Responsiveness is a critical issue in thinking about the problem of providing public goods and services. It is particularly critical where the preferences of individuals differ or where they may change over time. I would like to discuss the problem of designing institutional arrangements which increase the responsiveness of public officials to diverse communities of interest. Police services will be the specific focus of this paper.

THE PROBLEM OF DESIGNING INSTITUTIONAL ARRANGEMENTS

When individuals are engaged in transactions which primarily involve the production and exchange of what are called "private goods," responsive institutional arrangements are relatively easy to design. Private goods and services are highly divisible and can be packaged, contained, or measured in discrete units. The private good or service which one person utilizes or consumes is not available to anyone else. A loaf of bread is an example of a private good. The institutional arrangements of a market enable private entrepreneurs to provide private goods under conditions that can exclude potential consumers from enjoying the benefit unless they are willing to pay the price. The dynamics of a market lead the private entrepreneur to be highly responsive to the preferences of his consumers, depending, of course, on their ability to back their preferences with cash. If he is not responsive to their preferences, they will go somewhere else. The success of a private entrepreneur in responding to consumer preferences can be measured to a large extent by his ability to sell sufficient goods and services to cover costs.

The design of responsive institutional arrangements is a more difficult task when public goods and services are involved. Purely public goods and services are highly indivisible, and potential consumers cannot easily be excluded from enjoying the benefits. National defense is an example of a purely public good. Once it is

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provided for some individuals living within a particular country, it is automatically provided for all other citizens whether they want it or not and whether they pay for it or not.

In addition to the purely private good and the purely public good, there is a continuum in between. Within this continuum, the production or consumption of goods and services may have spillover effects. Air pollution which results from producing private goods is an example of a negative spillover. Most aspects of the production process affect only those directly involved, but the discharge of factory smoke affects others in a wider community. The benefits a neighborhood receives from the location of a golf course or park are a positive externality.

The provision of public goods or services having appreciable spillover poses a number of difficulties in the design of institutional arrangements. Only private entrepreneurs who will themselves directly benefit from the provision of a public good, or who can make some arrangement for others to share the cost, will be led to produce a public good. Under voluntary provision, consumers of public goods have no incentive to reveal their preferences for the good. Holdouts who refuse to cooperate in paying costs will receive the benefits from the good along with those who do pay. Beneficiaries will be led to minimize their share of the costs.

If individuals wish to have a higher quality of public goods than would be provided under voluntary arrangements, institutional arrangements must be designed to compel each individual to pay his share of the costs. A governmental agency, for example, can be established to provide public goods or services for those living within specified political boundaries. Users can be forced to pay for the good through compulsory means such as taxes. However, payments for services are extracted whether citizen consumers like what they receive or not. The lack of an exchange transaction substantially reduces the level of information about user satisfaction transmitted to public agencies as compared with private agencies.

While it is thus possible to provide public goods and services, the resulting institutions will never be as responsive to the preferences of consumers as the institutional arrangements which provide private goods and services under competitive conditions. Elections are substitutes for market mechanisms in indicating individual preferences regarding what level of public service should be provided. Elections and bureaucratic structures are not as sensitive in revealing user preferences as a market which enables each individual to choose how much he wants from a set of alternative
products. Some individuals will have a greater voice in articulating preferences within public decision-making structures. The wealthy and the better educated will have a better opportunity than others, as they have also in a private market.

However, the lack of divisibility makes it difficult for any individual to specify exactly what he wants. Further, the difficulty in measuring output makes it hard for a public agency to evaluate whether an appropriate level of service is being provided to meet the preferences of those who pay the costs. Consequently, inherent difficulties exist in designing institutional arrangements for the provision of any public good or any good with significant positive or negative spillovers.

THE NATURE OF POLICE SERVICES

Police Services as Public Goods. When police patrol traffic, most citizens in a jurisdiction benefit from the increase in safety thus provided. This aspect of police work can be thought of as a relatively pure public good. Even when police deal with a family quarrel, other families in the neighborhood receive the indirect benefit of being protected against the change that a violent conflict in one family may cause in the neighborhood. Therefore, it must be assumed from the start that responsive institutions for the provision of police services are difficult to design simply because of the public good aspects of police services.

The Type of Work Involved in Policing. A second major factor increasing the difficulty of designing police institutions responsive to individual preferences is the specific type of work involved in policing. Police work is largely person-to-person contact between individual policemen and citizens. Emergency illnesses, family quarrels, burglaries, traffic violations, gang fights in the street, and peaceful political demonstrations are all included within the routine work load. When a policeman responds to a call, little time is available to ask for instructions from headquarters. Police work is unusual for the amount of discretion which necessarily is placed in the lowest ranks. Even though semimilitary discipline is characteristic, it is difficult for supervisors in a police department to exert effective control over the work of patrolmen.

To compound this problem, police work is frequently dangerous. Each policeman knows that his own life may depend upon the support given him by his fellow officers and vice versa. Policemen also deal with situations where the citizens are apt to manifest their worst, rather than their best, characteristics. They learn to be suspicious of all individuals and in all transactions with the public.
Such suspicion, while understandable in light of police work, hardly leads policemen to view themselves as public servants responsive to the needs of citizens.

THE INTERDEPENDENCE OF POLICE AND OTHER INSTITUTIONAL ARRANGEMENTS. Whether a police agency is able to maintain public order depends not only upon its own effectiveness but also on the effectiveness of other institutional arrangements in any community. The degree of security enjoyed by individuals within a community is the result of individuals interacting with one another within a wider set of institutional arrangements.

If employment markets, housing markets, educational systems, and general governmental mechanisms are working relatively well, fewer individuals will resort to illegal means of solving problems. However, if the other institutional arrangements are not functioning well, the number of poor and unemployed within a community will increase and police will face the problem of increased law breaking.

This interdependence of police and other institutional arrangements creates special problems in the design of a responsive police institution. Wealthy and well-educated individuals will always have a fairly effective voice in articulating preferences for police services. The problem is how to increase the voice of disadvantaged people who need police service to protect them from crime and violence as well as to protect their right to articulate their dissatisfaction with other institutional arrangements in a society.

THE INFLUENCE OF THE TYPE OF COMMUNITY BEING SERVED. Of particular concern in the design of a police institution is the relative homogeneity of the community as measured by such indicators as income, race, religion, and home ownership.

When a population is relatively homogeneous, individuals are more apt to agree on basic values and morals. By mutual agreement, actions are more likely to stay within agreed upon standards and to lower the general level of demand upon the police for the maintenance of order. However, when a population is relatively heterogeneous, individuals are more apt to disagree on basic values and moral premises. An action that one individual considers appropriate may be regarded by his neighbor as a threat to his security. The more heterogeneous the preferences of the individuals being served by the police, the more difficult it is for the police to be responsive. No matter what the police do, someone is unhappy.

Attempts to enforce conventional morality in a heterogeneous community increase the problem of responsiveness still further. If
activities which many individuals do not consider immoral are made illegal, the basic calculations of risk and profit of individuals engaged in such activities are significantly changed. When activities such as gambling are legal, many potential sellers enter the field and the costs for the consumer are relatively low. If gambling is made illegal, many individuals who do not want to risk legal sanctions stop rendering such services. It is an odd paradox that making some activities illegal may actually enhance the opportunities for profit for those willing to run some risks and also increase the likelihood of police graft.

The Problem of Finding Valid Indicators of Performance. Without valid indicators of performance it is hard for individuals working within any type of institutional arrangements to be responsive to citizen preferences. Most urban police departments rely on the FBI Crime Index or similar indices as measures of performance.

The major problem with utilizing any crime index as an indicator of police performance is that its purpose is to measure crimes committed rather than crimes prevented. Since police attempt to prevent crime, the amount of crime committed cannot adequately be interpreted as a measure of the amount of crime prevented. Ideally, the indicators used would show what would have happened if the police had not been providing services. Such measurement, however, is impossible.

This basic problem is compounded in larger police jurisdictions. Police administrators in smaller departments can know more about what is going on and can directly coordinate many activities. Police administrators in smaller communities also come into direct contact with many citizens and can more accurately assess the success of their department as evaluated by citizens. Police administrators of larger departments are rarely able to interact directly with either their own men or with citizens who are being served. As a result, police administrators in large cities become dependent upon internal statistical reports about the activities of various subunits. In such reports, data are aggregated in ways that obscure much essential information about demand and response patterns.

The Problem of Designing Institutional Arrangements for Providing Responsive Police Services

Given the nature of police services, it will be difficult to design institutional arrangements to meet any particular set of performance criteria, whatever they might be. Recent developments in
organization theory provide theoretical grounds for challenging the assumption that hierarchical organization is always the most efficient for making decisions about police services. Empirical findings indicate that simple reliance on bureaucratic structure in the management of large-scale police departments has produced pathological results, manifesting inefficiencies, inequities, unresponsiveness, and corruption.

Thus, we must reconsider the design of police institutions which rely primarily on hierarchy. Nor can we place sole reliance on the other simple decision rule—that of a market—since police services have aspects of being public goods, and simple market mechanisms will not work for public goods.

Hierarchical organizations control individual behavior through interaction with the behavior of other individuals within the organization; and in a hierarchy, subordinates are subject to discipline imposed by superiors. Markets control individual behavior through exposure to the behavior of other individuals outside the organization. Firms not responsive to their markets are liable to suffer financially. We need to consider how to design institutions which combine both internal and external control mechanisms. A basic requirement must be diverse indicators of day-to-day performance so that sufficient information is available concerning the consequences of utilizing different mixes of internal and external control mechanisms. Only through constant evaluation and reevaluation of the performance of police institutions can behavior be improved in the long run.

Institutional Arrangements and Performance Criteria. The selection of performance criteria affects the choice of effective internal and external control mechanisms as well as the type of information essential to evaluate performance. If efficiency is selected as the sole criterion for assessing the performance of the police, then internal control mechanisms should be set up to show the amount of work each individual is doing. Reward and punishment structures should encourage high levels of activity and discourage low levels of activity. Performance auditing by independent agencies should be included among the external control mechanisms. Information required for both internal and external control would include the cost of input units and their relative efficiency in achieving similar performance goals. Statistical reports on the activity patterns of each division and patrol team within the organization would be needed.

If responsiveness is adopted as the sole criterion, then internal control mechanisms should be rigged to review citizen satisfaction with services performed. Supervisors should visit a random sample
of citizens who have interacted with their subordinates to evaluate citizen satisfaction with services received. Internal reward structures should encourage rapid police responses to citizen calls for service and even-handed treatment of all suspected violators of the law. Internal sanctions should discourage behavior which generates citizen complaints. Outside agencies might audit a sample of transactions and also process citizen complaints. Information required for both internal and external control would include the response time for all calls for service, relative satisfaction levels of citizens served, and preferences of citizens concerning the enforcement patterns in their neighborhoods.

However, rarely is only a single performance criterion utilized in the design of institutional arrangements or in the evaluation of the consequences flowing from its operation. Multiple goals present perplexing questions. Conflicting goals cannot be simultaneously maximized. While efficiency and responsiveness are not totally contradictory, the achievement of either beyond some level may require the diminution of the other. Thus, police cannot be perfectly responsive to the needs and preferences of all citizens at all times without significantly affecting the efficiency or fairness of their operation.

TOWARD MORE RESPONSIVE POLICE INSTITUTIONS

Given a concern for designing more responsive police institutions which also operate relatively efficiently and maintain a standard of fairness, what type of reforms of current police institutions should be considered? Unfortunately, there is no magic formula for combining institutional arrangements to produce any set of partially competitive performance criteria. I cannot in good conscience specify a "model set of institutions" which can be applied in all types of situations. The best I can do is to sketch some of the elements that would most likely be involved in any effort to increase the responsiveness of police institutions.

Any desirable system would involve a complex mixture of institutional arrangements. Neither a pure hierarchy nor a pure market will produce the desired results, given the nature of police services. A workable system would most likely rely upon both internal and external control mechanisms. Such mechanisms would need to increase: (1) the citizens' voice in articulating their preferences for different types of police services and (2) the information generated about system performance. Extensive mechanisms for the evaluation of performance using diverse criteria will be needed. In this way, the individuals affected by institutional arrangements can learn from past behavior and continue to change the institutional mix in light of experience. No
design will continue to operate successfully for very long without
adjustment in light of new or unanticipated problems.

Such a reformed system would probably involve the establishment
of both large-scale and small-scale police departments serving
the small area. Small units could provide neighborhood patrol
services responsive to the preferences of individual neighborhoods
while maintaining minimum standards established for a larger area.
Large departments could provide specialized services such as
crime laboratories, narcotics investigation units, and some types of
record keeping. Cooperative and contractual arrangements among
both large and small units could be developed to establish joint
communication services, joint training facilities, cooperative de-
tective units, and cross-deputization to ensure easy movement
across jurisdictional contracts. Developing agreements would tend
in and of itself to generate more information about the performance
of the system. Public officials involved in contract negotiation will
need to know the consequences of past arrangements.

Audits conducted by independent agencies of a random sample
of contacts between citizens and the police could serve a variety of
purposes. First, the accuracy of the reports made by police officers
could be assessed, and departments producing poor reports chal-
lenged. Second, the satisfaction of citizens with the manner, speed,
and methods utilized in responding to their calls for service could
be ascertained. Third, the fairness of the methods of apprehending
a suspect or stopping a violator of traffic regulations could also be
assessed.

Procedures enabling citizens to file complaints with an inde-
pendent agency would also improve the responsiveness of the sys-
tem. Regular reports could be made concerning the number of
cases filed, the findings of the independent agency, and the
methods adopted by police departments to reduce the likelihood of
future malperformance of police personnel.

Elements of the mix of institutional arrangements adopted to
increase responsiveness, while achieving efficiency and fairness,
would appear to work at cross-purposes. However, this would be
necessary, and only reflects the partially conflicting performance
criteria. A system of rules designed to achieve partially competi-
tive goals will, at times, lead to high levels of conflict. If the inform-
ation generated is extensive and relatively valid, adjustments ap-
proaching optimal solutions can be made in the long run even
though the day-to-day operation of the system appears chaotic and
unorganized.

Reform of current police institutions is receiving considerable
national attention. Within the last several years, numerous national study commissions have reported on the need to reorganize police institutions. However, the dominant recommendation differs substantially from the complex type of arrangements proposed above. Rather than encouraging the development of both large-scale and small-scale police departments, most recent study commissions have recommended the elimination of all small police departments—particularly those under ten full-time officers. Many state planning agencies in the criminal justice field are using their federal funds in ways to encourage the consolidation of smaller police departments.

Underlying the repeated calls for consolidation of smaller departments serving both rural and urban areas is an assumption that larger police forces will provide higher levels of police services more efficiently than will smaller departments. Such an assumption is presented as a simple theoretical model of predicted relationships in Figure 1.

![Figure 1. The theoretical consolidation model (simplified form).](https://example.com/figure1.png)

This simple model could be examined directly if there were an accepted method for measuring police outputs and if police outputs were all the same. However, as discussed above, this is not the case.

The Workshop in Political Theory and Policy Analysis at Indiana University and other groups and individuals have examined the effect of size of department on police output by narrowing the focus of study to police services provided to a neighborhood. These include all direct responses to calls for assistance, criminal investigation, general patrol, and related supportive services such as dispatching. Services such as metropolitan traffic patrol were excluded because the appropriate level of measurement differs significantly from that of neighborhood police services. Given this range of services, survey instruments were designed to obtain two types of information about police output. First, respondents were asked about their direct experiences with police and with criminal victimization. Second, respondents were asked to evaluate their local police in a number of respects. Thus, the theoretical model presented in Figure 1 can be translated into an operational model for testing as in Figure 2.
Given such a model, we would expect to find, in regard to citizens' experiences, that citizens living in neighborhoods served by large police departments would:

- Report less victimizations.
- Report victimizations to the police more often if they occur.
- Receive higher levels of police follow-up to a victimization.
- Call upon the police for assistance more often.
- Receive more rapid response to their calls for assistance.
- Receive more satisfactory levels of police assistance.

In regard to citizens' evaluations of local police, we would expect to find that citizens living in neighborhoods served by large police departments would more frequently:

- Rate the job being done by the police as outstanding.
- Rate police-community relationships as good.
- Indicate that police do not take bribes.
- Indicate that crime is about the same or decreasing.
- Indicate that police respond very rapidly.
- Agree that local police treat all equally.

In regard to costs, providing similar levels of police service should cost less in larger jurisdictions than in smaller jurisdictions.

This simple model was selected for study for two reasons. First, the posited relationships in the simple model must be empirically supported if the consolidation of police agencies is warranted. If larger police departments do not perform better or more efficiently, the major argument in favor of police consolidation is not empirically sound. Second, the theoretical formulation presented in the first section of this paper would lead to an assumption that the size of police departments should be negatively related to citizens' evaluations of neighborhood level police services.
A series of studies have now been conducted utilizing a most-
similar-systems research design. In each case similar neighbor-
hoods were selected, some of which were served by relatively large
city police departments and the rest by small departments. These
studies were conducted in Indianapolis, Grand Rapids, St. Louis,
and Nashville, Tennessee. In each case the hypotheses derived
from the simple consolidation model were not supported. The gen-
eral pattern across the series of studies was that citizens living in
matched neighborhoods served by small to medium-sized depart-
ment were:

- Less likely to be victimized.
- Most likely to call upon the police when victimized.
- More likely to call upon police for assistance.
- More likely to receive assistance in less than five minutes.
- More likely to rate the job of police as outstanding.
- More likely to rate police-community relations as good.
- More likely to indicate that crime is about the same or less.
- More likely to agree that police treat all equally.

These findings conflict with the simplified consolidation model
and support the alternative model.

CONCLUSION

From a citizen's perspective, small to medium-sized police de-
partments perform equally or better than large-scale police de-
partments in the provision of patrol, criminal investigation, and
quick responses to calls for service. The empirical studies cast
substantial doubt on the claims that consolidation of small police
forces will automatically lead to more effective, efficient, and re-
sponsive police forces. Institutional arrangements to meet these
performance criteria will need to include the provision of many
police services by small to medium-sized forces in a complex set of
large and small agencies.

1For those who wish to pursue the subject further, the following are suggested for
reading: Elinor Ostrom et al., Community Organization and the Provision of Police Services
(Beverly Hills, Calif.: Sage Publishers, 1973); Elinor Ostrom and Roger B. Parks, "Subur-
ban Police Departments: Too Many and Too Small?" in The Urbanization of the Suburbs,
eds. Louis H. Masotti and Jeffrey K. Hadden, Urban Affairs Annual Reviews, Vol. 7
(Beverly Hills, Calif.: Sage Publishers, 1973), pp. 367-402; and Elinor Ostrom and Gordon
P. Whitaker, "Community Control and Governmental Responsiveness: The Case of Police
in Black Communities," in Improving the Quality of Urban Management, eds. David
Rogers and Willis Hawley, Urban Affairs Annual Reviews, Vol. 8 (Beverly Hills, Calif.: