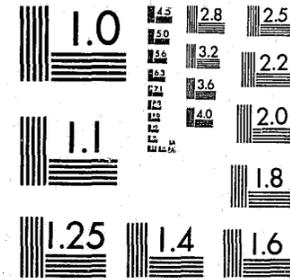


National Criminal Justice Reference Service



This microfiche was produced from documents received for inclusion in the NCJRS data base. Since NCJRS cannot exercise control over the physical condition of the documents submitted, the individual frame quality will vary. The resolution chart on this frame may be used to evaluate the document quality.



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

Microfilming procedures used to create this fiche comply with the standards set forth in 41CFR 101-11.504.

Points of view or opinions stated in this document are those of the author(s) and do not represent the official position or policies of the U. S. Department of Justice.

National Institute of Justice
United States Department of Justice
Washington, D. C. 20531

Date Filmed
2/16/81

72627

Policing the Beat: The Relationship between Scale of Patrol Organization and Service-Style Policing in Urban Residential Neighborhoods

NCJRS

OCT 15 1980

ACQUISITIONS

by

Stephen Mastrofski
Center for Urban and Regional Studies
University of North Carolina
Chapel Hill

The author appreciates the comments of Elaine Sharp and Gordon Whitaker on an earlier draft of this paper. This research was funded by the National Science Foundation, Division of Applied Research under Grant NSF GI 43949. This support is gratefully acknowledged. Any findings, inferences, views, or opinions expressed herein are, however, the author's, and do not necessarily reflect those of the National Science Foundation.

Policing the Beat: The Relationship between Scale of Patrol Organization and Service-Style Policing in Urban Residential Neighborhoods

ABSTRACT

Analysis of police organization and activity in 42 urban residential neighborhoods shows some support for the hypothesis that small scale police organization is more likely to engender service-style policing than large scale structure. The relationship between organizational scale and service-style policing is more ambiguous in high violence neighborhoods than low violence neighborhoods.

Policing the Beat: The Relationship between Scale of Patrol Organization
and Service-Style Policing in Urban Residential Neighborhoods

In Varieties of Police Behavior, James Q. Wilson coins the phrase, "service-style policing," which he uses to describe a pattern of police policies and behaviors that are very responsive to a wide range of order maintenance problems as well as violations of the law. Service-style policing does not ignore crime problems, but it seeks alternatives to legalistic solutions. Wilson depicts the service style in the context of a public market for police services: service-style police-"produce" what the public demands -- within reasonable legal limits and the dictates of community norms. Producing police service thus means putting the consumer in a central position in deciding when and how to act. Courteous, caring officers are the hallmark of Wilson's service style (Wilson, 1975: 200-226).

The idea of a service style of police behavior is not founded in a well articulated professional doctrine. Much of the impetus to reform police to the service style has come only in the last 10-15 years -- and largely from academics. Since Wilson's study, a variety of national commissions, academics, and progressive police leaders have added their own interpretations to the phrase. They all share a negative reaction to the legalistic, crime-fighting professional doctrine that developed in the 1930s and still flourishes (Fogelson, 1977: 219-242; Manning, 1977: 95-98; Walker, 1977: 139-166). But Bercal (1970), for instance, expands the notion of legitimate police services to the many routine services which are neither oriented toward restoring order, enforcing laws, nor fighting crime: the client oriented services (emergency medical service, pulling cats out of trees, etc.). The mushrooming interest in victimology thrusts even traditionally identified

law enforcement problems into the consumer service realm. The growing interest in using citizen surveys to evaluate police reflects the focus on the "satisfying" responsibilities of police. Even the suspect is entitled to his rights and to be treated civilly (Reiss, 1971). Victimless crimes are not pursued. Serious crimes must be strictly dealt with, but detection is much less interventionist and is based on due process. Alternatives to arrest are preferred for minor violations if they will help deal with the problem. Non-crime requests for service are not trivial, but are expressions of community need which officers are bound to fulfill as best they can. For the service approach, the helping aspects of policing modulate the coercive or control aspects.¹

During the period that reformers were contemplating a new approach to police officers' patrol style, there was also ferment on how to organize police to do it. Many reformers felt that professional organizational innovations of the previous 30 years contributed to the crime-fighting, enforcement styles and detracted from the service style. Putting the vast majority of patrol officers in patrol cars increased their mobility but isolated them from the people they protected. Except when officers received radio assignments, they could remain inside their vehicles, impervious to the streets. Patrol work became a series of discrete encounters with citizens -- marked off by long periods of isolated mobile or stationary "preventive patrol." Police management also restructured the officers' work environment by periodically rotating them among a large number of beats instead of leaving them in one beat for a long time. This was believed to reduce the impact of corrupting influences in the beat. Moving officers around was thought to keep them honest and on their toes, give them greater breadth of experience, and offer greater variety in their work. By the 1970s, however, the threat of police

corruption at the beat level was viewed as less of a problem than community alienation due to what Patrick Murphy calls this "stranger policing" approach (Murphy and Plate, 1977: 225).

Police interest in widespread reinstatement of foot patrols was not forthcoming, but returning the patrol officer's "turf" to him became popular in innovative police circles by the early 1970s. It was and is a central organizational feature of a pastiche of programs called "team policing" (Gay et al., 1977a: 16; Peterson and Pogrebin, 1977: 8). Some departments restrict the scope of their officers' work areas without implementing the other innovations associated with team policing. Some have long traditions of limiting the geographical scope of patrol officers' work areas (Rubinstein, 1973: 127-217).

Limiting the scope of officers' geographic patrol responsibilities is expected to encourage service behavior in two ways (National Advisory Commission, 1973: Ch 5). First, an officer's sense of responsibility for what happens in the beat is enhanced, since his long term focus to that beat gives him an opportunity to develop it. He is more willing to offer assistance to those in need when he feels responsible for them. Second, his continued presence in the beat increases the probability of repeated contact with and observation of citizens in it. This should help the officer develop an understanding of people's problems and ultimately greater empathy for them. When translated into service behavior, this orientation is expected to produce a citizenry more willing to cooperate with police. The police, being able to rely more heavily upon citizen-volunteered information, make fewer and better suspect stops. Greater familiarity with the people and customs of the beat reduces the likelihood of incorrect stereotyping of citizens and misinterpreting their actions. This ultimately leads to fewer instances of

the use of force to deal with problems. Provision of services, such as escorts, home security checks, and providing information become the means by which officers serve the neighborhood (Gay et al., 1977a: 16-17).

This paper reviews previous research and examines data to assess whether the expectations of police reforms are empirically verified. Is the scale of patrol organization an important factor in influencing the nature of the service received in urban residential areas? I test the hypothesis that the scale of police patrol is inversely related to the propensity for service-style policing. That is, small-scale police structure is expected to produce an increased tendency for the service-style and a lesser tendency for aggressive, enforcement-oriented policing.

Previous Research on Scale of Policing and Patrol Behavior

Research linking police organizational structure to patrol officer behavior is scant, and very few studies have focused particularly on the scale of policing. James Q. Wilson's study of eight police departments is perhaps the best known. Wilson's effort is directed at understanding the linkage between communities' political culture and the style of policing they receive. From research based on interviews with police officials, agency records, and limited first-hand observation, Wilson concludes that although the political culture sets the context of the police style a community receives, the precise form it takes depends to a much greater extent on the department's management values and capabilities. Wilson's research does not speak directly to the research issue at hand, except to note that, "Holding population characteristics constant, a police department is more likely to take seriously, by making arrests, problems of order maintenance when it is directly exposed

to community concerns for public order than when, by its size or detachment, it is insulted from them" (1975: 214). Thus, Wilson raises the possibility that administrative variations in scale at the neighborhood or beat level may result in the increased application of enforcement in some circumstances.

In his study of three professional California police departments, Michael Brown concludes that the structure of the police organization has a very significant impact on patrol service (1980: Ch. 9). His study, based upon interviews with patrol officers and observations of them at work, finds that the size of a police department is directly related to officers' tendency to exhibit aggressive and strict enforcement behavior on patrol. Small departments tend to show less aggressive anticrime activity and greater leniency in using enforcement procedures.

The size of a department is not necessarily an indication of the scale of patrol service delivery to neighborhoods within the jurisdiction. As mentioned earlier, many departments have attempted to compensate for their large size by downscaling their patrol operations: they restrict the scope of their officers' work areas. Numerous case studies of team policing have been conducted, although their methodological rigor has been questioned (Gay et al, 1977a). The findings have been mixed. Some evaluations report that aggressive patrol is reduced (Cordrey and Pence, 1972). Others, however, report that police officers in Los Angeles and New York City are more aggressive under team policing arrangements than non-team policing arrangements (Brown, 1980: 460).

The most methodologically impressive evaluations of team policing were conducted in Cincinnati by the Police Foundation and in Hartford by university researchers. These were experimental designs using intervention (team policing) and control (non-team policing) areas. The researchers in Cincinnati found

that after 30 months of team policing, informal citizen contact with police increased substantially but there was little indication that officers had developed a proprietary interest in their team policing areas (Schwartz and Clarren, 1977: 34-37). After a year, Hartford evaluators found that team police officers had more favorable perceptions of their neighborhood, although citizen evaluations stayed constant or declined somewhat (Fowler et al, 1979: 127-139). Although the design features of these projects were much stronger than most police program evaluations, they were based upon interviews with citizens and officers -- not direct observation of officers on patrol. In fact, with the exception of Brown's study of California departments, systematic in-person observation of police officers on patrol has not been part of research on organizational scale.²

Research on the scale of policing has been limited in several respects. Those studies which have used the size of the department or jurisdiction as an indicator of scale have left untested the possibility that internal administrative policies and practices could modify the structure of patrol scale relevant to individual neighborhoods within each jurisdiction. Those studies which have examined internally determined scale (team policing experiments) have not compared an array of levels of organizational scale; they have compared experimental and pre-experimental structures. They have not made clear the degree to which organizational scale in experimental conditions differed from nonexperimental conditions (Schwartz and Clarren, 1978: V-15, V-39-43; Fowler et al., 1979: 24, 45, 65). Further, these studies have relied upon interviews with citizens and patrol officers to detect changes in the nature of police service. These and agency-generated sources are useful, but limited in the detail they can provide. Direct observation of police on patrol can give that detail. The data described

below address these concerns, and although the analysis is cross-sectional, they provide a range of comparisons which would be impractical in a longitudinal study.

The Department and Neighborhood Sample

This paper reports research on patrol service by 11 departments to 42 urban neighborhoods located in three metropolitan areas: Rochester, NY; St. Louis, MO; and Tampa-St. Petersburg, FL.³ Departments were selected to represent a variety of organizational characteristics -- primarily size. Jurisdiction populations range from 47,000 (University City, MO) to 499,000 (St. Louis, MO). Department size varies from 53 sworn (Largo, FL) to 2,050 (St. Louis). Eight of the departments are municipal law enforcement agencies and three are county sheriff's departments serving urban areas.

Study neighborhoods were selected to reflect the various residential service conditions confronting each department. Ethnicity and family income of residents were the principal selection criteria. The number of neighborhoods per department varied from one to eight. All neighborhoods were predominantly residential. Neighborhood boundaries corresponded exactly to patrol beat boundaries for about half of the sample. Boundaries for the other neighborhoods were modified somewhat to maintain greater neighborhood integrity (ethnic/income homogeneity) or to deal with beat boundaries that changed with each patrol shift. Most neighborhoods were either predominantly minority (black) or nonminority (white). Neighborhood income levels ranged from heavily low income to predominantly upper-middle income. There was considerably greater within-neighborhood heterogeneity in income than ethnicity. Because neighborhoods were not selected randomly, generalizations about patrol services to the entire jurisdiction of each department are inappropriate.

Operationalizing the Variables

Partial correlation and multiple regression are used to assess the relationship between the scale of police patrol and several indicators of the service style, while controlling for department and neighborhood factors. Below are descriptions of the variables and their distribution in the sample.

The Primary Assignment Area and Department Size

The scale of police patrol in a study neighborhood is indicated by the population of the primary assignment area (PAA) of officers serving that neighborhood. The PAA for each neighborhood is determined by department policies and officers' practices which control the scope of patrol officers' long term work areas. The PAA relevant to each study neighborhood is the geographic area in which officers normally assigned to that area spend most of their work time over the course of a year. The population of that area is an indicator of the scale of service delivery. PAAs may be comprised of a single beat, several beats, or all of the beats in the jurisdiction -- depending upon the policies and practices relevant to a given neighborhood.⁴

The PAA size ranges from 7,900 in a University City, MO neighborhood to 209,700 in all four Pinellas County, FL neighborhoods. The PAA for the University City neighborhood is a single beat; the PAA for each of the Pinellas County neighborhoods is that department's entire patrol jurisdiction. The sample is skewed toward the low end of the scale, half of the neighborhoods having PAA populations below 50,000. Ten have PAAs between 50,000 - 100,000, and ten have PAAs of over 100,000.

All of the neighborhoods having PAA populations of less than 50,000 were served by departments that were making a conscious effort to keep patrol scale

small (St. Louis, Rochester, St. Petersburg, and University City). Three departments (Greece, Hillsborough County, and Monroe County) tried to maintain low population PAAs but due to personnel shortages and cross-beat dispatching, their PAAs were substantially enlarged (over 50,000). Four departments (Clearwater, Largo, Pinellas County, and Tampa) made conscious efforts to periodically rotate officer assignments or had assignment policies which insured high instability (periodically permitting officers to bid for shift and beat assignments). Thus, all of the neighborhoods with PAAs of less than 50,000 were served by departments whose management consciously articulated the benefits of a small scale patrol structure to facilitate a service approach. Those with larger PAAs were served by departments that either lacked the resources to implement their intentions, or consciously intended to have large scale patrol organization.

Behavioral Indicators of Patrol Service to the Neighborhoods

Indicators of police behavior are based upon direct observation of a sample of officers assigned to beats that covered the study neighborhoods. These observations are aggregated to the neighborhood level. PAA policies are designed by management to influence the nature of policing at the beat level. If PAA size is to have a meaningful impact on the style of policing to which neighborhoods are subjected, it must influence police service in the aggregate. Individual officers serving a neighborhood may vary in proclivity to offer service-style policing, but officers rarely conform absolutely to any single ideal type. Because we are interested in the neighborhood's perspective on policing, it is more appropriate to aggregate police behavior to the neighborhood -- not the officer. Aggregated police activities represent the exposure to service-style policing experienced within the neighborhood.

Trained observers accompanied officers on their assignments for a sample of 15 shifts.⁵ Observers accompanied officers on all their tasks, making field notes which were later coded on detailed coding forms. These forms provide information on what transpired during encounters with citizens as well as what transpired between encounters.⁶ I have selected indicators representing two important aspects of officers' discretion. The first regards officers' decisions to initiate activity: contact with citizens and home security checks. The second is what officers do once they are involved with citizens, regardless of how the encounter is initiated.

The time periods when officers are not involved in assignments from dispatchers or supervisors or conducting administrative duties (e.g., report writing) is their discretionary time -- that time during which officers are not occupied by the demands directly placed upon them by citizens and the department. How they choose to spend that time is a reflection of their operational patrol style. The proportion of unassigned time in this sample ranged from 41-81 percent, the median neighborhood being 59. Four indicators of these choices are examined in this paper. Each is standardized according to the total amount of observed officers' unassigned time in each neighborhood (in 100 hour units). The less unassigned time available to an officer, the less his opportunity to demonstrate the measured behavior.

The first variable, SERVICE, is the number of officer-initiated encounters in which there was at least one citizen present who was in need of assistance (as a crime victim, complainant in a civil dispute, sick or injured person, someone unable to care for himself, or someone needing other assistance). Suspects were also present in many of these encounters, but the rationale for including these encounters is that the presence of someone in need of help lends greater legitimacy and "street support" to the intervention than when

only suspects are present (Wilson, 1975: 83-89). This variable ranges from 0 to 13.4, the median being 6.9.

The second variable, AGGRESS, is an inverse indicator of the service approach. It is the number of officer initiated encounters per 100 hours of unassigned time in which only suspects were present. This represents the enforcement aggressiveness of patrol behavior in the neighborhood. The absence of a victim or complainant means that officers must rely upon the law to legitimate their intervention. There is no "consumer" close at hand to provide support for the intervention. This variable ranges from 3.3 to 43.6, the median being 19.1.

The third variable, NONCRIME, represents the degree to which officers serving a neighborhood are willing to initiate encounters that have no direct relationship to crime problems. Such problems include, lost or damaged property, utility problems, fires, people locked out of their homes or autos, animal problems, noncrime emergencies, escorts, road directions, transportation, other information provision, hearing complaints about police, just listening to people talk about their problems, traffic problems where no violations are indicated. No suspects are present in these encounters. NONCRIME is the number of such officer-initiated encounters per 100 hours of unassigned time in the neighborhood. The probability of making a "good pinch" in these situations is extremely low. This variable represents the extent to which the neighborhood is subject to purely service-oriented activities which have no direct linkage to crime. This ranges from 0 to 10.9 in the study sample. The median is 3.6 encounters per 100 hours of unassigned time.

A final indicator of service-oriented patrol behavior in the neighborhood is the frequency that officers conduct home security checks. Many officers regard this as a tedious business -- an anticrime strategy with a low arrest

payoff and questionable deterrent qualities, but it produces good will among the recipients of the service. It constitutes a police intrusion in which specific permission has been given or is usually welcome, although the requester is usually not present. As such, it is a much less aggressive form of officer-initiated anticrime activity (Gay et al., 1977a: 19). This variable is named SECURITY, and is the total number of residential security checks performed in the neighborhood per 100 hours of officer unassigned time. Security checks were infrequently conducted in the study neighborhoods. None were conducted in eight, although one averaged 51 checks per 100 hours of unassigned time. The median was 2.7.

Once officers intervene (regardless of whether the intervention is officer or citizen-initiated), there are a number of things that they might do to reflect a consumer-service approach. I use four indicators of the quality of officer behavior during encounters with citizens in the study neighborhoods.

Advocates of small scale patrol organization expect that officers who work under it will become more familiar with the people they deal with and will treat them in a more familiar manner. ACQUAINT is the proportion of all encounters during which the observed officers indicated in some way that they had prior acquaintance with one or more of the citizen participants. Being acquainted with someone does not necessarily mean that the officer will treat them kindly, courteously, or more attentively. However, familiarity, even with suspects, might be expected to produce fewer encounters where officers felt the need to use force to accomplish their working goals. Regardless of the citizen-participants' roles, officer familiarity with them is a critical component of the more intimate, service style. There is great dispersion in the ACQUAINT variable. The distribution ranges from 1.7 to 39.5 percent, 15.1 being the median value.

Concern for those who have suffered victimization or experienced trauma in personal situations is a hallmark of the service style. COMFORT is the proportion of encounters during which such individuals were present and the police offered some overt form of comfort or solace. The denominator of this proportion is comprised of violent crimes, fights, and disturbances. Neighborhoods ranged from 0 to 53.8 percent of the encounters when traumatized citizens were present. The median value was 16.7 percent.⁷

Advocates of the service approach prize the avoidance of officer-applied violence whenever possible. Whether an officer is unwarranted in using or threatening physical force in a given instance is extremely difficult to determine, but in the aggregate we should be able to discern a propensity or aversion for the use of force. Most people would agree that officers are justified in using some force when either they or citizens are clearly in immediate danger. I therefore constructed a variable, FORCE, which is the percent of all nondangerous encounters during which police officers used force on one or more citizens. Nondangerous encounters were those to which none of the following were applicable: citizen possession of a weapon; officer told (by dispatcher) that a weapon was involved; violent behavior toward the officer, other citizens, or self; officer statement to the observer that he anticipated danger. The use of force was defined as an officer doing any of the following: drawing a weapon, firing a weapon, hitting a citizen, threatening to hit or use a weapon, any use of physical force without a weapon (except that used to make someone "come along").⁸ The distribution of neighborhoods on the FORCE variable ranged from 0-14.2 percent of the nondangerous encounters. Nine neighborhoods had no use of force in these encounters. The median was 3.3 percent.

The reliance on arrest to deal with problems is contrary to the service approach. The service ideology calls for sparing use of arrest, reserving it for only the most serious crimes or chronic violators. The ARREST variable is limited to only nontraffic enforcement encounters in which one or more suspects were present.⁹ ARREST is the proportion of such encounters in which one or more arrests were made. Neighborhoods ranged from 0 to 50 percent on this variable, the median being 14.3. In eight neighborhoods no arrests were made under these circumstances.

Control Variables

The level of violent problems in the neighborhood has been a traditional justification to police for the need for more aggressive policing, more arrests, and more force. Bayley and Mendelsohn (1969: 88-99) provide an extensive discussion of the greater likelihood of a legalistic, coercive, and even violent response in high violence areas. Officers feel personally threatened in these neighborhoods and are thus apt to more quickly resort to strong control measures. They see other citizens as threatened by the danger of violence and therefore feel more apt to anticipate it to protect them. The high level of violence represents a community cultural norm to police, and it makes a strong or violent response also more acceptable in their eyes. An exacerbating factor is that high violence neighborhoods tend to be the least supportive of police. Without the public's support, the willingness and ability of police to use noncoercive means of solving problems is greatly reduced. Thus, more often than not, the police who work the tough neighborhoods are also confronted with myriad -- less threatening, but no less protracted -- problems. Inversely, as Wilson stresses, there

are fewer obstacles to providing service-style policing in middle class suburbs (1975: 200), or as put more colorfully by a Tampa patrol sergeant, "It's easy to be Officer Goodie Twoshoes in the Land of the Sugarplum Fairies."

The level of violence for these study neighborhoods was obtained from victimization surveys conducted during the period of on-site observation. Approximately 200 residents per neighborhood were randomly selected and interviewed by telephone. Victimization for the entire household during the previous year were determined. Only violent crimes and major disturbances with high potential for violence (e.g., domestic disputes) were used for this analysis. The range in the victimization level was 0-43.0 per thousand residents. The median neighborhood had 8.7 violent victimizations per 1,000 residents.¹⁰

The range in department size in this sample is fairly large. Because previous research has stressed the importance of department size for patrol style, the number of police officers in the department is used as a control variable. Large department size is believed to present obstacles to the service approach, which accounts for the popularity of administratively down-scaling patrol organization in several of the country's largest departments.¹¹ In this sample, the relationships between department size and PAA size reflects this tendency ($r = -.39$). Although the relationship is scarcely colinear, there are both theoretical and empirical reasons for controlling for the over-all scale of the "parent" organization that provides patrol service to these neighborhoods.

Data Analysis

Table 1 presents the zero and second order partial correlation coefficients between PAA population and the service behavior variables. The level of violent

crime in the neighborhood and the size of the department are partialled out. The second order partial correlation coefficient expresses the amount of variation explained by PAA population in the model when the variation explained by the control variables is removed. When the effects of neighborhood violence and department size have been partialled out, the relationship between PAA population and the dependent variables is in all but one instance (ARREST) in the hypothesized direction. In this and several instances, however, the coefficients are so small that no substantive significance can be given to the relationship. The most variation in any of the dependent variables explained by PAA population is 20 percent (ACQUAINT).

The PAA population of the sampled neighborhoods explains very little of the variation in indicators of officer-initiated interventions when neighborhood violence and department size are controlled. The relationship between PAA size and the frequency of officer-initiated encounters involving victims and other service recipients (SERVICE) is quite small ($r = -.10$). The frequency of strictly noncrime officer-initiated encounters (NONCRIME) shows practically no relationship to PAA population ($r = -.02$). The tendency to stop suspects -- a negative service-style indicator -- shows a relationship as hypothesized, though only two percent of the variation is explained ($r = .15$).¹² Of the officer-initiated helping activities, conducting home security checks (SECURITY) shows the strongest relationship in the hypothesized direction ($r = -.20$).

Some police actions in encounters show stronger relationships with PAA population than police-initiated interventions. Police demonstration of familiarity with citizen participants in encounters (ACQUAINT) shows a moderate, inverse relationship with PAA population ($r = -.45$). The tendency to offer comfort to victims of serious crimes and disorders is also moderately

correlated with PAA population ($r = -.37$). FORCE and ARREST bear practically no relationship to PAA population (FORCE $r = .04$; ARREST $r = -.07$). These statistics suggest that the provision of positive indicators of a consumer service orientation (ACQUAINT and COMFORT) are related to PAA population, although negative indicators (FORCE and ARREST) are not.

The impact of PAA population on the dependent variables, when measured in terms of partial regression coefficients, is not large, and only in the case of SECURITY, ACQUAINT and COMFORT do the regression coefficients exceed their standard errors (See Table 2). When neighborhood violence and department size are in the regression equation for ACQUAINT, the partial regression coefficient for PAA population (in 10,000s) is $-.66$, meaning that the line-of-best-fit predicts -- for every increase of 100,000 in PAA population -- a decrease of 6.6 percent in the proportion of encounters during which officers gave some indication of acquaintance with participants. The PAA population partial regression coefficients (in 10,000s) predicting the likelihood that victims of crime will be comforted is $-.96$. That means that a neighborhood with a PAA population of 10,000 is predicted to have approximately 10 percent more of its victims comforted in police encounters than a neighborhood with a PAA population of 110,000. Changes in levels of police interventions are even less substantial. The PAA partial regression coefficient for the frequency of security checks is $-.32$, indicating that a difference of 100,000 people in a neighborhood's PAA population produces a difference of only 3.2 security checks per 100 hours of unassigned time. The large standard error of this partial regression coefficient and that in the other officer intervention regression equations make an attempt to precisely predict PAA population impact a hazardous venture.

It is possible that the relationships between PAA population and the dependent variables in this sample are masked by the diversity of the

neighborhoods. That is, the scale of police patrol may have a different (or stronger or weaker) relationship in low violence neighborhoods than in high violence neighborhoods, which the previous analysis could not reveal. In Table 3, neighborhoods are divided into low violence neighborhoods (fewer than 10 violent victimizations per 1,000 residents) and high violence neighborhoods (10 or more violent victimizations per 1,000 residents). There are 22 low violence neighborhoods and 20 high violence neighborhoods according to this dichotomization.¹³ Simple correlation coefficients between PAA population and each dependent variable are presented.¹⁴ The number of neighborhoods in each sample is quite small. Differences between the two types of neighborhoods are suggestive only. The analyses described below do suggest that PAA population may have different effects in low and high violence neighborhoods.

In low violence neighborhoods PAA population shows correlations in the expected direction with all police-intervention dependent variables and with some of the police action-in-encounters variables. The relationship between PAA population and the frequency of home security checks shows up as particularly strong compared to other police interventions ($r = -.45$). Police actions in encounters with citizens is less consistently explained by PAA population. The demonstration of familiarity with citizen participants in encounters is about the same magnitude and in the expected direction ($r = -.44$). Providing comfort to victims of crime also shows a similar relationship, though less strong ($r = -.29$). The use of force and arrest show weak relationships with PAA in the hypothesized direction.

The pattern of relationships between PAA population and propensity for the service style of policing in high-violence neighborhoods is different from that in low violence neighborhoods. Two of the variables (SERVICE and NONCRIME) are not in the expected direction; they indicate that in high violence

neighborhoods, larger PAAs tend to produce more service-oriented officer initiated activities (SERVICE $r = .25$; NONCRIME $r = .30$). The propensity to stop suspects (AGGRESS) does show the hypothesized relationship, although it is weak ($r = .14$). The frequency of home security checks is also in the hypothesized direction (SECURITY $r = -.20$). Police actions in encounters with citizens are in the expected direction for the two positive measures of the service style (ACQUAINT $r = -.24$; COMFORT $r = -.44$). However, negative indicators of the service style show moderately strong relationships with PAA population, contrary to the hypothesis (FORCE $r = -.37$; ARREST $r = -.46$). That is, officer use of force and arrest in high violence neighborhoods is more likely in those served by small PAAs than large ones.

What sense can we make of the relationships shown in Table 3? An important aid is to note those variables that show substantially different relationships between PAA size and police activity, depending on the level of violence in the neighborhood. This is the case for the SERVICE and NONCRIME variables in the police intervention category and the FORCE and ARREST variables in the actions-in-encounters category. For each of these variables, low violence neighborhoods exhibit the hypothesized relationships, but high violence neighborhoods show relationships contrary to those hypothesized. For these variables, then, small PAAs appear to encourage service-style activity in low violence neighborhoods, but in high violence neighborhoods they appear to discourage it.

One explanation is that failing to frequently rotate officers through a wide variety of beats (a policy closely associated with small PAAs) can "burn out" those officers who are continuously assigned to only the violent areas -- those where social problems are most protracted, where citizens have greatest ambivalence or animosity toward police, and where police are busiest.

Small PAAs may increase officer familiarity and empathy for neighborhood residents, but initiating "helping" encounters may be a low priority to officers. Repeated exposure to the area's difficult problems may motivate officers to avoid any unnecessary contact with people on their beat (necessary being only the most serious violations or most obvious suspects). That is, they may use their unassigned time to unwind from dealing with dispatched calls rather than initiating further contact. Patrol in low violence neighborhoods typically does not require frequent contact with high-conflict, emotional problems. Some officers may become bored, but they do not get burned out. In low violence neighborhoods, then, the size of the PAA shows a much more consistent relationship in the hypothesized direction.

Another explanation is that departments have a tendency to be picky about whom they permanently assign to a beat or area when the neighborhood is known as a "fast track," but not as choosy for the less violent neighborhoods.¹⁵ Departments with automatic rotation schedules (associated with large PAAs), in their attempt to keep officers moving throughout the jurisdiction, would have less ability to manipulate the operational style of policing in each neighborhood. When they choose to exercise this sort of control, managers and supervisors may decide that tough, enforcement-oriented officers are most appropriate to high violence neighborhoods. Officers with this orientation may be less susceptible to the hypothesized influence of small scale patrol organization. A small PAA may not moderate their toughness; it may give them greater opportunity to actualize it. This would be reflected in higher FORCE and ARREST frequencies in small PAAs, since neighborhoods with large PAAs would not be served as frequently by this type of officer. We would also expect to find that permanent assignment of tough officers to high violence areas would reduce the frequency of officer-initiated helping activities there. The

coefficients for FORCE, ARREST, SERVICE, and NONCRIME are consistent with this interpretation.

Ironically, two positive indicators of service style, ACQUAINT and COMFORT, show comparatively high inverse correlations with PAA size. If small PAAs in tough neighborhoods do receive predominantly tough or tougher officers, it may be that even they are susceptible to the empathic processes hypothesized to grow out of small scale policing.¹⁶

I do not have systematic data on whether tough officers are assigned disproportionately to tough neighborhoods under small PAA arrangements. Management in one department with small PAAs mentioned that the opposite was true: such officers were systematically excluded from permanent assignment to tough areas. In most such departments, however, the specific assignment of permanent beats was left to watch and field supervisors. Both of the above alternative explanations of the specification analysis are speculative. Detailed data on individual officers' attitudes and behavior over time would help elucidate the developmental processes that might influence operational style.

Conclusion

This aggregate analysis looks for a relationship between manipulable organizational structure (PAA size) and the "bottom line" from the neighborhood's perspective -- the style of police patrol experienced in it. It suggests that across a variety of neighborhoods and departments, smaller PAA size encourages more frequent acquaintanceship between officers and citizens they encounter and may also facilitate the expression of sympathy for victims of serious crimes and disorders. The degree and nature of the influence of PAA size on indicators of service style behavior may well be susceptible to neighborhood violence levels. Low violence neighborhoods show fairly

consistent relationships in the hypothesized direction. The pattern in high violence neighborhoods is more complex. None of the relationships between PAA size and police behavior in the neighborhood is strong; the predicted impact of PAA population is not large.

Reducing the patrol organization scale is a troublesome task for police departments. The integrity of small PAAs constantly faces threats from other management concerns. When police managers make policies that affect the boundaries of PAAs, they are heavily influenced by a desire to meet citizen requests for service and equalize patrol units' workload (Maxfield, 1979: 31-43). In the face of daily fluctuations in demand and personnel availability, willing departments find it difficult to sustain consistent PAAs -- especially small ones. Many of the departments in this sample aimed for much smaller PAAs than were actually implemented. Those departments with the largest PAAs were able to achieve a large scale by consciously rotating officers throughout the jurisdiction. There is substantial variation in PAA size in this sample. Why aren't the relationships between PAA size and indicators of service style more striking?

First, implemented by itself, altering the scale of police patrol organization is a modest change. Its objectives are largely facilitative. It attempts to structure the long term working environment of street officers. Those who advocate small scale patrol hope that continued interaction in a limited environment will nurture officers' knowledge of and empathy for neighborhood habitues. Those favoring large scale policing hope that the frequent rotation of officers throughout the jurisdiction will prevent corruption, stagnation, and encourage even-handed enforcement of the law. Adjusting the scale of patrol is a passive approach to managing street-level discretion. Thus, we might expect subtle -- not major -- changes in patrol style, despite the fanfare that so often accompanies the implementation of a program to reduce the scale of policing.

Second, the scale of patrol organization is only one of many ways that departments attempt to influence what officers do on the street. The quantity and quality of street-level supervision is susceptible to management influence. The amount and nature of training given to officers is another. Promulgation of criteria for promotion and assignment to prestigious jobs is another. The type of performance statistics collected on individual officers may also influence their perception of what is valued by management. These organizational characteristics are not included in this analysis. Some departments with smaller PAAs (less than 50,000) did try to facilitate a service approach in other ways, though they varied in intensity. St. Louis, for example, made a substantial effort to decentralize supervision in its experimental team policing areas and provide officers with the time to exchange information and attend community meetings. However, chronic personnel shortages reduced the time available to conduct these special tasks, and a centralized dispatch still restricted the impact of decentralized supervisory control. Virtually all departments had given their officers special training in service-style topics (e.g., crisis management, human relations, juvenile problems), yet they still relied at least in part upon traditional officer activity reports that included arrests, citations, field interrogations, parking tickets, etc. What this means is that the officers serving all of these neighborhoods were subject to conflicting signals from management about what they should be doing on the beat. This ambiguity could have diffused the effects of small scale patrol organization. This has been a chronic problem even for team policing programs, which have probably been the most comprehensive attempts at achieving a service style through structural reform (Peterson and Pogrebin, 1977). In fact, ambiguity in work prescriptions issued "from the top" appears to be an organizational fact of life in all large police departments and street-level bureaucracies generally (Muir, 1977:

191-192; Prottas, 1979: 91-101).

In light of the ambivalent organizational context of small PAAs in this sample, our conclusions about the scale of police patrol and the provision of service-style policing to urban residential neighborhoods must be cautious. The consistency of the relationships found in low violence PAAs (as hypothesized), suggests that reducing the scale of policing there may well produce more service-style policing. Whether the relatively small increments of change that can be expected are worth the effort is debatable. The mixed pattern of relationships found in high violence neighborhoods probably reflects the special challenges confronting departments wishing to offer consumer-oriented policing there. Without carefully monitoring permanent officer assignments to these areas and effective checks for "burn out," small scale policing may have some counterproductive results in terms of promoting the service style.

Table 1

Simple and Partial Correlation Coefficients for PAA Population with Indicators of Service Style Policing in 42 Study Neighborhoods

Dep. Var. Name	Variable Description	Simple Correlation	2nd Order ^a Partial
POLICE INTERVENTIONS			
SERVICE ^b	# Officer-initiated encounters involving a citizen in need of assistance	-.03	-.10
AGGRESS ^b	# Officer-initiated encounters involving suspects only	.28	.15
NONCRIME ^b	# Officer initiated encounters involving no violations or interpersonal conflicts among citizens	.06	-.02
SECURITY ^b	# Home security checks conducted	-.29	-.20
POLICE ACTIONS IN ENCOUNTERS WITH CITIZENS			
ACQUAINT	% Encounters that police showed acquaintance with citizen(s)	-.37	-.45
COMFORT	% Serious crime encounters with victim present that police comforted victim(s)	-.42	-.37
FORCE	% Nondangerous encounters when police used force on citizen(s)	-.14	.04
ARREST	% Nontraffic encounters with suspect present that police made arrest(s)	-.24	-.07

^aControl Variables: # violent victimizations/1000 neighborhood residents during previous 12 months
police officers in the department

^bStandardized per 100 hours of total observed-officers' unassigned time (time when officers were not responding to dispatcher or supervisor-assigned work or performing administrative duties).

Table 2

Multiple Regression for PAA Population and Control Variables with Indicators of Service Style Policing in 42 Study Neighborhoods

Dep. Var. Name	Variable Description	PAA ^a Pop. B(Beta) Stand. Err.	VIOCRIME B(Beta) Stand. Err.	DEPSIZE B(Beta) Stand. Err.	Multiple R ²
POLICE INTERVENTIONS					
SERVICE ^b	# Officer-initiated encounters involving a citizen in need of assistance	-.06(-.11) .094	-.03(-.08) .089	-.54(-.11) .001	.03
AGGRESS ^b	# Officer-initiated encounters involving suspects only	.28(.15) .306	-.52(-.36) .291	d(-.01) .004	.19
NONCRIME ^b	# Officer initiated encounters involving no violations or interpersonal conflicts among citizens	-.01(-.02) .096	-.08 (-.21) .08	d(-.02) .001	.05
SECURITY ^b	# Home security checks conducted	-.32(-.21) .212	.004(.004) .237	.003(.19) .003	.11
POLICE ACTIONS IN ENCOUNTERS WITH CITIZENS					
ACQUAINT ^c	% Encounters that police showed acquaintance with citizen(s)	-.66(-.44) .21	.52(.47) .203	-.008(-.62) .002	.34
COMFORT ^c	% Serious crime encounters with victim present that police comforted victim(s)	-.96(-.39) .392	.11(.06) .373	d(-.002) .005	.18
FORCE ^c	% Nondangerous encounters when police used force on citizen(s)	.02(.04) .096	-.02(-.04) .091	.002(.50) .001	.21
ARREST ^c	% Nontraffic encounters with suspect present that police made arrest(s)	-.12(-.07) .282	.20(.15) .268	.005(.31) .003	.21

^aPAA population in units of 10,000

^bStandardized per 100 hours of total observed-officers' unassigned time (time when officers were not responding to dispatcher or supervisor-assigned work or performing administrative duties).

^cIn percentage points

^dCoefficient is less than .001

Table 3
Simple Correlation Coefficients for PAA Population with Indicators
of Service Style Policing, Specified by Level of Neighborhood
Violence

Dep. Var. Name	Variable Description	Neighborhoods with 10 or fewer violent victimizations/1000 residents	Neighborhoods with more than 10 violent victimizations/1000 residents
(N)		(22)	(20)
POLICE INTERVENTIONS			
SERVICE ^a	# Officer-initiated encounters involving a citizen in need of assistance	-.31	.25
AGGRESS ^a	# Officer-initiated encounters involving suspects only	.30	.14
NONCRIME ^a	# Officer initiated encounters involving no violations or interpersonal conflicts among citizens	-.17	.30
SECURITY ^a	# Home security checks conducted	-.45	-.20
POLICE ACTIONS IN ENCOUNTERS WITH CITIZENS			
ACQUAINT	% Encounters that police showed acquaintance with citizen(s)	-.44	-.24
COMFORT	% Serious crime encounters with victim present that police comforted victim(s)	-.29	-.44
FORCE	% Nondangerous encounters when police used force on citizen(s)	.17	-.37
ARREST	% Nontraffic encounters with suspect present that police made arrest(s)	.13	-.46

^aStandardized per 100 hours of total observed-officers' unassigned time (time when officers were not responding to dispatcher or supervisor-assigned work or performing administrative duties).

FOOTNOTES

¹Several scholars and police notables have been attracted to one or more aspects of the service-style described here. See Bittner (1974), Garmire (1977), Goldstein (1977), Hahn (1971), Manning (1977), Brown (1980).

²The systematic observations reported by Brown are used to develop his typology of officer patrol styles, however, and are not used to compare large and small departments. For these Brown relies upon officers' responses to hypothetical situations presented during interviews.

³Data were provided by the Police Services Study, a joint project by Indiana University and the University of North Carolina. Principal investigators were Elinor Ostrom, Roger B. Parks, and Gordon P. Whitaker.

⁴PAA boundaries were determined from interviews with police administrators, patrol officers, beat assignment records, and observation by researchers accompanying patrol officers at work. PAAs described by administrators were adjusted according to agency assignment records and researcher observations. PAAs reported here refer to areas that (1) accounted for at least three fourths of the work assignments of the officers serving it, and (2) accounted for 70 percent of the observed officer's citizen encounters and time on mobile patrol. Population figures for these areas were based upon national, state, or local censuses/population estimates. A detailed account of this coding process is given in Mastrofski (1979).

⁵The samples were matched for time of day and day of week for all neighborhoods. Busier time periods were oversampled to increase the number of observations of encounters with citizens. Several officers per neighborhood were observed. The number of hours observers accompanied officers assigned to each neighborhood varied from 107 to 142 hours due to differences in shift lengths and actual time on the street (between the end of roll call and check-in at the shift's end). Observations of encounters reported in this paper are therefore standardized per 100 hours of observed, unassigned time.

⁶See Caldwell (1978) for a detailed account of patrol observation procedures and coding rules.

⁷In thirteen of the neighborhoods, no such victims were comforted. These neighborhoods tended to have fewer serious observed circumstances, the average number being five. The average number observed in the other neighborhoods was 11. The correlation between the frequency of such encounters and COMFORT is small, however ($r=.12$), indicating that the probability that victims of serious crimes and traumatic disorders will be comforted is independent of the frequency that police encounter these situations.

⁸The definitions of nondangerous and the use of force are both conservative. The FORCE measure is admittedly insensitive to important nuances of some encounters' dynamics. Some officers tend to "engineer" or provoke violence in citizens, and this measure would categorize these circumstances "dangerous," albeit they are within the power of the officer to defuse. Consequently, this measure must be interpreted with caution.

⁹Hit-and-run is coded as a nontraffic crime for this variable. Traffic citations are legal arrests, but they are widely considered to be of an entirely different magnitude than arrests for nontraffic violations. They have therefore been excluded.

¹⁰Analysis was performed using other control variables in addition to the one described. Percent of neighborhood residents that were ethnic minority and the mean family income in the neighborhood were also used. Their inclusion in the analysis produced no significant differences in the statistics. Level of neighborhood violence was also estimated based upon that observed by researchers accompanying officers. Using this variable made no appreciable differences in the findings.

¹¹Surveys of 44 departments with more than 400 officers indicate that 36 percent employ team policing (Farmer, 1978; Heaphy, 1977).

¹²Excluding traffic stops in constructing this variable produces a somewhat smaller coefficient ($r = .05$).

¹³The cutpoint of 10 is somewhat arbitrary, although this distribution of neighborhoods suggests that this is an appropriate choice. The mean violence levels are 5.1 and 17.8 for low and high violence neighborhoods, respectively. Medians are nearly identical to the means of each distribution.

¹⁴Partial correlations were also computed, controlling for department size, but coefficients remained substantially unchanged.

¹⁵I am indebted to Roger Parks of the Workshop in Political Theory and Policy Analysis at Indiana University for suggesting this alternative.

¹⁶The opportunities for taking strong coercive action and making arrests in low violence neighborhoods may be too infrequent for PAA size to show a marked affect for the 15 shift sample, thus accounting for low correlation FORCE and ARREST coefficients in Table 3.

BIBLIOGRAPHY

- Bayley, David H. and Harold Mendelsohn. 1969. Minorities and the Police (New York: Free Press).
- Bercal, Thomas E. 1970. "Calls for Assistance: Consumer Demands for Government Service," in Harlan Hahn, ed., Police in Urban Society (Beverly Hills, California: Sage Publications): 267-277.
- Bittner, Egon. 1974. "Florence Nightengale in Pursuit of Willie Sutton: A Theory of the Police," in Herbert Jacob, ed., The Potential for Reform of Criminal Justice (Beverly Hills, California: Sage Publications): 40.
- Brown, Michael K. 1980. Working the Street Police Discretion and The Dilemmas of Reform (Sage Publications) (forthcoming).
- Caldwell, Eddie. 1978. "Patrol Observation: The Patrol Encounter, Patrol Narrative, and General Shift Information Forms." Police Services Study Methods Report MR-2 (Bloomington, Indiana: Workshop in Political Theory and Policy Analysis).
- Cordrey, J. and G. K. Pence. 1972. "An Analysis of Team Policing in Dayton Ohio," Police Chief (August): 44-49.
- Farmer, Michael T. 1978. Survey of Police Operational and Administrative Practices 1977 (Washington, D. C.: Police Executive Research Forum).
- Fogelson, Robert. 1977. Big City Police (Cambridge: Harvard University Press).
- Fowler, Floyd J., Mary Ellen McCalla, and Thomas W. Mangione. 1979. Reducing Residential Crime and Fear: The Hartford Neighborhood Crime Prevention Program (Center for Survey Research, University of Massachusetts/Boston and the Joint Center for Urban Studies of M.I.T. and Harvard University).
- Gay, William G., Jane P. Woodward, H. Talmadge Day, James P. O'Neil, and Carl J. Tucker. 1977a. Issues in Team Policing: A Review of the Literature (Washington, D.C.: Government Printing Office).
- Gay, William G., Talmadge Day, and Jane P. Woodward. 1977b. Neighborhood Team Policing (Washington, D. C.: Government Printing Office).
- Goldstein, Herman. 1977. Policing a Free Society (Cambridge: Ballinger).
- Hahn, Harlan. 1971. "The Public and the Police," in Harlan Hahn, ed., Police in Urban Society (Beverly Hills: Sage): 9-33.
- Heaphy, John F. 1977. Police Practices: The General Administrative Survey. (Washington, D. C.: Police Foundation).
- Manning, Peter K. 1977. Police Work: The Social Organization of Policing. (Cambridge: MIT Press).

- Mastrofski, Stephen. 1979. "The Primary Assignment Area: Measuring an Aspect of Police Patrol Organization." Presented at the Annual Meeting of the Midwest Political Science Association, Chicago.
- Maxfield, Michael Gregg. 1979. "Discretion and the Delivery of Police Services: Demand, Client Characteristics, and Street-Level Bureaucrats in Two Cities." Ph.D. Dissertation (Evanston, Illinois: Northwestern University).
- Muir, William Ker, Jr. 1977. Police: Streetcorner Politicians (Chicago, Illinois: The University of Chicago Press).
- Murphy, Patrick V. and Thomas Plate. 1977. Commissioner (New York: Simon and Schuster).
- National Advisory Commission on Criminal Justice Standards and Goals. 1973. A National Strategy to Reduce Crime (Washington, D. C.: U. S. Government Printing Office).
- Peterson, John and Mark Pogrebin. 1977. "Team Policing: A Modern Approach to Decentralization of Police Decision Making." Abstracts on Police Science. Vol. 5, #1 (January/February): 1-13.
- Prottas, Jeffrey Manditch. 1979. People Processing--The Street Level Bureaucrat in Public Service Bureaucracies (Lexington, Mass.: Lexington Books).
- Reiss, Albert J., Jr. 1971. The Police and the Public (New Haven: Yale University Press).
- Rubinstein, Jonathan. 1973. City Police (New York: Ballantine Books).
- Schwartz, Alfred I. and Sumner N. Clarrren. 1977. The Cincinnati Team Policing Experiment: A Summary Report (Washington, D. C.: Police Foundation).
- _____. 1978. The Cincinnati Team Policing Experiment: A Technical Report (Washington, D. C.: Police Foundation).
- Walker, Samuel. 1977. A Critical History of Police Reform (Lexington, Mass.: Lexington Books).
- Whitaker, Gordon P. 1979. "What Are the Structural Advantages of Small Police Departments?" (Chapel Hill, North Carolina: University of North Carolina, Department of Political Science).
- Wilson, James Q. 1975. Varieties of Police Behavior (New York: Atheneum). Originally published by Harvard University Press, 1968.

END