vice – Drug dealing, illegal alcohol sales, gambling, prostitution, organized crime.

Communications – Call types, repeat calls from same location, temporal peaks in calls for service.

Chief's Office – Letters and calls from citizens, concerns of elected officials, concerns from city manager's office.

Other Law Enforcement Agencies – Multi-jurisdictional concerns.

Elected Officials – Concerns and complaints.

Local Government Agencies – Plans that could influence crimes, common difficulties, complaints from citizens.

Schools – Juvenile concerns, vandalism, employee safety.

Community Leaders – Problems of constituents.

Business Groups – Problems of commerce and development.

Neighborhood Watch – Local problems regarding disorder, crime, and other complaints.

Newspapers and Other News Media – Indications of problems not detected from other sources, problems in other jurisdictions that could occur in any city.

Community Surveys – Problems of citizens in general.

problem-oriented policing must work very long and hard to overcome this barrier.

Once a problem has been detected and a preliminary analysis has shown that it indeed is a problem (though perhaps not the problem it was originally thought to be), a supervisor must determine who will deal with it. If an officer has uncovered a problem, the supervisor will usually assign the problem to him or her for analysis and response. Short-term, as well as long-term,

problems were handled this way. Sometimes problems are handled by a group of officers on a shift, with the sergeant or lieutenant overseeing the analysis and response. Occasionally, a team comprising officers from two or more units will handle a problem. Although supervisors have the authority to form temporary special units to tackle problems, so far all problems have been handled by officers and first-line supervisors while they dealt with other duties.

Analysis

During the analysis stage, a problem-solving officer gathers information about the problem in order to understand the problem, thereby permitting the development of a workable solution. The analysis guide, described in the next chapter, is the central feature of this stage.

Officers try to achieve two objectives in this stage. First, department members handling a problem try to develop a thorough understanding of it. Once they achieve this, they develop a set of response options that are consistent with the information gathered.

The Task Force developed a problem-analysis guide to help department members achieve the first objective. Officers use the guide, which is called the Analysis Model within the department, as a checklist for gathering and organizing information. The guide lists three categories of problem characteristics: actors (victims, offenders, and third parties); incidents (physical setting, social context, sequence of events, and immediate results of the events); and responses (by the community and its institutions).

This checklist reminds officers of the types of questions they should ask. It also suggests possible data sources. Because a great deal of the information that can lead to a thorough understanding of the problem exists outside the department, emphasis is placed on tapping information sources within the community: talking to residents and business leaders, discussing problems with members of other public agencies, and collecting facts and figures from national research.

Officers are not expected to collect information on all points listed in the guide, but they are expected to look into the major topics before narrowing their search for solutions. The guide should provoke consideration of questions that normally might go unasked. Then the officer can make as comprehensive a search as time will allow.

Although supervisors are expected to check the quality of analysis, it was difficult to determine how much of this was done. This was partly because some supervisors were unfamiliar with problem analysis. Several training sessions helped to inform supervisors, but it is unlikely that they will closely monitor the quality of analysis until supervisors and officers have much greater experience with this type of work.

The Task Force helped provide the guidance that supervisors generally have been reluctant to provide. Department members working on problems were invited to the monthly Task Force meetings to discuss their plans, information, and possible responses. The atmosphere was informal; no orders were given and all were encouraged to speak their minds. Most of the members who brought problems to the Task Force have returned to give updates and get further advice. Since Task Force members are familiar with the problem-solving process, and department members are strongly encouraged to use the problem-analysis guide, these meetings were the best place to turn for assistance. In addition, presentations and discussions at Task Force meetings provided recognition for problem-solving efforts.

In summer, 1986, the department enacted a policy and procedure to guide problem-solving efforts. It established the Problem Analysis Advisory Committee to replace the Task Force. Like the Task Force, the Problem Analysis Advisory Committee is an eleven-member group of department members representing all ranks and units. Its function will be to provide the advice the Task Force had provided. Members are appointed by the chief of police and serve for a year. Selection is made on the basis of interest and past experience at solving problems. The Advisory Committee will meet monthly.

The same policy and procedure also instructed all commanders and supervisors to encourage

their officers handling problems to make presentations at Problem Analysis Advisory Committee meetings. The policy and procedure suggested that this be done early in the analysis stage.

Officers working on long-term or complex problems often discussed them with the Task Force, but officers and supervisors handling short-term problems generally dealt with problems on their own. Two examples of problem-solving efforts not brought to the attention of the Task Force are the Marshall Avenue 7-eleven problem, and the skating rink problem (see Chapter 7 for descriptions of both). Indeed, one sergeant who was particularly active in encouraging his officers to find and solve problems seldom brought them to the attention of the Task Force. In part, this was because he and his officers were assigned to the midnight shift, making attendance at afternoon meetings difficult. However, for department members who are "naturally" inclined to solve problems, the presence of a process and a guide may be less important than the attitude expressed by top management that handling problems is important. The process and the guide are symbols of support for actions these department members want to take.

It is helpful to think of officers first collecting information and then listing response options. Still, they seldom actually write out a list, and the search for options usually begins before all the information is collected. Throughout the analysis stage, officers may entertain a variety of possible responses, modifying this mental list as new information is collected. By the time all the data have been collected, most officers have a good idea of the type of response they should implement. In fact, discussions with members of outside organizations and with individual citizens often provoke officers to begin looking for solutions.

This tendency to merge the response stage and the analysis stage limits the number of options considered. If all the facts were in before the full range of possible responses were explored, better responses could be developed. However, this is a very time-consuming approach, since most problems entail extremely lengthy research projects. Domestic violence, for example, has been the subject of a large number of studies and there is still much to be learned. Officers and supervisors analyzing problems must balance the need to understand problems with the time and resources available to collect information. Sorting through options while collecting information is often the only practical strategy. It probably will work well as long as officers and supervisors keep their minds open to a variety of responses.

Response

During the response stage the officer has two objectives: select a solution and implement it.

One of the Problem-Oriented Policing Project's principles was that "The solutions developed by the process will involve non-police public agencies and other organizations. And the solutions will not rely totally on patrol and investigator responses." This principle is important because traditional police responses are appropriate only to certain situations. Many of the situations the public expects the police to handle cannot be solved with traditional police responses.

If police broaden their range of solutions, then the number of problems they can solve should increase. Involving outside organizations is critical because these other organizations, public and private, have access to resources and expertise that police agencies normally lack. When police combine their resources and expertise with the resources and expertise of other organizations, they can develop effective solutions for a larger number of problems.

The project and department encouraged a broad search for solutions in a number of ways. First, by analyzing problems before responding to them, department members broadened their search for solutions. Collecting information exposed department members to the large number of factors that create the problems. Removing one or more of these factors could solve a problem.

This suggested a number of alternative responses that could have been applied. To initiate these responses, department members worked with outside organizations. In addition, department members who used the problem-analysis guide had to consult with people in other public and private agencies; there was often no alternative

source for the information. This encourages collaboration.

Second, through training, supervisors were encouraged to think about the variety of outside organizations that could help solve problems. Since many of these organizations were outside the criminal justice system, solutions involving them were less likely to involve the imposition of sanctions.

Third, early examples of problem-solving that received much attention throughout the department involved police working with outside agencies. The New Briarfield burglary problem and the domestic violence problem are two examples.

Fourth, the Task Force encouraged a broad search for solutions. Through monthly meetings with officers and supervisors handling problems, Task Force members pointed out possible ways of dealing with the problems involving outside agencies. In some cases, an individual Task Force member worked directly with the officer or supervisor handling a problem, and helped him or her think through their options.

Department members were given free rein to find a solution that would solve their problem. The only restriction was that the solution had to be legally, financially, administratively, and politically feasible.

Despite these efforts to encourage innovation, many of the responses were simply variations of traditional patrol or investigative responses. These were the surest and simplest to adopt. Officers and supervisors may consider a wider array of options in the future. Police agencies adopting problem-oriented policing may have to find better methods of encouraging a broader range of responses. A third possibility is that, by and large, the responses adopted are realistic and practical; it may be that we are misguided in believing that non-traditional responses are useful for most problems the police handle.

But one of the reasons that many of the responses described in Chapters 6 and 7 focus on the criminal justice system is that they are interim measures. When a problem is long-term and complex, and the public needs some immediate relief, interim solutions may be implemented before analysis is completed. Putting officers on foot patrol on Jefferson Avenue while the street was blocked by construction is an example. This was not designed to solve the burglary problem, but it was apparent that something had to be done as a temporary measure.

As information describing a problem is collected, parts of solutions become apparent. Sometimes one aspect of a solution is implemented right away; this makes sense if coordination among the parts is unnecessary. For example, during the analysis of the theft-from-vehicles problem, the officer studying the problem learned about a group of possible offenders. At the time it was unknown if these offenders were responsible for a large portion of the thefts. Still, arresting them would not jeopardize other options for solution. Once arrested, the offenders provided useful information about other offenders and the way target vehicles were identified. Further analysis of theft rates indicated that these offenders were indeed responsible for a large proportion of the thefts, a fact learned, to a large extent, by making the arrests. This example illustrates that, although analysis is needed to develop a solution, action should be taken when there is an obvious remedy, even though the remedy may be temporary. In such cases additional information is gathered because of the actions.

In general, solutions can be organized into five groups:

1 Solutions designed to totally eliminate a problem;
2 Solutions designed to substantially reduce a problem;
3 Solutions designed to reduce the harm created by the problem;
4 Solutions designed to deal with a problem better (treat people more humanely, reduce costs, or increase effectiveness); and,
5 Solutions designed to remove the problem from police consideration.

Although we lack a sufficient number of problems to determine the types of problems that are likely to fit into these groups, experience provides some indications.

Group one solutions probably will be most often applied to small, simple problems--problems affecting a small number of people and problems that have only recently arisen. Examples might include congestion created by removal of a traffic

sign, or litter accumulating in a newly built park with too few trash cans.

Group two solutions will be applied most often to neighborhood crime and disorder problems. Also, these solutions will probably be used for persistent problems. The fact that they have been around for some time is evidence that they are unlikely to be eliminated. Examples include most crime and disorder problems like robbery, burglary, vandalism, drug dealing, and prostitution.

Group three solutions will be applied most often to problems where it is almost impossible to reduce the number of incidents that they create, but it is possible to alter the characteristics of these incidents. These may be problems created by behavior that has unintended harmful affects. For example, police may look for ways to reduce killings and injuries resulting from small-time gambling among residents of a neighborhood--the gambling is not stopped or reduced, but some of the harm is reduced. Group three solutions also may be used in combination with other types of solutions. For example, group three solutions may be used as part of attempts to deal with commercial robberies or rapes, by showing potential victims how to act to minimize the chances of being killed or injured during an incident.

Group four solutions will probably be applied to problems that are jurisdiction-wide and involve larger social concerns. For these problems, improving the way the difficulties are handled may be the best solution in the short run. Over a much longer time period, the solution, combined with other social changes, may reduce the problem. Examples include such problems as runaway juveniles, drug addiction and abuse, drunk driving, and elder abuse.

Finally, group five solutions probably will be applied to problems that have been created by specific businesses or groups as a "by-product" of their ways of operating. In addition, these solutions probably will be used when the police and the business or group fail to agree on some other resolution. Examples might include stores that arrest shoplifters but consistently fail to prosecute, businesses that have high false alarm rates, or businesses that encourage a large number of thefts as a consequence of the way they market their goods.

Deciding to which group a solution belongs will affect how its effectiveness should be judged.

Assessment

This final stage provides feedback to the agency on how the response works. This information then can be used to change the response, improve the analysis, or even redefine the nature of the problem. This information also could be used for planning strategies for classes of problems, and for revising the problem-solving process. The responsibility for assessing the effectiveness of the response falls to the supervisor of the department member who handled the problem.

For some problems assessment is very simple. For instance, the sergeant supervising the officer who handled the skating rink problem observed the area after the solution was implemented and found no evidence of the problem. Patrol officers working the former prostitution area of Newport News will be able to see if street prostitution activities increase.

For some solutions, assessing effectiveness proves more difficult. If the problem can be tracked using police records, then the Crime Analysis Unit can assist by providing periodic reports. For

Table 6
Experiences With Problem-Solving

Percent [and number] of respondents who have:

Identified a problem which is being addressed.	66%	[128]
Participated in the analysis of a problem.	56%	[110]
Helped to develop a solution to a problem.	67%	[130]
Led a problem-solving effort.	44%	[86]
Done one or more of the above.	66%	[130]

example, most crime problems can be assessed this way.

The solution to the domestic violence problem involves a case tracking process that was designed in part to provide information on repeat family violence. This information will be used to determine if repeat violence has decreased. This is an example of specialized data collection that may be employed for particularly serious and complex problems. Another example is a before-and-after survey to assess fear reduction.

During supervisory training sessions, participants were introduced to basic concepts in evaluation methods. These included simple pre-post, interrupted time series, and non-equivalent control group designs, as well as methods for measuring effectiveness. Since most problems addressed in Newport News have not progressed to the assessment stage, we do not know how well evaluations of solutions will be conducted.

Administration

According to a policy and procedure currently under consideration, department members handling problems will complete a form at the end of the problem-solving effort describing what they did. The Planning and Analysis Unit (which includes the Crime Analysis Unit) will receive these forms, and any other documentation on problems. For simple problems, this form will be the only record. For more complex problems, the form will serve as a cover sheet for supporting documentation describing the scanning, analysis, response, and assessment stages. These problem-solving summaries are to be filed and made accessible to all department members. This file will serve as a reference library so that department members handling problems can find out if a similar problem has been tackled in the past, and what has been done about it.

Attitudes Regarding Problem-Solving

In early August, 1986 the Forum conducted an attitude survey of department members. The survey asked members a number of questions regarding their experiences with problem-solving, and their feelings about these experiences.

Table 6 shows that two-thirds of department members claim to have been involved in problem-solving in some way. This figure should be interpreted as an upper bound on the extent of experience. Observations by the Forum's Field Research Associate suggest that a better estimate might be one-third of the department's members. Still, it is possible that there have been a number of short-term problem-solving efforts of which the Forum project team was unaware. In addition, many of the problem-solving efforts that have been documented involved a number of officers and supervisors. Even if we take half of the lowest figure, 15 to 20 percent involvement is relatively large given the short time the police department has applied a problem-oriented approach.

Table 7
Responses to Department Survey Regarding Practicing Problem-Solving
(Brackets enclose the number of responses)

How well do you feel you can do each of the following?[2]

	Very Well	Moderately Well	Not Well
Identify community problems.	29% [56]	66% [126]	4% [8]
Use the problem-solving guide to analyze problems.	15% [28]	61% [113]	23% [43]
Develop solutions to community problems.	21% [40]	70% [132]	9% [16]
Evaluate solutions to see how well they work.	22% [40]	73% [134]	7% [12]

Department members also were asked how well they believed they could handle each stage of the process. These responses are shown in Table 7. Most department members felt only moderately comfortable with their ability to handle each stage, although more department members felt very comfortable than felt very uncomfortable. The exception was the use of the analysis guide. Department members clearly felt they were less adept at analyzing problems than at identifying and solving them, and at assessing their results. Since the department and the Forum put the greatest emphasis on the analysis of problems, and since studying problems prior to responding to them may be the most radical departure from past practice, this result is not surprising. It does, however, emphasize the need to provide assistance and advice in this area.

Notes

[1] Problem-solving probably has as much potential for dealing with administrative matters as substantive matters. In Newport News, officers and supervisors who have been asked to investigate administrative problems have been urged to use the approach described in this chapter and the next.

[2] Respondents checked one of the five boxes ranging from "Very Well" to "Not Well". In this table "Moderately Well" indicates that any of the three middle responses were given. "Very Well and "Not Well" indicate one of the extreme answers was selected.

CHAPTER 5

A GUIDE FOR THE ANALYSIS OF PROBLEMS

Introduction

Though all four stages of the problem-solving process are important, the analysis stage may be the most critical. It is at this stage that officers gather information to determine the appropriate response. Without studying the problem first, responses would be based simply on experience, tradition, and guesswork. Because police agencies generally have not supported thorough analysis by street officers before developing responses, stressing analysis is an important improvement on past practice. For these reasons, the Task Force expended considerable effort on this stage of the problem-solving process.

A police officer analyzing a problem needs to assess, and should be prepared to gather, a lot of information. Not all of this information will be useful for solving a particular problem. And for most problems, there will be a lot of useful information that the officer cannot collect. Sorting out what is and is not useful, and what can and cannot be collected can be an imposing task. As a result, the Task Force designed a guide to make this easier.

To develop the guide, the Task Force held a series of brainstorming sessions. The course of these sessions was influenced by the information the Task Force had collected from discussions with experts, visits to other agencies, past research, and their own experience working on two problems (thefts from vehicles and burglaries in the New Briarfield Apartments). Four sources of information were particularly influential in developing the guide.

The starting point for the Task Force was a list of problem descriptors developed by the Patrol Task Force of the Kansas City, Missouri, Police Department (1974). The Kansas City "Conceptual Model–Crime Analysis" divided crime problems into a number of areas: the criminal act, the crime victim, the crime offender, community responses, and institutional responses. The Newport News group gained additional insights from Chief Stephens, a member of the Kansas City Police Department's Patrol Task Force that had developed this model.

A second source of information was the theory of situational crime prevention (Clarke, 1983; Ramsay, 1982). In many respects, situational crime prevention forms the theoretical basis for believing that crime and disorder can be reduced in small geographic areas by carefully studying the characteristics of problems in the area, and then applying the appropriate responses. Clarke (1983) describes situational crime prevention as changing the "attractiveness of criminal opportunities" in order to "affect the likelihood that individuals will engage in crime". Although he focuses on changing the physical environment of crimes, his general thesis--that by paying attention to situational factors, crime can be reduced without serious displacement--seems applicable to a variety of measures.

In fact, the basic principles behind situational crime prevention seem applicable to most problems confronted by the police. The basic principle is that individuals make choices based on the opportunities presented by the immediate physical and social characteristics of an area (Clarke and Cornish, 1985). By manipulating these factors, people will be less inclined to act in an offensive manner.

British researchers on situational crime prevention were particularly helpful. Barry Poyner discussed his "process model for street attacks" with members of the Task Force in November, 1984. His model includes victims, offenders, social context, physical environment, sequence of events (by victims and offenders), and outcomes (1983). Poyner also discussed the application of his model to preventing street robberies. Because of the importance of situational crime prevention to problem-oriented policing, Chief Stephens and the project director visited London to discuss this developing field of study with researchers at the British Home Office. During this visit, Home Office researchers described their studies of auto theft, vandalism, and burglaries.

The third stimulus for the Task Force was Herman Goldstein's "problem-oriented approach" (1979). Just as situational crime prevention provided a basis in criminological theory for the work of the Task Force, Goldstein's problem-oriented approach provided a basis in police organizational theory. Goldstein and the Task Force discussed the basic concepts of problem-oriented policing (see Chapter 1, Table 1) and explored various data sources that could be used to examine problems.

The fourth body of information came from addressing two problems: the thefts from vehicles in downtown parking areas, and burglaries in the New Briarfield Apartments. These two problems, handled by the Task Force, provided concrete examples of questions that the problem-analysis guide should handle (see Chapter 6). Because the problems were quite different, a wide variety of questions were considered.

The Task Force explored the list of factors described in the Kansas City model and in Poyner's model, added to them, reorganized them, and developed a more comprehensive list. This list then was edited by the Forum's project team and returned to the Task Force for review and comments. This resulted in the final problem-analysis guide, described later in this chapter, and shown in Appendix A.

Task Force members believed that, in order to understand a problem fully, an officer must find and examine information describing an array of problem characteristics. Specifically, data on three basic topics, involved in every problem, are required: actors, incidents, and responses.

Actors include victims, offenders, and others--"third parties"--who witness the incident or are directly affected in some other way. In short, actors include all people directly involved in the problem.

Problems are made up of groups of incidents created by the interactions of the actors. Understanding the incidents that make up a problem requires knowledge of the actors' actions (sequence of events) and the social context and physical setting within which the sequence of events takes place. Understanding the problem also requires knowledge of the immediate results of the events.

Responses to the incidents by the community (individuals and groups, inside and outside the jurisdiction) and its institutions (private and public organizations) are important because they affect the actors and how they interact. Of importance when considering responses is the degree of seriousness with which the community and institutions view the problem.

Note that, in the context of the problem-analysis guide, responses are current reactions to the problem. In the context of the problem-solving process, responses are new ways of dealing with problems. Before a new response can be developed by using the process, an officer must use the guide to find out about old responses.

The interactions of actors, incidents and responses is shown in Figure 5, based in large part on a similar diagram developed by Poyner (1983). As shown in this figure, actors come together in the same social context and physical setting and perform a sequence of events that have immediate results. The community and its institutions perceive these results as more or less serious, and respond accordingly. These responses, in turn, affect what actors will participate and how they will behave in subsequent incidents.

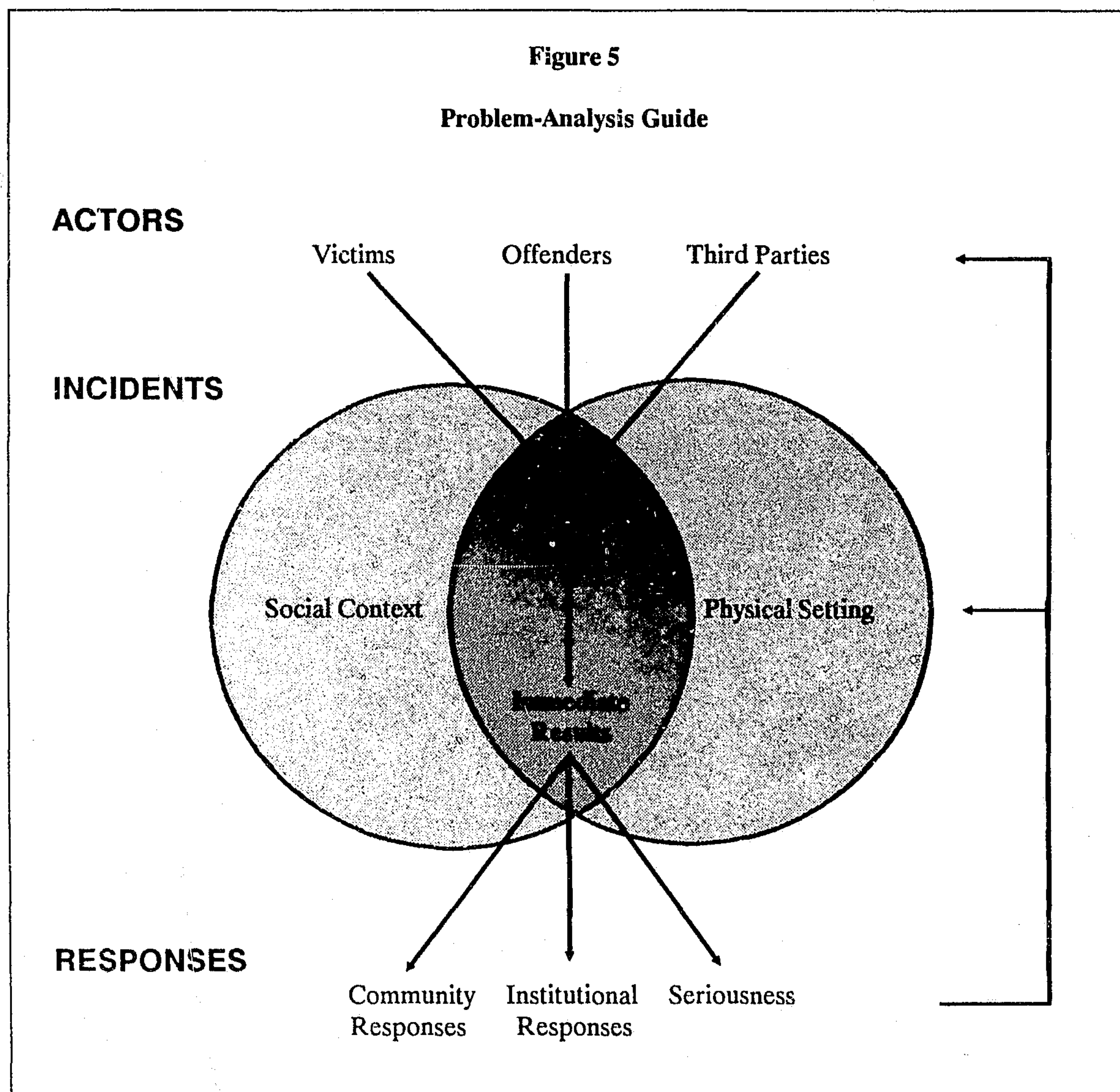


Figure 5

Problem-Analysis Guide

Poyner listed three benefits from such a model. First, models give an easily understood description of the problem. Second, "when used for assembling data it acts as a searching, yet flexible, framework for organizing the data and deciding what data are relevant." Finally, and most important, models make it easier for analysts to find ways of preventing future occurrences of the problem (Poyner, 1980).

Using the Analysis Guide

The analysis guide organizes, in the form of a checklist, the most important types of information a department member will need. A department member can use the list to help identify the types of information that bear on the problem and then determine where the required information can be found. No element on the list will be applicable to all problems, so for any given problem some elements can be ignored. In other cases, the department member may lack the time or resources

needed to explore all facets of the problem, and must focus on its most important aspects. The guide is a set of prompts, not a mandatory set of points to be addressed.

In fact, the guide can be viewed as a *general purpose model* that contains elements that an analyst can use to develop *models of specific problems.* It is analogous to a set of "Tinkertoys". The Tinkertoy set contains all the material needed to build any number of devices that resemble real world machines. The pieces in the Tinkertoy set, and the rules for assembling them, make up a general purpose model. By applying the rules, the builder selects the pieces required for making a particular device, and leaves the other pieces alone. The devices constructed (a crane or windmill, for example) are specific models of real world objects.

Similarly, the factors contained in the analysis guide, and the relationships depicted in Figure 5, comprise a general purpose model. The police officer selects the appropriate factor, collects information describing the problem, and then assembles the information into a description, or specific model, of a real world problem.

Although the guide shows department members the questions that they should be interested in, it does not show the analyst how to think about problems. Similarly, the guide does not describe procedures for manipulating data. The quality of problem-analysis, as a result, will vary among officers with different abilities and skills. The Newport News experience indicates that agencies adopting a problem-oriented approach should strongly consider improving the analytical skills of its members. Although additional training in analytical skills is desirable, as the results of the efforts of Newport News officers indicate, it is not essential.

The Guide

The guide described here is an abridged version of the problem-analysis guide provided in Appendix A. Although extensive, it is not exhaustive. As this guide becomes more widely used in Newport News and in other agencies, additional factors will be found and added.

The guide's three main topics have already been introduced--actors, incidents, and responses. Each of these topics contains three or four factors (for example, actors include victims, offenders, and third parties). These are further divided into elements (for example, third parties is divided into personal data, how involved, and expectations for police action elements). For each of these elements, the guide gives further elaboration.

In the sections that follow we describe each topic and its factors. For each factor we will first describe several basic questions with which the factor deals. This is followed by a list of the elements of the factor. Next, we give an illustration of how the factor applies to two problems, New Briarfield burglaries and thefts from vehicles. These two problems are discussed in greater detail in Chapter 6. Finally, we list some of the other problems for which the factor was particularly important. Fuller descriptions of these other problems are given in Chapter 7.

Actors

At least two actors are required for most incidents--an offender and a victim. For some incidents, of course, it will be difficult to tell the two apart. This is very likely with consensual crimes (for example, prostitution), offenses committed between friends and relatives (for example, assaults between drinking buddies), and crimes involving business transactions (for example, selling stolen goods). Still, for most incidents these labels are adequate. In addition, other actors--so-called "third parties"--often are involved. These may be witnesses, neighbors who report or intervene in incidents, or friends of a victim or offender who take no part in the incident themselves. Depending on the nature of the problem, department members may need a variety of data on each of these actors. The most important of these data types are described below.

Offenders. These are persons who commit crimes or who engage in other behavior that is generally considered socially unacceptable. For some problems the offender is obvious--the person who broke into the house or robbed the pedestrian. For other problems, the offender is less obvious--juvenile runaways, or barroom fights. However, since the point of the guide is to

draw attention to aspects of the problems that may help explain what is going on, whether or not there is a clear-cut offender for a particular problem is not critical. What is critical is that the analyzing officer consider this factor. Elements that the Task Force felt should be of particular concern were:

1 *Identifiers:* Names, addresses, social security numbers.
2 *Physical descriptions:* Age, race, sex, height and weight, hair color, facial hair, eye color, distinctive marks, blood types, finger/footprints, speech patterns and accents, clothing, perfume or cologne.
3 *Life styles:* Financial status, friends and associates, marital status, leisure activities, victimizations.
4 *Education and employment history:* Schooling/training, employment, military record.
5 *Medical history:* Physical health, substance use/abuse, mental health, medical insurance.
6 *Criminal history:* Type of incidents, motive for incidents, method of operations, recorded criminal record, probable future conduct.

Information about offenders living in New Briarfield was collected from police arrest records, but did not prove useful. Offender information was helpful in understanding thefts from vehicles, however. Informants provided some names and descriptions, as well as addresses of juveniles probably involved in stealing from vehicles. After these offenders were arrested, convicted, and sentenced they provided a great deal of information regarding other offenders. These interviews made it clear that a small group of offenders were responsible for the majority of these thefts. (The New Briarfield and thefts from vehicles problems are described in detail in Chapter 6.)

Information about offenders has been gathered as part of other efforts to analyze problems in Newport News (see Chapter 7 for descriptions of these efforts), perhaps because police have become accustomed to asking questions about offenders. Offender information has been particularly useful in addressing the Marshall Avenue 7-Eleven problem. Again, a small group of offenders was involved and knowledge about them provided keys to the solutions of the problems. Offender information was also useful in the 32nd and Chestnut drug dealing problem and the domestic violence problem.

Victims. These are the persons who are directly harmed as a consequence of an offender's actions. As with learning about offenders, it is not always clear who is and who is not a victim. Elements describing victims include:

1 *Personal data:* Identification, descriptions.
2 *Life styles:* Financial status, friends and associates, routine activities, substance use/abuse.
3 *Security:* Police protection, other organized security, self-protection.
4 *Victimization history:* Prior victimizations, response to prior victimizations.
5 *This victimization:* Relationship to offender, short-term effects of victimization, long-run effects of victimization, reported to police, expectations for police action.

Victims in New Briarfield were the residents, and to a lesser degree the owner of the complex. Information describing victims and potential victims came from offense reports and a community survey. Some residents, especially those living in the only occupied unit in an otherwise abandoned row, seemed more likely to be subject to repeated burglaries. Residents, as a rule, cannot afford expensive locks or alarms. The units are hard to secure, though most residents employed some sort of self-protection, including nailing rear doors shut and using two-by-fours to secure windows.

In the theft from vehicles example, offense reports indicated that most victims are male shipyard workers who commute to the area daily. Navy personnel who are housed in the area or work at the shipyard also are likely victims. In addition, on Sundays there are a number of churchgoers who become victims. Self-protection seems to be minimal, but a few potential victims leave their vehicles unlocked to minimize collateral damage. Nothing is known about repeated victimizations of the same people.

Victim characteristics were of particular concern when the domestic violence problem was analyzed, especially life-style, victimization history, and current victimization information. An example where victim information was unimpor-

tant was the skating rink problem, discussed in Chapter 7.

Third Parties. These people include anyone involved in an incident, but who is neither a victim nor an offender. Again, third parties are not always easily distinguished from offenders or victims. For example, depending on how one defined a burglary problem, a receiver of stolen goods could be either an offender or a third party. When trying to solve a drug-related problem, the roles of various actors can be extremely difficult to sort out. Again, the key is not to precisely classify a person, but rather to gain an understanding of how they are involved. Elements of the guide describing third parties are:

1 *Personal data:* Identification, description.
2 *How involved:* Actions taken, relationship to victim, relationship to offender, effects of victimization, reporting to police.
3 *Expectations for police actions.*

A number of classes of individuals are often third parties to burglaries in New Briarfield, including neighbors (some of whom have also been victims, and a few of whom may be offenders), the maintenance staff, and the apartment manager. Additionally, letter carriers and others who regularly move through the complex may become involved. Most of these people become involved as third parties because they are potential witnesses to burglaries or discoverers of break-ins. A few may be friends of offenders, and are most likely juveniles. Since the maintenance staff and the apartment manager are responsible for repairing the damage caused by break-ins and for securing vacant units, we have included them in this category.

Third parties to the thefts from vehicles include shipyard security personnel and people who regularly pass through the parking areas.

Ultimately, knowledge about third parties turned out to be of little use for either the New Briarfield or the thefts from vehicles problems. As will become apparent in Chapter 7, information on third parties proved very useful for officers analyzing the skating rink and prostitution-related robberies. Without having learned about the actions of parents and the skating rink owner, the officer would have not developed the solution he did. When a solution to the robbery problem was being developed, the behavior of bar owners was an important concern.

Incidents

Although police are used to describing an incident in the simplest of terms--for example, by the appropriate section of the criminal code--a complete description of the events that make up a problem is more complicated. In particular, officers should consider the social context and physical setting for these events, the sequence of actions leading up to and including the incident, and the results of the actions taken by the offenders and victims.

Sequence of Events. This factor includes activities of actors culminating in an offense or disturbance. Elements of the guide pertaining to the sequence of events include:

1 *Target of act:* Person, property, exchange.
2 *Events preceding act:* Part of other acts or end in itself, transactions involved, victim/witness/offender precipitation, witnesses and others involved.
3 *Event itself:* Actions of offender, actions by victim to avoid attack or defend him/herself during attack.
4 *Type of tools used by offenders:* To attack buildings and things, to attack people, other instruments.
5 *Events following the incident:* Actions taken by each actor following the incident (offenders, victims, witnesses, other third parties).

Offense reports and direct observations showed that break-ins were easy to commit in New Briarfield. There were so many ways to gain access that no systematic patterns were found that would help in developing a solution. Most burglaries occurred when victims were away from home, and as a consequence, many residents were afraid of leaving their apartments. Doors and windows were easy to enter, either by breaking a door jam or window, or by pushing in the entire door or window frame. Some residents claimed that offenders would shatter a rear porch light several days prior to a break-in to provide better concealment, though this was never confirmed. Other break-ins were made through walls separating abandoned units from occupied units, or through

ceilings from crawl spaces running the length of apartment blocks. In New Briarfield, the vast number of ways of breaking in was an important consideration for developing a solution.

Sequence-of-events information for the thefts from vehicles problem was very interesting. Interviews of suspects revealed that one group of offenders looked for clues that a vehicle might contain drugs. These clues included rock-and-roll radio station bumper stickers, "muscle" cars, and drug paraphernalia, like razor blades or feathers, hanging from the rear view mirror. Cars in the middle of lots were better targets than those near streets because the former were concealed from onlookers. Some offenders preferred stealing before the shipyard lunch break, when presumably the thieves could find drugs before the owners returned to use them. This information helped explain why some victims reported break-ins to vehicles without losses.

Understanding the sequence of events has been important for understanding other such diverse problems as domestic violence, gas thefts, and the skating rink. In all these problems, there is a recurring pattern of actions by actors that results in the problem incidents: in domestic violence, it is the repeated escalation of disputes into violent confrontations; for gas thefts, it is the inability of some gas station operators to monitor the self-serve pumps while engaged in other commercial transactions. The pattern of behavior of kids and their parents, as well as neighborhood residents, characterized the skating rink problem.

Immediate Results of Incidents. This factor contains the short-term consequences of the actions taken by the actors involved. Elements describing the immediate results of incidents are:

1 *Harm done to victim:* Threat or intimidation, injury, property loss, prospects for recovery, fear.

2 *Legal concerns:* Statutory category/legal definition, elements of proof required, civil actions, potential penalties, previous court cases.

3 *Gain to offender:* Property, revenge, gratification, status, recognition.

The immediate results of burglaries in New Briarfield include the loss of property (predominantly televisions, radios, and clothing); damage to the unit, which makes it even more vulnerable; and increased fear. Little evidence is available for identifying offenders. It is unknown what benefits, in addition to the property itself, they may be receiving from their burglaries. This information was gained from interviews with residents and from offense reports.

Apart from gains to offenders, and losses to vehicle owners, little was discovered about the immediate results of thefts from vehicles.

In contrast, the immediate result of some domestic disputes was often apparent--injury and sometimes death.

The legal concerns involved in reducing prostitution activity were very important to the solution of the robbery problem.

At the Marshall Avenue 7-Eleven the immediate results were that the offenders gained some goods from shoplifting while the store gained some revenue generated by the offenders purchasing beer and wine.

Physical Setting. This includes the conditions under which the incidents take place. It is in this category that most of the traditional crime prevention considerations apply: How easily can someone gain access? How visible is the target to witnesses? How does the area contribute to the problem? The physical setting contains four elements:

1 *Chronology:* Time of day, day of week (holidays or special events), months, seasons (Christmas, spring school break), cycles (business, pay schedules, and so on).

2 *Location:* Inside or outside, within a vehicle, character of surrounding neighborhoods (residential, commercial, industrial, deserted, mixed use), jurisdiction boundaries.

3 *Access control:* Target hardening, symbolic barriers.

4 *Surveillance:* Street and doorway lights, physical design.

New Briarfield illustrates this type of information. Information on when burglaries take place, the deteriorated conditions of the structures and the trash accumulation, lack of fencing and the inability of residents to secure their units, the improper placement of street lighting, and unobstructed views all fall into this category. Direct observations, as well as interviews and of-

ficial records, provided most of this information. As noted above under "sequence of events," the physical characteristics of the complex created an abundance of opportunities for breaking into it.

The physical setting of the shipyard parking areas also is important for understanding that problem. The lots are operated by a number of owners with a variety of security measures. Shipyard-owned lots are generally paved, well lit and fenced; some have security guards. City-owned lots are sometimes paved, generally poorly lit, and without security of any sort. Privately-owned lots, run by large parking firms, are usually paved, although lighting is generally poor and security minimal. The many lots owned by small businesses very often are unpaved and without any lighting or security. The downtown area, therefore, is a "crazy quilt" of lots offering a large number of targets with little or no security, day or night.

Other problems described in Chapter 7 illustrate the importance of the physical setting as well. In the Jefferson Avenue commercial burglary problem, barricaded streets prevented access by patrol cars. Also, the physical setting of Washington Avenue provided hiding places for stolen goods.

Social Context. Social context describes the behavior of the people in the-area of the incident. Information from this should help determine if community organizing would be useful in solving the problem. The three elements of the guide describing the social context are:

1. Likelihood of witnesses to the incident: Street traffic, visibility of incident scene to nearby buildings, characteristics and condition of likely witnesses.
2. Probable actions of witnesses: Neighbors able to identify strangers, frequency and intensity of interaction among neighbors, activities of any neighborhood watch.
3. Apparent attitudes of residents toward neighborhood: Condition of residences, condition of neighborhood.

New Briarfield is a residential complex inhabited by low-income tenants, many of them single mothers with children. Until the police established a Crime Watch organization, there were no community groups in the complex. Although some residents stated that they moved to the complex to be near friends and relatives, many regarded their neighbors suspiciously. Most residents felt that their neighbors would be unlikely to intervene to prevent a crime. This information had to be gleaned from interviews, as official records rarely note social conditions.

The shipyard parking area is an interesting example because the social context at first appears to be relatively uninteresting: No one lives in the parking lots and few people live in the vicinity. However, further reflection reveals that the social context is a critical part of the problem. Many people pass through the area regularly, although the parking areas themselves are deserted except during shift changes. Likely witnesses would be Navy personnel, shipyard workers, sanitation workers, and parking lot attendants. Most of these people may be unaware of a theft in progress; people passing through are unlikely to care much about the area and have little incentive to become involved. Even victims may be more concerned with beating the rush-hour traffic home than in reporting a theft.

The social context of runaways is vital to understanding that problem. Many juveniles run away because of abuse in their home or other domestic troubles. In addition, the pattern of drug dealing on 32nd and Chestnut indicated a strong social network that allowed these transactions to take place. Many of the people involved lived in the area. Finally, domestic violence provides a good example of the importance of understanding the social context of a problem.

Responses

Most incidents of concern to the police result in some kind of response from the community at large and from its institutions, such as government agencies and the mass media. These responses are important for understanding the problem, for two reasons. First, community responses define police goals and objectives; thus they may be used to help specify how serious a particular problem is, and why it is a problem. Second, these responses directly affect the problem itself. Sometimes, as some of the problems handled in Newport News show, the absence of a response by the community or institutions, or a general feeling that the

incidents are of little consequence, helps contribute to the problem.

Community Responses. These are the reactions and attitudes of people in the areas, local and citywide, in which the incidents occur. Community response elements of the guide include:

1. *Neighborhood affected by the problem:* Perceptions of problem, attitudes about problem, actions, political clout.
2. *City as a whole:* Perceptions of problem, attitudes about problem, actions.
3. *Opinions of people outside city:* Investors, job seekers, commuters, tourists, shoppers.
4. *Groups:* Religious organizations, civic associations, clubs, neighborhood watch.

Interviews with residents and members of city agencies indicated that there had been a variety of community responses to the problems of New Briarfield. At the neighborhood level there is a great deal of fear, much of it directed toward neighbors. Many residents blame the complex owners for the conditions. At the city level, New Briarfield is considered to be housing of last resort, and its problems are largely ignored. To the extent that the complex is known outside the city, New Briarfield is seen as an investment opportunity. No community groups were involved with New Briarfield until the police department started Crime Watch.

The few residences and businesses in the area of the parking lots have never urged action regarding the thefts. People in the city as a whole, and regular visitors to the area from outside the city, may feel there is a risk to parking downtown. However, what they do with this knowledge is unknown.

One of the most common community responses to problems is avoidance. Most people avoid the downtown area of Newport News at night, except prostitutes and their customers. When young men or derelicts hang out near local businesses, local customers avoid the places, as was the case with the Marshall Avenue 7-Eleven and the Jefferson Avenue business area. Yet, the apparent absence of concern on the part of the community can be changed, as with the handling of the domestic violence.

Institutional Responses. Institutional responses are the actions of public and private agencies and organizations as a consequence of the incidents. Institutional response elements of the guide are:

1. *Police:* Prevailing attitudes, workload, approach to problem, belief in effectiveness of approach, resources.
2. *Prosecution:* Priorities, procedures.
3. *Courts:* Treatment of actors, readiness to incarcerate, procedures.
4. *Corrections:* Space available, parole procedures.
5. *Sheriff:* Work release, booking, jail space, policies.
6. *Legislature:* Knowledge of problem, willingness to deal with problem, how voters affected.
7. *Preventive Programs*: Health, child care, fire.
8. *Mass media*: Effects of news coverage on public, victims, and offenders, sensationalization, copycat incidents, willingness to cooperate with justice agencies.
9. *Business sector:* Insurance, housing industry, organizations.
10. *Schools:* Crime prevention programs, truancy, vandalism.
11. *Medical:* How actors are treated, willingness to cooperate with other interested parties.
12. Other social services: Public housing, mental health, welfare, planning, codes, fire, revenue, development, others.

Many city agencies have an interest in New Briarfield, including fire, human services, codes, housing, and the police. Interviews with agency members showed that most of these agencies have attempted to serve their clients but have been frustrated by the enormity of the complexes problem's. The agencies that have a stake in the physical structure of the area have been slow to act, making the problem worse. In the past, several newspaper articles have reported on the complex, but they seem to have yielded little long-term impact. Federal involvement was considerable because of the Department of Housing and Urban Development's financial dealings with the owners, and because the federal tax code made the complex an attractive investment.

Institutional responses to the thefts from vehicles is limited. Little concern has been found

on the part of the union or the management of the shipyard. Local businesses, including parking lot owners, seem unconcerned. The city Department of Codes and Compliance does have an interest in some of the privately owned lots that do not meet city code. And, of course, the city has an interest in the lots it owns. But whether these city concerns include thefts is doubtful. From a downtown development perspective, there is a real need for concern on the part of the city. To the extent that these thefts make the downtown area appear unsafe, this problem slows investment and growth in the area.

Problems described in Chapter 7 show that officers have found that often part of a problem can be addressed if another city agency does its job. For example, the abandoned buildings problem involves a number of derelict buildings that Codes and Compliance might be able to have torn down. During the course of studying runaways, the detective handling the problem discovered that the juvenile court had little information on these youths. By providing the court with this information, close cooperation on joint programs became possible. While analyzing the drunk driver problem, information about state grants for programs to reduce drunk driving was discovered. As a result, the officers used other information they had collected to apply for a grant to deal with drunk driving.

Seriousness of the Problem. The concerns about the incidents felt by members of the public and public officials are included in this factor. This is important because problems perceived to be very serious are more likely to receive attention and resources than problems perceived to be minor. However, problems that have received widespread attention and are generally perceived to be serious may be more difficult to solve because of misinformation and powerful interest groups. Elements describing this part of the guide include:

1 *Public perceptions:* How seriously regarded by public, why seriously regarded by public, publicity about the problem, community support and acceptance of present police actions.
2 *Perceptions of public agencies:* Commonwealth Attorney's view and support, court cases on this problem, other enforcement agencies outside this jurisdiction, perception of city manager and other city agencies.
3 *Perceptions of private leaders:* Business community, media, charitable organizations.
4 *How the problem came to police attention.*

New Briarfield is generally considered the housing of last resort and its problems have evoked public concern for years. Because of these concerns it was relatively easy to mobilize general support within city government for taking action. Like other city agencies, the police have long been aware of the problems in this complex.

The parking-area theft problem is an example of a problem that has serious consequences, even though most people do not think of the thefts themselves as serious. Although little attention has focused on these thefts, most people who park their cars in the area are aware of the risk. This has contributed to a widespread fear of crime in the downtown area, which may hamper plans for Newport Centre and similar area redevelopment efforts. Despite this, thefts from vehicles is a low priority with the local prosecutor and convicted offenders are treated lightly by the courts. Although Newport News Shipbuilding is concerned enough to provide secured lots for its senior managers, neither the company nor the union seem concerned enough to do much for the workers. The problem came to the attention of the police because officers were required to take a large number of reports dealing with these thefts.

Gas thefts from self-serve filling stations are not a serious concern to most residents of Newport News, giving the police department some flexibility in the response it selects.

Drug dealing on the corner of 32nd and Chestnut was a very serious problem to the local residents, making it a necessity that the police do something about it. Some problems, if handled early, never fester to the point where they become a widespread concern. The skating rink problem may be an example of this.

Police Attitudes Toward the Guide

One of the greatest concerns of visitors to Newport News regarding problem-solving was how officers and supervisors found the time to deal with problems. Even department members wondered about this.

An open-ended question on the department survey asked members what they considered to be the advantages and disadvantages of using the problem-analysis guide. The results are shown in three panels in Table 8. It is not surprising that the most frequent advantage listed is that the problem-analysis guide improves services. We were surprised to learn that a large proportion of the respondents felt that the guide also assisted management. Among the disadvantages listed were that the guide is hard to implement, and using it takes a great deal of time. Panel C shows that these two disadvantages were important to department members regardless of the advantages. However, a quarter of those who felt "assisting management" was a clear advantage also felt there were no disadvantages. Further, among those who saw no advantages to the guide, "time"--that is, the time required for solving problems--was the biggest drawback. Any agency implementing problem-solving, then, will need to both provide quality training in the use of the guide, and make sure department members have the time to apply it.

Conclusions

A department member analyzing a problem should be prepared to collect, and become familiar with, a great deal of information. Not all of these pieces of information have a bearing on a particular problem. And for most problems, there will be a great deal of pertinent information that cannot be collected. To focus information collection efforts, this guide leads department members to the many types of information they should be considering and attempting to collect.

It is obvious that a complete problem-analysis must consist of more than just collecting relevant data; reciting the facts will not yield a solution. The analyst also will have to weave a story out of the strands of information, a story that describes the nature of the problem, what caused it, who is involved and why, and what can be done about it. In other words, they must use this general guide for analyzing problems, then create a more specific plan to address their problem.

It appears some people are good at this and others are not. In the very long run, the ability to analyze problems is a skill that police agencies need to look for, encourage, and develop in their members. If problem-oriented policing proves effective in a large number of police agencies, practitioners and academics must help to improve the skills of police officials in understanding problems. But ultimately, analysis techniques and guides, including the problem-analysis guide described here, are not enough to ensure success. Reading a research text book will not by itself develop a good researcher; ability and experience also are needed. The same is true with problem-solving.

In Newport News the analysis guide also has symbolic value, apart from its use as a guide for studying problems. It symbolizes management's concern for careful analysis before acting, along with showing management's support for creative long-term solutions to problems. So while the guide's value for guiding analysis is considerable, it also has a less tangible value in communicating the type of police activity that management considers important.

Table 8
Advantages and Disadvantages with the Problem-Analysis Guide
(From open ended questions)

Panel A
What major advantages have you found with the problem-analysis guide?

Effective, Efficient, Provides better service	34%	[41]
Assists management	27%	[32]
Provides information	8%	[9]
Challenging	3%	[3]
Other	3%	[3]
None	17%	[20]
Don't Know	9%	[11]

Panel B
What major disadvantages have you found with the problem-analysis guide?

Hard to implement	36%	[43]
Takes a lot of time	29%	[34]
Other	8%	[9]
Does not work	2%	[2]
None	16%	[19]
Don't Know	10%	[12]

Panel C
Advantages by Disadvantages for major categories.

	ADVANTAGES			
	Effective, Efficient, Service	Assists Management	Information, Challenging, Other	None
DISADVANTAGES				
Hard to implement	68% [27]	34% [11]	7% [1]	22% [4]
Takes time	20% [8]	34% [11]	50% [7]	44% [8]
Doesn't work, Other	8% [3]	6% [2]	36% [5]	6% [1]
None	5% [2]	25% [8]	7% [1]	28% [5]
TOTAL	100% [40]	100% [32]	100% [14]	100% [18]

CHAPTER 6

THE EFFECTIVENESS OF PROBLEM-SOLVING

Evaluating Problem-Oriented Policing

Chapters 4 and 5 described the structure of problem-oriented policing: the procedures that the Newport News Police Department implemented to encourage its officers to solve problems. Now we turn our attention to the practice of problem-oriented policing--its implementation in the field. As discussed in Chapter 1, our evaluation of their efforts examines two questions:

- Can police officials use the problem-solving process and the problem analysis guide to solve problems? That is, can they take actions and implement programs, or influence others to do so, which reduce the size of the problems they take on?
- Can police officials do this on a routine basis, as part of their regular job? Or, alternatively, is problem-solving something that can only be done by special units or intensive single issue projects?

In this chapter, we consider the first question; in Chapter 7, we examine the second.

The best way to understand how problem-oriented policing works is to examine case studies of problem-solving efforts. Just as crimes and calls for service are the proper unit of analysis for examining incident-driven police work, so are problems the proper unit of analysis for problem-oriented policing.

Newport News police officers have undertaken the analysis and solution of eighteen problems since January 1985. We selected three of these problems to evaluate the effectiveness of problem-solving efforts--the first three problems which were identified, analyzed, and responded to. In this chapter we provide descriptions of how these three problems were addressed and evidence showing how effective these efforts were.

Before proceeding, we must offer three caveats regarding this evaluation. First, our sample of problems is very small. As noted above, the appropriate unit of analysis for evaluating problem-solving is the problem. As of this writing we have documentation on only 18 problem-solving efforts. This sample is further limited by the fact that these problems are at various stages of being addressed--anywhere from just having been identified, to having been successfully solved. So for many of these 18 problems we do not know how the department will respond, let alone if the response will be effective. Only three problem-solving efforts have progressed far enough, and have had their solutions implemented long enough, for us to conduct formal evaluations.

Second, these three problems are not representative of all possible problems. As we show in Chapter 7, the three considered here are examples of a special class of problems--neighborhood crime problems. That is, all three are similar in

two ways: first, each is restricted to a small, geographic area; second, each of these problems involved serious crime. These three are also big problems--all had a serious, deleterious effect on the community, and all required a substantial devotion of police resources to solve them. Nevertheless, they do illustrate the effectiveness of problem-solving activities for neighborhood crime problems.

Third, these problems were not randomly selected. They were chosen because they were addressed first. Yet, because they were addressed first they may have received more attention than subsequent problems. This is especially likely with the two problems selected by the Task Force. The Forum's Field Research Associate provided help in the analysis of the New Briarfield burglary problem. Although far less outside help was given the department in the analysis of the thefts from vehicles problem, the officer analyzing it may have been able to devote more time to it than would be normal for other problems. The prostitution/robbery problem is the most representative of normal problem-solving; no outside help was provided and the department members involved were given no extra time to handle it.

We can be virtually certain of one thing, the results described in this chapter would not have been achieved without the efforts devoted to these problems. We are confident of this for two reasons. First, all three problems had existed for many years and showed no signs of disappearing of their own accord. Second, over the years the department tried to address these three problems, but the problems either were resistant to enforcement efforts, or quickly rebounded after the enforcement effort. So although generalizing from these three efforts to all possible problem-solving efforts is speculative, we can be confident that the successes achieved were due to the analysis and responses described below.

A note about names: the names of all police department members, other public employees, and Forum staff members given in this chapter and the next are real. Private citizens have been given fictitious names to protect their privacy.

Burglaries in the New Briarfield Apartment Complex

The New Briarfield Apartments are located in the southern half of Newport News, in the center of a racially and socially mixed neighborhood. Originally built during World War II to house shipyard workers, the complex consists of over 400 one-story wooden units arranged in linear groups of 4 to 16 apartments. New Briarfield was never intended to be permanent housing, but the postwar housing shortage was acute and the apartments have been continuously occupied ever since.

By 1981 the complex was generally regarded as the worst housing in Newport News. Most residents were low-income, black households headed by women. The burglary rate was highest in the city; the vacancy rate was nearly 20 percent. The owners were unable to turn a profit on the complex, the apartment manager was unable to maintain it properly, and it deteriorated further.

That year the department decided to take action against the burglary problem. The department persuaded the apartment manager to let it use, free of charge, one of the many vacant units as an office. The Crime Prevention Division stationed two officers in this vacant unit, and patrol officers used it as an office for completing their reports. In addition, the department recommended crime prevention strategies to the apartment manager, some of which were implemented.

The department felt that the increased police presence and the crime prevention tactics were effective. Officers involved in this effort claimed that they reduced the burglary rate in New Briarfield by 60 percent. They also claim that the apartment vacancy rate declined as well. Nevertheless, the apartment owners remained unwilling to invest in many of the crime prevention strategies recommended, and the residents remained vulnerable. For example, dead bolts were installed in the exterior doors of each apartment; but the bolts were of the single cylinder type, and a burglar could defeat them easily by breaking the windows adjacent to the door and reaching in to unlock the

door. Walls, door frames, and other structural parts of the unit were weak, and posed little problem for thieves. So when the police moved out of the complex to focus on another crime problem in 1982, the burglary and vacancy rates quickly returned to their former levels. Since then, the complex has continued to deteriorate. By 1984, New Briarfield Apartments were generating more calls for service than any other apartment complex in the city. This was how the Newport News Police viewed New Briarfield when a Task Force member proposed that the Task Force analyze this problem again.

Analysis

Analysis of the Briarfield burglary problem began with a seminar Herman Goldstein held for the project Task Force in Newport News. A brainstorming session of Task Force members generated an extensive list of questions and potential data sources. Detective Tony Duke, with the part-time assistance of the Forum's Field Research Associate in Newport News, Judy Frist, then started tapping these data sources and answering the questions. They ranged from incident reports to a victimization survey, and from interviews of city, state, and federal officials to on-site inspection of the problem area. Let us review some of the most important data sources.

Crime Data. Analysis of department crime data showed that in 1984 there were 70 burglaries in the New Briarfield Apartments. Since only half of all burglaries nationwide are reported to the police, it was conceivable that the true victimization rate was much higher. In an attempt to determine who might be committing these break-ins, an auxiliary police officer plotted on a spot map the addresses of all adults arrested in 1985 for a felony in District 5 (the area containing Briarfield and the surrounding neighborhood). The officer then plotted on a more detailed map of the complex the homes of all arrestees who lived in New Briarfield. This provided little useful information--there was no pattern of arrestees' units, and most had been arrested for assault, not burglary.

Visits to the complex during school hours consistently revealed school-aged youths hanging out or roaming around. The 1980 census and a survey conducted by the police department (described below) showed that many families in New Briarfield include 14 to 17 year-old youths. Most families are headed by single mothers, and children often go unsupervised. In addition, few of the residents own much that is valuable; adult burglars would get little return for their efforts. Most of the items reported taken are of little monetary value. Finally, residents have stated that juveniles are committing many of the break-ins and acts of vandalism. This is especially true of vacant units, where they take anything that is not nailed down (and many things that are). This was confirmed by Duke and Frist, who were able to photograph a group of kids escaping from a vacant building. The kids had just broken the lock and entered the structure when Duke and Frist arrived on the scene.

Drug addicts and alcoholics also use the vacant apartments. Sometimes they damage the vacant units; occasionally, they set fires in them.

Several officers who patrol the Briarfield complex describe what they refer to as a "death cycle" for these apartments. First, a tenant moves out of the unit. Kids break in, remove anything of value, and vandalize the unit. This leaves the apartment unprotected: doors remain ajar, windows are broken. Unless the unit is quickly boarded up (and until recently, the apartment maintenance crew rarely did so), addicts and drinkers begin to take refuge there to get high, and kids continue to play in the structure. The unit deteriorates more quickly, now that it is exposed to the elements. The combination of weather and vandalism create structural defects in the exterior walls, floors, and ceilings; over time, these defects get worse, and may spread to adjacent units. Sometimes the unsavory users intimidate the legitimate residents next door. In any case, residents of neighboring units are likely to leave. This creates opportunities for other units to be broken into, pillaged, and made uninhabitable. If a fire begins in one of the vacant units (whether intentionally or accidentally set), several units may be destroyed. In the end, the entire row of units becomes vacant.

Detective Duke suspected that some apartments might run higher risks of burglary than others. If some pattern of offenses could be identified, he reasoned, it might be possible to apprehend the thieves by staking out particularly vulnerable apartments at the times they were most likely to

be broken into. Unfortunately, spot maps revealed little pattern to the burglaries. The likelihood of a break-in was slightly higher in the center of the complex, on Temple Lane; it was slightly lower in two particularly well-maintained sections of the complex. But for the most part, the burglaries seemed randomly distributed about the complex. There was also no time pattern, except that virtually none of the break-ins were committed when someone was at home. This, too, suggested that opportunistic juveniles were the cause of the problem.

Resident Survey. It became apparent that the police had only a vague idea of how the residents of New Briarfield viewed the problems of the apartment complex. Although the police department considered Briarfield's biggest problem to be burglary, it was possible that residents viewed the problem differently. So the Task Force felt that Duke should conduct a survey of households in the apartment complex.

With the help of Detective Marvin Evans, Duke developed a questionnaire. The questionnaire was pretested in an apartment complex near New Briarfield that also contained low-income residents. Forum staff then helped Duke revise the questionnaire.

Duke then randomly selected 200 units from a list of occupied units supplied by the New Briarfield manager. The department sent letters to the randomly selected households, explaining the purpose of the survey and asking their cooperation. Auxiliary and sworn police officers were then trained to administer the questionnaire and sent out to do so. Apparently the list from which the sample had been drawn was outdated--many of the units were in fact vacant. And, of course, a few of those sampled could not be contacted or refused to cooperate. But 150 households were surveyed, representing nearly half of the occupied units. For those surveyed units that were occupied, a response rate of over 80 percent was obtained.

The survey confirmed that most of the residents of the complex were very poor. Forty-three percent of the families living in New Briarfield grossed less than $6,000 in 1984; 72 percent made less than $12,000. The biggest reason, of course, was that many residents were unemployed: half the heads of households were unable to find work. Even those who could find a job were poorly paid: 26 percent of household heads with jobs earned less than $6,000.

The survey also revealed that many residents had come to New Briarfield in the late 1970s, because it was a nice place to live. Long-time residents cited the air conditioning and similar amenities as important benefits. But many of them have since changed their minds. One respondent expressed the opinions of many:

> When I first moved in, this was a nice place to live. But nobody takes care of this place anymore.

The primary attraction of Briarfield now is its cheap rent. Sixty percent of the residents moved there for this reason; 24 percent claimed Briarfield was the only place available that they could afford.

Despite the poverty and poor housing conditions, most of the residents (53 percent) felt burglary was the most serious problem. Virtually all respondents called burglary one of the top three problems. In the six months preceding the survey, over 20 percent of the residents had suffered at least one break-in. Not surprisingly, fear of burglary was also a problem: over 65 percent of the residents were "very worried" about the prospect of a burglary. One young mother stated that she was so afraid of a break-in that she did not even keep food in the unit. Instead, she kept it at her mother's home and took the bus three miles whenever she had to prepare a meal.

Such drastic avoidance measures were not untypical. One of every four residents--all of them adults, many of them heads of households--avoided walking anywhere in the complex, while 63 percent habitually avoided at least some sections of the complex, even during the day. And very few people were willing to go out at night. Casual observation revealed that the streets were almost totally deserted after dark, except for small groups of teenagers and young adults. Over 70 percent of the sample explained that they did not go anywhere in the neighborhood at night--by car, on foot, or by bus--because they were afraid of being robbed or attacked. Many residents told interviewers that they were afraid to invite neighbors into their homes, suspecting that the

neighbors would later break in and steal their belongings.

Although burglary was a serious problem, the physical condition of the complex ran a close second. For 30 percent of the residents this was the biggest problem. Most residents expressed concern over management's inability to make repairs. Some told (and showed) interviewers real horror stories: in some units, roofs or floors had caved in and the residents left to the elements for up to six weeks; a water main had recently broken, flooding parts of the complex for nearly a month before it was repaired; cold drafts blew through large cracks in numerous door and window frames. Many units failed to meet Federal standards for low-income housing supplements, but nonetheless received Federal subsidies.

In summary, New Briarfield was filled with people who felt they had no place to go. The astronomical burglary rates and corresponding fear levels, combined with the dilapidated housing conditions, had sapped the residents of all feelings of community. If it were not for the belief that they had no choice but to live in New Briarfield, most residents would probably have left.

These were only the most dramatic survey findings. But even before the results were tabulated, the survey made two substantial contributions to the Task Force's understanding of the problem. First, Task Force members became more aware of the difficulties that New Briarfield residents faced and as a consequence became more interested in helping them. Second, Task Force members no longer saw the problem as just one of burglaries. It became apparent that the physical condition of the complex contributed substantially to the burglary problem. In fact, the poor and deteriorating conditions were one of the causes of the burglaries, as well as one of the consequences.

Private Organizations. When the police began to collect data on New Briarfield, one of the first sources they turned to was the apartment manager, Priscilla Sedgwick. Mrs. Sedgwick was very cooperative at first, supplying information on the number of units, the vacancy rate, and even tenants' names. Sedgwick informed Detective Duke that 200 units were subsidized under the Section 8 Loan Management program administered by the U.S. Department of Housing and Urban Development (HUD). HUD uses this program to help financially troubled apartment complexes with outstanding HUD loans. Another 60 households received subsidies through the Section 8 Rental Assistance Program, administered through the Newport News Redevelopment and Housing Authority.

Identifying the owners of New Briarfield proved to be a more difficult task. To do this, Duke had to develop an understanding of the complex structure of a real estate syndicate. With the help of local stock and real estate brokers, Duke learned enough real estate and corporate law to know what to look for. Then, a search of records kept by the HUD area office and the Virginia Corporation Commission in Richmond, combined with a title search conducted by the City Clerk, produced a complex network of general partners, limited partners, and holding companies that stretched from Fairfax, Virginia to Los Angeles and Seattle. Over the years, the complex had changed hands frequently, moving from one partnership to another as each exhausted its tax deductions. The evidence indicated that New Briarfield is owned and controlled by people whose principal aim is to secure income tax deductions.

During this exploration, Detective Duke discovered that the current owners were $1.6 million in arrears and about to default on a $5.3 million loan from HUD.

Public Agencies. At one point or another in his analysis, Detective Duke had to contact a wide variety of local, state, and Federal agencies to understand some piece of the Briarfield puzzle. A partial list is provided as Table 9.

Developing Solutions

As a result of this analysis, Duke and the Task Force took several actions to resolve the problems in New Briarfield. These actions involved both immediate, short-term tactics to improve the situation and prevent the problem from getting worse, and long-term planning to solve the problems permanently. Two factors were common to all actions taken: they were the direct result of the department's analysis of the problem, and they involved other city agencies acting in cooperation with and under the leadership of the police department.

Table 9
Public Agencies Contacted for
Information on the New Briarfield Burglary Problem

Newport News city agencies

Office of Business Licenses--business license records;

Clerk of Courts--deed records;

Department of Codes Compliance--building safety information;

Fire Department--fire and arson data;

Planning Department--land use and census data;

Department of Public Works--street cleaning and sanitation information;

Redevelopment and Housing Authority--data on housing subsidy programs;

Tax Assessor's Office--property values and tax payments;

State agencies

Virginia Corporation Commission--corporate records;

California Corporation Commission--corporate records;

Federal agencies

Federal Bureau of Investigation (local office)--fraud investigation issues;

Internal Revenue Service--ownership patterns

Department of Housing and Urban Development (Washington, DC central office)--housing standards and loan default data;

Office of Management and Budget--multi-family housing problems and HUD assistance programs.

One of the most beneficial aspects of the survey was to show Task Force members how residents felt about New Briarfield. Prior to the survey, Task Force members were more likely to blame the residents for their plight than to sympathize with them. But after the survey the Task Force members became much more concerned about the community.

Among the most dramatic consequences of this attitude shift were the actions taken by the day shift patrol officer who patrols New Briarfield Apartments. Officer Barry Haddix was a member of the Task Force, so he was familiar with the data being collected. He took it upon himself to improve the physical conditions at New Briarfield. He convinced Mrs. Sedgwick to resolve her dispute with the private garbage collection firm she had contracted to pick up New Briarfield's trash; rat-infested trash which had been piling up for months was finally removed. Haddix had Sedgwick clean out and fill in an abandoned swimming pool filled with trash and stagnant rain water. He convinced her to remove a number of abandoned and unlocked refrigerators that were outside the maintenance building. The pool and the refrigerators were dangers to the children in the complex. Haddix had abandoned cars towed away and persuaded the city sanitation department to clean the streets. Because of his pressure to clean up the complex, there was a marked improvement in the physical condition of the area. While not a permanent solution, these actions were a beginning.

In April 1985, Chief Stephens felt it was time to get other agencies involved in a more systematic way. He asked Detective Duke to prepare a report on his findings. Then Stephens sent a letter and a copy of Duke's report to the heads of five city agencies--redevelopment and housing, codes compliance, fire, planning, and social services. The department heads were invited to send representatives to a meeting to discuss how they should coordinate a strategy for improving the conditions in the complex. The meeting was held in May.

The department heads agreed that it was impossible to renovate New Briarfield--the buildings were simply too deteriorated. To bring the units up to city housing codes, fire walls would have to be installed; but the units would have to be partially destroyed in order to add new foundations to support them. Inadequate drainage around the structures posed a continuing problem for maintenance and a barrier to upgrading the structures. Unfortunately, the cost of solving the drainage problem would be greater than the value of the complex. Burglary was a problem, because the doors and windows did not fit their frames, leaving spaces that made it easy to pry them open or kick them in. Here again, substantial expenditures would be needed to change the basic physical structure of the apartment units and resolve this problem.

The department heads agreed to find new, safer, and better housing for the residents--and then raze New Briarfield. Codes Compliance had already conditionally condemned 57 vacant units because they failed to comply with city housing codes. The owners were given notice to bring these units into compliance within 30 days or have them demolished. However, HUD was appealing the decision. The Property Maintenance Appeals Board was to meet the next week. On the grounds that there was no evidence that the owner or HUD would or could actually improve the situation, representatives of five city agencies--codes, fire, planning, redevelopment and housing, and police--all agreed to testify against HUD's request for a 60-day extension on Codes' notice.

The formation of this coalition was the first combined action by Newport News city departments on any issue of its kind. After hearing from a representative of the HUD General Counsel's office, the city department representatives gave their views. In the past, appeals for delay were almost always granted. This appeal was denied.

In July 1985, HUD foreclosed on the owners of New Briarfield and took over the problem for itself. This sparked a new round of responses from the police department. In October, Officer Vernon Lyons was assigned to a foot patrol beat in the Briarfield neighborhood. His beat included both the New Briarfield complex and two adjacent, low-income apartment complexes. His assignment was to organize the neighborhoods in his beat so that residents would be better able to work with the police to resolve problems.

One of Lyons' first actions was to work with New Briarfield's fledgling Crime Watch. The group had been formed with police department assis-

tance in the Spring, but had struggled ever since. At Lyons' suggestion, crime watch leader Fred Baxter formed a parallel organization to fight for better maintenance of the complex. Maintenance proved to be a better organizing issue than crime, particularly after Baxter was able to convince a municipal court judge to order HUD to return the rent of eleven tenants whose apartments were in particularly poor repair. Baxter's organizations now include 90 percent of Briarfield residents, and are an important force in the negotiations between the city and HUD.

Under pressure from the tenants' group, the city, and the courts, HUD continued to improve the internal and external condition of the occupied units, as well as some of the vacant units. Internal work focused on bringing the occupied units up to standard--floors, doors, and windows were replaced in many apartments, for example. Meanwhile, the city has been negotiating with HUD to develop final plans for the 39-acre site. The city envisions 240 new, low-income apartments, an 8-acre shopping center, and an expansion of the Briarfield Elementary School adjacent to the present apartment complex. The new development would be built in stages, so that present Briarfield residents could be moved into the new apartments as they become available. HUD never intended to own the complex in the first place, and the city council has made New Briarfield into an important political issue; so both sides are attempting to resolve the matter quickly. Nevertheless, Federal regulations make it very difficult for HUD to divest itself of housing stock. So these negotiations may take some time.

If the tenants can be found new housing it seems very likely that their chances of being victims of burglary will decrease. There are no apartment complexes in Newport News that are as vulnerable to break-ins as New Briarfield. Newly constructed apartments on the same site as the current complex would appear to be the best solution for the tenants. Many residents interviewed during the department's survey said that they liked the location of the complex because it was reasonably close to friends, relatives, stores, government services, and jobs. However, it is far from certain whether the complex will be replaced, and whether the current tenants will be able to live in the new complex. While all of this is being decided the police department will continue trying to keep burglaries down through a combination of community organizing and patrol.

Assessment

Analysis of reported crime data shows that the department's actions have reduced the burglary rate in New Briarfield substantially. Details of the statistical methods used are provided in Appendix B. In summary, time-series analysis revealed that there were no sizeable or statistically significant short- or long-term trends during the 37 months preceding the February 1985 intervention, although the number of burglaries reported did fluctuate randomly from month to month. But there was a sizeable and significant effect of the police intervention on burglaries in the 17 months following the intervention: *reported burglaries dropped by about 35 percent* since February 1985, and have remained at about the same level ever since. If the preintervention rates of burglaries had continued, instead of dropping, as many as 40 additional burglaries would have taken place. So in the seventeen months since the police began work, almost 40 burglaries have been prevented. Further, there is no evidence of "spillover" or displacement effects to the surrounding neighborhood.

Burglary rates are still slightly higher in New Briarfield than in the adjacent low-income apartment complexes. Once the old buildings have been replaced with the new units, however, it is reasonable to expect that the rates will drop to roughly equivalent levels.

Forum staff interviews of residents and patrol officers suggest that police/community relations have improved. The local foot patrol officer has received a great deal of cooperation from the residents. They keep him informed about events within the complex and he uses his network to communicate with residents. As a result of this interchange he has been able to help residents bring pressure on the management firm, under contract to HUD, to make some improvements in several apartments. The complex has remained relatively trash free since the initial police cleanup effort.

Thefts from Vehicles in the Shipyard Parking Lots

Newport News Shipbuilding is the largest employer in the state of Virginia. Each day over 30,000 workers enter the shipyard's main plant in the southwestern section of the city. Many drive, leaving their cars, pickups, vans, and motorcycles unattended in one of the many parking lots surrounding the shipyard. Thefts from these vehicles comprise a serious problem for the police department: over 700 thefts from these vehicles were reported in 1983, for example.

Like the problem of burglaries in New Briarfield, the police have long recognized that the shipyard parking lots posed a problem. Unlike New Briarfield, however, the thefts from vehicle problem has always been considered a trivial nuisance by most police officers. Despite the volume of offenses, and despite periodic attempts to arrest offenders, the Crime Analysis Unit did not even track thefts from vehicles. In fact, when the problem was first posed for study by a member of the Task Force who had once patrolled the parking areas, the idea was met with much joking and criticism.

The shipyard and the surrounding lots largely define this section of the city. There are few other buildings, most of them bars and fast food diners catering to shipyard workers. Most of the rest of the land in the district consists of a hodgepodge of vacant lots. Some are owned by the city, some by the shipyard, others by local residents and private companies. They result not only from the need for parking, but from urban renewal projects in the nearby downtown area. Many of the buildings that had been in the area in the 1960s were removed but never replaced. Because there is little demand for commercial building in the downtown area, the present owners make do by turning their vacant land into parking lots.

Security and other amenities vary considerably among the lots. The fanciest lots are owned by Newport News Shipbuilding and are used by its managers and executives. They are paved and have well-marked spaces. They are also relatively secure, having high fences, limited access points, and guards. At night, these lots are well-lit. At the other extreme are the lots used by shift workers. They are owned by parking lots companies, individuals, and the city. These lots are often merely gravel open areas with no marked spaces. Security is not provided in these lots: there are no fences and many access points to the street; none of these lots are guarded, and many are unattended during the day; lighting is minimal, mostly provided by street lights.

Over the years, the police had made several attempts to deal with crimes in and around the parking lots used by shipyard workers and Navy personnel. In 1982, following the murder of two sailors in one of the lots, the Navy and the police created the SPAN unit--Special Patrol to Aid the Navy--to patrol the area. The Navy purchased two cars and pays the overtime of police officers to patrol the downtown area around the shipyard. While it increases police presence, SPAN does not seem to deter the thieves. A SPAN stakeout in 1983 aimed at arresting thieves netted several minor drug dealers, but no auto burglars.

When this problem was first considered by the Task Force, Detective Bill Liddell was assigned to take a preliminary look at the problem. Liddell confirmed that over 700 vehicle break-ins were reported each year. In 1983, thefts from vehicles in these lots accounted for 10 percent of the index crimes committed in Newport News. The average loss was $250. This put a dollar value of more than $150,000 per year in reported losses, and this did not include unreported thefts and the damage done to vehicles. The Task Force selected the problem for further study, and assigned Officer Paul Swartz to handle the analysis.

Analysis and Response

Swartz soon found that the theft from autos problem was more complex than he had imagined. Rather than analyze the problem and then develop a response, he attacked the problem in an iterative process: he analyzed a facet of the problem, then developed an appropriate response; then he studied another facet and developed a further response; and so on. This satisfied both the task force and command staff's desire for immediate action, and Swartz's conviction that thorough study was needed for long-term success.

Building on Detective Liddell's preliminary work, Swartz took three approaches. First, he examined police records to get a better idea of when and where the thefts were committed. Then he gathered information about the offenders. These two information sources led him to develop an effective, short-term response to the problem. Finally, he began to talk with shipyard security force, residents of the neighborhood, and others with a stake in solving the problem, to get their views as to what needed to be done. This was useful in the development of a long-term solution.

Reported Crime Analysis. Swartz used the city's computer to obtain a printout containing information on all thefts from vehicles committed in the shipyard area between January 1982 and March 1985. Swartz then hand-tabulated the data in literally dozens of ways, focusing on three characteristics: when the thefts were committed, where they were committed, and who (probably) committed them.

Officer Swartz looked at daily, weekly, monthly, and yearly time patterns. He found that most of the offenses were committed on weekdays during the day shift. This was hardly surprising, since these were the times when the lots were most full and there was most to steal. But a sizeable proportion of thefts were committed at night, and even Sunday churchgoers were sometimes victimized. In fact, the likelihood of victimization per car seemed to be highest on weekends, suggesting that the thieves were simply opportunists.

One of the first questions Swartz asked was whether there was a pattern of thefts related to the security measures provided. The secured lots owned by the shipyard did seem to have a lower rate of thefts. But because there was no count of the automobiles parked in the lots at various times, it was difficult to determine if this was due to better security or fewer cars at risk. In any case, it would be prohibitively expensive for the city or the private lot owners to provide fences, lights, and guards, so Swartz abandoned this line of inquiry for the time being. Instead, he focused on trying to identify parking lots with exceptionally high numbers of thefts, regardless of the number of cars using them.

Using spot maps, he was able to identify seven lots with more than 25 break-ins each for the years 1982 to 1984. Two of these lots, including the most often victimized lot, were owned by the city. Another 20 lots with 15 to 24 break-ins during this period were also found; two more city lots were found in this group. Not surprisingly, none of these lots were owned by the shipyard.

Swartz also examined a variety of other characteristics of the offenses, including the type of goods stolen, the method used to break into the car, and so on. He found that the incident reports often failed to include some data important to his analysis; working through the chain of command, he convinced patrol officers to add these data elements to any reports they took of thefts from autos in the Shipyard area. Finally, Swartz developed a detailed daily tracking procedure, so that he or anyone else who took over the problem could stay on top of changes in offense patterns.

This analysis suggested two solutions. For the short-term, it gave patrol officers in the area an idea of where and when they should focus their attention. This might help to arrest frequent thieves, for example. Second, it suggested a long-term option: work with the city and private lot owners to improve security in the most frequently victimized lots. The long-term solution was made more difficult by the fact that only four of the worst lots were owned by the city; to make a serious dent in the problem, it would be necessary to convince the private lot owners to adopt fairly expensive security measures.

Although his analysis of police records provided much useful information, Officer Swartz felt that he needed to go beyond reported crime data to understand the problem fully. He next concentrated his efforts on identifying the offenders.

Offender Analysis. Swartz discussed the problem with patrol officers and detectives who worked the area and followed up cases of parking lot thefts. These officers believed that there were two important groups of thieves. One group consisted of a loosely knit gang of white, working class youths who lived in the neighborhood just north of the shipyard. Officers felt this group was responsible for many of the thefts in the northern section of the parking area. The other group consisted of young, black adults who lived across the C&O railroad tracks in the city's southeast community. Although the officers suspected that these offenders knew one another, they appeared to work by themselves rather than in groups.

There was apparently no connection between the northern group of white thieves and the southern group of black thieves.

Armed with the names and addresses of the thieves that had been identified by other officers, Swartz resolved to interview them when he had the chance. The opportunity came early that summer, when a youth we will call Brian Thrush was arrested for possession of marijuana. Swartz suspected that Thrush was one of the northern thieves; Swartz promised the offender that nothing he said in the interview would be used against him.

Swartz learned that drugs were a prime target of the northern thieves, but stereo equipment and car parts were also targets. They especially looked for "muscle" cars, cars with bumper stickers advertising local rock and roll radio stations, or cars with other evidence that the owner might be a marijuana smoker or cocaine user. (Thrush related that a roach clip or a feather hanging from the rearview mirror, or a corner of a plastic bag sticking out of the glove compartment were dead giveaways.) Thrush confirmed that the northern thieves worked together, and seldom ventured into the lots south of 40th Street. Hesitantly, he also provided Swartz with the names and addresses of other members of the group.

Further interviews confirmed and extended Thrush's testimony. The southern thieves were after money, rather than drugs; as a result, they concentrated on car stereo equipment, auto parts, guns, and other goods that could be fenced easily. Although they worked independently, they did know one another. Thus Swartz was able to increase his list of active offenders, and confirm that a few were particularly frequent offenders.

The combination of reported crime and offender interview data gave Swartz a good idea of who the most active offenders were and where they were most likely to strike. Beginning in April, he issued a series of crime analysis bulletins to Patrol South officers. The bulletins detailed his findings about the time of day, day of week, and locations of the offenses; they also included the names, addresses, and detailed descriptions of the worst offenders. After Swartz made presentations at lineup, officers began to use his findings to direct their own patrol activities.

Swartz also enlisted the help of a special police unit and, indirectly, the U.S. Navy. The Navy was mostly concerned with robbery and assault, so most SPAN officers worked evenings. But Swartz was able to show the SPAN coordinator that more than one-third of the victims of parking lot thefts were Navy employees, and that these thefts took place during weekdays. The coordinator agreed to assign some of the SPAN units to work the times and locations for which thefts were most likely. To help guide their surveillance, Swartz also provided SPAN officers with his list of active offenders.

Perhaps because the crimes were committed so frequently, these directed patrol efforts were productive. Shortly after the first crime analysis bulletin was issued, patrol officers began to catch the offenders on Swartz's list in the act. Within a three-week period, three of the offenders Swartz and his colleagues suspected were the most active were caught. Almost immediately, the theft rate began to drop.

Other Interested Parties. With a short-run response apparently well in hand, Swartz turned to development of a long-term solution. Up to this point Swartz's work was basic crime analysis, but he suspected that other agencies and businesses would need to be involved if the long-run response was to be effective.

Although the Shipyard security force was willing to be helpful, they were unable to commit many resources to surveillance of the lots: the Shipyard's emphasis was on internal security, to guard against employee theft and leaks of sensitive military information. But the security chief did promise to put theft prevention literature in pay envelopes, and to try to convince some of the shop newsletters to publish stories on the theft problem.

Swartz had hoped that insurance companies would be willing to help, too, but the auto insurance agents he discussed the thefts with did not consider the problem serious. Although they paid a substantial amount in claims to their clients, the amount was small relative to other claims. Moreover, it was stable, so they were able to charge high premiums for comprehensive insurance and gain a tidy profit each year. A one-year reduction in thefts would mean a windfall profit for the insurers; but this would force them to reduce premiums, and they might lose money

the next year if thefts returned to their earlier levels.

The Department of City Planning proved more helpful. The city was planning a massive downtown development project, Newport Centre. As part of the Newport Centre plan, the Planning Department had conducted an extensive study of the need for parking downtown. Many of the existing parking lots would be replaced with multilevel parking garages; these took up less space, and would presumably be less prone to theft. Detective Bill Morgan of the police Crime Prevention Unit obtained a copy of the plan, and convinced the city's Planning Director to put him on the site review board. Morgan's role has been to offer ideas on crime prevention through environmental design of parking lots and other Newport Centre buildings. The Crime Prevention Unit hopes that this will help provide a long-term solution to the problem.

Swartz and other officers undertook a variety of other activities. Crime prevention officers established a neighborhood watch group in the residential neighborhood north of the parking area. Apprised of the seriousness of the problem, the Commonwealth Attorney agreed to seek jail sentences for repeat thieves. And Swartz began to collect information on how thefts from autos were handled in other departments. This led him eventually to begin drafting an amendment to the Virginia Penal Code, classifying these offenses as burglaries from autos, rather than as petty larcenies. This amendment would increase the likelihood and probable length of jail sentences issued to convicted thieves.

In November 1985, Officer Swartz accepted a new assignment in another unit. He turned the problem over to other officers on the day shift. After a period of confusion as to who would do what, offender and offense tracking resumed, and the results used to direct patrol activities. In July 1986, for example, their tracking procedure indicated that thefts were beginning to climb back to 1984 levels. In response, day shift Sergeant Tom Penny organized a plainclothes stakeout of the hardest-hit lot. Two juveniles were caught in the act of breaking into a car, they confessed to some two-dozen offenses, and the theft figures returned to the low levels of 1985.

Assessment

The police department's response to the theft from vehicles problem involved mostly traditional tactics--interception patrol, plainclothes stakeouts, and the like. But these tactics were directed in nontraditional ways, through extensive analysis of police records, through the pooling of the street information known to individual officers, and through development of a new data source, the offenders themselves. As a result, patrol officers knew where and when to look, and for whom. Their efforts led to the arrest and eventual incarceration of the thieves many regarded as the most active.

Statistical evidence suggests that this combination of traditional tactics and nontraditional direction seems to have been successful. Time-series analysis of 39 months of reported thefts prior to the intervention and 16 months after (detailed in Appendix B) shows that the *number of reported thefts has been reduced by more than half* since the directed patrol tactics began in April 1985. This works out to a reduction of nearly one theft per day, or nearly 450 thefts prevented as of July 1986. Losses due to theft from Shipyard and Navy workers have been reduced by over $100,000; and since many of the thefts involved damage to the vehicle, and many other thefts go unreported, the true amount of losses prevented may be as high as $200,000.

As the recent, short-lived increase in thefts shows, however, the lots still present a tempting opportunity for new thieves. This problem-solving effort, though successful, illustrates the need for police officials to pursue courses of action that involve non-criminal justice responses. For example, there has been little concerted effort to work with the union representing employees of the shipyard. Perhaps a crime prevention campaign in cooperation with the union would be effective.

There is another lesson to be found in this case study: the movement of officers among shift, geographical, and unit assignments can be disruptive to effective problem-solving. Similarly, promotions and resignations can be disruptive. Much of this movement is necessary or unavoidable in a police agency. Police officials, however, need to find ways of minimizing the im-

pact of these movements, and if possible, reduce the frequency of some type of movement.

Finally, like the New Briarfield effort, the theft from vehicles effort shows that sometimes the best solution will take a long time to implement. And implementation is largely out of the hands of the police. Until the city redevelops the area, perhaps replacing the quilt work parking area with easy-to-secure parking structures, maintaining the current low theft rate will almost certainly require constant attention from the police department.

Prostitution and Robbery on Washington Avenue

In 1984, 245 robberies were committed in Newport News. Nearly one-fifth of these were committed within the small downtown area the police call District 1. The number of downtown robberies was increasing by a steady 10 percent each year. In Fall 1984, Patrol South managers began looking for a solution to the problem.

Background

In the 1960s, street prostitutes became firmly entrenched in a four-block section of Washington Avenue, in the old downtown section of Newport News. As the reputation of the area became known, they attracted more and more customers.

In the mid to late 1970s, the unlit parks along nearby West Avenue became meeting areas for homosexuals. Some of the homosexuals were transvestites who turned to prostitution. The recipients of the transvestites' services were being duped, and risked being robbed or assaulted if they discovered the prostitute to be a man. Still, the transvestites were successful because of their ability to impersonate women.

The police response to the problems of prostitution and robbery had always been fairly routine. Occasionally, plainclothes officers would act as decoys to catch prostitutes or their customers, but their efforts were sporadic. The response to robberies was equally routine--officers would take a report. Although most officers recognized that the two problems were linked, the linkage seldom affected the police response.

First Efforts: A Vice Raid

Charged with curbing the incidence and visibility of street prostitution on Washington Avenue, the Vice unit organized a "sting" operation for January 6, 1984. Rookie Officer Joe Boswell, unknown to the Washington Avenue prostitutes, was assigned to work in plainclothes posing as a "john." A prostitute picked Boswell up and took him to an apartment building. Boswell suspected the hooker to be a transvestite, and his suspicions were confirmed when he announced he was a police officer. The prostitute resisted, the two scuffled, and the hooker got away. Boswell decided to find the offender.

Boswell looked through the mug book maintained by the Vice unit. After finding the offender, he looked up the offender's arrest record. The transvestite had been arrested and convicted before, and had been placed on probation; but Boswell saw that the offender's probation conditions prohibited him from returning to the area where he had solicited Boswell. Based upon his identification, Boswell could request the court to revoke the offender's probation. This surprised Boswell, and it surprised the other officers he discussed it with. Apparently, the court had put such restrictions on offenders for years, but the police department had never thought to enforce the probation restrictions.

The Vice unit's undercover operation resulted in eight arrests and convictions, but Boswell was frustrated further when he discovered that the recently arrested prostitutes would be back at work in less than a month. This frustration increased his determination to tackle the problem.

Fortunately, he was not alone. When he asked his sergeant for permission to work on the problem, he was given it and promised time off from answering calls to come up with a response. This marked the first time Patrol had attacked the problem; it had always been regarded as a problem for the Vice unit.

Analysis

When Sergeant Jim Hogan assigned the prostitution problem to Officer Boswell, he required Boswell to measure the level of prostitution activity, so that Boswell could document the success or failure of his efforts. Boswell soon found this

to be a difficult task. Counts of prostitutes could be made, but prostitution could not be measured, because it is a crime of consent and would never be reported without constant police action. Many prostitutes use and deal drugs, but drug offenses were--like prostitution--crimes of consent and thus difficult to measure. Suspecting that robbery may be linked to prostitution, Boswell studied this crime next.

Boswell went to the Crime Analysis unit to obtain incident reports for all robberies from persons committed downtown between 1982 and 1984. He found almost half of the robberies to be linked to prostitution. Usually the "johns" were the victims and the prostitutes the offenders. He also found that one-third of the robberies were concentrated in the area of highest prostitution, on or near Washington Avenue. Thus Boswell believed that if prostitution could be reduced, the frequency of personal robberies would also be reduced.

A few months before, Patrol South managers had reached the same conclusion, but working from the opposite direction. Concerned about the frequency of robberies downtown, Captain Donald Boyd and his lieutenants had resolved to develop a program that would address this problem before the end of the year. While devising a plan to reduce street robberies, the relationship between prostitution and street robberies was discussed. They knew that many of the prostitutes were cocaine or heroin addicts who supported their habits through prostitution. They suspected that some also turned to robbery or larceny to supplement their income. So the managers had planned to devise a program to remove prostitutes from the district to reduce personal robberies, even before Boswell had volunteered to develop a response to prostitution itself.

Throughout January and February, Boswell worked with the Vice Unit to develop specific tactics. Most tasks would be carried out by patrol officers under Boswell's direction.

Boswell's first response to the problem was to convince Vice to conduct another undercover operation aimed at arresting prostitutes for solicitation. Just as had happened a month earlier, eight arrests were made and eight convictions obtained. Although this tactic was successful, it could be used only occasionally. Eventually, the streetwalkers would respond to the increased risks and become more cautious in choosing customers. These changes might reduce prostitution, of course, but maintaining the pressure through constant undercover operations would be costly. A more efficient approach was needed.

Boswell decided to take advantage of characteristics of street prostitution to collect the information he needed to develop a new approach. Prostitutes are easy to identify: their dress is often suggestive and inappropriate to the setting, they regularly congregate in a specific area during particular hours, and they are unusually friendly to perfect strangers. Relying on this advertising, Boswell field-interviewed every person on Washington Avenue who fit these characteristics. During a two-week period in January, he interviewed twenty-eight known or suspected streetwalkers. In the months that followed, Boswell made it a point to interview any new prostitutes on the street, and to talk with the twenty-eight regulars again from time to time. This enabled him to keep track of prostitutes working downtown. At the same time, the streetwalkers realized Boswell and the police department were increasing efforts to reduce the sex trade.

Although the interviews provided him with much new information, Boswell realized that he needed the help of other criminal justice agencies if he were to use it effectively. In March 1985, he met with Assistant Commonwealth Attorney Dave Olson and asked him to be the liaison with the department. Olson agreed, and together they created a plan for reducing downtown prostitution. It had three parts.

First, rather than the usual 15-day suspended sentence, Olson promised to ask the court for twelve-month sentences. Under Virginia law, a judge can suspend all or part of a sentence, and place conditions on the convicted person during this suspension period. If evidence is presented to the judge, showing a violation of the conditions, the judge can reimpose the entire suspended sentence. Unless it is a condition of suspension, the offender does not report to a probation officer. So Olson would also ask the judge to make the convicted prostitutes serve only two months in jail and suspend the remaining ten months.

Second, the prosecutor proposed to ask that convicted prostitutes be placed under strict con-

ditions during their ten-month suspension period. The proposed conditions were simple: the convicted prostitutes were not to be seen along Washington Avenue between 25th and 50th Streets, and they were not to solicit in other areas of the city. This would prevent prostitutes from returning to working the streets after their release.

Third, Boswell promised that the police would enforce these conditions. If a police officer found a prostitute violating the conditions, the officer would inform the prosecutor. The prosecutor would then request the court to subpoena the violating prostitute. The prostitute would have to appear in Court to explain his/her presence in the restricted area. The court could then require the prostitute to serve the remainder of his or her sentence in jail.

Response

Boswell and Olson realized that their plan would only work if all agencies involved were willing and able to do their part. The police had to be able to arrest the hookers, build strong cases, and track them upon release to detect suspension violations. The Commonwealth Attorney had to be willing to prosecute the prostitutes to the limit, and cooperate with the police in obtaining subpoenas. And the court had to be willing to mete out stiff sentences and enforce suspension violations. They decided to ensure the cooperation of these agencies before proceeding further.

Boswell explained the plan, first to Sergeant Hogan, and then to other officers assigned to District 1. Olson explained the plan to other Assistant Commonwealth Attorneys and to District Court Judge Joseph Curran. Judge Curran supported the approach, particularly after Olson explained Boswell's findings on the link between prostitution and robbery. The judge agreed to impose longer sentences, based on recommendations from the Commonwealth Attorney's Office. Judge Curran also agreed to issue and enforce the suspension conditions; at the time of sentencing, he and his fellow judges would give convicted prostitutes a map of the restricted area.

With a coordinated response in place, police officers could now make arrests for prostitution knowing that the streetwalker would be out of District 1 for at least two months. Once released, an additional four- to ten-month absence was likely if the prostitute was seen on Washington Avenue.

The police still had to make these arrests, of course, and two types of businesses stood in the way--bars and hotels. Downtown bars and hotels gave prostitutes a place to meet potential customers, while staying out of sight of passing police cars. Boswell worked with the Virginia Alcoholic Beverage Control (ABC) Board to force the hookers out on the streets where they could be seen. Boswell and an ABC agent visited each ABC licensee in the downtown area in mid-March. They notified owners that enforcement of Title 4-37 would begin in ten days. Each licensee received a copy of the statute, which provides for legal sanctions when the licensee

> has allowed noisy, lewd, or disorderly conduct upon the licensed premises. . .[or] has allowed such premises to become a meeting place or rendezvous for persons of ill repute.

A bar owner could lose his license if he failed to comply with this statute.

Boswell next talked to the owners of the hotels, motels and rooming houses in the targeted areas. He notified them that city ordinance Chapter 21, Sections 1 though 5 would be enforced at the end of a ten-day grace period. These ordinances require potential guests to provide proof of their names and addresses when registering for a room. Boswell hoped that some johns would be scared off when they had to prove who they were.

Throughout the course of the operation, Officer Boswell used high visibility and aggressive patrol tactics. Although he continued to answer calls for service, he spent most of the rest of his time on Washington Avenue. He learned the prostitutes' street and legal names; he made sure they learned his. He chatted with the streetwalkers whenever he could. Occasionally he joined conversations between streetwalkers and johns, often formally introducing the astonished johns to their male dates.

Boswell continued to work with the Vice Unit on decoy operations about every two to three months. But he did not ignore the customers. On occasion, female officers posed as prostitutes to attract and arrest potential customers.

Officer Boswell also has addressed some 2,000 U.S. Navy personnel stationed in Newport News. He discussed the chances of being robbed while looking for sex, warned these men of the risk of contracting diseases, and alerted them to the presence of transvestites.

Assessment

In January 1985, Boswell had identified 28 prostitutes working in District 1. Six months later, using the same methods, he was only able to find six, a reduction of 79 percent. Interviews with local merchants and observations conducted by Forum staff support Boswell's findings. Over the next year, the number of prostitutes in the downtown area remained at this level.

Robberies were also reduced. Time series analysis (detailed in Appendix B) shows that the number of *personal robberies committed downtown were reduced by 43 percent,* beginning in January 1985. Since about half the robberies committed before this time were prostitution-related, this is almost exactly the percentage decrease that would be expected, had all prostitution-related robberies been eliminated entirely.

Although the reduction began with the Vice Unit's sting operation in January, the police had implemented numerous such operations since the early 1980s. The problem was only solved when Officer Boswell developed and implemented his coordinated enforcement plan.

Conclusions

Our evaluations of these three problem-solving efforts indicate that the problems were reduced. Furthermore, the reductions in these problems resulted from the activities of the officers and supervisors involved. It would be speculative to generalize from these three efforts to all problem-solving efforts. However, in the next chapter we will describe a number of other efforts. Although we have not evaluated these efforts, they also appear to be successful.

CHAPTER 7

THE PRACTICE OF PROBLEM-ORIENTED POLICING

Introduction

The three cases examined in Chapter 6 show that problem-oriented policing can be applied to a variety of crime problems, and that it can be very effective at reducing the size of these problems. So the first of our questions--can police use the process and guide to solve problems--appears to be that they can. Now we turn to the second question: can police officers use the process and guide to solve problems as part of their daily routine? Or, can they use existing time more efficiently?

In this chapter, we take a look at more examples of problems that Newport News Police officers have begun to study and solve. The list is not exhaustive--officers and their supervisors continue to find new problems. Nevertheless, these case studies show the range of information sources, analytic methods, and responses that have been developed to fit this wide range of problems.

One of the most important aspects of problem-oriented policing is the ability of patrol officers, detectives, and supervisors to tackle problems as part of their routine. If they can identify, analyze, and respond to problems while also handling more typical service requests, then problem-oriented policing can become a standard part of policing. So the efforts described in this chapter are important because they were conducted as part of daily activities.

Some of the efforts described in this chapter, and the previous chapter, illustrate very thorough analyses of problems and show promising responses that deviate from normal police practice. Other efforts show less thorough analyses and more traditional responses. However, when looked at as a group, they show that patrol officers, detectives, and supervisors can do more than just handle calls and process cases. As a group they demonstrate that taking on problems can become standard police work.

Problems may be described on the basis of two dimensions. One dimension is the nature of the problem itself: Is it a type of crime or set of crime types, or is it primarily a disorder that is irritating to the community but not strictly criminal? The second dimension is the geographic impact of the problem: Does the problem directly affect only one neighborhood or section of the city, or does it affect residents and workers throughout the city? Characterizing problems by both dimensions at once, we may divide these problems into four broad groups, as shown in Table 10. Methods of information collection, analysis, and response differ from one group to the next. Newport News personnel have examined problems in each of these four groups.

The three problems examined in Chapter 6--burglaries in the New Briarfield Apartments, thefts from autos parked in the downtown parking lots, and prostitution-related robberies downtown--are all examples of neighborhood crime problems. Newport News patrol officers and detectives have begun to study several addi-

Table 10
Types of Problems

	Citywide	Neighborhood
Crime problems	Domestic homicides Gas station driveoffs Assaults on police officers	Personal robberies (Central business district) Commercial burglaries (Jefferson Avenue business district) Vacant buildings (Central business district) Residential burglaries (New Briarfield Apts) Residential burglaries (Glenn Gardens Apts) Larcenies (Beechmont Gardens Apts) Thefts from autos (Newport News Shipbuilding) Drug dealing (32d and Chestnut)
Disorder problems	Runaway youths Driving under the influence Disturbances at convenience stores	Rowdy youths (Peninsula Skating Rink) Shot houses (Aqua Vista Apts) Disturbances (Marshall Avenue 7-Eleven) Dirt bikes (Newmarket Creek) Disturbances (Village Square Shopping Center)

tional problems of this type, so let us begin our discussion with these.

Neighborhood Crime Problems

Commercial Burglaries on Jefferson Avenue

In Fall 1984, the U.S. Department of Transportation began construction of an extension of Interstate 664, a spur that would connect downtown Newport News to Interstate 64. The construction required parts of several streets in the central business district to be temporarily closed to traffic. One of these, Jefferson Avenue, is one of the primary shopping streets for Newport News' Southeast community. Five blocks were barricaded in June 1985; although the sidewalk remained open, vehicle traffic was routed around Jefferson Avenue for the next nine months.

Jefferson Avenue is lined with small, family-run businesses and a few store-front apartments. The barricades not only eliminated vehicle traffic; they also hindered police patrols of the five-block area. At night, when the stores were closed, only a few pedestrians used the isolated street.

The burglary rate almost doubled along the five-block stretch. Property losses from the small businesses increased and business owners began to complain to the police department. The South Patrol Captain, Jim Harrison, asked Sergeant James Quail to address this problem.

Quail had an idea about why the burglaries were increasing: because there was no one to see them at work, nighttime burglars could break into the small businesses with impunity. So Quail's first action was to increase police visibility in the area. He explained the problem to district patrol officers, and instructed them to get out of their cars and patrol Jefferson Avenue on foot.

Then Quail inspected the area, and found trash and brush piled up behind the businesses. This provided the burglars with ample places to hide. To make the burglars feel as conspicuous as possible, Quail encouraged owners to clean up trash and brush around their establishments.

Then Quail began an analysis of the problem. He collected offense reports of burglaries committed in the area. To help identify geographic patterns, he plotted them on a detailed spot map. To identify M.O. and repeat offender patterns, Quail recorded a description of the suspects, time of commission, type of property taken, and similar information on a specially designed form. Finally, he suspected that some of the offenders were using vacant apartments located above some of the businesses to conceal stolen property; he began to investigate this possibility.

Shortly after Quail began his analysis, construction along Jefferson Avenue was completed. The barricades were removed, and the burglary rate decreased. Street closures are a common practice, however, especially since the Interstate will not be finished for several months. Sgt. Quail began to prepare a policy and procedure that would facilitate communications between city agencies that can close streets and the police. This policy and procedure will help the department to anticipate potential burglary problems due to street closures, and perhaps to prevent burglaries from occurring.

Vacant Buildings in the Central Business District

Newport News' deteriorated downtown area has been a target of criminal activity for years. Burglary, larceny, and robbery are all significant problems. In 1984, the police department began to do something about robberies, by tackling the related problem of street prostitution; in Spring 1986, the department began to work on the problem of downtown property crimes. Officer Cathy Bell was assigned to analyze and respond to the problem.

Before her assignment to handle the problem, Officer Bell had been struck with the contribution of abandoned buildings to the problem. While investigating a commercial burglary, Bell had discovered several of the stolen items in the second story of an abandoned building a few blocks away from the burglarized store. When two other officers made a routine check of the same building a week later, two men were found inside. Both

had warrants on file and one had a previous burglary conviction.

Bell knew that many of the buildings in the deteriorated downtown district were vacant, and she suspected that vacant buildings provided both hangouts and hiding places for many property offenders.

Relying on observation and interviews with local merchants and residents, Officer Bell identified all vacant buildings in the central business district. She then used information provided by the tax assessor to identify the names and addresses of the owners of the buildings. Bell has been transferred to Patrol North, but the problem is still being addressed. One by one, officers are contacting the owners and encouraging them to demolish, renovate, or secure their buildings. The owners are likely to comply: the city's Department of Codes Compliance has agreed to inspect the buildings of those who do not comply for code violations.

Residential Burglaries in the Glenn Gardens Apartments

The Glenn Gardens Apartment complex is located in a middle-class residential area adjacent to the Hampton city line. The 417-unit complex has one of the highest burglary rates in the city, exceeded only by the burglary rate for the New Briarfield complex. The burglary problem peaked in the Summer of 1985: 18 burglaries were committed or attempted in June, July, and August.

The Investigations Division had been looking into the problem since January 1985. Detectives found that the victims of the burglaries represented a cross section of the community, including both civilian and military personnel. Most of the burglars had obtained entry by forcing a rear door or window; they typically stole cash and easily fenced items such as stereo equipment and televisions. The burglars left little physical evidence and attracted few witnesses. Detectives had taken several actions to alleviate the problem: they had been in constant contact with the apartment manager; they had coordinated their patrols with the Hampton Police Department; they had staked out various parts of the complex, hoping to catch one of the burglars in the act; they had even obtained a list of parolees who lived in the complex from the state probation and parole department. Nothing worked--no arrests were made, and the burglaries continued.

In February 1986, the commander of the Investigations Division took a different tack. He assigned Detective Rick George to handle the problem, and instructed him to use the problem analysis guide. Detective George then began to look at the problem again.

First, he considered the residents of the complex. He found from interviews with the apartment manager and with Glenn Gardens residents that most residents of the complex did not stay very long: many of the units were occupied by Navy personnel, living in the complex temporarily while their ship was in port; many other units were leased on a month-to-month basis by civilians. So the residents had little chance to meet their neighbors before they left. As a result, they found it difficult to distinguish strangers from neighbors.

Detective George also found that the physical condition of the complex made the burglar's job more convenient. The lighting was poor, most ground-floor apartments were obscured by tall bushes, and the complex was laid out so that vehicles could drive behind the apartment buildings; thus burglars had no trouble finding places to hide, and inconspicuous places to break into apartments. Discarded cinder blocks, bricks, and other debris could be used to help break into apartments, and window and door locks were easily defeated; thus burglars had no trouble actually breaking in.

Finally, Detective George studied the Glenn Gardens maintenance personnel. He recognized two of them: he had arrested them for burglary and larceny in another part of the city. George decided to discuss the burglary problem with the maintenance staff. He brought up two concerns. First, George told the group that they had a great number of opportunities to witness crimes during the normal course of their duties. He asked them to record and report any suspicious circumstances they might run across. George then gave them a series of pointers on how to remember, record, and report events. Second, he told them that some residents felt that the maintenance staff was doing the stealing. He stated that he did not think this

was the case. To demonstrate to the residents that none of the maintenance staff were involved, he asked that each maintenance man voluntarily submit to a polygraph exam whenever a burglary was reported The two maintenance men George had recognized quit shortly afterward.

George and his colleagues prepared a report to the apartment manager, recommending changes in physical and social conditions at Glenn Gardens. Among the recommendations:

- extend the minimum lease period, to reduce the transiency problem;
- remove the bushes that obscure the view of windows and doors from the street;
- conduct a security inspection of all apartments;
- hire a security guard and establish a crime watch.

The apartment manager has begun to implement these recommendations, and the department is still working on the problem. Although no formal evaluation has been conducted, George reports a reduction in the number of burglaries in the complex.

Larcenies in Beechmont Gardens

While reviewing the annual printout of index crimes for their area, the managers of Patrol North were surprised to find that a large number of crimes were committed in a ten-block section adjacent to the Denbigh neighborhood police station. An interview with the manager of the Beechmont Gardens Apartment complex located in the area confirmed that larcenies were being committed in the complex. So the police managers made reducing larcenies in Beechmont Gardens one of their goals for 1986. Officer Carleen Haddix was assigned to analyze and respond to the problem.

As part of the department's management-by-objectives program, the police managers had specified that Patrol North officers would conduct a survey of residents of this complex. They were no doubt influenced by the success of a similar survey of the New Briarfield complex, conducted by Patrol South officers a few months before. Although Officer Haddix was unconvinced of the need for a survey at Beechmont Gardens--and even of the existence of a larceny problem there--she began to design a questionnaire.

One of her first actions was to meet with the designer of the Briarfield survey, Detective Tony Duke of the Crime Analysis Unit. When Duke asked about the purpose of the survey, Haddix found that she had no clear answer. She realized that a survey of the residents was premature, and decided to interview the apartment manager and take a look at the complex first.

The manager, Johnny Oshman, proved helpful. He agreed that there were problems with theft and vandalism; he had recently hired security guards and installed additional lighting to ameliorate them. But Oshman was puzzled when told of the high crime rates--he had not thought the problem was that serious.

Suspicious, Haddix began to monitor reported crimes from the ten-block area. Beechmont Gardens residents did in fact report a few minor thefts and acts of vandalism. But by far the bigger problem came from a small shopping center two blocks away: shoplifting from convenience stores and gas station driveoffs accounted for the vast majority of the crimes.

Now certain of her ground, Haddix recommended a few short-term responses until her analysis was complete. Patrol officers were scheduled to get out of their cars and walk through the complex--and the shopping center--at the times of day when most of the offenses were being committed. Haddix also worked with the apartment manager to ensure that his security guards were working at the times when the threat of theft and vandalism was greatest.

Soon afterward, one resident caught another in the act of stealing a bicycle, and reported it to the apartment manager. Oshman and Haddix searched a storage area near the suspect's apartment, uncovering several bikes and bicycle parts. The suspect was arrested, and reported larcenies began to decrease. Over the next several months, few crimes were committed in Beechmont Gardens; the department's goal had been achieved.

Perhaps more important, Officer Haddix's analysis revealed the importance of shoplifting from convenience stores and gas station driveoffs as sources of crime in this neighborhood. Patrol managers recognized that they were important sources throughout the city, as well. These

problems were assigned to other officers for analysis and response.

More generally, this problem illustrates the importance of flexibility among officers and especially among supervisors. It is conceivable that the department could have proceeded on its first judgment as to the nature of the problem. Officer Haddix could have been afraid to contradict her sergeant, for example; the sergeant might have been unwilling to deviate from the action plan detailed in the goals and objectives. In this case, much time would have been wasted on a relatively small problem, while larger problems would have been ignored. Instead, police managers were willing to amend their initial opinions based on the analysis of a patrol officer.

Drug Dealing at 32nd and Chestnut

Newport News is the primary city on the Virginia Peninsula; residents of Hampton, Yorktown, Williamsburg, and smaller towns often drive to Newport News when they want to work, shop, or enjoy their leisure time. Some also drive to Newport News when they want to buy drugs. For years, a major heroin center in the city was located on the corner of 32nd and Chestnut streets, a residential intersection in the city's southeast community.

Competing drug dealers hung out on the corners, waiting for the driver of a passing car to stop and ask about prices and availability. Years of continuous police action had left the dealers wary of strangers; because they rarely sold drugs to anyone who had not been introduced by one of the regulars, the police found it difficult to mount buy-and-bust operations.

Locating at this corner brought other advantages to drug dealers. It was central--close to Interstate 664, an easy drive from anywhere in the Peninsula. In addition, the concentration of dealers at 32nd and Chestnut made it easy for drug users to "score."

The neighbors called the police regularly to report drug transactions, property damage, and an occasional theft. Complaints were steadily rising, and in August 1985, Captain Harrison assigned Sergeant Tom Penny the task of doing something about the problems on the corner.

Penny, like most Newport News Police officers, had been informally analyzing the 32nd and Chestnut problem for years. Still, he recognized that he needed to know more. He checked the arrest histories of the known dealers; as expected, most had long criminal records, including larcenies, burglaries, and robberies as well as drug violations. Then Penny discussed the problem with members of the Vice unit, with officers in the Hampton and Norfolk Police Departments, and with the Virginia State Police. These sources confirmed his view that the dealers on the corner obtained their drugs from a variety of wholesalers--no single organization was behind the operation. He and his colleagues also suspected that the wholesalers regarded their dealers as interchangeable parts. So busting one or two street dealers would be wholly ineffective in reducing the drug trade: the wholesaler would simply recruit another to take his place, and in the meantime the slack would be taken up by the competition. Penny recognized that he would have to incapacitate the entire group of dealers if he wanted to realize even a short-run impact on the drug traffic.

Penny next began to identify and work with informants. He had two officers on loan from other jurisdictions infiltrate the drug network. And he set up a surveillance team, equipped with video cameras, in a vacant apartment donated by a Chestnut Street landlord. He obtained help from the Hampton and Virginia State Police, and worked closely with the Commonwealth Attorney to ensure that the cases would be solid and sentences long. After six months of carefully monitored drug buys, several dozen police moved in one evening in December 1986. Forty-four arrests were made.

Most of those arrested are still awaiting trial, but there are already signs that the police will be successful in incapacitating the dealers. No charges have been dropped; all those who have gone to trial have been convicted; all those who have been convicted have been sentenced to prison terms ranging from five to fourteen years in length. Although most of the dealers are out on bail, none have returned to 32nd and Chestnut. The number of (obvious) drug transactions, calls for service, and citizen complaints have all dropped. We cannot be sure if the problem has been solved. Drug dealing may return to the corner, or those not sen-

tenced to long prison terms may set up shop somewhere else.

With the approval of Captain Harrison, Sergeant Penny is continuing to monitor the corner of 32nd and Chestnut in order to develop a long-term solution.

Neighborhood Disorder and Fear Problems

The cases examined above are similar in that they are made up of incidents that are clearly defined as crimes, by both the police and the neighborhood affected. But some groups of incidents disrupt neighborhoods, or raise anxieties and fears among residents or users of a neighborhood, even though no one has committed a crime at all. These problems pose difficulties for police officers interested in analyzing and solving them. In this section, we consider four examples of neighborhood disorder and fear problems.

Peninsula Skating Rink

In June 1985, the police began receiving complaints from residents of the Hilton Village section of Newport News. Their problem: large groups of rowdy kids paraded through their usually quiet neighborhood between 2 and 3 a.m. every Friday and Saturday night. There had been no violence, but the kids seemed unpredictable. Many of the complainants added that they thought the kids were coming from a roller skating rink on Main Street. The rink closed at 1 a.m.; presumably, the kids were making their noisy way home. Sergeant Jim Hogan assigned the problem to Officer Paul Summerfield, urging him to look the situation over and talk to the rink owner.

The next weekend, Summerfield drove to the rink early in the evening to watch events develop. He found that virtually none of the patrons walked to the rink; some took a bus that had been chartered by the rink, and many others were dropped off by parents or friends. But many of the drivers wore bathrobes and nightgowns; they clearly had no intention of coming back for their children at 1 a.m. When he talked to the kids, Summerfield found that their parents expected them to take the rink's bus back home. But there was only one bus, and it could not carry the several hundred youths who needed it to get home without making several trips. The cause of the problem became obvious: many of the kids became impatient while waiting for the bus to return, and started to walk.

Summerfield discussed the problem with the rink owner. The owner agreed to lease more buses for the return trip. By the next weekend, the problem had disappeared.

Shot Houses in the Aqua Vista Apartments

In January 1986, the property manager of the Aqua Vista Apartments alerted the police to trouble in his complex. His primary complaint was that some of the residents were running "shot houses"--selling liquor by the drink from their homes, without a license. The patrons of the shot houses were also using drugs, racing their cars through the apartment parking lots, and creating a variety of other public nuisances. Patrol South Lieutenant Lauren Goldstrohm assigned Officer Steve Lewis to analyze and solve the problem, using the problem analysis guide.

Officer Lewis began by reviewing reports prepared by other officers who had responded to similar calls in the complex. An earlier report indicated that thirty crimes had been reported between October 1984 and September 1985. Most were minor--indecent exposure, obscene phone calls, and the like. But a few were serious, including burglaries, larcenies, and four sex offenses. Most were committed on Saturdays, confirming Lewis' view that the complex was quiet except for the shot house traffic.

Lewis has conferred with a Vice detective about possible drug traffic in Aqua Vista; he is beginning an informal survey of the residents. Although he is unsure what the police response will be, he has helped the apartment manager to develop some strategies for reducing complaints from his tenants. The manager decided to set and enforce a speed limit in the parking lots, to reserve parking for tenants only, and to prosecute trespassers. Lewis agreed that the police would help him to enforce these restrictions.

Officer Lewis is continuing to collect information and to monitor activities in the complex.

Disturbances at a 7-Eleven

The 7-Eleven on Marshall Avenue was distinctive in three ways. It had the largest sales volume of any convenience store in the city. It was a popular hangout for neighborhood youths, often attracting 100 or more on a weekend evening. And it produced more calls for police service than any other address in the city. Tired of having his officers' time wasted in response to three or four calls per night, Lieutenant Goldstrohm assigned Officer Aaron Thomas to study the problem and recommend solutions.

Thomas knew from experience why the convenience store attracted so many kids: it was a convenient location, open 24 hours, and adjacent to three, large, low-income apartment complexes. Interviews with the hangers-out confirmed that most lived in one of these complexes; most were in their late teens or early twenties; most had never been arrested before. The store owner and clerks were concerned with shoplifting, fights in the store's parking lot, and robbery; they also felt that the store was losing many potential customers because of the threatening crowds outside. Adult residents of the nearby apartments confirmed the clerks' suspicions, and reported that they were bothered by noise as well.

Thomas believed that members of the crowd were larcenous and rowdy because they felt anonymous, so he worked to destroy the illusion of anonymity. Using a Polaroid camera, together with the help of police records and employees of the nearby apartments, Thomas assembled a mug book of the most likely offenders among the crowd outside the store. The 7-Eleven manager installed better lights, a fence along one side of the parking lot, and a closed-circuit camera behind the counter. The combination of the store's prevention measures and Officer Thomas' mug book led to several arrests for shoplifting and robbery. More important, members of the crowd no longer felt anonymous; they stopped hanging out at the 7-Eleven. The change was not lost on residents of the neighborhood. Calls for service at this location dropped by 80 percent. And at a local crime watch meeting, local residents told Lt. Goldstrohm that they had noticed a significant reduction in noise and rowdy behavior.

Dirt Bikes in Newmarket Creek

Since 1984, citizens had been complaining about the noise and property damage being caused by dirt bikes using the Newmarket Creek drainage area and the nearby woods. By October 1984, a task force consisting of four police officers had been organized to address the problem. Information about known violators was made available to each officer, along with a map of the area. This was done to ensure that arrested offenders would be properly charged, and that the officers were aware of property boundaries, easements, and rights of way.

Initially, officers warned the violators that they were on private property. Names and addresses were obtained and they were advised that if they returned, they would be summoned to appear in court for trespassing. For a while, these efforts proved successful.

However, as the weather began to warm, the number of complaints began to rise again. This time, Officer Wayne Smith was assigned to prepare a more thorough analysis and response. Citation records showed that the offenders were white males, ranging in age from 10 to 36. A printout of calls for service confirmed that the problem had always been worst in the summer during daylight hours; the bikers particularly favored the area behind the Newmarket Creek, Beech Drive, and Harpersville subdivisions. And when he conducted an informal, door-to-door survey of residents of these subdivisions, Smith found that the dirt bikers were annoying many of the residents. The bikers kicked up dust, which was obnoxious and damaging to the residents' property. Many residents were concerned about the safety of their children, who liked to play in the creek bed. Perhaps most important, many of the residents with whom Officer Smith spoke expected the police to arrest the violators in order to solve the problem.

Convinced that more police enforcement was needed, Smith discussed the matter with his supervisors. They agreed that constant enforcement would be time-consuming, and decided to try and scare at least some of the bikers off. Smith

contacted the city's Traffic Engineer, who agreed to put up "No Trespassing" and "No Motor Vehicles" signs. At the instigation of the department's Public Information Officer, local television stations did stories on the problem and the department's imminent crackdown. Smith and other officers went back to the residents, through neighborhood watch meetings and a door-to-door canvass, telling them what the police were going to do.

Patrol officers and traffic enforcement officers were stationed outside the entrances to Newmarket Creek at the times and days most favored by the trail bikers. All officers were briefed on the jurisdiction boundaries, the location of public and private property, and the appropriate sections of the criminal code. Violators were cited for the most serious applicable crimes, and told they would be arrested if they returned on their bikes. Two repeaters were eventually arrested, prosecuted, convicted, and jailed for short periods.

Shortly after the enforcement effort began, the number of citizen complaints began to drop. Calls for service statistics now indicate that only a few trail bikers continue to use Newmarket Creek.

Although this response was primarily traditional in nature, Officer Smith coupled the increase in enforcement with surveys of residents to learn their views, and a public information campaign aimed at deterring the violators. The problem was solved, and the department has received no complaints about the enforcement effort from bikers or residents.

Hooliganism in Village Square

Officer Cathy Bell was assigned to reduce crime and fear of crime in the Village Square Shopping Center, located in the middle-class Horse Run section of Newport News. Large groups of young adults hung out in front of the stores, intimidating and apparently scaring off potential customers. Business owners had also complained that some of the loiterers were responsible for shoplifting and purse snatching, and that their employees were worried about being victimized after work. Some of the loiterers had been ordered to stay out of stores several times, but the store owners were unable to enforce the restrictions.

Bell began her analysis by talking with Jeff Cross, a foot patrol officer who had recently been assigned to the neighborhood bordering on the shopping center. Officer Cross had been conducting an informal survey of business owners and employees. He reported that fears for personal safety increased during the day and peaked near closing hours; he confirmed that shopkeepers were concerned about shoplifting, purse snatching, and robbery during the day, and burglary after hours. Several women who worked in Village Square were fearful of being sexually assaulted on their way to their cars after work.

Bell and Cross went back to the businesses to plan a systematic response to the problem. The owners agreed to start a Business Watch group. They also agreed to identify people who created trouble in their stores and go to court to obtain an order keeping the offender out of the shopping center. If an offender violated the court order, then he or she could be charged with trespassing. The merchants would record and share the names of miscreants who they had excluded from their stores. The owner of the Food Lion supermarket directed his staff to take pictures of all loiterers excluded from his business; he promised to continue the practice, and to make the pictures available to other members of the Watch and to the police. The Watch members also agreed to submit the names and photographs of those they had excluded from the stores to Officers Bell and Cross.

Encouraged by Officer Boswell's example, Bell decided to talk with the prosecutor to see what could be done to enforce the store owner's trespassing charge. She and an Assistant Commonwealth Attorney worked out a program similar to that worked out for the Washington Avenue prostitution problem. She and Officer Cross would regularly walk through the shopping center, looking for loiterers excluded by the Business Watch members. When they saw one, they would cite him for trespassing. The prosecutor would then ask the judge to suspend their sentence, with the restriction that the offender could not return to the shopping center. Offenders who received a suspended sentence would also receive a map of the restricted area. If a police officer saw them loitering in Village Square within the restriction period, they would serve a jail term.

So far, two offenders have received suspended sentences; as it happened, both were already wanted on felony warrants and may serve a term in jail, even if they do not return to Village Square. In the meantime, the Food Lion is still taking pictures, Bell and Cross are continuing to implement the program, and Bell is looking for longer-range solutions.

Citywide Crime Problems

It is perhaps easiest to envision crime and disorder problems that affect particular neighborhoods, but some problems are common throughout a city. Domestic violence, runaway youths, or traffic accidents can happen anywhere, but the incidents that make up each of these problems are clearly related in the sense that the characteristics of the actors, the sequence of events, or the physical or social context surrounding the events are similar. Newport News Police officers have identified, analyzed, and responded to a variety of citywide problems. Some are clearly criminal in nature; others are disorders, juvenile status offenses, or have been decriminalized. Let us consider some examples of police response to citywide crime problems first.

Domestic Violence

Homicide Detective Marvin Evans was tired of investigating murder. A member of the department Task Force that designed the problem-solving process, he decided to apply the problem-oriented approach to see if he could prevent killings.

Evans began by examining all homicides committed in the previous eighteen months. He found that half of them were the result of domestic violence, and that in most of these cases the police had responded to domestic disturbances before the murder. In reviewing these cases, Evans became convinced that a better police response to domestic disturbances could have prevented some of them from escalating into murder.

Evans then reviewed national research on spouse and child abuse, and began to look at how these cases were handled locally. He interviewed counselors at the local women's shelter, prosecutors, judges, ministers, and anyone else he could find who had a stake in solving the problem.

Because his fellow officers had a stake in solving the problem, he surveyed them. He found widespread agreement that domestic violence was a problem, and frustration about the large number of repeat calls to the same family. Like police throughout the country, Newport News officers were particularly frustrated because the victims often refused to swear out a warrant or prosecute their attackers. Few officers knew that they could swear out a warrant themselves, without the cooperation of the victim.

Detective Evans' analysis confirmed that the present response to domestic violence was not working. So he brought together a group of interested people to design a better response. The group included representatives of the local women's shelter, a local hospital, several churches and charities, the local newspaper, the military, and various criminal justice agencies. The group worked together to design a comprehensive plan for handling family violence.

The group agreed on a common objective: keep the family together, but teach both the abuser and the victim how to handle stressful situations without resorting to violence. The police adopted a mandatory arrest policy for certain circumstances (for example, where a weapon was used, someone was injured, or previous acts of violence had been committed). But the group agreed that arrest was not an end in itself--instead, it was a means to ensure that both parties received treatment. The Commonwealth Attorney and the District Court agreed that charges would not be dropped if the victim refused to prosecute; instead, they would use the threat of legal sanctions to get both parties into counseling. Procedures were developed for court protective orders and emergency removal of the victims. Plans were made for training police officers and other city employees on use of the new policy. Detective Evans developed a brochure to be distributed by police officers, showing citizens what resources were available to help.

Training was completed in Fall 1985, and the program officially begun in January 1986. In February, the local newspaper published a 20-page Sunday supplement on domestic violence, covering all aspects of the problem.

Evans has also developed a procedure for tracking domestic cases. In time, this will help determine whether the program is successful. Although it is too soon to tell how successful it will be, this response to domestic violence shows that line officers can analyze complex problems and develop a comprehensive, citywide response.

Gasoline Thefts

Gas station driveoffs--leaving a filling station without paying for the gasoline--pose two concerns for police agencies. First, a patrol car is dispatched to the scene of all reported driveoffs, even though there is usually little the responding officer can do besides take a report. Second, driveoffs make up a large share of the city's larcenies. If they can be reduced, the losses to the businesses can be reduced. The extent of the problem was driven home during Officer Haddix's analysis of the larceny problem around Beechmont Gardens, described above. When Officer Haddix reported her findings, Patrol North managers decided to take action to reduce the extent of the driveoff problem. Detectives Lynn Pearson and Mike Brewer were assigned to analyze the problem and develop a response.

Pearson and Brewer began by interviewing several gas station managers, asking them about the scope of the problem and possible solutions. They found that some stations, those which had instituted a "pay before you pump" policy, had little trouble with driveoffs. But many companies did not permit their managers to institute such policies, feeling that it would irritate customers and reduce revenues. For some stations, company policy prohibited prosecution without the approval of the central office; one station reported that it only reported driveoffs when employees had recorded the thief's license number. In addition, the physical layout of the station seemed to influence the extent of its driveoff problem: those which had employees working the isle, or those where the employees could see all pumps from inside the station reported fewer problems. The detectives concluded that the differences among stations were substantial and important.

Shortly afterward, Pearson and Brewer were taken off the driveoff problem; it was reassigned to Detective Laura Harwood. Harwood took up where the first two had left off, hand-tabulating information about each driveoff reported in the past several months. Using this new data base, she has begun to identify stations which are frequent victims, and to identify conditions associated with frequent driveoffs. She hopes to conduct a seminar for gas station managers soon.

In the meantime, she is working with an informal group of gas station managers to try to reduce the demand for patrol response to the scene of driveoffs. The eventual result will be a revised dispatch policy for these cases.

Assaults on Police Officers

Sergeant Janice Thurman conducts police internal affairs investigations, and is responsible for monitoring all reports of assaults on police officers. Concerned about the number of such reports that crossed her desk, she decided to study the problem more carefully.

Thurman analyzed seven months of assault reports. Most of her findings confirmed her expectations: most assaults were committed at night; most were committed on weekends; about half the offenders were black, the other half white; most of the offenders were under the influence of alcohol. Some officers--particularly those with little experience--were assaulted more often than would be expected; some offenders were responsible for several assaults. About one in every six assailants came to police attention because they were involved in domestic disturbances. And the courts rarely sentenced the assailants to jail terms, despite a six-month statutory minimum.

Her analysis did reveal one, very surprising finding: more than half of the assaults were committed in the booking room of the police station. So Sergeant Thurman began to look more closely at conditions in the booking room.

Working with Melva Williams, an architecture student at nearby Hampton University, Thurman visited booking rooms in other local police departments. They concluded that the layout of the room needlessly put arresting officers at risk of assault. Williams then designed an alternative layout, similar to the booking rooms of other departments. Renovation will begin upon ap-

proval of the plan by the department's Management Committee.

With a response to the booking room problem nearly complete, Sergeant Thurman is turning her attention to the problem of repeat assailants and repeat victims. She is planning to look at the problem from a psychological perspective, again with the help of local universities.

Citywide Disorder Problems

Some problems are not strictly criminal in nature, but nonetheless cause difficulties for people throughout the city. In Newport News, several problems of this type have been addressed. Again, these examples suggest that the best methods of data collection, analysis, and response are different than for the other three groups of problems.

Runaway Youths

Detective Linda Robinson works in the Youth Services Division. As part of her job, she investigates cases of runaway youths. When the number of runaways appeared to increase in Spring 1985, Robinson began to look for ways of reducing the size of the problem.

Robinson found that department statistics provided little useful information. So she prepared a questionnaire and began to interview runaways when they were found or when they returned home. She also interviewed parents and guardians to get their story. The interviews proved so useful that the Juvenile Unit has adopted them as standard practice; the Juvenile Court has found them useful as well, leading to better cooperation between the Court and the police department.

Her interviews, combined with extensive discussions with social workers in charitable and local government agencies, confirmed two things. First, many of the runners were repeaters, and the repeaters accounted for most of the runaway cases the police had to handle. Second, most of these repeat runaways were fleeing beatings or sexual abuse at home. Robinson began to work with the courts to remove the abused youths and place them in foster homes, and to work with the families to ensure that the parents received counseling. Although Robinson is still analyzing the problem, she has begun to explore even broader alternatives. In particular, she is working with a regional coalition of social service agencies to change the Virginia statutes regarding the handling of runaways.

Driving Under the Influence

Like most Newport News Police officers, Lieutenant Ben Collett was very concerned about the frequency of drunk driving in the city. But he also knew that looking for and arresting drunk drivers was very time-consuming for the officers on his shift; he hoped the problem analysis guide could help him develop a more efficient way of preventing people from driving while drunk. Collett assigned the problem to Officers Tom Lee, of North Patrol, and Wayne Smith, of South Patrol.

Lee and Smith began by looking at traffic fatality and arrest records, each working with the data from their half of the city. They found that most arrested drunk drivers were white males; most were between 20 and 25 years of age. Most arrests were made in police districts 1, 9, and 13. Lee and Smith knew that most of the city's bars were also in districts 1, 9, and 13. Although they felt sure this was not a coincidence, they needed more information if they were to link the bars to drunk driving.

Working through the chain of command, the two officers convinced the patrol captains to direct their officers to find out where the drunk drivers they stopped were coming from, and where they were going. After several weeks, Lee and Smith were surprised to find that many of the drunks had been drinking at home before they stepped into their car. And, as expected, some bars were responsible for more than their share of the drunk drivers.

Feeling it would be easier to prevent drunk driving among bar patrons, Lee and Smith began to respond to this part of the problem first. They began working with the Virginia Alcoholic Beverage Control Board to put pressure on the bars that are the worst offenders. They are now developing a proposal for state funding to train

bar owners in identifying intoxicated patrons and preventing them from driving. Local cab companies and charitable organizations have volunteered to drive drunks home for free. Meanwhile, Lee and Smith are considering strategies for preventing home drinkers from driving drunk.

Conclusions

Can problem-solving be implemented on a routine basis? Judging from the Newport News experience, the answer seems to be yes. Department members of all ranks and from a variety of units have addressed a wide variety of problems. Their efforts have resulted in many nontraditional approaches, and several successful solutions. According to police managers, these efforts have been undertaken without sacrificing the basic police services of patrol, response to calls, and investigation of crimes.

Perhaps more important, there are indications that officers enjoy solving problems. Discussions between members of the Forum project team and police officers revealed that officers particularly liked being given the freedom to attack underlying causes. Many found it to be more interesting than chasing calls for service or investigating reported crimes, especially when problem-solving periods were interspersed with periods of doing more traditional police work.

Some Caveats

Most problems have been identified by police managers, rather than by line officers. This did not seem to dampen officers' enthusiasm for problem-solving, however, perhaps because managers were careful to assign problems to those officers they felt would be most receptive to the new methods. In addition, managers seem to be willing to let the officer doing the analysis determine the nature of the problem. If after careful analysis, the officer finds the problem is not as originally described (a likely outcome), or is not a problem at all, the manager generally defers to the judgment of the officer.

Some parts of the problem analysis guide have proven easier to implement than others. For example, many officers have conducted surveys of residents in problem-stricken neighborhoods, but few officers have interviewed offenders. No doubt this is partly because it is easier to find law-abiding citizens, and because the information obtained from citizens can be more easily applied to finding a solution. On the other hand, many officers probably feel that the attitudes and opinions of citizens are important--it is their problem that is being solved--and that offenders' opinions and attitudes are not. Although this attitude is understandable, it may have restricted the range of solutions proposed for such disorder problems as the Newmarket Creek dirt bikes or the crowds which gather in front of the Marshall Avenue 7-Eleven and in Village Square. It is revealing that when offenders have been interviewed--as in the cases of the the Peninsula Skating Rink, driving under the influence, and the Shipyard parking lots--these interviews have yielded information that was very useful in framing a response.

Similarly, some supervisors have reported that they had to push their officers to consider other than traditional responses. Some officers have become impatient with analysis of problems for which the proper responses seem obvious to them. One patrol sergeant worked through the problem analysis model--as members of the department referred to the guide--for several weeks, then announced that he was "modeled out" and went back to his original plan of action.

It is interesting to look at the relationship between the "depth" of analysis and the use of criminal justice responses. To do this we classified the 18 problems described in this and the previous chapters along two dimensions.

The first dimension has three response categories: criminal justice, alternative, and mixed. A criminal justice response relies almost totally on making arrests and deterring offenders through patrol and investigative efforts. Alternative responses rely on any tactic other than criminal justice responses. This may include changing the physical environment, organizing communities, finding non-criminal justice disposition of cases, and a host of other approaches. Mixed responses rely on a combination of criminal justice and alternative approaches.

Classifying the type of response is a highly subjective decision. How one judges the degree to which a response relies or does not rely on a

criminal justice approach will vary from person to person. Furthermore, many of these problem-solving efforts are still underway, and the responses we had to consider are only those options currently being considered.

We used two categories for the depth of analysis: limited analysis and extended. Problem-solving efforts were grouped by determining if there were obvious information sources that were not used, given the nature of the problem. If there were obvious unused sources, then the effort was classified as limited. If there were not any obvious unused sources, then the effort was classified as extended. However, even extended efforts had many opportunities for more in-depth analysis.

The opportunities to use information sources vary with the size and complexity of the problem. For large, complex problems there will be many possible sources. For small, simple problems there may be only a few. Therefore, an analysis of a simple problem may be classified as extended although it may have involved fewer sources than a limited analysis of a complex problem.

Judging the thoroughness of analysis is also subjective. What one person feels to be an obvious omission in analysis may not be obvious to anyone else. Moreover, the depth of analysis was not always under the control of the officers and supervisors involved. Time constraints, transfers, and other factors sometimes hindered their efforts.

To introduce some reliability into this process, Forum staff members separately classified the problem-solving efforts, and then compared notes. The groupings presented below were the result of the discussion that followed. Although these results are still subjective, they are useful for considering how to improve problem-solving. More rigorous research should be conducted before such results are considered conclusive.

Table 11 shows that an extended analysis is more likely to lead to an alternative or mixed response than a limited analysis. The implication of this is that the more carefully an officer studies a problem, the greater the number of possible responses that officer is likely to discover. Out of this larger pool of possibilities the officer is more likely to find an alternative or mixed response that is useful. So getting officers to conduct a careful analysis is important if one wants to broaden the range of responses taken.

There were two problem-solving efforts that we had great difficulty classifying: hooliganism in village square and prostitution related robberies. In both cases we had trouble deciding whether their responses should be considered criminal justice or mixed. But regardless of how they are classified, the results remain basically the same.

Whether alternative or mixed responses are on the whole more effective than criminal justice responses is uncertain. However, the more possibilities an officer reviews the more likely he or she will find an appropriate response. A limited analysis reveals fewer possible responses, so the officer is less likely to find an appropriate response.

One of the advantages of greater reliance on alternatives to the criminal justice system is that violations of citizens' due process and other civil liberties are less likely. Three of the four solutions to problems shown in the criminal justice column of Table 10 raise these types of concerns. Undercover work, as in the efforts to reduce drug dealing at 32nd and Chestnut, constantly runs the risk of violating civil liberties. Some would argue that the activities of officers attacking the 7-11 and the Village Square problem (photographing offenders) also runs this risk. Further analysis may have found solutions that are less problematic.

The tendency to act before analyzing still pervades the department; without constant attention on the part of supervisors, the amount of analysis conducted and the number of nontraditional activities undertaken would no doubt decrease. It may be that the success of nontraditional approaches will help to change this tendency in the future, but it is too soon to tell for sure.

Few of these problems were evaluated in any but the most cursory way. Most of the time, this was entirely appropriate. Reviewing calls for service records and casual observation were enough to identify with certainty that The Newmarket Creek or Peninsula Skating Rink problems were solved, for example. For criminal problems--burglaries in Glenn Gardens or on Jefferson Avenue, for example, more formal methods will be needed. Although all supervisors received some exposure to evaluation methods as part of their problem-solving training, no one in the department has yet tried to use formal statistical methods.

Table 11
Level of Analysis and Response Selection

	CRIMINAL JUSTICE	MIXED	ALTERNATIVE
LIMITED ANALYSIS	Drug dealing at 32nd & Chestnut	Commercial burglaries on Jefferson Ave.	Assaults on officers
	Disturbances at a 7-11	Shothouses in Aqua Vista	
	Hooliganism in Village Square		
Total [6]	[3]	[2]	[1]
EXTENDED ANALYSIS	Thefts from Vehicles near Shipyards	Prostitution related robberies	Vacant Buildings
		Larcenies in Beechmont Gardens	Burglaries in Glenn Gardens
		Dirt Bikes	Skating Rink
		Domestic Violence	Burglaries in New Briarfield
			Gasoline Thefts
			Drunk Driving
			Runaway Youths
Total [12]	[1]	[4]	[7]

General Implementation Considerations

In Newport News, the switch in emphasis from incident-driven policing to problem-oriented policing has been downplayed. The problem-solving process has been presented as a useful tool for police managers, rather than as an alternative or replacement for the traditional, incident-driven approach. Members of the patrol and detective divisions have attempted to conduct incident-driven business as usual, in addition to implementing the problem-oriented approach. As a result, time has been a critical factor in virtually all the problem-solving efforts described above. According to results of the May 1986 personnel survey, 29 percent of officers felt that the time requirement was a serious difficulty with using the problem-solving process. And there have been occasional grumblings from officers not assigned to solve problems that their problem-solving com-

rades have not pulled their fair share of the incident-driven weight.

These complaints occurred despite the fact that the Newport News Police Department had implemented a differential police response strategy. It is, of course, possible that the department could free up even more time through differential response, investigative case screening, or other procedures. The complaints about time, however, suggest that even if a department has freed up time for officers to use, implementing problem-oriented policing still may create time management difficulties. Some of these difficulties may indeed result from officers being given more work than they can accomplish. However, our observations indicate that many of these difficulties resulted from officers not fully understanding the expectations of their supervisors. Better communications between management and officers may be the best way of dealing with this difficulty.

Another factor which has caused implementation problems is the frequent transfer of officers to other assignments and shifts. In Newport News, most personnel below the rank of Major are transferred every eighteen months. This policy was a partial result of the fixed shift policy. Without a rotation plan older officers would fill up the positions on the desirable shifts, leaving the undesirable shifts to the newer officers.

Transfers have disrupted some problem-solving efforts: for example, Officer Bell has had to turn over the vacant buildings problem to other officers, now that she has been transferred to North Patrol. This suggests that all but the simplest problems must be formally adopted by the unit in which the problem-solving officer is a member, rather than by the officer. This argues for a team approach to scanning, analysis, response, and assessment. It also argues for further integration of the problem-solving process with the more formal management-by-objectives process.

Although troublesome, these caveats should not detract from the primary results of the Newport News experience: police officers can solve problems as part of their daily routine; they enjoy problem-solving; and their efforts are often successful.

CHAPTER 8

IMPLICATIONS

Summary

The previous two chapters described problem-oriented policing in the Newport News Police Department. In particular, Chapter 6 looked at whether problem-solving efforts work. Based on the three problems for which sufficient time had elapsed to conduct an evaluation, the answer seems to be that these efforts are an effective way to solve problems. Chapter 7 explored the issue of whether police officers and supervisors can address problems as part of their normal work. Here again, the answer seems to be that they can. All the problems described were pursued by regular police department employees, not members of a special unit. They were able to do this because the department implemented measures to assure that officers and supervisors had the time to deal with problems. Just as important, department members were not pressured to solve problems in unreasonably short periods of time.

Implementing problem-oriented policing is a long hard process, in part because it is not a program; it is a new way of doing business. This was true in Newport News, but it progressed faster than originally expected.[1] The implementation process, moreover, is still going on.

As this report is being written, the department is continuing to integrate problem-oriented policing into daily police operations. The Task Force is being replaced by the Problem Analysis Advisory Committee. Committee members have been selected and have begun monthly meetings. A department policy and procedure for handling problems has been drafted and is being reviewed and revised. The department is developing regular in-service training of officers and supervisors. And the Planning Unit is setting up a process for monitoring how well problem-oriented policing operates. Meanwhile, officers and supervisors are still detecting problems, analyzing information, developing solutions, and assessing progress.

In early August, 1986, the Forum conducted a survey of all police department members.[2] Several of the questions dealt with feelings about problem-solving. Table 12 summarizes these results. Overall, the results show a positive attitude toward a problem-oriented approach. Most respondents thought that problem-solving was useful. Most reported positive experiences with problem-solving; they felt their efforts had been successful and worthwhile. They had received the help they needed, and their supervisors had supported them. However, many respondents felt that they deserved more recognition for their efforts than they had received.

Despite these successes, problem-oriented policing is still far from being fully institutionalized in the Newport News Police Department. Probably no more than 20 percent of the officers have had an opportunity to completely work through a problem, although survey results indicate that at least forty percent have had some exposure to working with the process. In time, as training is implemented and department members gain more experience, the numbers will increase. This of course depends on whether top

Table 12
Responses to Department Survey Regarding Problem-Solving
(Brackets enclose the number of responses)

How Useful is Problem-Solving as Implemented in Newport News?

Somewhat Useful to Very Useful	Not Very Useful to Not Useful At All	No Response
60%	15%	25%
[117]	[29]	[49]

Those respondents who said they had been involved in problem-solving (about 70%) were asked seven questions, and gave the following answers.

	Agree	Neutral	Disagree
So far, my problem-solving efforts have been successful.	54% [80]	36% [54]	9% [14]
All in all, the time I spent solving problems was worthwhile.	59% [86]	31% [45]	11% [16]
Other officers have given me help/cooperation when needed.	60% [88]	34% [50]	6% [9]
Private citizens have given given help/cooperation when needed.	56% [80]	33% [48]	11% [16]
Other agencies have given given help/cooperation when needed.	58% [84]	35% [51]	6% [9]
I feel I've received enough encouragement from supervisors.	56% [83]	33% [48]	11% [16]
I have received the recognition I deserve for my efforts.	33% [48]	43% [63]	23% [34]

management in the agency continues to support problem-oriented policing.

In July, Chief Stephens resigned to accept the position of Executive Director of the Police Executive Research Forum. The new Chief, Jay Carey, had been the department's project monitor for problem-oriented policing; he and the command staff fully support this approach to delivering police services. In fact, in the departmental survey, 93 percent of the officials with the rank of sergeant and above thought problem-solving was good for Newport News. Of those with a rank of captain or higher, this feeling was unanimous.

Although management support for problem-oriented policing is strong, no one knows with certainty whether local conditions will continue to encourage this approach. Consider, for example, recent changes in the political and management environment: control of the city council shifted from the Republicans to the Democrats in the 1986 city elections; the council then selected a new mayor; the new mayor hired a new city manager; because all of this coincided with the resignation of Chief Stephens, one of the city manager's first tasks was to select a new police chief. So far, the new city council, mayor, and city manager have not interfered with the operations and management of the department, Chief Carey has continued his strong support for the approach, and the department has continued to use it; but it is not difficult to imagine how problem-oriented policing could have withered in Newport News. A series of celebrated crimes or a scandal involving police officers could have prompted the city council to demand a "back to basics" approach to law enforcement. The mayor could have appointed a city manager who took a "hands-on" role in managing the police department; such a manager would almost certainly have been unfamiliar with problem-oriented policing. Or a police chief who wanted to put his own stamp on the department could have been appointed from outside the agency. Clearly, the continued survival of problem-oriented policing is due as much to luck as to its apparent effectiveness. Unless and until problem-oriented policing becomes the standard approach to law enforcement, this luck could change.

Regardless of the final outcome, the effort has already provided information for other police agencies to use. But this suggests a broader and more important question: Can other law enforcement agencies apply the lessons from Newport News and develop the concept further?

With only one example of agencywide problem-oriented policing to draw on, it is difficult to separate factors that apply to most agencies from those that are peculiar to Newport News. Until this study is replicated, few definitive conclusions can be stated on this subject.[3] Nevertheless, police executives and city officials in other jurisdictions should experiment with problem-oriented policing.

This concluding chapter, therefore, is devoted to a discussion of implementing problem-oriented policing. We will first discuss why problem-oriented policing needs to be explicitly implemented, instead of allowing it to just happen. Next, we describe the characteristics of a problem-oriented policing agency. Third, we review some of the many concerns that a chief executive of a law enforcement agency will need to deal with when adopting problem-oriented policing. Finally, we discuss future developments of this approach.

The Need for Planned Implementation

Newport News police officers took to problem-oriented policing quicker than we had originally expected. One reason may be that it encourages many of the activities they would like to do. When asked why they had originally wanted to join police forces, police officers consistently say that they joined to help people (Rubin, 1973; Van Maanen, 1975). By emphasizing work that addresses people's concerns, and giving officers the discretion to develop a solution, problem-oriented policing helps to make police work more rewarding.

Many, if not most, police officers are natural problem-solvers. And it is probably true that an observer can find problem-solving officers active in most police agencies. Police work by its very nature requires that problems be solved. Officers have always had to solve problems, but had little

guidance as to how to go about doing it. But in some agencies, officers attempt to address problems in secret, fearful that their actions will be criticized by their supervisors and colleagues.

A few agencies may actively suppress this type of police work, but more often it is just ignored by senior administrators, so only a few officers will consistently engage in it. When a crisis occurs--for example, when neighborhood complaints about local drug dealing gain the support of local politicians--one of these active problem-solvers may be selected to deal with the crisis. But apart from efforts spurred by crisis, in many agencies there is little official encouragement for individual initiative in addressing problems.

A very few agencies, however, may encourage individual problem-solving initiatives by assigning problems and by rewarding efforts through recognition and other means. But even in these agencies, there is little guidance as to what concerns the police administration wants addressed, and how to go about addressing them.

Problem-oriented policing is a department-wide strategy to encourage and guide all of its members to engage in problem-solving. The effective handling of public concerns is a primary mission of problem-oriented policing agencies. In such an agency, problem-solving efforts are viewed as the principal means for addressing these difficulties. And in order to assure that as many concerns as possible are addressed effectively, the agency formally encourages and guides these efforts.

If solving problems is a better way of serving the public than just handling calls, and if officers generally like to solve problems, then why not just let them? Why should an agency formally adopt the strategy of problem-oriented policing?

There are two reasons why a more systematic and explicit approach needs to be taken. First, it helps to ensure that the department addresses as many problems as possible. Second, it ensures that officers' problem-solving efforts are as effective as possible. Let us discuss each of these reasons in turn.

Making Sure Many Problems Are Addressed

The public expects the police to handle a large number and variety of problems. In the short time that problem-oriented policing has been applied in Newport News, a variety of problems have been taken on. These problems are only the tip of the iceberg. There are many other problems that are still unrecognized. Furthermore, problems will change over time, as society changes.

It takes more than just a few motivated officers to detect and effectively address the large number of problems. The entire agency must be engaged in this effort.

To get the whole agency involved, police executives must adopt four practices.

First, *agency executives must communicate to all department members the vital role of problem-solving in serving the public.* They must describe why handling problems is more effective than just handling incidents. Executives must show that all police activities--including incident handling--must contribute to a problem-oriented strategy. Department members must understand why problem-solving is important and why they should engage in it. If officers do not know why they should change their way of doing their job they are likely to resist it.

Second, *agency executives must provide incentives to all department members to engage in problem-solving.* Although personal satisfaction from serving the public well is in itself a strong incentive, most officers rely on their fellow officers and supervisors when judging whether their efforts are worthwhile. So without positive encouragement it is unlikely that problem-solving will become standard practice in a police agency.

Third, *agency executives must reduce the barriers to problem-solving that occur in most police agencies.* Practices that prevent officers from having enough time to address problems need to be changed. Procedures that have the effect of squelching initiative and creativity need to be rewritten. Policies that tend to disrupt problem-solving efforts should be modified. And practices that take away personal satisfaction in solving problems must be curtailed. Unless the barriers are kept to a minimum, officers will see a direct conflict between the incentives to solve problems and the organizational structure they have to work in. This will lead to a great deal of frustration, and fewer problem-solving efforts.

Fourth, *agency executives must show department members how to address problems.* Police officers,

like most people, do not like to take unnecessary risks; they want to know, in advance, what is considered good and poor performance. It is not intuitively obvious what problem-solving entails or what the characteristics of a good problem-solving effort are. At this early stage in the development of problem-oriented policing we cannot list all of these characteristics, but there is plenty of guidance that can help reduce officers' uncertainty. Executives can build on what their agency already does well by recognizing officers engaged in problem-solving efforts. Recognition efforts should be followed by training in problem-solving. Finally, the department must set guidelines for innovation. Department members need to be assured that they have the latitude to innovate, even though these efforts may not always work as expected. Since every problem-solving effort is likely to plow new ground, you cannot have problem-solving without some mistakes. Everyone in the agency should recognize that risks are involved, and as long as basic and explicit guidelines are followed, mistakes will be forgiven.

The top management of a police agency must consciously address these four concerns. Failure to do so will result in problem-solving conducted by a relatively small number of department members, and only sporadically. As a consequence, relatively few problems will be addressed.

Assuring Effective Problem-Solving

We have stated that to ensure the entire agency is involved, police executives need to provide guidance as to what constitutes good and poor problem-solving efforts. There is another reason for giving this guidance: to make sure that the problem-solving efforts are as effective as possible.

Police officers must be more effective at identifying problems. At first, obvious problems, usually crime-related, will be identified; and many other opportunities to address problems will go undetected.

Department members also must know how to analyze problems so that the solution fits the problem. Often officers skip the analysis step and jump directly to proposing a solution. Only the simplest problems can be effectively addressed in this manner. Most problems result from a complex interplay of a variety of factors. Without an understanding of the complexity of a problem, it is unlikely that officers will reliably find the appropriate solution. Innovative solutions, that are not based on a thorough analysis of the problem are more risky than solutions based on a thorough analysis.

Department members must learn how to design effective solutions. Like most people, officers are likely to rely on familiar solutions. This means that a rather limited set of options will be considered. Department members will rely too heavily on criminal justice related solutions. Thus officers will be less likely to create solutions that fit the characteristics of the problem; the solutions that they do consider will be of limited effectiveness. Problem-solvers must cast a wide net in their search for possible solutions. Department members need to be encouraged to look for solutions used in other agencies and to borrow them freely, but intelligently.

Finally, department members need to evaluate their solutions to determine if they are working as well as expected. Few police agencies do this, and fewer do it well. As a result, programs that do not work well are not improved or are abandoned. Programs that are working are sometimes killed because nobody can demonstrate they are working. The next time a similar problem has to be confronted, there is no documentation to indicate which tactics have worked well in the past and which have worked poorly. So mistakes are repeated and good solutions are ignored. They should make the results of their evaluations known to other agencies, so that others can use the information in their problem-solving efforts.

All of these activities--detecting problems, analyzing problems, developing solutions, and evaluating solutions--can be improved by showing department members how to solve problems. Line officers, supervisors, and managers should be trained in problem-solving. This training should use case studies of actual problem-solving efforts, as well as prescriptive material such as the problem solving guide. Problem-solving training is a necessity for providing officers the knowledge and confidence they need. Unless such guidance is provided, many will not engage in these efforts and many problem-solving efforts will not solve problems.

There will be a tension between encouraging everyone to address problems, and developing high quality efforts. The easier problem-solving is, the more department members will become involved. On the other hand, promoting high quality problem-solving efforts will make these efforts appear more difficult. Thus department members will be slower to get on board. In a short time period, this conflict is irreconcilable. Over a longer period, both quality and quantity objectives can be pursued.

Problem-oriented policing will not come to a police agency in a year or two. It is probably best to assume that it will take as long to get all officers routinely and effectively handling problems as it takes for a recruit to become a high-level manager. If new recruits see problem-solving as the norm, then by the time they are in charge it will be. The process could happen faster. Still, the speed of the process will depend on the number of senior and middle managers who become committed to the strategy early in the implementation process, and a strong steady commitment by the chief executive.

If adopting problem-solving takes such a long time, how will an agency know whether it is on the right track? We address this question next.

Characteristics of a Problem-Oriented Policing Agency

Unless we can describe the characteristics of a problem-oriented policing agency, we will not know what we are trying to achieve, or the best ways for achieving it. Despite the lack of agencies that have fully institutionalized problem-oriented policing, there are characteristics that agencies beginning problem-oriented policing should strive for.[4]

An agency that has fully institutionalized problem-oriented policing will have seven characteristics. These characteristics can be divided into two groups. The first four characteristics describe agencies that have begun a long-term commitment to adopting the strategy.

1. Problem-solving is explicitly recognized as the standard method of policing.
2. The problems addressed should directly affect members of the public.
3. Problem-solving objectives are measurable.
4. The agency explicitly looks for ways to get all members to address problems effectively.

The last three characteristics are long-term goals, and can only be achieved after many years of experience with applying the strategy.

5. Agency members conduct complete analyses of information describing problems.
6. Agency members conduct uninhibited searches for solutions.
7. Everyone in the agency is involved in problem-oriented policing.

A lengthy process should be anticipated because many people, inside and outside the police agency, must be taught a new set of expectations of police work; many policies and procedures must be changed, eliminated, or created; and agency members must gain experience as to what is, and is not possible with problem-solving. Let us look at the first four characteristics in greater detail.

Initial Characteristics of a Problem-Oriented Policing Agency

The four characteristics listed above that fall into this category are described in more detail here. The first three describe the agency's approach to solving problems, and the last characteristic describes the agency's approach toward change.

Problem-solving is explicitly recognized as the standard method of policing. The agency has policies encouraging and guiding department members to solve problems. Furthermore, the importance of these policies and procedures are communicated throughout the agency. These policies explain why problem-solving is the principal method for delivering police services, outline how problem-solving should be conducted, and describe the department's view of innovation and risk taking.

The problems addressed should directly affect members of the public. The agency makes it clear that the problems of concern to the agency are the problems confronting the public. When ad-

ministrative problems are taken on, development of solutions must take into consideration how the public will be affected. This view of problems is reflected in policies, procedures, training, and actions undertaken by the agency.

Problem-solving objectives are measurable. This means that three factors must be clearly expressed: what the problem is, how the solution will affect the problem, and how the impact of the solution on the problem will be measured. This should be encouraged through training and policies.

The agency explicitly looks for ways to get all members to address problems effectively. The agency is engaged explicitly in making sure that all activities of the agency contribute to problem-oriented policing. First-line supervisors, middle managers, and command staff are encouraged to look for and resolve conflicts between old policies and procedures and the policies and procedures developed to foster problem-solving. This is bolstered further by regular training to foster systematic and routine problem-solving. In short, the long-term characteristics described next are explicit objectives of the agency.

Long-term Characteristics of Problem-Oriented Policing Agencies

The first four characteristics, which deal with policies, procedures, and training, can be implemented relatively quickly. The next three characteristics will take much longer to achieve. Therefore, early in the implementation of problem-oriented policing, these characteristics are best viewed as objectives to be reached after a number of years of experience. Time to achieve these characteristics will vary from agency to agency.

Agency members conduct complete analyses of information describing problems. Agency members engage in a thorough search for information, using sources internal and external to the agency. As a routine part of this analysis, the officer talks to representatives of all who are involved in the problem; victims, offenders, or representatives of organizations or groups that respond to the problem. The problem-solver looks to other jurisdictions that have taken on similar problems and reviews the research literature to gain an understanding of the problem. The analysis may not be a rigorous research effort, but it should be thorough. At the end of the analysis, the problem-solver should be able to describe who is involved in a problem, how they interact in the social context and physical setting, and the results of these actions. The problem-solver can describe the responses of various public and private organizations and individuals to the problem, and how these responses contribute to or reduce the problem.

Agency members conduct uninhibited searches for solutions. Based on the analysis of the problem, the problem-solver should engage in a thorough search for ways to reduce or eliminate the problem, or to handle problem-related incidents more humanely, efficiently, and effectively. Potential solutions are not restricted by traditional practice. Instead, all options that are effective, ethical, and legal are considered. Fiscal and administrative considerations are then used to narrow the field of options.

Everyone in the agency is involved in problem-oriented policing. Problem identification and analysis, and solution development and evaluation are everyone's business. Problem-solving is a routine part of police work in every unit and at every rank. Agency members who are not in a position to directly address problems support those who do. Handling calls for service is still an important function, but it is not an end in itself. Effective call handling means going beyond care of the immediate needs of the victim and the circumstances, and looking for ways to prevent future occurrences.

In the next section we will review a number of factors that influence a department's ability to achieve these seven characteristics.

Implementing Problem-Oriented Policing

Throughout this report we have stressed the importance of the internal and external police environment for implementing problem-oriented policing. Here we will discuss a range of factors

that a police executive must consider. Internally, an executive must provide leadership and direction regarding agency decision-making, communications, and work with the public. He or she must also promote changes in some operational and administrative procedures. Externally, an executive must adapt problem-oriented policing to the local government, and to private institutions in the jurisdiction. We will then briefly address integrity concerns.

Internal Considerations I – Leading and Directing

The long-term commitment of the agency's chief executive to problem-oriented policing may be the single most important factor in ensuring its success in an agency. Without this commitment, few of the necessary changes in the internal and external environment will occur. One of the first and most important considerations is the management style, which the chief executive strongly influences.

Our experience in Newport News suggests that a style that allows great latitude to first line supervisors and officers works well. This does not mean that the lower ranks are allowed to do as they please. Quite the contrary. Supervisors and officers are under clear instructions to look for problems, use the guide to analyze problems, conduct thorough searches for innovative solutions, and find out whether the solutions worked. Problems are assigned to sergeants. Officers are told to look for information they had not considered. Solutions have to be feasible. And not all evaluation results are found to be acceptable.

What we mean by giving wide latitude is that supervisors and officers are permitted, and even encouraged, to try new and different approaches. They are encouraged to look for problems that may have been considered trivial or nonexistent by other members of the department. If a problem is assigned by a supervisor, and after collecting information an officer finds that the problem is not as described or the problem does not exist at all, then the findings of the officer are generally accepted.

In the problem-oriented policing agency, supervisors and officers can talk to anyone who can shed some light on their problems. This includes conducting department surveys, community polls, interrogating suspects, interviewing city officials and business leaders, and calling national experts. There are few clearance procedures; instead, survey instruments and other methods of collecting information are reviewed by supervisors.

Similarly, the responses selected are not restricted. They obviously have to be effective, legal, feasible, and publicly acceptable, but beyond these broad limits anything goes. The fact that a particular solution has never been tried before is not a barrier to its use (some officers in Newport News would claim this is an asset). As a general policy, high level clearance is not required to work with members of other agencies. The assistance of high-ranking department members is sometimes useful to gain cooperation of outsiders, and sometimes support on this level is needed to assure that conflicts in policy do not result. But, for most problem-solving efforts it is not required.

Most important, officers and supervisors have permission to fail. Not all problem-solving efforts succeed. But if officers and supervisors are expected to be creative enough to design new responses to difficult problems, then mistakes must be expected and accepted as a natural part of the process. A thorough analysis of a problem does not guarantee an effective response. So, officers and supervisors must have the freedom to start over, without fear of censure, when a response does not work. Since solution failures will occur, they need to be spotted quickly, and not hidden from view. Recognizing and learning from mistakes is the best way to keep from repeating them.

If this style of management is very difficult to apply in an agency, problem-oriented policing probably will not work there.

Supervision and Decision-Making. Many Newport News police officers believe that problem-solving improves management. In fact, 37 percent of them responding to our survey told us this was the most important advantage of the problem-oriented approach. From our observations it appears that the management of problem-oriented policing is a very important consideration for implementing this approach. Since patrol officers and detectives are expected to conduct most of the problem-solving efforts, the first line supervisors are critical to the strategy.

Sergeants and lieutenants have the greatest impact on how well problem-oriented policing works. In Newport News, those supervisors who encouraged their officers to look for problems, conduct careful analysis, and look for new and different responses, had many officers solving problems. Supervisors who showed no interest in problem-solving had fewer officers addressing problems. This seemed to be true regardless of the seniority of the officers involved.

Supervisors who were successful at getting their officers to address problems used a variety of means to do so. Although we have not systematically collected data on first line supervisory styles, observations and informal conversations provide some clues as to useful approaches.

Most successful supervisors give their officers a great deal of discretion in addressing the problem. An officer who is assigned to a problem discusses progress with his or her supervisor often and usually follows the suggestions provided; beyond that, however, the officer is given a great deal of latitude. An example is the prostitution related robberies inquiry, directed by a patrol officer with the guidance of his sergeant. Similarly, if a supervisor leads the problem-solving effort, the analysis and response are typically handled by a team of unit members. The supervisor assigns responsibilities to his or her officers regarding who collects what pieces of information or carries out what parts of the response. Officers not directly involved in solving a problem handle calls for service that ordinarily are handled by those working on the problem.

Officers are generally free to make contacts with outside agencies when needed. For example, the detective handling the spouse abuse problem had free rein to seek the advice and assistance of local experts and organizations. However, supervisors ask to be kept informed. If a supervisor knows someone in an outside agency, he or she usually makes the initial contact.

Supervisors who are successful in getting their officers to solve problems are very conscious of the time such efforts take. Problem-solving efforts are carried out over long periods if needed, and tasks are handled between calls and in slack periods. They recognize that the busier the unit, the longer the effort takes. Although an officer is sometimes given permission to be free from handling calls in order to accomplish a special task, supervisors are reluctant to free them for extended periods of time. By and large, successful supervisors seem to be patient.

Successful supervisors check to make sure the problem-solving effort is moving along. Once a response has been implemented, they check to be sure it is working. The weekend after the skating rink owner had contracted for more buses, the patrol sergeant for the area looked for noisy youths disturbing the neighborhood. When he found none he knew the problem had been solved.

Supervisors who encourage problem-solving give the credit to the officers who do the work. For example, two patrol officers and a detective presented their problem-solving efforts to middle managers from other agencies at a state law enforcement conference. Their supervisors did not go to the conference. When out-of-town visitors came to Newport News to hear about problem-oriented policing, it was usually the patrol officers and detectives who describe problem-solving efforts. Successful supervisors also try to spread the opportunities to address problems among their officers, so that no single officer is always in the limelight.

These are not hard and fast rules. Indeed, styles of problem-solving and management seemed to be as varied as the personalities involved. Nevertheless, the supervisors we observed to be the best at getting problems solved seemed to like new and different approaches, and seemed to judge success by whether something had been accomplished. They seemed to be less concerned about whether their officers deferred to their rank than whether their officers solved problems.

Executives considering adopting problem-solving should consider these attributes of first-line supervisors. If an agency encourages sergeants and lieutenants to act in these ways, then problem-solving may work well.

Cooperation, Coordination, and Communication. Coordination within the police agency is also important. Officers and supervisors addressing problems will need the help of their colleagues on different shifts, in other areas, and on different assignments. When investigating a potential problem, officers and supervisors need to know if others have confronted the same difficulty before. During analysis, the records unit, crime analysis

unit, communications unit, and any other unit that has written records can provide help. Meetings and discussions with other officers are also important throughout a problem-solving effort. The same applies when a response is being planned.

As needs vary from problem to problem, it seems to make little sense to establish a special unit to promote coordination. Instead, a department should aim at creating an atmosphere in which cooperation can easily and quickly be achieved on a wide variety of problems. Policies and procedures that stand in the way of such coordination should be scrutinized to determine how they can be modified, or if they should be abandoned. Methods of fostering communications among units should be encouraged. And units that support, but do not lead, problem-solving efforts need to be recognized.

Role of the Police in the Community. Problem-oriented policing starts with the assumption that the mandate of the police is not just to fight crime; the police have a much broader mandate. The agency's chief executive must communicate this greater role to both department members and the public at large. At the neighborhood level, officers and supervisors must know that the problems they are expected to handle involve more than just UCR index crimes. Dealing with public fear of crime in low crime areas, loud teenagers, inebriates, traffic congestion, petty thefts, and a host of other concerns may be as important to neighborhood residents and businesses as solving a murder, catching a rapist, or foiling a robbery.

This means that officers and supervisors must pay close attention to public demands. Calls for service are one form of demand. Supervisors especially must be aware of the patterns of these calls in order to detect problems. Many calls from the same location, even though each call may involve a different concern (and may even be coded differently by communications personnel), is a good indication of a problem. For example, the Marshall Avenue 7-11 problem was identified as a problem because it had more calls for service than any address in the city. The types of calls varied--noise complaints, shoplifting, assaults, and others--but they all came from the same source. Many departments have the capability to identify crime and call patterns through computers, so this type of scanning is relatively easy.

Another method relies on contacts made directly with the mayor, city manager, chief of police, or any other city official or department member. Often these contacts reveal a concern with which the police should deal. Sometimes the concern is a problem, sometimes it is not. Yet, this source of information about potential problems complements the analysis of repeat calls. Some problems, like drug dealing, do not generate many calls to police communications, but do produce calls and letters to city officials.

There are many other methods of detecting problems. In Chapter 4, Table 5 lists sixteen sources of information for finding problems. What is important are not the sources used--all should be employed--but the fact that the department listens. *Department members must listen to the way the public describes the problem, and not try to force it into existing classifications.* Only after some analysis should department members decide whether a problem is similar to other problems, and even then the unique aspects of the problem should not be ignored.

Not all problems are restricted to neighborhoods; many are jurisdiction-wide. These pose difficulties for patrol officers and first-line supervisors because patrol is organized around small geographic areas within the larger jurisdiction. In large agencies, jurisdiction-wide problems should probably be assigned to existing special units that operate jurisdiction-wide. For example, in Newport News, the problem of runaways was taken on by a detective in the juvenile unit, the problem of spouse abuse was addressed by a detective from the homicide unit, and the problem of thefts of gas from filling stations was handled by a detective from the general assignments unit. However, drunk driving was handled by two patrol officers, one from the north and one from the south division.

So members of special units need to take a broad view of their role in the department. For example, a burglary squad normally just investigates reported break-ins. Although a useful function, the unit's supervisor might profitably devote some of the unit's time to analyzing the stolen property distribution process in the jurisdiction. The head of a drug unit could consider devoting some of the

unit's time toward analyzing the physical characteristics of street corners where drug dealers sell their wares.

Internal Considerations II – Operations and Administration

Police agencies have many procedures that can help or hinder problem-oriented policing. In this section we will look at two categories of procedures: those that directly affect how work is carried out--operations--and those that have their most direct effect on the people doing the work--administrative.

Operational Procedures. There are four types of operational procedures that we will review here: procedures to free up officers' time, management by goals and objectives, crime analysis, and proactive tactics by patrol and investigative supervisors.

Police departments can implement a variety of procedures that will free up time so that department members may engage in problem-solving efforts. One of the biggest disadvantages Newport News officers saw with problem-solving was the amount of time these activities take. Few officers felt they had too little time to undertake any problem-solving activities, but it is undeniable that problem-solving can take up a great deal of it. So procedures that increase officers' flexibility in handling their incident workload are important. Call handling procedures that allow incidents to be addressed over the telephone, that divert some calls to civilian complaint handlers, or in some way reduce the number of incidents that patrol officers have to handle (McEwen, Connors, and Cohen, 1986) can free up time for problem-solving. Among detectives, case screening procedures (Eck, 1983) can assist problem-solving. These investigative workload management procedures help free up detective time by focusing their efforts on the most promising cases and diverting them from cases that cannot be solved.

Management by goals and objectives procedures help foster routine problem-solving in another way. The Newport News Police Department goes through an annual goals and objectives setting process. Each organizational unit and shift, lists its major concerns for the next year. Although some of these concerns deal with administrative matters, each unit and shift must also focus on several substantive problems. This procedure assists problem-solving in three ways. First, it reinforces the department's strategy of focusing on problems. Second, it permits the scheduling of big, long-term, problem-solving efforts. This process, therefore, can be used to make sure that long-term efforts are not overwhelmed by the day to day handling of incidents, and the many short term problem-solving efforts. Third, by linking the goals and objectives process to the budget cycle, as was done in Newport News, it is more likely that the resources needed to handle problems will be available.

Crime analysis units can help foster problem-solving. A good crime analysis unit can help promote problem-oriented policing in two ways. First, it is extremely helpful for detecting potential problems. Though it is not the only method for scanning, such a unit can provide officers and supervisors with trend, series, and pattern data that may be indicative of problems. Crime analysis units can use many methods including: counting the number of calls from locations, plotting the temporal patterns of incidents, mapping the geography of events, or tabulating the characteristics of victims. Operational officers will have to investigate these results further to determine whether a problem really exists. Second, a crime analysis unit can provide useful information early in the analysis stage of a problem-solving effort. In Newport News, the first thing many department members did when starting their analysis was to request information from this unit. Although it is a good start, further analysis rapidly took the problem-solver into areas that the crime analysis unit could not help with: interviewing members of the public or representatives from other local agencies, for example.

Finally, the department can promote the use of proactive tactics by patrol officers and detectives. This includes, but is not limited to, the use of directed patrol procedures. If an agency already has a history of allowing first line supervisors to use their officers to attack crime problems, then problem-oriented policing may be easier to implement. As we stated above, sergeants and lieutenants direct many problem-solving efforts.

Administrative Procedures. Three types of administrative procedures also influenced problem-

oriented policing: assignment and shift rotations, reward and promotion procedures, and training.

The ability of department members to undertake and solve problems depends in large part on the stability of assignments. Officers gain satisfaction from seeing their problem-solving job through from beginning to end. Consequently, many officers will voluntarily put a great deal of extra time into these efforts, time for which the department cannot legitimately ask. In Newport News, several officers collected information on their own time, without being asked. Since most officers take pride in their ability to deal with problems effectively, handing over a problem-solving effort to someone else, or taking over someone else's effort, reduces the officer's incentive to put extra time into it. When this happened in Newport News, the effort suffered delays and was sometimes hard to resume. Therefore, procedures that create a great deal of movement of officers among assignments should be modified. Some movement will always be necessary. But an agency serious about implementing problem-oriented policing should carefully consider the benefits of moving people around relative to the benefits of effective problem-solving.

A related concern is shift rotation. The Newport News Police Department operated on a fixed shift schedule for patrol officers and their supervisors. This provided a great deal of stability in problem-solving. Since some problems seem to be specific to a time of day, fixed shifts make it easier for department members to address some problems. Shift supervisors must coordinate efforts directed at problems that span two shifts, or are not time specific. Not all shifts are equally capable of dealing with problems, however. Officers and supervisors on the night shift complained of difficulties in gathering information during the time they were on duty. Overtime can be used to compensate for this, however.

A rotating shift plan, on the other hand, seems likely to create more difficulty for problem-solving than a fixed shift plan. This is especially true of a plan that rotates officers every week. Group supervisors must coordinate their officers' activities on virtually every problem-solving effort, because all officers will be confronting the same problems over the course of a rotation cycle. Furthermore, officers will take longer to collect information, since each week they are on duty at a different time. However, if supervisors can coordinate their rotating groups, then this pattern may have one advantage: supervisors can parcel out problem-solving tasks to officers depending on who is on the best shift to do the task. No single group will always be at a disadvantage at solving problems. Although rotating shifts may work well on a few large efforts, it is likely to be difficult to coordinate on a regular basis. So, a department getting involved in problem-oriented policing should seriously consider moving to fixed shifts.

One reason for changing an officer's assignment is a promotion. Another reason may be as a reward for exemplary performance. The ability of police executives to influence the policies and procedures for unit assignments and promotion varies from agency to agency. But if executives base their assignment and promotion decisions in large part on their employees' problem-solving abilities, problem-oriented policing will become institutionalized faster. If good problem-solvers disproportionately get the best assignments and promotions, other department members will realize how committed top management is to problem-oriented policing. If top management fails to use problem-solving performance as a criteria for unit assignments and promotion, when it is able to do so, this will undermine the entire effort. The promotion system will advance officers who are not good at solving problems or directing these efforts, and these individuals are unlikely to support problem-oriented policing. Other department members will feel that top management is not really all that interested in problem-solving, and they will withdraw their support.

Training is the third administrative policy area we will discuss. A department can make all the operational and administrative changes suggested here, but unless officers, supervisors, and managers know how to go about solving problems, institutionalizing the strategy will be an extremely slow process. Recruits need to be taught what problem-oriented policing means and how they should look for problems, analyze them, develop solutions, and evaluate the results. Field training officers need to be trained in problem-solving so they can pass this information on to probationary officers. But probably most important is the train-

ing of first line supervisors. They will be the department members who will have the greatest influence over how many problems get addressed, the effectiveness of the efforts, and how much time these efforts take. The department needs to include problem-solving as part of regular in-service training for supervisors. All training sessions, whether in recruit school or as part of in-service training, should contain at least two components: a description and discussion of the principle, policies, and procedures for solving problems, and discussions of actual problem-solving efforts, both good and bad.

The operational and administrative procedures we have discussed here are important. It is unrealistic and impractical, however, for an agency to implement all these changes, plus problem-oriented policing all at once. Implementing and institutionalizing problem-oriented policing will take a long time. Police executives who want to implement it should be aware of the full range of changes that are likely to be needed. A few can be implemented prior to starting problem-oriented policing, and other changes can be made later. As the department gains experience with the approach, difficulties will arise, and the need for other changes will become apparent. By being aware of many of the changes that may be needed, but making them only when the need arises, many internal conflicts can be avoided.

Dealing with internal considerations is only half of the picture. Police executives implementing problem-oriented policing must also influence the outside environment of policing in order for problem-oriented policing to work. So in the next two sections we will explore the external considerations of implementing this strategy.

External Considerations I--Local Government

Implementing problem-oriented policing brings with it a built-in public relations dilemma. It requires a great many changes not easily seen by outsiders. There are no special units, pieces of equipment, or new personnel to point to. So an outsider who looks for problem-oriented policing has no "thing" or "place" to look at. Problem-oriented policing is a way of thinking.

In addition, the executive will inevitably be asked, "Isn't that what the police are supposed to be doing, anyway?" Replying, "Yes, but we were not doing this before," puts the chief in an awkward position. *Since the public, and most government officials have only a vague idea of what the police do, explaining problem-oriented policing may be difficult.*

But the support of the head of local government is critical because the chief's officers and supervisors are going to be making demands of other local government agencies. No matter how friendly and cooperative police department members are, their requests will still require effort on the part of the other agencies. These requests can sometimes be handled on a case-by-case basis, but in the long run it may be easier if the heads of local agencies reach an agreement early on and the line officials work out the specific details.

In Newport News, the police chief had briefed the city manager on problem-solving and had regular contacts with other agency heads. Other city agencies in Newport News were, for the most part, cooperative. Many problems faced by the police also face other agencies. By keeping the heads of other agencies informed about problem-oriented policing, problem detection, analysis, and response by line officers and supervisors was made easier. In a jurisdiction where agency heads do not have regular communications, or are rivals, problem-solving will be more difficult.

Sometimes another agency will fail to do its job. These types of problems can raise major obstacles. If the head of local government is already supportive of problem-oriented policing, then resolving these barriers will be easier.

External Considerations II--Private Institutions

Local private institutions pose similar concerns for police executives trying to adopt a problem-oriented approach. These institutions can provide support and assistance, but they may contribute to problems as well. Just as the police chief should be sure that the head of local government understands problem-oriented policing, the chief should consider ways of explaining the approach to private institutions.

Many of the problems dealt with in Newport News relied on the assistance of private businesses, organizations and other groups. These agencies reported problems to the police, provided information for the analysis of problems, and contributed to the responses. Most of the involved institutions were directly affected by the problems they helped to solve.

However, some institutions that provided assistance did not directly benefit. They provided help because they felt that solving the problem would be good for the city. Universities, for example, were a good source of free labor and assistance. For example, an architecture student provided expertise in the analysis of assaults against officers by studying the configuration of the booking facilities. Churches provided facilities for neighborhood residents when meeting space was needed. The local newspaper not only publicized individual problem-solving efforts, thereby giving the officers involved a pat on the back, they also helped to mobilize public support behind some efforts.

Not all private institutions were of help. Some contributed to the problems, resisting the changes required to affect a solution. This was particularly true of businesses that generated many calls for service. The calls dealt with such concerns as rowdy behavior, shoplifting and other minor thefts. But when it became clear that the physical layout of the store, behavior of employees, or management of the operation helped create the trouble, the businesses were often reluctant to change. Calling the police was cheaper.

In these cases, the police were presented with a direct conflict between public and private interests. Merchants, probably without considering the wider implications of their actions, established store policies that shift public resources--the police and sometimes the entire criminal justice system--to their own private ends. Officers handling calls created by these private policies cannot be serving other members of the public. Since these businesses do not pay more for the added police services required by their policies, the public subsidizes them. And since the subsidy is hidden, there is no opportunity for a public hearing on the merits of such assistance.

The police department was then faced with a choice of either continuing to handle these incidents or finding a more expedient method of processing the calls, such as taking the complaints over the phone and taking no further action. So far these issues have not caused great difficulty in Newport News: in the Marshall Avenue 7-Eleven problem and the gasoline theft problem these potential conflicts have been worked out. Nevertheless, further conflicts may still arise between private organizations and the police.

A police chief who wants the department's employees to work on problems will have to be willing to take some heat from private institutions whose practices contribute to problems.

Integrity

All ideas for helping people can be perverted. Although we have not seen examples of problem-solving being used for bad ends in Newport News, it is prudent to assume that this will occur as more and more agencies experiment with problem-oriented policing. The open management style and the need for close work with the public both provide opportunities for corrupt practices. At the same time, the requirement for thorough analysis before deciding on a solution may help prevent these practices.

If supervisors and managers just turn their subordinates loose, some will get into trouble. Since officers are encouraged to look for innovative approaches to deal with problems, an unscrupulous department member can find innovative approaches for serving him or herself. Policing provides many such opportunities already, and problem-oriented policing can expand these. For example, officers could conspire with some of the participants in the problem to develop solutions that serve the conspirators, but harm others.

Although supervisors and managers need to provide their subordinates with a great deal of latitude, they must also closely monitor what they are doing, and why. If supervisors and managers help guide the analysis, aid in the development and implementation of the solution, and closely scrutinize the performance of the solution, they should be able to reduce opportunities for corruption. On the whole, problem-oriented policing may be less susceptible to corruption because it relies on an open process of gathering information and measuring effectiveness.

We have described a large number of concerns, internal and external, that a police executive should be prepared to deal with if he or she undertakes problem-oriented policing in his or her agency. This list of concerns may appear daunting. But not all of these concerns are of equal importance, and they do not have to be dealt with all at once. Furthermore, this list is based on the experiences of one agency. Some of these concerns may not be universally applicable; other concerns, not found in Newport News, may be of greater relevance to other agencies. Still, police executives will find it necessary to make a large number of changes in their agencies if they want to implement this approach.

As discussed earlier, an executive is more likely to succeed at implementing this approach if he or she takes a long-term perspective. One way to accomplish this is to set up a way of getting periodic reviews of progress in implementing problem-oriented policing. The agency's command staff, a special task force, or the planning unit could undertake this review function. The group should look for successes and difficulties, and recommend changes that will promote future occurrences of the former and avoid repeating the latter.

The Future of Problem-Oriented Policing

In this report we have described the history and theory of problem-oriented policing, and how it was applied in Newport News. The success shown so far in Newport News suggests that it holds promise for other police agencies. However, policing is littered with interesting ideas that were successful during their first test, but failed to prove their success during subsequent trials. Although we doubt this will be true of problem-oriented policing, the possibility cannot be ignored.

We must remember that problem-oriented policing is subject to change. Over the next two years the National Institute of Justice and the Police Executive Research Forum will develop this approach in several other jurisdictions. As police agencies adopt and experiment with routine problem-solving, they will improve and expand on the concept. Departments will develop new methods for finding problems. Officers will create a body of analytical methods that can be applied "on the street." The police and other public and private agencies will organize new channels of communications to facilitate solution development. Police managers and executives will demand more rigorous evaluations of problem-solving efforts. The concept of a "problem" may also change. The active cooperation and support of researchers and academics can greatly aid these changes as police officials will need assistance in research and evaluation methods.

As experience with handling problems grows, police agencies could develop an extensive body of knowledge about how problems are created in their jurisdiction. This body of knowledge may allow officers to detect circumstances that create problems, before the problems actually occur. This will be very different from the ability to detect the occurrence of a particular incident at a set time and place. The ability to routinely predict the occurrence of incidents still eludes us. However, it is reasonable to believe that police will be able to predict the circumstances that create some types of problems. For example, traffic engineers can predict the congestion that would result from a proposed shopping mall; economists can predict the effects of a new highway on land uses. As police agencies gain more experience with problem-solving they should attempt to synthesize their experiences in order to make similar forecasts.

Social scientists can help. For example, studies of physical space have provided useful knowledge for crime prevention. Current research on criminal careers holds out promise for the future. At the same time social scientists would benefit from the knowledge gained by officers addressing problems. After all, each problem-solving effort is, in part, a research project.

Given these possible changes in problem-oriented policing, how will routine use of problem-solving affect police agencies?

The first major change is likely to be the internal management structure of police agencies. Practitioners and police researchers have long complained about the negative management style of

police agencies. Officers are judged by how few rules they break, not whether they accomplish anything (Goldstein, 1977). As we have described throughout this report, and earlier in this chapter, problem-solving requires a more positive management style. Problem-solving provides objectives that can be used to judge the performance of officers and supervisors. How many problems were detected by an officer, supervisor, or unit? How thorough were the analyses of these problems? How well do officers, supervisors, or units reach out to other agencies, organizations, and the public when organizing responses? Were the responses implemented? Did the responses solve the problems?

The second change will occur in the way police performance is assessed. Developing performance measures for problem-solving will not be easy. However, an agency that makes a reasonable effort in this direction is likely to deliver better services to its public. In the very long run, such performance measures, if combined with officer task analyses, can be used to recruit and promote the officers who are most likely to succeed at solving problems.

The third area of major change will be in the role of the police in local government. Although police budgets and overall direction come from an elected or appointed local government official, the police are viewed as belonging to the criminal justice system more than they are as belonging to the local government system. However, as many of the problems described in Chapters 6 and 7 have shown, the police must often work closely with other agencies outside the criminal justice system. Good police work requires far more than having a good relationship with the prosecutor's office. They will have to be concerned with relations with housing, fire, public works, codes, economic development, schools, health, planning, human services, and many other local government agencies. It is conceivable that local governments that promote problem-oriented policing will also promote problem-solving throughout government. Such an approach could have a large impact on local government operations.

The fourth change will be the biggest. If problem-oriented policing becomes the standard for policing, then public expectations of police services will also change. Police agencies will no longer be judged by the rise and fall of the overall crime rate for the jurisdiction, but by how they deal with problems. An agency that has practiced problem-solving for some time will have developed a profound knowledge of the workings of their community. This knowledge should give the police the ability to anticipate potential problems, and to institute responses in advance.

Problem-oriented policing requires changes in policing. Department members will engage in a greater variety of activities and the qualities of a good officer will change. Management practices will have to change accordingly. Within the larger community a police agency will be viewed more as part of the "human services system". But possibly the biggest change will be in how the public and its elected officials judge the police.

Conclusion

In 1854 an English doctor, John Snow, investigated incidents of cholera in a London neighborhood. Snow plotted on a map the homes of people who had died of the disease. These locations clustered around the Broadstreet water pump. Further analysis revealed that most of the victims drew their water from this pump. People using other pumps in the area were, generally, unaffected. Dr. Snow had the pump handle removed, thus ending an epidemic in one area of London (Fox and others, 1970; Tufte, 1983).

In another effort to reduce deaths from cholera, Dr. Snow interviewed people living in houses where someone had died of the disease. Snow asked these people which water company supplied them with water. Based on these interviews Snow was able to demonstrate that most were supplied by a single water company, which drew its water from the River Thames downstream of London. Only a few people who were supplied by a second company had died of cholera. This company drew its water from the Thames upstream of London, before the water became polluted (Last, 1986).

These and other efforts by Dr. Snow formed the basis of modern epidemiology, the branch of medicine concerned with curbing the spread of disease. The efforts of epidemiologists have made

major contributions to the improvement of public health, world-wide.

The contributions of epidemiology provides a valuable lesson for policing. Handling incidents will always be a part of police work, just as treating the sick and injured will always be a part of medicine. But medicine does not just rely on reacting to reports of sickness and injury. An important branch of medicine, epidemiology, collates data from many incidents and looks for similarities that indicate a common problem. Then by dealing with this problem, better treatments are found and many other incidents are prevented. Constant evaluations help determine whether these treatments and preventive measures work.

Sir Robert Peel, a contemporary of Dr. Snow, once stated that policing must abide by the principle "that the test of police efficiency is the absence of crime and disorder, and not the visible evidence of police action in dealing with them" (Critchley, 1967). Police will never be able to make an improvement in public safety until they start to investigate underlying conditions. Problem-oriented policing holds out the hope that law enforcement agencies will be able to do this. But this will take a long time. The efforts of officers in Newport News represent a modest beginning. As more agencies experiment with this approach, learn how to do it better, and share this information with other police professionals and the public, policing may, in the long-run, be as effective as epidemiology. It is with this hope that we advocate the continued study and development of problem-oriented policing.

NOTES

[1]When this project began, the Forum and the Institute felt that if the department could address three problems, the project would be a success. As shown in Chapters 6 and 7, six times that number have been taken on.

[2]The survey had a response rate of 83% among sworn officers.

[3]The National Institute of Justice has directed the Forum to problem-oriented policing further in the police departments of Clearwater, St. Petersburg, and Tampa, Florida. This study should be completed in 1988.

[4]We would like to thank Anthony Burns-Howell, Herman Goldstein, Barry Poyner, and William Saulsbury for their major contributions to this section.

APPENDIX A

A GUIDE FOR THE ANALYSIS OF PROBLEM INFORMATION

To understand a problem fully, the analyst must find and examine information about a variety of aspects of the problem. Data on three basic aspects of each problem will typically be required.

- It is important to know something about the *actors involved* in the incidents. This includes victims, offenders, and others -- "third parties" -- who witness the incidents or are directly involved in some other way.
- Understanding the *incidents* themselves requires not only knowledge of the sequence of events, but also of the social and physical context of the events, and of the immediate effects of the incidents.
- *Responses* to the problems by the community and its institutions are important because they affect the actors, and sometimes contribute to the problem. Of importance when considering responses is the degree of seriousness with which the community and institutions view the problem.

In the following document, the most important types of information are organized in the form of a checklist. The analyst may use the list to help identify which types of information bear on the problem he or she is examining; the analyst may then determine where the required information can be found, and collect it. Some of the information on the list will be clearly inapplicable for certain kinds of problems, so the analyst should be sure to plan his or her information collection strategy carefully.

ACTORS

At least two actors are required for most problems -- an offender and a victim. For some problems, of course, it will be difficult to tell the two apart. This is particularly likely to be the case with "victimless crimes," offenses committed between friends and relatives, some disorder problems, and crimes involving business transactions. Still, for most problems the common-sense labels are perfectly sensible. In addition, other actors -- so-called "third parties" -- are often involved. These may be witnesses to a pursesnatch, neighbors who discovered a burglary long after the offender had fled, or friends of a shoplifter who took no part in the offense itself. Depending on the nature of the problem, analysts may need a variety of data on each of these actors. The most important of these data types are described below.

Offenders

1. Identifiers
   - Name
   - Address
   - Social security number

2. Physical description
   - Age
   - Race

- Sex
- Height and weight
- Hair color, facial hair
- Eye color
- Distinctive marks:
    - physical disabilities
    - scars
    - tattoos
    - right/left handed
- Blood type
- Finger/footprints
- Speech patterns and accents
- Clothing
- Perfume or cologne

3. Life style
    - Financial status
        - sources of income, both legitimate and illegitimate
        - real and other property owned
        - credit
    - Friends and associates
        - marital status
        - living situation
        - friends
        - criminal associates
        - gang and criminal organization affiliations
        - other organizational affiliations
        - prior residences
        - location of family and friends
        - sexual preference
    - Leisure activities
        - hobbies
        - religious preference and background
    - Ever a victim

4. Education and employment history
    - Schooling/training
        - special skills
        - schools attended, location
    - Employment
        - present employer, location
        - previous employers, location
        - occupations
    - Military record
        - active/inactive/reserve
        - type of discharge
        - activities in service
        - where stationed

5. Medical history
    - Physical health
        - physical disabilities
        - hospitalization record
    - Substance use/abuse
        - type of substance used
        - frequency of use
        - behavior under the influence
        - allergies
    - Mental health
        - present status
        - residency/patient history
    - Medical insurance

6. Criminal history
    - Type of crimes
        - trend in crimes
    - Motive for crimes
        - profit
        - revenge
        - anger
    - Method of operations
        - preferred MO
        - trend in MO
        - where learned MO
        - one or several MOs
    - Recorded criminal record
        - number and crime type of prior arrests
        - existing warrants
        - crimes done on bail, parole, or probation
        - jail and prison time
        - behavior in prison
        - present parole/probation status and name of PO
    - Probable future conduct
        - prospects for rehabilitation
        - prospects for deterrence

Victims

1. Personal data
    - Identification
    - Description
        - age
        - sex
        - race

height and weight
medical history and present state of health
education/employment history
amount and source of income
criminal record
family makeup

2. Life Style
   - Present financial status
     - amount and source of income
     - real and other property owned
     - credit
     - insurance
   - Friends and associates
     - marital status
     - living situation
     - domestic problems
     - interaction with neighbors
     - member of organized crime group
     - length of residence in neighborhood
     - reason for choosing neighborhood
     - prior residences
   - Routine activities
     - working hours
     - when someone at home or business
     - places frequented
     - organization/club meetings attended
     - routine visitors
     - access to home/office by maintenance people
     - use/abuse of drugs, alcohol

3. Security
   - Police protection
   - Other organized security
     - private security guards
     - apartment management
     - neighborhood watch
   - Self-protection
     - dogs
     - alarms
     - other crime prevention hardware
     - precautions taken to avoid street victimization
     - weapons
     - martial arts training

4. Victimization history
   - Prior victimizations
     - crime types
     - seriousness of prior crimes
     - relationship to prior offender
   - Response to prior victimizations
     - reported to police?
     - cooperate with prosecutor?
     - attitude regarding act and offender
     - fear of future crime
     - precautions taken to prevent future crime

5. This victimization
   - Relationship to offender
     - family member
     - friend, neighbor, acquaintance
     - stranger
   - Short-run effects of victimization
     - property losses
     - injury
     - stress and anxiety
     - inconvenience due to involvement with justice system
   - Long-run effects of victimization
     - permanent disability
     - chronic anxieties and phobias
   - Reported to police
     - length of reporting delay
     - reason for delay
     - reason for reporting at all
   - Expectations for police action
     - willingness to cooperate with police
     - willingness to prosecute

Third Parties

1. Personal data
   - Identification
   - Description
     - age
     - sex
     - race
     - height and weight

medical history and present state of health
education/employment history
amount and source of income
criminal record

2. How involved
   - Connection to incident
     - witness/bystander
     - friend/relative of victim
     - friend/relative of offender
     - discoverer of crime
   - Relationship to victim
     - family member
     - friend, neighbor, acquaintance
     - stranger
   - Relationship to offender
     - family member
     - friend, neighbor, acquaintance
     - stranger
   - Effects of victimization
     - stress, anxiety
     - inconvenience due to involvement with justice system
   - Reported to police
     - length of reporting delay
     - reason for delay
     - reason for reporting at all

3. Expectations for police action
   - willingness to cooperate with police
   - willingness to prosecute

INCIDENTS

Although we are used to describing an incident in the simplest of terms -- the appropriate section of the criminal code, for example -- a complete description of the acts that make up a problem is bound to be much more complicated. In particular, consideration must be given to the full sequence of events leading up to and including the event itself, the social and physical environment that provide the context for these events, and the results of the actions taken by the offenders and victims.

Sequence of Events

1. Target of act
   - Person
   - Property
   - Exchange

2. Events preceding act
   - Crime part of other acts or end in itself
   - Transactions involved
     - legitimate business
     - vice
     - other illegal: fence, loanshark, and so on
   - Victim/witness/offender precipitation
   - Witnesses and others involved

3. Event itself
   - Intent of offender
   - Actions by victim to avoid attack

4. Type of tools used by offenders
   - Attack buildings and things
   - Attack people
     - gun
     - knife
     - lead pipe
     - rope
     - wrench
     - candlestick
   - Other instruments
     - vehicles
     - police scanner
     - other

5. Events following the act
   - Actions taken by each actor following the event
     - offenders
     - victims
     - witnesses, other third parties

Physical Context

1. Chronology
   - Time of day
   - Day of week--holiday or special event
   - Month

Season--Christmas, spring school break
Cycle--business, pay schedules, PMS, and so on

2. Location
Inside
Outside
Vehicle
private auto or public transportation
type of vehicle
Character of surrounding neighborhood
residential--single family, condo, apartment, hotel
commercial--retail, warehouse, parking lot
industrial
deserted locations
mixed use of land
Cross jurisdiction boundaries or all in city

3. Access control
Target hardening
locks, window bars and jams, peepholes
light timers
watch dogs
burglar alarms
safes
limitations on traffic flow (people/vehicles)
fences
Symbolic barriers
shrubs, trees
short fences
defined walk ways

4. Surveillance
Street and doorway lights
Physical design
positioning of windows
apartment building entrance lobbies
placement of playgrounds and high activity areas
size and state of common areas
closed-circuit television

Social Context

1. Likelihood of witnesses
Street traffic
pedestrians
vehicles
variation in activity between day and night
Visibility of events to nearby buildings
Characteristics of likely witnesses
criminals
drug addicts
derelicts
law-abiding citizens

2. Probable actions of witnesses
Neighbors able to identify strangers
Frequency and intensity of interaction among neighbors
friends
casual acquaintances
enemies
Neighborhood watch active in area?

3. Apparent attitude of residents toward neighborhood
Condition of residences
yards and lawns
exterior maintenance: windows, paint
common interior areas in apartments
Condition of neighborhood
abandoned cars
trash
common exterior areas in apartments

Immediate Results of Events

1. Harm done to victim
Threat or intimidation
weapon used or threatened
home or business broken into
injury threatenedshort-run and long-run stress and anxiety
Injury
extent of injury
medical care or hospitalization required

long-run debilitating effects of injury

Property loss

value of property stolen

value of damage

Prospects for recovery

covered by insurance/effect on premiums

replacement of lost property possible

Operation ID or other identifying marks

2. Legal issues

Statutory category/legal definition

Elements of proof required

arrest

indictment

conviction

Potential penalties

violation

misdemeanor

felony

Previous court cases

new law or known track record

3. Gain to offender

Property

Revenge

Gratification

Status/recognition

RESPONSES

All problems result in some kind of community response, both among institutions such as government agencies and the mass media, and among individual citizens. These responses are important for understanding the problem for two reasons. First, community responses define police goals and objectives; thus they may be used to help specify how serious a particular problem is, and why it is a problem. Second, these responses directly affect the problem itself.

Community Response

1. Neighborhood affected by the problem

Perceptions of problem

Perceived amount of crime in neighborhood

perceived handling of problem by police

perceptions of courts, other agencies

Attitudes about problem

fear level

acceptance of problem

perceived seriousness of problem

expectations of action by police, courts

Actions

willingness to prevent further incidents

self-protection, avoidance

participation in Neighborhood Watch

Political clout

2. City as a whole

Perceptions of problem

know problem exists

perceived relevance of problem to their neighborhood

Attitudes about problem

special/vested interests

fear levels

expectations of action by police, courts

responses to victim/suspect

attitudes toward press/media

feels responsible for incidents outside immediate area

Actions

avoid areas perceived to be risky

willing to help solve problem

3. Opinions of people outside city

Investors

Commuters

Shoppers

Tourists

Job-seekers

4. Community groups

Churches

Civic associations

Clubs

Neighborhood Watch

Institutional Response

1. Police
    - Prevailing attitudes
        - seriousness of incidents
        - victims
        - perpetrators
        - departmental philosophy
        - individual philosophy
    - Workload
        - perceived workload
        - actual workload
        - staffing levels
        - contribution of this problem to overall workload
    - Approach to problem
        - procedures
        - previous work with victims and witnesses
        - past experience/previous approach to this problem
    - Belief in effectiveness of approach
    - Resources
        - information systems
        - equipment
        - expertise
        - funding

2. Prosecution
    - Priorities
        - special sections
        - case screening
    - Procedures

3. Courts
    - How actors are treated
        - victims
        - offenders
        - repeat offenders and repeat victims
    - Readiness to incarcerate
    - Procedures

4. Corrections
    - Space available
    - Jail and prison conditions
    - Parole procedures

5. Sheriff
    - Booking
    - Jail space
    - Work release programs
    - Policies

6. Legislature
    - Knowledge of problem
    - Willingness to deal with problem
    - receptivity to change
    - How voters affected

7. Preventive Programs

8. Mass media
    - Effects of news coverage on public, victim, and offender
    - tendency to sensationalize violence
    - copycat crimes result
    - Willingness to cooperate with justice agencies

9. Business sector
    - Insurance
        - contribution to problem
        - knowledge about problem
    - Housing industry
    - Business organizations

10. Schools
    - Crime prevention programs
        - impact on community
    - Truancy
    - Vandalism

11. Medical
    - How victim/offender treated
    - Willingness to cooperation with other interested parties

12. Other social services
    - Public housing
    - Mental health
    - Welfare
    - Planning
    - Codes compliance and enforcement
    - Fire
    - Revenue
    - Community Development
    - Other government agencies

Seriousness of the problem

1. Public perceptions
   - how seriously regarded by public
   - why seriously regarded by public
   - publicity about the problem
   - community support and acceptance of present police actions

2. Perceptions of problem by other agents
   - Commonwealth Attorney's view and support
   - Court cases on this problem
   - Other enforcement agencies outside this jurisdiction
   - Perception of city manager and other city agencies

3. How came to police attention

APPENDIX B

TIME SERIES METHODS USED TO EVALUATE THE EFFECTIVENESS OF THREE PROBLEM-SOLVING EFFORTS

This appendix provides some technical details on the time-series analysis of reported crime data summarized in the text. Each case study is considered in order.

Briarfield

Data analyzed are reported residential burglaries, by month, from January 1982 through June 1986, for two areas: the New Briarfield Apartment complex, and the surrounding neighborhood. The surrounding neighborhood was considered to be all areas of Newport News within one mile of the center of New Briarfield. Each series includes 54 points; this is sufficient (if marginally so) for the use of ARIMA and other stochastic modeling techniques.

Examination of the two raw time series showed no evidence of a trend effect, except for the pre/post intervention differences in the Briarfield data set. Examination of the autocorrelation functions confirmed that there was little cause for differencing the data--none of the first few autocorrelations were significant at any reasonable level of significance, and the pattern of autocorrelations that is characteristic of a drifting time series was not present. The lack of significant autocorrelations also argued against a moving average component. None of the first few partial autocorrelations were significant, either, suggesting that an autoregressive component was also inappropriate. Just to be sure, autoregressive and moving average components and first-order differencing were all tried out; addition of each component increased the value of the Akaike Information Criterion, indicating that none of them provided any information. Since an intervention effect could have masked the autocorrelations, both the ACF and the PACF were examined again, using only the pre-intervention data points. Again, there was no evidence of autocorrelation.

Similarly, the autocorrelation and partial autocorrelation functions showed no evidence of seasonality. Addition of 12th order autoregression, moving average, and difference components increased the Akaike value.

Thus the raw reported crime data for both New Briarfield and the surrounding neighborhood appeared to be white noise. However, an examination of the distribution of reported crime values showed consistent deviations from Normality: the right tail was too long. A log transformation Normalized the data nicely. Kolmogorov-Smirnov statistics, comparing the log reported crime distributions to Normal distributions of the same mean and variance, were small and did not approach significance. Due to an overabundance of caution, ACFs and PACFs for both log time series were examined; they resembled the raw functions closely, and none of the first few autocorrelations and partial autocorrelations were significant. It

appeared safe to conclude that the log of reported crimes was approximately Normal-distributed white noise.

This suggested that ordinary least squares would be the simplest method of assessing the impact of the police department's intervention. Following McCleary and Hay (1980), three potential forms of impact were examined:

- An abrupt but temporary impact;
- A gradual, permanent impact;
- An abrupt, permanent impact.

The intervention was presumed to begin on 1 February 1985; February was the first month in which the activities of Officer Haddix and Detective Duke were noticeable in the Briarfield complex. The abrupt, permanent hypothesis fit the data best, in that it minimized both the Akaike criterion and the standard error of the estimate. The equations actually estimated were

$$\log B = \underset{(.076)}{1.958} - \underset{(.135)}{.347}\, I \pm .457$$

$$\log N = \underset{(.062)}{2.804} + \underset{(.111)}{.026}\, I \pm .379$$

where B represents reported residential burglaries in New Briarfield, N represents reported residential burglaries in the surrounding neighborhood, and I is a dummy variable that takes the value of 0 for the preintervention period, and 1 for the postintervention period. Statistical tests of the residuals of each regression indicated no evidence of heteroskedasticity, serial correlation, time trend, or nonlinearity. The residuals of the two regressions were also uncorrelated with one another.

These results indicate that the intervention had no effect on burglaries in the surrounding neighborhood, but reduced burglaries in New Briarfield by 34.7 percent. An average of 6.757 burglaries were reported each month between January 1982 and January 1984, thus the reduction due to the police intervention averaged 2.345 burglaries per month. Over the fourteen months since the police began their work, about 38 burglaries have been prevented. We can be 90 percent certain that the total number prevented was greater than 12 and less than 54.

Thefts From Vehicles Parked Downtown

After analyzing the problem, Officer Swartz concluded that the theft from auto problem could be cleanly divided into two parts: a large Shipyard factory located between 39th and 42nd streets separated the lots into two parts. Thus two time series were examined, a northern series and a southern series. Both include all reports of theft from automobiles, theft of automobile parts, vandalism of automobiles, and tampering with automobiles reported between January 1982 and July 1986.

Although the thefts in the northern and southern sections of the area were apparently committed by two different sets of thieves, there was a strong presumption that the two time series would be generated by similar processes. In addition, the police intervention began at the same time in each area, and was of similar form in each. Thus a decision was made to add the two series together and analyze the aggregate series.

Examination of the raw time series, ACF, and PACF for the preintervention series suggested no trends, but a weak seasonal component. After taking 12th-order differences, a spike at ACF(1) suggested that a first-order moving average model would work well. Experimentation with other forms confirmed that an $(0,0,1)(0,1,0)_{12}$ form minimized the value of the Akaike criterion. The residuals were close to Normal-distributed, homoskedastic, and not serially correlated.

The police intervention began with an increase in surveillance leading to the arrest of three, persistent offenders in April 1985. A cursory glance at the raw series shows that the effect of this intervention was immediate and constant; thus there was no need to experiment with various functional forms. The question was, how big an effect did the police intervention have on the number of thefts committed? When a zero-order transfer function was applied to the full time series, the following parameters were obtained:

$$MA(1) = \underset{(.121)}{-.212}$$

$$I(0) = -26.461$$
$$(3.824)$$

After controlling for short-term effects of random shocks (through the MA term), the preintervention average was 50.9 thefts per month; the postintervention average of 24.4 thefts per month represents a reduction of 52 percent. It is 90 percent certain that the percentage reduction is greater than 40 percent, and less than 64 percent. Simply put, the police intervention appeared to cut the incidence of these crimes in half.

As mentioned in the text, the average losses per theft were $250, not including damage to vehicle. Thus a conservative estimate of the dollar losses prevented by the police intervention since April 1985 would lie between $80,000 and $130,000; the best guess would be about $105,000. Since many vehicles were damaged in the thefts, and many of the minor thefts go unreported, the amount of true losses prevented is probably closer to $200,000.

Prostitution Related Robberies

The data set consists of all reported robberies against persons committed in Police District 1 (roughly corresponding to the Newport News downtown area), from January 1982 to June 1986. Due to the nature of the offenses considered and the police department's intervention, there seemed little cause for concern about displacement or spillover effects.

As in the case of New Briarfield burglaries, examination of the ACF and PACF indicated that no trend, autoregressive, moving average, or seasonal components should be included in the model. The insignificance of seasonality was somewhat surprising; one might expect that both prostitution and robbery would be most prevalent in the summer months and least prevalent in the winter. Conversations with patrol officers confirmed the statistical results, however: neither the supply of nor the demand for street prostitution seemed to slack off in cold weather.

Close examination revealed that the monthly robbery figures for both the pre-intervention and post-intervention periods were very nearly Poisson-distributed. This confirmed the results described above: the likelihood of a robbery report appeared to be about constant at all times. A square-root transformation would have Normalized the data; on balance, however, the small deviations from Normality seemed less worrisome than the added complexity of interpreting regression results on the transformed data set.

Again, three forms of impact were examined. The intervention was presumed to begin on 1 January 1986; although some elements of the intervention were only added later, the initial response to the problem began in that month. Again, the hypothesis of an abrupt, permanent impact fit the data best. The actual equation estimated was

$$R = 3.571 - 1.395\, I \pm 2.054$$
$$(.347) \quad (.607)$$

Thus a 39.1 percent reduction in reported robberies in District 1 can be attributed to the police activity. This represents 25 robberies prevented over the past 18 months; if there were no displacement to other districts of the city, this would represent a a 7 percent reduction in robberies citywide. The assumption of no crime displacement is at least conditionally confirmed by the fact that the number of robberies reported outside of District 1 decreased by 5.5 percent in 1985.

APPENDIX C

TWO ADMINISTRATIVE PROBLEMS

The primary purpose of the problem-solving process is to solve the problems of the public. But police managers face many internal problems that must be solved, and some department members felt that the structure of the problem-solving process was sufficiently general to allow it to be adapted to administrative problems. In this section, we describe two attempts to adapt the process to primarily internal problems.

Auto Accidents Involving City Vehicles

The police Accident Review Committee was concerned about the growing number of accidents involving police vehicles. A request to study the problem filtered down through the chain of command, finally landing in Officer Sonny Timberlake's charge.

He began by looking at department records. Timberlake found that 105 accidents involving police vehicles occurred in 1984 and 1985, but only 42 of them could have been prevented by the officer driving the car. The preventable accidents were usually caused by carelessness, and were mostly minor: drivers backed up into parked cars, or they hit buildings and light poles while talking on the radio or handling other equipment. Almost half of the preventable accidents involved probationary officers. The new recruits were often impatient to get on the streets at the beginning of their shift, or distracted by the radio or other events.

Officer Timberlake was surprised by the apparently large number of minor accidents, so he went to the Virginia Department of Motor Vehicles to get comparison data. He concluded that when the number of miles driven was taken into account, Newport News police officers were less likely to become involved in accidents than the average driver.

Timberlake's analysis also suggested that some officers were accident-prone, so he recommended that a remedial driving program be instituted. A training officer would ride with the bad driver, recommending changes in bad habits; he would also help teach the accident-prone driver how to maneuver in traffic while exceeding the speed limit, and how to operate a vehicle while using the radio and emergency equipment at the same time.

To prevent simple carelessness, Timberlake also recommended that monthly reports be posted, describing injuries, property damage, and events leading up to accidents involving police vehicles.

Police Morale

In March 1985, the police department's Employee Concerns Committee indicated their belief that staff morale was low. Low morale, the committee members felt, was the reason many officers had left the department over the last several years. The committee also identified low morale as the source of a variety of administrative problems.

Deputy Chief Charles Hinman, a member of the Employee Concerns Committee, wanted to investigate the problem further. He decided to use the problem analysis guide in his investigation. Although the problem was an administrative one, Hinman felt the checklist would be a useful tool.

His first step was to obtain the services of a student at Christopher Newport College. The student was given the task of developing a questionnaire to be distributed to personnel. The purpose of the survey was to determine the level of morale of all police personnel, and the causes and effects of what dissatisfaction there was. Although the results of survey are still being tabulated, Hinman's preliminary findings suggested that morale was, indeed, a problem.

As the survey will serve as only one means of data collection, Deputy Chief Hinman is currently completing a literature review and plans to talk with other departments to determine other means of assessing morale.

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