



Rapid Response and Community Policing: Are They Really In Conflict?*

by
Richard C. Larson
Massachusetts Institute of Technology
Cambridge, MA

National Center for Community Policing
School of Criminal Justice
Michigan State University

* This paper builds from a presentation with the same title given at the Seventh Meeting of the Executive Session on Community Policing at Harvard University, Kennedy School of Government, June 17, 1988.

MSU is an affirmative-action, equal-opportunity institution.

This publication was made possible by a grant from the Charles Stewart Mott Foundation to the School of Criminal Justice, Michigan State University. The information contained herein represents the views and conclusions of the author and not necessarily those of the Mott Foundation, its trustees, or officers.

Copyright © 1990 by the Board of Trustees, Michigan State University.

[#] denotes reference number

* denotes endnote

From the days of Lyndon Johnson's Crime Commission (1966), the President's Commission on Law Enforcement and Administration of Justice [28], there has been a growing rift dividing the community of nationally prominent law enforcement professionals and researchers. One group, stemming from recommendations of the Science and Technology Task Force of the Crime Commission [29], has advocated more creative use of technology and management

science to enhance the effectiveness, efficiency and equity of law enforcement services. The other group, perhaps stemming from the work of the Police Task Force of the Crime Commission [30], has consistently advocated reforms in policing that would "take police officers out of their cars" and "put them on the streets" in order to provide a more community-oriented policing to urban citizens. The latter group have often labeled, somewhat derogatorily, the first group the "rapid response advocates." The latter group have not been so trivially labeled by the former, but they seem to have a self-labeling problem; within the past twenty years the following collection of terms have all been used, often interchangeably: community policing [12, 16, 17, 23, 24, 34, 39-41], problem-oriented policing [9], problem-focused policing [9], team policing [1, 5, 6, 11, 13, 14, 32, 33, 35, 42, 44] and foot patrol [27, 36, 43, 45].

This paper is an attempt to build a bridge across the rift of two important law enforcement communities. The author has a natural bias, stemming from his work as a member of the Science and Technology Task Force of the President's Crime Commission, having been grouped in the past with the "rapid response advocates." My major point in this paper, however, is to argue that community policing (the simple label we use herein) and rapid response (we also accept this label) are not necessarily in conflict. Moreover, we argue that technologies which have arisen in the last ten years, facilitate a type of community policing heretofore impossible. Thus it is imperative that the two groups begin to work more closely together in efforts to achieve their common goals, namely improved provision of law enforcement services throughout the United States.

With the possible exception of the Los Angeles Police Department and a few other departments, previous implementations of community policing programs have been temporary and partial. Officers who have been assigned to these programs viewed them as temporary and often welcomed the revision back to "rapid response" mode. Part of the implementation problem of the past has been that these reforms have been implemented as programs and not operationally into day-to-day routine, using regular patrol officers and not squads. The second problem in the past has been cost. By far the largest component of police budgets is personnel costs, and any new integrated policing will have to exist within given personnel constraints. Most past implementations of community policing have either cost too much or neglected "rapid response," thereby creating community rejection of the idea. As a cost rule of thumb, one can keep in mind the figure of \$70,000 per officer per year as typical throughout the United States.*

If we are to develop an integrated policing that embodies ideas of community and rapid response, it is important to bear in mind that whatever we spend on technology will be miniscule in relation to personnel costs. U.S. municipal police remain one of the most labor intensive under-capitalized industries in the United States. When broadly interpreted there is enormous potential here for "productivity improvement." New computer and telecommunications technologies can now facilitate information-rich innovations in policing, innovations that decentralize authority and control, allowing the beat officer to pursue aggressively problem solving approaches and yet simultaneously provide a rapid response capability greater than that which is common today.

1. The Stereotypical Two Sides of the Argument

a. Rapid Response as Viewed by Community Policing Advocate

Operating in rapid response mode the community policing advocate sees police officers as spending all their time in their cars, either driving around awaiting dispatch to a call for service or en route to a dispatched incident; the only time they get out of their cars is at the scene for calls for service or at meal breaks. The stereotypical argument goes on to say that rapid response advocates wish to push telecommunications and computer technology, using advanced 911, computer-aided dispatch (CAD) systems [20, 21], mobile digital communication systems, and automatic vehicle location (AVL) systems [18], to speed response to virtually all calls for service. The police posture is entirely reactive, not at all proactive. In medical analogy, rapid response represents lots of ambulances ready to respond to medical emergencies with virtually no preventive health care.

Operating in this mode, the community policing advocate sees police insensitive to a community's needs. Most of the time they spend in the car with little informal interaction with members of the community. Operating in reactive rather than proactive mode, police view their job as responding to calls for service, with times between calls for service as rest breaks (the "taxi cab" model). To the extent that crimes are involved with calls for service, the emphasis is on the appearance of crime fighting not on problem identification and resolution. Organizationally, the structure that supports such an operation tends to be rigid, centralized and bureaucratic.

Finally, community policing advocates will point out that rapid response is not important anyway, since (1) 85 to 90 percent of calls for service are not urgent [3], and (2) even urgent incidents incur delayed reporting by citizens. These arguments are buttressed by the Kansas City response time studies [15,25].

b. Community Policing as Viewed by A Rapid Response Advocate

To a rapid response advocate, community policing and the other types of policing mentioned above are costly, utopian, by their very concept temporary, anti-technology, and prone to influences of corruption. They tend to be advocated by academics and reformers where the longevity of implementation is dependent on the term of the current reform-oriented commissioner or chief. Rarely will a community policing program live through the consecutive terms of two or more commissioners or chiefs.

The rapid response advocate goes on to say that police do not have master's of social work (MSW's) and should not be viewed as social workers. And with such a broad-based agenda how does one evaluate an officer's performance with community policing?

Finally, the rapid response advocate will question what happens when *you* truly need rapid response (e.g., when a burglar/robber is trying to break into your home). You, being a member of the community, are naturally interested in community-oriented policing. Community-oriented policing must mean more than just talking to members of the community and identifying problems and must include, in the rapid response advocate's point of view, the ability to respond rapidly to life threatening situations reported in a timely manner. Just because only 10 to 20 percent of calls for service fall into this category, does not mean that they can be ignored. Tossing away low likelihood high-cost events would suggest not investing in life insurance, seat belts, or fire extinguishers.

2. The Needs for Police, as Perceived by the Community

In the following sections, I outline what I believe to be the attributes of an *integrated, information-rich policing*, policing that incorporates the needs and desires of the "community" with the realities of responding quickly to life threatening emergencies.

Communities, which we will define as groups of citizens living in close proximity (in "neighborhoods"), will often value differently -one from the other - the value of alternative law enforcement services. In Boston's North End, double parking is a "way of life" whereas in nearby Back Bay, parking violations are viewed as a priority concern of neighborhood citizens. In some communities, groups of teenagers gathered at a street corner in the evening hours represent a prelude to vandalism and perhaps assaultive type crimes, whereas in other communities "hanging out" is part of the law abiding teenagers' culture. In urban poor and predominantly minority communities, citizens often want police attention directed at drug problems, believing that all other types of crime stem ultimately from infestation of drugs within the community. Whatever the problem, it seems clear that the priorities that various communities place on different police services throughout a city are not homogeneous throughout the city. Thus communities desire to have *negotiated policing priorities*, the negotiation taking place directly between community groups and representatives of the municipal police.

Citizens within a community also desire police attentiveness and responsiveness to recurring community problems that could escalate in seriousness. Addresses that give rise to repeat calls to 911 can signal growing

problems which require early intervention and aggressive and creative problem solving approaches. This requires problem-focused follow-up to certain types of calls for service, a fundamentally different approach from police officers viewing each call for service as a routine thirty minute "job." [9] Examples of recurring problems could be family-focused, perhaps involving alcohol and/or drug abuse and spousal assaults, or could be neighborhood oriented, perhaps involving groups of neighborhood teenagers.

One problem with individual police officers recognizing potentially recurring problems is that it is a rare event for the same police officer to be dispatched back to the same address to a repeat call for service at that address. As a rule of thumb, five individuals are required to staff fully a twenty-four hour a day, seven day a week police patrol position. Moreover, police officers are typically busy at least 50 percent of the time and are unavailable for immediate dispatch to a call for service. Thus, if say "Officer Jones" is one of the five officers assigned to the local police sector, there is only approximately *one chance in ten* that any given call from that sector will be responded to by Officer Jones. The one chance in ten comes from the fact that Officer Jones is only on duty approximately 20 percent of the time when a random call for service occurs, and given that he or she is on duty, there is only about a one in two chance that he or she will be available for dispatch when that call for service arises. Successive calls for service from the same address have 9 chances in 10 of having different police personnel responding.

These logistical truths make difficult a continuity of responsibility regarding problem recognition and resolution by responding police officers. They point to the need to store and retrieve information about past calls for service so that responding officers can be aware of the history at an address prior to arrival there. In medical analogy a physician or nurse practitioner - even if never having seen the patient before - will "pull the patient's file" prior to attempting to provide medical service. Promising research on the problem of repeat calls has recently appeared [24].

Communities also appear to place high priority on foot and motorized patrolling that truly seeks to deter crime, apprehend offenders, and give the community a sense of security (not routine driving around as one would do during "rest breaks" between calls for service). A community-oriented patrolling officer is aware of the opening and closing hours of stores in his patrol area. He is aware of the scheduled times of community meetings such as church groups whose attendees may be elderly and who may benefit from a police car parked by the church when the meeting lets out at, say, 10:00 p.m. [19, 29]. In "problem focused" police patrolling, the officer may take advantage of time between assignments or calls for service to attempt to identify ameliorative actions to certain growing community problems that he or she has become aware of during the past several weeks or months.

Anyone who calls 911 with a truly life threatening emergency is also a member of a given community. That person requires rapid and accurate police response. Community policing should not be antithetical to rapid response for truly life threatening situations. "The community" values rapid response to life threatening calls or calls having high likelihood of arresting a felon. Studies sponsored by the National Institute of Justice in Wilmington, Delaware [2,38] and elsewhere [22,31,37] have demonstrated that a managed response to calls for service is acceptable by the community. The managed response, which is now often labeled "differential police response," usually has the following attributes:

- Non-urgent calls are delayed for up to an hour or more with the caller informed of the anticipated delay and the reason for the delay while still on the phone.
- Certain low priority calls are "teleserved:" that is the report is taken over the telephone.
- Certain calls are shunted to other agencies, perhaps social service agencies.
- Some calls are scheduled perhaps to the next day or tour of duty.
- Some individuals who call in are requested to walk-in a report to the local precinct station.
- Some callers are requested to submit a mailed in report.

These elements of managing calls for service, taken in an appropriate combination for a particular community, provide simultaneously more rapid response capabilities to truly life threatening calls and more unbroken patrolling time for problem solving and community policing. They result in a net reduction of overall dispatches of police officers and a rescheduling of some lower priority dispatches to hours of relatively lower 911 demands.

3. Operational Requirements

To accomplish an integrated urban policing that both is community-oriented and provides rapid response, there are certain operational requirements that must be seriously taken into consideration. To achieve community-oriented problem-focused policing, the following is a minimal set of operational requirements:

- Make available to patrol officers large unbroken (e.g., by dispatches to calls for service) time segments for productive patrolling and/or problem solving.
- Schedule meetings with community members and groups to negotiate and adjust local priorities.
- Incorporate neighborhood negotiated priorities in an on-line data base of the "911" CAD system.
- Integrate foot patrolling with motorized patrolling.

In order to achieve rapid response one must add to the above operational requirements the following:

- Assure dispatch availability of nearby patrol units to respond rapidly to the 10 to 15 percent of calls for service that are life threatening or likely to yield the arrest of a felon.
- Train 911 call takers to diagnose and prioritize correctly (with high probability) the problem reported by the 911 caller.
- Make available accurate and timely data regarding patrol units, community priorities, and likely growing problems (e.g., through repeat call analysis), all on-line on the CAD system.

We expand on these ideas and add additional ones in the sections that follow.

4. 911 Call Taker as the Telephone Triage Agent

In this and the following two sections we outline fundamentally new concepts of the roles of 911 call takers, dispatchers and dispatchable police patrol officers. We believe these new roles are now warranted given the desire by communities to have both community/problem-oriented policing and rapid response, and due to the growing capability of computer and telecommunications technology which allows each of these police professionals to carry out tasks heretofore technologically infeasible.

Regarding technology, it is popular in some police circles to equate computers and communications technology with strong centralized control. These views may have rooted in the 1960's when huge mainframe computers literally "wired in" centralized bureaucratic authority. However, today's miniaturized computers and telecommunications devices - together with database search capabilities - facilitate decentralization, local autonomy and creative use of information [8,10], the very features desired in problem-focused community policing.

In this first section we focus on the 911 call taker. We believe the 911 call taker should be viewed as more than just a recorder of an address and an incident type. The 911 call taker is more than a minimum wage employee. The 911 call taker requires careful training prior to being put to work taking actual calls from the public. The 911 call taker must recognize the diversity of incidents reported to the police and the diversity of callers and their ability to communicate what is happening. A well-trained 911 call taker working in conjunction with an intelligent CAD system to assist in taking the information of the call for service represents the first step in implementing a new integrated policing.

In processing all calls, we must recognize conceptually that there are two types of prioritization error:

1. **Under Prioritization** (the typical concern): placing too low a priority on a CFS, resulting in a "cost" of excess delay and/or too few resources devoted to initial response. Results can be serious injury, loss of life or property.
2. **Over Prioritization** (the oft neglected concern); placing too high a priority on a CFS, resulting in a "cost" of (1) excess delays to *future* CFS's (including life threatening ones) and (2) interrupting unnecessarily officers involved in problem-oriented community policing.

In trying to "avoid making mistakes," 911 call takers operating in many cities today in the U.S. will over prioritize. In trying to get to the majority of calls quickly, police find that in fact they respond quickly to very few. And they needlessly interrupt police officers who could be undertaking problem solving and other important activities.

The new 911 call taker must be educated in the dynamics of police-related incidents that can lead to priority escalation or de-escalation between time of telephone reporting and police arrival at the scene. Understanding typical incident dynamics will assist the 911 call taker in correctly prioritizing calls.

A large source of disappointment to a community member when calling 911 can be the lack of concern shown for the community priorities by the 911 call taker. Even though the 911 caller may be reporting a non-life threatening situation and asking for on-scene service, the 911 call taker should be aware of recent community negotiated policing priorities and then establish a *continuity in police service* by verbalizing this awareness on the phone and explaining the type of response to the caller in view of locally negotiated priorities. Example: "Yes, Mrs. Smith we are aware that beer drinking youths at the corner of Bolyston and Glouster have been a problem over the past six weeks and in fact we have responded seven times to requests to disburse them over this period of time. As soon as the sector car frees up on a current robbery call, I'll be sure he goes over there to disburse the group. And by the way, we are unaware of any serious crimes that have occurred that could be attributed to members of that group, but please feel free to call us immediately if you observe any criminal activities that warrant our more immediate attention." All of the information in this three sentence dialogue could be gleaned from an appropriately structured relational database resident on-line in the CAD computer.

The relational database search indicated by the example above represents only one of the numerous new capabilities available with fourth generation computer languages, and vastly more powerful and fast computers, than were available, say fifteen to twenty years ago. No longer need a CAD system be merely an expensive electronic conveyor belt [4, 20]. The CAD system in fact can be almost anything the police department wants it to be in terms of searching and analyzing data and providing decision support. The technology can serve the police functions given priority by the police commissioner or chief. Generalizing the community negotiated priorities to a more general "background query processing capability," one could pull out records on any combination of information files that police feel important and appropriate in responding to calls for service. In that way, responding to any given address the police officers before arriving at the scene would be aware of any outstanding arrest warrants there or nearby, recent 911 calls, guns registered at the address, "lions in the basement," etc. Again, the medical analogy is the physician "pulling out the record of the patient" before attempting to provide service.

As a result of the above reconceptualization of the role of 911 call takers, these call takers would require much more training, an increase in their professional stature (including an increase in their salaries), and elimination of the practice of assigning officers to communications as a punitive detail.

5. The Radio Dispatcher as the Real Time Manager of Scarce Police Patrol Resources

Too many police dispatchers in the United States are acting as "taxi cab" dispatchers. That is, they "take jobs in," and "dispatch cars to jobs" as cars become available [9, 26]. Taxi cab type police dispatching has been further institutionalized by early forms of police CAD systems, which simply automated the bad practices of earlier decades [4]. Since calls for police service can occupy fifty percent or more of a radio dispatchable patrol

officer's time, the directives of the dispatcher can determine how fifty percent or more of a patrol officer's time is spent. If we begin to realize that in-the-field patrol officers are more than taxi cabs running from job to job, then it is imperative that the dispatcher begin to view his or her role as the *guardian of scarce police patrol resources*.

To integrate problem focused community policing in with the dispatching function, the "jobs" or "tasks" that officers undertake must be broadened. Police officers need long unbroken periods of time to undertake problem-focused community policing. One could do this operationally by assigning, say, a "priority two" level to any patrol unit on "problem-focused policing status." Such an officer could only be interrupted ("preempted") for a priority one (i.e., life threatening) response [18, pp. 65,66;Chap. 6]. To institutionalize this concept, one could require police officers undertaking each such problem-focused community policing task to write up "incident reports" related to each such task. Progress on these "incidents" could be measured in various ways, albeit fundamentally differently from the ways in which calls for service at the scene of incidents are evaluated. An integrated evaluation of patrol officers would then focus on both "911 incidents" and "community-oriented problem-focused incidents."

To preserve a capability to respond rapidly to possible *future* life threatening CFS's, the dispatcher should use police differential response methods [2, 11, 31] in conjunction with "cutoff priority queues." [32] Since the 911 call taker will no longer be saying, "a police car will be there right away Ma'am or Sir," the dispatcher no longer has to attempt to assign every call for service as soon as a local car is available. If the number of locally available cars is below some critical threshold, the idea would be for the dispatcher to hold any non-life threatening calls for service in queue, even in the presence of nearby available police cars, in order to reserve or preserve the availability status of these cars for near-term life threatening calls which may arise. Of course, some of these reserve cars may be in the priority two status of undertaking problem-focused community policing. Thus we see the dual benefits of implementing this feature of differential response, namely that it facilitates problem-focused community policing by preserving long unbroken periods of time for patrol officers and it assures the availability of proximate resources for rapid response to calls that warrant it.

Until the last decade or so, it was technologically infeasible to contact an out-of-car police officer who is responding to a previously assigned call for service. But now sufficiently many hand-held or belt-held radio and telephone communication devices exist, so that minute-to-minute contact with police officers can be maintained even while they are outside of their cars. This capability allows police departments to break with decades-long tradition and to devise policies to implement "unit recall" or "preemption," in which a unit on a low priority CFS is interrupted to go to a high priority CFS. Besides being technologically infeasible, many departments have viewed this as against departmental tradition, risking public outcries when police officers must prematurely leave the scene of an incident to go to a nearby life threatening CFS. However, extension of the differential police response survey results, in which it was shown that citizens are satisfied with delayed police service in non-life threatening situations as long as they are told of the reasons for that delay, one could reasonably conclude that occasional preemption of units on such incidents as lock out, parking violations, cold burglary, etc. would be understood and readily accepted by the citizenry. There are communities such as Peoria, Illinois which now routinely utilize these concepts of unit recall, and there are individual dispatchers in many cities who do this on an informal basis; however, these are exceptions, not the rule. The fundamentally important role of unit recall must be accepted within U.S. policing.

Recognizing the importance of dispatching, police departments should send dispatchers to dispatcher training schools, give them preferential pay, and eliminate the dispatching assignment as an often punitive assignment.

6. The Police Patrol Officer as Mobile Autonomous Professional

The third and most important type of police personnel that we attempt to reconceptualize is the motorized dispatchable police officer. The fundamental hypothesis is the following: To ensure the long-term successful

implementation of problem-focused/community policing, we must change in fundamental ways the patrol officer's environment: organizational, physical, and technological. One could easily write a book on these new proposed attributes of a police officer's environment, and in this section I will merely sketch some of the elements that I feel to be important.

Organizationally, the police officer needs to be freed from the bondage of pyramidal quasi-military supervision that is indifferent or hostile to innovation, creativity, risk taking, and "success," and values strongly "not making mistakes." New criteria for evaluation and promotion must be found.

Physically, the officer's working environment should include specially designed patrol vehicles, as one sees for other motorized professionals in such services as fire, emergency medical services, parcel deliveries (such as Federal Express, and the U.S. Postal Service). The officer should also have an assigned desk at the station house and limited access to support personnel (e.g., secretaries).

Technologically, the patrol officer should be provided technology to give him or her timely, easy access to information she or he needs to undertake creative problem solving and to work as an independent professional. A current example is lap-top portable computers for creating incident reports, as is done in the St. Petersburg, Florida Police Department and as is being tried in numerous other police departments around the country. Another example is the full-scale implementation of mobile cellular telephones, as also is being tried by the St. Petersburg Police Department, for communicating professionally with the outside world. Police officers in the car and on foot can also benefit from mobile digital communication systems to provide access to certain databases and to communicate emergencies.

Let us examine mobile cellular telephones as one new technological innovation for the mobile autonomous professional. For "problem solving" the police officer needs to create and maintain a "local network" of contacts [9]. These contacts could be in the following areas: drug and alcohol abuse, family counseling, the probation department, building inspection department, department of sanitation, health department, schools, tow companies, locksmiths, alarm companies, local businessmen, community organizations such as churches, etc. I cannot think of any other type of professional who would be required to maintain communication with such an elaborate and diversified network and who is asked to exit his office and deposit a dime or quarter in a public pay telephone in order to place a telephone call. Many executives, salesperson, real-estate agents, and consultants, have seen the benefit of communicating from their automobiles. Isn't it time to consider the same thing for police officers? Such a technological innovation would allow early diagnosis and intervention by leveraging the scarce resources of the police department onto the broader resources of the community and its government. It would facilitate implementation of what Bob Trojanowicz calls "full spectrum policing." [40] Such a new technology could also facilitate CFS shunting and scheduling, whereby the responding officer could place a call to the person reporting the CFS and undertake the shunting and/or scheduling at that time on the telephone. Needless to say, use of the telephone would place no additional demands on already scarce municipal police radio frequencies.

One might raise the issue of costs of such wide-scale use of mobile cellular telephones. The author's estimation is that the cost per car per year for use of a mobile cellular telephone (cost including purchase and/or lease costs plus costs of individually placed calls) would be approximately \$2,000. A two-officer round-the-clock police patrol unit now typically costs more than \$500,000 a year in many U.S. cities (90 to 95 percent of this cost being directly related to personnel costs). The \$2,000 per year additional represents a 0.4 percent increase in variable costs. The investment would be cost effective if the mobile cellular telephone provided an increase in service to the public greater than that which could be achieved by an additional \$2,000 added to status quo operations.

Another objection to mobile cellular telephones may be that of abuse or corruption. For instance, wouldn't the officer or officers in the car use such a device for personal calls? For one thing, each call that is placed is

monitored exactly as to the phone number called and the time of placing the call as well as the duration of the call, thus any abuse of the system could be monitored by an individual at headquarters who routinely sampled the monthly billings. Moreover, it might be valuable to have the capability to call one's spouse from the car in certain situations, say situations in which a dispatch is about to take the officer beyond the time limit of end of tour, in which case the officer might report being home late for a meal. Such personal calls from one's office are not frowned upon by others professionals, so why should police be singled out?

The details of devices, be they cellular mobile telephones, lap top computers, hand-held radios, etc., are less important than that fundamental realization: current computer and telecommunication technologies allow organizations - including police departments - to do things and to structure themselves in ways not even dreamed of a few years ago. As Peter Drucker [8] and others [10] argue, the chip-based revolution in electronic miniaturization, together with modern relational databases, can free up organizational information flows from the yoke of central authority. The mobile autonomous police officer on the beat can have access to problem solving information not even collected on main frames a few years ago. Technology, rather than reinforcing the old pyramidal organizational structure, can liberate the beat officer to pursue aggressively his or her own agenda leading to crime reduction and resolution of community-based public safety problems. It can assist dispatchers to protect scarce police patrol resources, assigning them quickly only to calls that truly need rapid response. It can assist 911 call takers and field officers in providing a continuity of police service not possible without on-line databases. The changes that police departments are about to experience due to this new information richness will be remarkable, and now is the time for the best minds in law enforcement to focus on setting the agenda.

In educating the mobile autonomous police professional, one needs to augment traditional police academy training in fundamental ways. Preferably one could implement regional school centers to undertake these new and challenging educational tasks. Chiefs and commissioners in forward looking cities would also have to be identified who could serve as early "model implementors" to provide "role models" for other departments throughout the United States.

7. Research Program

This paper has deliberately been structured to be an "advocacy" piece, not a carefully worded research document. It builds on the author's twenty-three years of professional police research and consulting. But it reaches beyond many well established findings, extrapolating from the two previous decades of police research experience. The hypotheses underlying the proposals would best be tested in trial implementations, closely monitored by researchers and supported by the National Institute of Justice, the Mott Foundation, and others, in order to fine tune the concepts, identify erroneous hypotheses, and to refine these ideas in implementation.

One approach would be to support "demonstration projects" in which the local police department would attempt "full implementation" and the results would be evaluated and disseminated. A second more incremental approach would be to test on a one-at-a-time basis the key new ideas herein: 911 operators as triage agents, dispatchers as deployers and guardians, police patrol officers as mobile autonomous professionals, use of mobile cellular telephones, use of on-line data bases in CAD systems having community priorities, implementation of cutoff priority queuing as a component of differential police response (i.e., deliberately delaying CFS's in the presence of available patrol units), recalling or preempting dispatch patrol officers, assigning a CFS priority status to a patrol unit engaged in "problem solving," using a "background query processor" in a CAD system, and measuring the overall eventual reduction in call rates as a major impact of the problem solving officer focusing on repeat calls.

ENDNOTES:

*This figure includes salary, benefits (including pension contributions), and a limited amount of overhead expense

REFERENCES:

1. "Neighborhood Team Policing," Peter B. Bloch and David Specht, Washington, D.C. Urban Institute, 1973.
2. "An Alternative Approach in Police Response: The Wilmington Management of Demand Program," M. Cahn and J.M. Tien, National Institute of Justice, Washington, D.C., 1981.
3. "Relationship of Response Delays and Arrest Rates," C. Clawson and S. Chang, *Journal of Police Science and Administration*, Vol. 5, No. 1, 1977.
4. *A National Assessment of Police Command, Control and Communication Systems*, K.W. Colton, M. Brandeau, and J. Tien, Public Systems Evaluation, Cambridge, Massachusetts, 1980.
5. *Evaluation of Community-Centered Team Policing*, J. Cordrey, and K. Kotecha, Wright State University, Dayton, Ohio, 1971.
6. "An Analysis of Team Policing in Dayton, Ohio," John Cordrey and Gary K. Pence, *Police Chief*, Vol. 39, No. 8, August 1972.
7. *Neighborhood Assistance Officer's Program*, Dayton Police Department, Dayton, Ohio, 1975.
8. "The Coming of the New Organization," Peter F. Drucker, *Harvard Business Review*, pp. 45-53, January-February 1988.
9. "Problem-Solving, Problem-Oriented Policing in Newport News," J.E. Eck, and W. Spelman, National Institute of Justice, U.S. Department of Justice, Washington, D.C., (undated).
10. "Liberating Technologies," S.C. Florman, *Technology Review*, p. 18, October 1988.
11. W. Gay, H. Day and J. Woodworth, 1976, National Evaluation Program Phase One Summary Report: Neighborhood Team Policing, Washington, D.C. National Institute of Law Enforcement and Criminal Justice, U.S. Department of Justice, 1976.
12. "Community Policing: Would You Recognize It If You Fell Over It?" Frances X. Hartmann (with Lee P. Brown and Darrel Stephens), draft presented at the Executive Session on Community Policing, Harvard University, November 5-7, 1987.
13. Institute for Human Resources Research, Phase One National Evaluation of Selected Patrol Strategies - Specialized Patrol Operation Under the National Evaluation Program, Products 1-6, 1975, Bethesda, Maryland Institute for Human Resources Research.
14. "Evaluation Report on the Model Cities Team Policing Unit of the Holly Oak Police Department," John Angell, Raymond Galvin and Michal O'Neill, Holly Oak, Massachusetts: Holly Oak Police Department, 1972.
15. Kansas City Police Department, Response Time Analysis: Executive Summary, 1977, Volume 1: Methodology, 1977. Volume 2: Analysis, 1977. Volume 3; Part II: Crime Analysis, 1979. Kansas City Missouri Police Department, Board of Commissioners, Kansas City Missouri.
16. "Police in Communities: The Quiet Revolution," George L. Kelling, draft presented at the Executive Session on Community Policing, Harvard University, November 5-7, 1987.
17. "From Political to Reform To Community: The Evolving Strategy of Police," George L. Kelling and Mark H. Moore, draft presented at the Executive Session on Community Policing, Harvard University, November 5-7, 1987.
18. "Evaluation of A Police Automatic Vehicle Monitoring (AVM) System: A Study of the St. Louis Experience, 1976-77," Gilbert C. Larson and James W. Simon, U.S. Department of Justice, Law Enforcement Existence Administration, National Institute of Law Enforcement and Criminal Justice, Washington, D.C., 1979.
19. *Urban Police Patrol Analysis*, Richard C. Larson, MIT Press, Cambridge, Massachusetts, 1972.
20. "The Future of Police Emergency Response Systems," Richard C. Larson, National Institute of Justice, *NIJ Reports*, pp. 2-6, March 1985.
21. "Synthesizing and Extending the Results of Police Research *Studied*: Final Project Report," Richard C. Larson and Michael F. Cahn (with Edward Kaplan), Public Systems Evaluation, Inc., Cambridge, Massachusetts, October 1981.
22. "Evaluation of the Differential Police Response Field Test," J. Thomas McEwen, Edward K. Connors, III, and Marcia I. Cohen, U.S. Department of Justice, National Institute of Justice, Washington, D.C., 1986.

23. "Toward a Working Definition of Community Policing," Susan Michaelson with George L. Kelling and Robert Wasserman, draft presented at the Executive Session on Community Policing, Harvard University, November 5-7, 1987.
24. "Developing a Policing Style for Neighborhood Oriented Policing: Executive Session #1," T.N. Oettmeier and W.H. Bieck, Houston Police Department, 1987.
25. "Police Response Time, Its Determinants and Effects," Tony Pate, Amy Ferrara, Robert A. Bowers, and John Lawrence, Mid-West Research Institute and Police Foundation, Washington, D.C., 1976.
26. "The Character of Police Work: Implications for the Delivery of Police Services," G. Pierce, S. Spaar, L. Briggs, Northeastern University, Boston, Massachusetts, September 1988.
27. *The Newark Foot Patrol Experiment*, Police Foundation, Washington, D.C., 1981.
28. "The Challenge of Crime in a Free Society," a report of the President's Commission of Law Enforcement and The Administration of Justice, United States Government Printing Office, Washington, D.C., 1967.
29. President's Commission on Law Enforcement and Administration Justice, Task Force Report: Science and Technology, Washington, D.C., U.S. Government Printing Office, 1967.
30. President's Commission on Law Enforcement and Administration of Justice, Task Force Report: The Police, Washington, D.C., U.S. Government Printing Office, 1967.
31. "Evaluation of the Differential Police Response Field Test," Research Management Associates, Inc., Alexandria, Virginia, September 1984.
32. "An N Server Cutoff Priority Queue Where Arriving Customers Request Random Number of Servers," C. Schaak and R.C. Larson, *Management Science*, 1988.
33. *Team Policing: Seven Case Studies*, L.W. Sherman, C.H. Milton, and T.V. Kely, Police Foundation, Washington, D.C., 1973.
34. "Structural Change in Support of Community Policing," Malcolm K. Sparrow, draft presented at the Executive Session Community Policing, Harvard University, November 5-7, 1987.
35. *Evaluation of Team Policing In Cincinnati: A Technical Report (Volumes I and II)*, A. Schwartz and S. Claren, Police Foundation, Washington, D.C., 1977.
36. "Traditional Preventive Patrol," Theodore H. Shell, Don H. Overly, Steven Schack, and Linda L. Stabile, National Evaluation Program Phase One Summary Report, prepared for the National Institute of Law Enforcement and Criminal Justice, Washington, D.C., June 1976.
37. "An Evaluation Report of the Worcester Crime Impact Program" James M. Tien, Richard C. Larson, J. Green, J. Williamson, and V. Dunlap, Public Systems Evaluation, Inc., Cambridge, Massachusetts, 1975.
38. "An Evaluation Report of An Alternative Approach in Police Patrol: The Wilmington Split-Force Experiment," James M. Tien, James W. Simon and Richard C. Larson, Public Systems Evaluation, Inc., Cambridge, Massachusetts, March 1977.
39. "The Impact of Community Policing on Serious Crimes," Robert C. Trojanowicz, draft presented at the Executive Session on Community Policing, Harvard University, November 5-7, 1987.
40. "Fear of Crime: A Critical Issue in Community Policing," Robert C. Trojanowicz (with George Latimer, Patrick V. Murphy, and Daniel Whitehurst), draft presented at the Executive Session on Community Policing, Harvard University, November 5-7, 1987.
41. "City of Houston Police Department Command Station/Neighborhood Oriented Policing Overview," Catherine J. Whitmire, Lee P. Brown, Chief of Police, (undated)
42. "Specialized Patrol Projects," Kenneth W. Webb, *et. al.*, National Evaluation Program Phase One Summary Report, National Institute of Law Enforcement and Criminal Justice, 1977.
43. "St. Louis Metropolitan Police Department - Foot Patrol Project Evaluation Report," J. Walsh, St. Louis, Missouri Metropolitan Police Department, 1975.
44. "Evaluation of Community-Centered Team Policing Program," Wright State University, 1971.
45. "Boston Power Patrol," a case in policing prepared by Marc Zagans under supervision of Robert Leone, John Fitzgerald Kennedy School of Government, Harvard University, 1987.

If you wish to receive a copy of a National Center publication please contact us at the address or telephone numbers given below:

National Center for Community Policing
School of Criminal Justice
Michigan State University
560 Baker Hall
East Lansing, Michigan 48824-1118
800-892-9051 or (517) 355-9648