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THE EFFECTS OF TRAINING AND EDUCATION ON
POLICE ATTITUDES AND PERFORMANCE:
A PRELIMINARY ANALYSIS

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Introduction

Increasing the educational levels and the amount of training provided police are two reforms which have long been recommended as keys to the improvement of police services in America. A Task Force of the President's Commission on Law Enforcement and the Administration of Justice in 1967 and the Wickersham Commission, in its report on police more than three decades earlier, expressed "the need for highly educated personnel." (Task Force on the Police, 1967: 126; National Commission of Law Observance and Enforcement [Wickersham Commission], Report on Police, 1931) Charles Saunders, Jr., in his recent book, Upgrading the Police: Education and Training for Better Law Enforcement, builds his case for increased police education and training on a proposition, stated by Raymond Fosdick in one of the first major studies of police in this century, that "the heart of the police problem is one of personnel." (Saunders, 1970: 4) According to Jerome Skolnick the notion that the solution to police problems is to "upgrade" the police pervades the tradition of police reform in the United States. (Skolnick, 1966: 4)[1] While few have claimed that education or training are panaceas for police problems, substantial claims have been made for the salutory consequences which are expected to flow from "improving the quality of law enforcement personnel."

Despite the long history of proposals to mandate higher education and training requirements for police personnel, minimal public action has occurred until the last five years. With the advent of urban riots and increased fear of crime, the previously local issue of law enforcement became an item on the national policy agenda. A series of national commissions have studied the police and proposed reforms. (President's Commission on Law Enforcement and the Administration of Justice, 1967;

National Advisory Commission on Civil Disorders, 1968; National Commission on the Causes and Prevention of Violence, 1970) The need for additional training and education for police has been a common theme in the commission reports. The President's Commission on Law Enforcement and the Administration of Justice developed the most detailed brief for this reform policy. The Report of the Task Force on the Police of that Commission assembled data on education and training levels of police departments throughout the United States. It concluded that current levels "remain minimal in most departments." It asserted, "The quality of police service will not significantly improve until higher educational requirements are established for its personnel." (Task Force on the Police, 1967: 126) "Cities and counties which fail to recognize the vital necessity of upgrading the educational levels of their departments are" according to the Task Force on the Police (1967: 126) "guilty of perpetuating ineffective police service and are not providing their citizens with adequate police service and protection." The Task Force also states that training "is one of the most important means of upgrading the service of a police department." (Task Force on the Police, 1967: 137)

The Commission's final recommendations include the following:

The ultimate aim of all police departments should be that all personnel with general enforcement powers have baccalaureate degrees. (109)

Police departments should take immediate steps to establish a minimum requirement of a baccalaureate degree for all supervisory and executive positions. (110)

All training programs should provide instruction on subjects that prepare recruits to exercise discretion properly, and to understand the community, the role of the police, and what the criminal justice system can and cannot do . . . . (112)

Formal police training programs for recruits in all departments, large and small, should consist of an absolute minimum of 400 hours of classroom work spread over a 4- to 6-month period so that it can be combined with carefully selected and supervised field training.

Every general enforcement officer should have at least one week of intensive inservice training a year. Every officer should be given incentives to continue his general education or acquire special skills outside his department. (113)

In 1968, in response to the recommendations of the President's Commission, Congress for the first time authorized and appropriated significant amounts of money to support police education and training programs. (Law Enforcement Assistance Administration, 1971: 81-87) Congress has continued to allocate monies for this purpose. State and local governments have also taken a variety of steps to bring education and training levels of police within the purview of public policy. Commissions have been established to set requirements. Training academies have been created. Incentive programs for educational attainment have been funded. In some cases, requirements for specific amounts of training have been mandated by state legislation. (Law Enforcement Assistance Administration, 1971: 81-87; Section 66.250 R.S. Mo. Supp. 1972) In short, these reform proposals have been the subject of a significant amount of public policy making over the last five years.

One might assume that the considerable emphasis on education and training as a police reform is based on a solid body of research on the relationship between those factors and police performance. However, there is a notable paucity of such research. Instead, as Charles Saunders conceded in stating his case for the reform:

The reasons advanced for college education for police are essentially the same as those used to justify higher education as preparation for any other career. They rest more on faith than fact. (Saunders, 1970: 81-82)

The case for increasing the education and training of policemen rests, in part, on an analogy. Advocates of these reforms contend that police work is or should be (the distinction is not always made clear) a profession. The police are called upon to provide a vital service to the community. The structure of their present organization results in the individual police officer exercising extensive discretionary power which can have a profound effect on the lives of individuals. In the case of urban disorders, the entire community may feel the effects of police discretion. The Task Force on Police of the President's Commission on Law Enforcement and the Administration of Justice stated: "Few professionals are so peculiarly charged with individual responsibility." (Task Force on the Police, 1967: 125) The Task Force also maintained that "the complexity of the police task is as great as any other profession." (Task Force on the Police, 1967: 126) After stressing the points of similarity between the tasks of policemen and those of the "learned" professions, the advocates of these police reforms typically emphasize the absence of advanced formal education. (Task Force on the Police, 1967: 126-127; Clark, 1970: 146-148; Harvie, 1971: 59-61) Thus, they advocate "professionalizing" the police. When the President's Commission recommended that, due to "the nature of the police task and its effect on our society," "all personnel with general enforcement powers have baccaulaureate degrees," their recommendation corresponds to Wilbert Moore's contention that for professional status "the minimum educational requirement be placed at the equivalent of the college Baccaulaureate degree." (Moore, 1970: 11)

Making brief what could be a lengthy discussion , it may suffice to note here that the status of professions is viewed by most advocates of increasing

the levels of education or training for police through lenses shaped
by the sociology of work literature. (Moore, 1970: 245-301) In this
literature a profession is taken to be an abstract model of occupational
organization and practice characterized by certain key elements. Over-
simplified, the model refers to an occupation whose members use formally
acquired technical skills to provide service to "clients" in accordance
with publicly proclaimed standards of practice. Discussions of this
model frequently refer to the way in which the technical skills or com-
petence are acquired (prolonged education and training) and the role of
a written code of ethics in guaranteeing a service orientation on the
part of practitioners. According to the model, professions are typically
granted authority to regulate their own practice in reward for their
expertise and service orientation. (Wilensky, 1964; Eulau, 1973; Haug and
Sussman, 1969: 153-155) Professions in this conceptualization know
what is best (competence) and can be relied upon to do what is best
(service orientation) if allowed to exercise their own judgment (autonomy).
The role of education and training is regarded as critical in profes-
sions both for imparting the necessary skills and for inculcating the
appropriate values. Applied to   police the contention is this:
if urban communities want their police to be competent and dutiful
servants, they must be trained and educated, they must be profession-
alized.

The policy of professionalizing the police has many advocates and
some critics. Advocates of the reform place primary emphasis on the
competence and service orientation elements of the model of professions,
while giving slight mention to the element of autonomy.[2] Critics of the
policy typically focus on the element of autonomy. They question whether

the introduction of greater autonomy into the governance of police is
consistent with the maintenance of a democratic rule of law. However,
one advocate of professionalization, Albert J. Reiss, Jr., bases his
case for the reform largely on the hope that the self regulation implied
by professional organization will be more successful in constraining
the use and abuse of police power than is the current practice of rely-
ing on bureaucratic organization. (Reiss, 1971: 202) These issues
set the stage for a much larger discussion than is possible here.[3]

Questions could be raised about 1) the appropriateness of the
analogy between police and such occupations as law and medicine, 2) the
adequacy of the "model" of professions as an explanatory tool or a pres-
criptive guide, and 3) the degree of fit between the model of profession
and the actual practice of law and medicine from which the model was
abstracted. However, the approach in this paper will be to set aside
those questions for the present.

An Empirical Analysis

We will undertake an empirical analysis of some of the claims of
particular relationships between each of these reforms and the attitudes
and performance of police. An empirical study of the relationships between
training and/or education of police and their attitudes is a relatively non-
controversial method of examining propositions derived from the work of
those proposing increased reliance on both of these strategies. As will
be discussed in the next section, advocates of reform make specific refe-
rences to the changes in police attitudes which increases in training or
education will produce. Thus, examining the relationship between an
officer's level of training and/or his level of education and his atti-
tudes with reagerd to key aspects of his job is a very obvious method for
examining these propositions.

However, it is almost impossible to find a non-controversial method for examining the relationships between training or education with police performance. The measurement of police performance, like the measurement of the output of most public goods and services is exceedingly complex. Reliance on F.B.I. crime statistics as a measure of performance is subject to severe methodological criticism. (Biderman, 1966; E. Ostrom, 1971) In this study, as in a series of previous studies on the organization of police in metropolitan areas (E. Ostrom, et. al., 1973; IsHak, 1972; E. Ostrom and Parks, 1973), surveys of citizens' experiences with and evaluation of the police serving them have been used as an instrument to measure the performance of police agencies. The use of citizen surveys as a measure of the consequences of police professionalization is likely to be especially controversial. According to classical statements of the professional model, a professional must be judged by his peers; the lay community is presumed incapable. In Ernest Greenwood's widely cited article on "Attributes of a Profession" he states:

> In a professional relationship, however, the professional dictates what is good or evil for the client, who has no choice but to accede to professional judgment. Here the premise is that, because he lacks the requisite theoretical background, the client cannot diagnose his own needs or discriminate among the range of possibilities for meeting them. Nor is the client considered able to evaluate the caliber of the professional service he receives. (Greenwood, 1966: 12-13, our emphasis)

As part of their claim to professional status, some police have asserted that citizens are inappropriate judges of their performance. Neiderhoffer notes the use of the professional model as an argument against civilian review boards. (Neiderhoffer, 1967: 4, also 178-190) Louis Radelet, in discussing the nature of "professional police-community relations,"

stresses the idea that professionals determine and respond to the "needs" and not the "wants" of clients. (Radelet, 1966: 89) Viewed in this way, the use of citizen evaluations of police as a measure of police performance may be challenged. The disqualification of laymen as judges of performance is a paradoxical element in the professional model when considered alongside another component of the same model. As Haug and Sussman note, professional autonomy is granted as a result of public acceptance of an occupation's dual claim of expertise and service orientation. (Haug and Sussman, 1969: 53) The dependence of professional status on community sanction, on public acceptance, clearly implies public evaluation. Hence the paradox.

Several premises underlie the prominent place of citizen evaluations in our study of police performance. First, as Albert Reiss stresses, citizens play a critical role in the provision of police services and the law enforcement process. (Reiss, 1971: 65-88) Police depend upon citizens to call when events arouse their suspicion, to supply information, and to testify as witnesses. Citizen willingness to participate depends, it is assumed, on their perception of the likely consequences of that participation. (Riker and Ordeshook, 1973) That depends, in turn, on their perception of the competence, reliability, and responsibility of the police. Thus, as a practical matter citizen evaluations of police performance are important indicators of police performance.[4]

Second, some of the effects which are predicted to flow from increasing the levels of training or education of police should be felt directly by citizens. Thus, a citizen survey is a major method of ascertaining if citizens' perceptions reflect any difference in the performance of better trained or better educated police compared with the

performance of police having lower levels of training or education.

Third, few of the records routinely maintained by police departments or other agencies provide adequate indicators of police performance. The most frequently collected data--reported crimes listed in the F.B.I. crime index--normally accounts for only 10 to 20 per cent of the total activities of a police department. Arrest rates and clearance rates provide some interesting insights into the activity patterns of a department but many heavily reflect the incentive system established by a Police Chief.

Education and training are expected by proponents of these reforms to produce a variety of specific benefits. One category of predicted effects relates to changes in the outlook, attitudes, and orientation of police officers. Both education and vocational training are expected to increase the officer's capacity to cope with the complex tasks which his job may entail. These effects will lead, according to the justification of the reform, to a second category of effects: improved police performance resulting in higher regard for police in the communities they serve.

In our analysis, the effects of training and education are considered separately. Training and education are frequently grouped together under the rubric of professionalization or "upgrading police personnel." The impact of training and education are not however, expected to be equal in impact but frequently to have the same type of effect. For example, college education is considered more important than training in shaping attitudes toward due process and other democratic values but a unit on this subject is normally included in proposed training curricula (Saunders, 1970: 122-123) Training is expected to play a greater role in the

acquisition of skills for handling specific police assignments, but college is expected to have a general, positive impact on the competence and self assurance of the officer in facing complex tasks.

Hypotheses

The following hypotheses are among those which follow from the case presented for policies requiring increased training and education for police. Police officers with higher levels (as compared with lower levels) of training (T) and education (E) will:

H_{1T} and H_{1E} — have a lower estimation of the efficacy of force in solving crime problems;

H_{2T} and H_{2E} — have a view of the goals of law enforcement which includes the protection of civil liberties even of persons suspected of criminal acts;

H_{3T} and H_{3E} — be less critical of Supreme Court decisions;[6]

H_{4T} and H_{4E} — be more tolerant of public protest and dissent;

H_{5T} and H_{5E} — have greater willingness to accept innovation in the structure of police departments;

H_{6T} and H_{6E} — be less approving of a military model of organization for police departments;

H_{7T} and H_{7E} — have greater confidence in their competence and preparedness for coping with police assignments.

In addition to the above hypotheses relating training and education to specific attitudes of the individual police officer, a second series of hypotheses can be posited which examine the relationship between the amount of training or the amount of education present in a police department and the performance of that department. When performance is evaluated by citizens, citizens served by departments whose officers have higher levels of training or education (compared with citizens served by departments having lower levels) will:

H_{8T} and H_{8E} — tend to give their police services a higher rating;

H_{9T} and H_{9E} tend to give a higher rating to police-community relations in their neighborhood;

H_{10T} and H_{10E} be more likely to believe that police respond quickly when called;

H_{11T} and H_{11E} be more likely to report that police treat all citizens equally; and

H_{12T} and H_{12E} be less likely to report that crime is increasing in their neighborhood.

When performance is measured by the success with which a police department is able to obtain warrants from a Prosecuting Attorney, departments whose officers have higher levels of training or education (compared with departments having lower levels) will:

H_{13T} and H_{13E} be more successful in obtaining warrants from the Prosecuting Attorney's office.

Data Base

In order to examine the above hypotheses we rely upon data collected during the spring and summer of 1972 in a major study of police performance conducted in the St. Louis metropolitan area. For the first series of hypotheses we will examine data obtained from interviews with 712 police officers employed in 29 different police departments. The departments varied in size from those employing only part-time officers (no full-time officers) to one employing over 2,200 officers. For the second series of hypotheses we will examine data obtained from approximately 4,000 citizens, distributed across jurisdictions served by 29 police departments. To each citizen case we added the aggregate characteristics of the department or district of a department serving his neighborhood. There were 45 neighborhoods included in the survey. The research design underlying the choice of neighborhoods and communities within the St. Louis

metropolitan area has been discussed elsewhere. (E. Ostrom, Parks and Smith, 1973) Appendix A provides a brief overview of the sample frame employed and the methods of data collection utilized.

Relationships Between Training and Education of Police and Attitudes Toward Work

The proponents of increased education and training regard the reform to be important not only because they are expected to increase the skills available to the officer but also because both education and training are thought to have an important impact on the orientation of policemen toward their work.

In order to examine the effects of training and education on the attitudes of officers toward work, our survey included the following items:

A. If a patrolman in tough neighborhoods had fewer restrictions on his use of force, many of the serious crime problems in those neighborhoods would be greatly reduced.
Strongly Agree___ Agree___ Disagree___ Strongly Disagree___

B. Police here would be more effective if they didn't have to worry about "probable cause" requirements in questioning or searching citizens.
Strongly Agree___ Agree___ Disagree___ Strongly Disagree___

C. What effects have Supreme Court decisions over the last ten years had on law enforcement here?

D. In this country there is no real justification for protest and dissent.
Strongly Agree___ Agree___ Disagree___ Strongly Disagree___

E. Is the command and discipline found in a military organization a good model for a police department?
Yes___ No___

F. The following have been suggested as ways of improving law enforcement in this country. Would you favor or oppose:
[list, including the following:]
Seeking chiefs and other top officers from outside of the department.
Favor___ Oppose___ Strongly___

The two measures of police training used at this stage in the analysis are (1) total weeks of training (including "basic training" at recruit schools or academies, F.B.I. courses on specialized subjects, training offered by other agencies such as the Department of the Army or the Federal Bureau of Narcotics and Dangerous Drugs, and short courses such as the ones held at Michigan State University on police-community relations) and (2) length of basic or recruit training.[7] Recruit training is now the exclusive province of a single Greater St. Louis Metropolitan Police Academy which has a sixteen-week program. Until several years ago, only officers in the City of St. Louis had the sixteen-week training. Officers in the municipalities typically attended an intensive two-week course sponsored by the Missouri Highway Patrol. Some, however, attended the twelve-week County Police Department Academy prior to its merger in the Greater St. Louis Metropolitan Police Academy.

Thus, even though all new officers are now required to take sixteen weeks of training at a single academy, the vast majority of officers in our sample joined their respective departments when length of training was highly variable. This variation is reflected in our sample.

Findings: The Relationship Between Police Training and Attitudes Toward Work

We begin by examining the simple association of training and attitudinal variables. The relationships between these variables and the background or contextual variables of officer age, tenure in a particular department, total years as a police officer, rank, assignment (uniform or plain clothes) and size of the officer's department was also examined Where these provide additional insight, those results are also presented.

Use of Force (H_{1T})

Approximately 40% of all officers agreed strongly with the statement (A, above) attributing effectiveness to force as an instrument of crime control. Total weeks of training does not discriminate between those who agree or disagree on the use of force ($tau_c = -.03$).[8] Controlling for age, race, length of service did not change the lack of relationships between total amount of police training and orientation toward the use of force.

Length of recruit training does make some difference. The direction of the relationship, however, is opposite the prediction derived from the reform literature ($tau_c = -.12$). When we compare the extreme cases (those who attended the sixteen-week course)[9] the overall character of the relationship prevails in most of the categories of the control variables. The relationship is somewhat stronger ($tau_c = -.18$) in smaller departments (less than or equal to .11 men). Officers in the largest department, all of whom have had the longer recruit training, are the ones most likely to strongly agree (20%) and agree (30%). While these results, provide quite insufficient warrant for asserting the existence of a relationship which is the reverse of reform expectations, the data do not support reform claims.

Probable Cause (H_{2T})

If police officers have a view of the goals of law broad enough to include the protection of citizens' civil liberties, they will be unlikely to concur with the assertion that "probable cause" requirements reduce police effectiveness. Those officers who consider suppression of crime as an overriding objective might well agree with the assertion. (Skolnick,

1966: 196-199) Just under half of the officers surveyed did agree with the statement (B above) (48.8%) and of that group, 17% indicated "strong agreement." Only 10% strongly disagreed. Amount of police training does not appear to be related to attitudes toward probable cause limits on searches and interrogation of citizens (tau_c = .08) nor does length of recruit training make a difference (tau_c = -.02).

Effects of Supreme Court Decisions (H_{3T})

In the last decade, actions by the United States Supreme Court pertaining to police behavior have been a source of bitter controversy in law enforcement circles. (Neiderhoffer, 1967: 161-174) Decisions such as Mapp v. Ohio, Escobedo v. Illinois, Miranda v. Arizona and others have been criticized for "handcuffing" the police. Arthur Neiderhoffer, recognizing the demands resulting from the decisions, stated an alternative interpretation: "Any department worthy of being called professional will meet this challenge successfully and emerge the stronger for it." (Neiderhoffer, 1967: 173) The contention is made that through education and training police officers will learn what the law requires of them and gain an understanding of the American system of constitutional government in which Supreme Court protection of civil liberties is accepted as legitimate.

We asked each respondent to assess the effects of Supreme Court decisions on law enforcement (C above). Answers were coded into categories which included "very harmful," and "very helpful " somewhat, etc., such as "We do much better, more professional police work because of them" was coded "very helpful." "They ruined us; tied our hands completely" was coded "very harmful." The statement "They made our job

harder, but I guess it should be that way" was placed in the middle or ambivalent category.

About half of all policemen surveyed regarded the decisions as harmful or very harmful. In contrast to the 20% who said the decisions were very harmful, only 5% said they were very helpful. Total amount of training shows no simple relationship to attitudes toward the Court (tau_c = -.03). When a control for size of department is introduced, the negligible relationships prevail, except for a weak relationship (tau_c of -.12) for officers serving in the smallest departments. This relationship, however, is not in the direction which the reform advocates suggest. Whereas 63% of those in the lowest training category found the decision of the court harmful in some degree, and 31% said they were somewhat helpful, 72% of those in the highest training category characterized the decisions as harmful and no officer in that category gave an answer that could be placed in "decisions are helpful" categories. Controlling for rank and length of recruit training did not affect the lack of a relationship.

Protest and Dissent (H_{4T})

Only 20% of all officers surveyed expressed any degree of agreement with the statement "In this country, there is no real justification for protest and dissent." Total amount of training is not related (tau_c = .07) with attitudes toward protest and dissent. Controlling for age and length of service, however, results in the appearance of a weak relationship between total training and favorable attitudes (i.e., disagreement with the statement) toward protest (tau_c = .15) in the highest age and length of service categories.

Length of recruit training (whether two or sixteen weeks) and attitudes toward protest appear not to be related.

Lateral Entry (H_{5T})

The President's Commission on Law Enforcement and the Administration of Justice noted that "Most departments today do not permit 'lateral entry' into command or staff position by officers from other departments or by civilians." (President's Commission on Law Enforcement and the Administration of Justice, 1967: 111) The Commission states that America's police personnel are "virtually frozen into the departments in which they started" in part "because of a traditional police resistance to 'outsiders.'" (President's Commission on Law Enforcement and the Administration of Justice, 1967: 111) Since barriers to lateral movement are characterized as "stifling the professional development of the police service," it seems useful to ask (E above) whether the more highly trained police in our survey were less inclined to oppose lateral entry than their less "professionalized" fellow officers.

Total weeks of police training is not related to an officer's attitudes toward lateral entry (tau$_c$ = .00). Controlling for size of department, age of officer or length of recruit training does not alter the finding of no relationship. Training, thus, does not help discriminate between the officers who favor (31%) and the officers who oppose (69%) opening top positions to lateral entry.

Military Model (H_{6T})

The status of a military model of organization for police departments (or "quasi-military" model as police tend to say) is extremely ambiguous. It is included in this discussion not because the literature on police

reform has provided a clear hypothesis. It has not.[8] There is one reform tradition that views the infusion of police organization with military discipline and bearing as "professionalization." (Bittner, 1970: 53, Bordua and Reiss, 1966: 68-76) In that tradition, the role of training is largely the inculcation of discipline, with the curriculum patterned after and named after its military counterpart, "basic training." (Neiderhoffer, 1967:45) Officers so trained might prefer a military organizational style. Another tradition expects training and education to produce competence and capacity for responsible exercise of discretion. (Task Force on the Police, 1967: 136; Bittner, 1970:86) One would expect, on the basis of this second tradition high levels of training to be associated with rejection of the military model of police organization. While our hypotheses derives from the second tradition, the findings are relevant to both.

Most police officers (64%) answered in the affirmative our question about whether the command and discipline found in a military organization is a good model for a police department. Total amount of police training was not simply related to acceptance or rejection of the military model (tau$_c$ =-.01). The percent officers approving the model in the three categories of total training were 64%, 65%, 65%. Introducing controls did not change the finding of no relationship.

Feelings of Preparedness (H_{7T})

Included within the set of tasks assigned to police are some which are quite complex. Advocates of "upgrading police personnel" frequently contrast the present need in police work for brains with the requirement in times past for brawn. Their belief is that training can better prepare police officers to cope effectively with the demands of their office. (Clark, 1970: 132-150; Task Force on the Police, 1967: 125-137; Bittner, 1970: 83-85) Quite a different perspective is offered by James Q. Wilson

who contends that competence in police work is derived not through formalized training but through apprenticeship. (Wilson, 1968: 283) Wilson is not merely recounting the current practice in law enforcement but making a more substantial assertion that police competence, at the present time, cannot be based on classroom learning (whether at the academy or college) because, he maintains, police work lacks a "proven technology." (Wilson, 1968: 63)

We asked each to indicate how well his training and experience had prepared him for handling family disturbances, civil disorders, traffic accidents, narcotics cases, court appearances, and problem juveniles.

Police officers do not feel equally prepared for all six types of assignments. Whereas almost 80% of all officers in the survey felt "very well prepared" for traffic accidents, and almost as frequently felt that they were very well prepared for family disturbances and court appearances, only 26% indicated that they were very well prepared for narcotics cases and less than 40% stated that they were very well prepared for civil disorders and problem juveniles. The distribution of answers on the other extreme ("not very well" prepared) was similarly varied, ranking in the opposite order from preparedness. All of the associations between total weeks training of officers and reported feelings of preparedness are negligible. The length of time spent in basic training is weakly associated with feeling of preparedness in dealing with problem juveniles ($tau_c = -.14$). However, increased training is weakly related to reported feelings of unpreparedness.

Findings: The Relationship Between Education
and Attitudes Toward Work

At this stage of preliminary analysis of data we will follow the precedent of the few studies which have undertaken an empirical examination of the effects of education on police. (Neiderhoffer, 1967; Walsh, 1970; Milner, 1971; Smith, Locke and Walker, 1967; Cohen and Chaiken, 1973) That is, we will ignore the obviously important refinements which are possible and appropriate in the use of college education as a variable.[11] Number of college credits, grouped into categories representing years of college education (30 credit hours equals one year) is used as our measure of college education. While many of the discussions recommending college education requirements for police refer specifically to a need for "college graduates," they typically indicate that some college is preferable to no college where degree holders are not available. Thus, for policy purposes, college credit is treated as at least an ordinal measure. We follow that practice in our analysis.

Use of Force (H_{1E})

The advocacy of college education for those who engage in police work rests, in a large measure, on the conclusion that intelligence and knowledge rather than physical force are the keys to successful law enforcement. There is the assumption, more or less explicitly stated, that intelligent, well-adjusted men today go to college and that college has a capability to impart knowledge which surpasses other learning situations. Finally, there is an assumption that the college milieu has a broadening, a humanizing effect. (Task Force on the Police, 1967: 126; Clark, 1970: 146-147; Smith, Locke and Walker, 1967; Saunders, 1970: 81-92)

As a consequence, the college educated policeman is expected to understand the inadequacy of force as an instrument of crime control and to accept limits of the use of force by police on humanitarian and constitutional grounds. Restraint in the use of force is a characteristic attributed to "professional police." (See Skolnick, 1969: 248-249; Clark, 1970: 132-150)

Our question on the use of force by police simultaneously probed acceptance of limits on the use of force and perceptions of the efficacy of force as a solution to problems of crime. Approximately 40% of the respondents agreed or strongly agreed that limits on the use of force in tough neighborhoods reduced success in controlling crime. To what extent is amount of college education associated with rejection of freer use of force as a solution to crime? The preliminary answer is: To some small extent.

Years of college and disagreement with the use of force statement are weakly associated (tau_c = .11). Controlling for the effects of other variables produces in most cases only small changes.

Probable Cause Reduces Police Effectiveness (H_{2E})

A 1967 study cited by advocates of college education for police concludes that:

> There are certain personality characteristics of police who attend college that make it likely that they will be able to function more effectively with respect to the problems stemming from civil rights demonstrations and more effectively in accordance with the guidelines set down by the Supreme Court with respect to arrests and search and seizure. (Smith, Locke, and Walker, 1967: 132)

It is clear that reform advocates expect college educated officers to include the protection of civil liberties as part of their responsibility

to uphold the law. Saunders, citing the 1967 study mentioned above and several others as support for the reform proposal, states: "Such findings are not conclusive but they suggest that large scale recruitment of college graduates would significantly affect police performance." (Saunders, 1970: 89)

While 49% of all respondents agreed or strongly agreed with the assertion that probable cause requirements reduce police effectiveness, those with any college at all were somewhat less likely to agree than those with none (tau_c = .15). Years of college work are also weakly related (tau_c = .12). These preliminary findings provide some weak support for the hypotheses derived for reform proposals. However, controlling for size of department complicates the picture. Only in the middle-size departments does the weak relationship exist in the reform-predicted direction. The largest and smallest departments show only a negligible relationship between years of education and attitudes toward probable cause.

Effects of Supreme Court Decisions (H_{3E})

One goal of educating policemen, according to the Task Force on Police, is to increase their appreciation of our constitutional system of government in which, as Skolnick says, the police "are not supposed to adjudicate and punish; they are supposed to apprehend and take into custody." (Skolnick, 1969: 249) Neal Milner concludes, "Most advocates of police reform would expect a positive relationship between education and the degree of approval of a decision like Miranda." (Milner, 1971: 197) And, as noted earlier, a 1967 study of police suggested that the inclination to attend college by itself augured a capacity to function

more effectively in accordance with Supreme Court guidelines. (Smith, Locke, and Walker, 1967)

In the realm of attitudes, we find some support for reform expectations about effects of college. Slightly more than 60% of the officers interviewed assessed the effects of Court decisions to be harmful or very harmful to law enforcement. Those with college were less inclined to perceive the decisions as harmful. Years of college is weakly related to characterizing the decisions as helpful (tau_c = .19). The relationship is slightly weaker for patrolmen (tau_c = .17) and slightly stronger among command rank personnel (tau_c = .22). Rank itself is weakly related to acceptance of the Court as helpful (tau_c = .13).

The relationship between college and regarding the Court decision as helpful is not the same for officers in departments of all sizes. The relationship is negligible in departments of 11 men or less, is strongest in the middle-sized municipal departments (tau_c = .20) and the county department (tau_c = .18) and is reduced to a tau_c of .12 among officers in the largest department in the study. In this connection, the actual percentages of agreement and disagreement are worth reporting. (Table I)

Table I. Police Officers' Attitudes Toward Effects of Supreme Court Decisions in Differently Sized Departments

Department	% Very Harmful or Somewhat Harmful	% Very Helpful or Somewhat Helpful	N
Mini (0-11)	64	28	(47)
Muni (12-70)	58	28	(342)
County (422)	55	36	(81)
St. Louis City (2,200)	83	13	(95)
Total	62	27	(565)

One might expect to explain the Court's low score among officers in the largest (though certainly not the "mini" departments) with the fact that the largest department also has the largest proportion of its officers who are older and have significantly longer tenure.[12] There is a tendency in the literature to contrast the "old breed" of cop with the new policeman. (Wilson, 1968a: 173-195) Overall there is no relationship between an officer's age and his attitudes toward the Court. But a weak relationship does appear when we control for size of department with age being related negatively to considering the Court helpful in the largest department (tau_c = -.15). For middle sized departments the relationship either remains negligible (muni's) or becomes weakly positive (County, tau_c = .17). Thus, if the "old breed" explanation serves at all, it does not pertain to all sizes of departments.

Protest and Dissent (H_{4E})

Ramsey Clark and others have held that college educated officers will feel less threatened and more easily accept the legitimacy of public protest and dissent in America. (Clark, 1970: 144-145) Our findings provide some confirmation for their expectations.

Years of college work is weakly related to acceptance of protest and dissent overall (tau_c = .14) and for both patrolmen (tau_c = .12) and command rank personnel (tau_c = .16). When a control for age is introduced, however, the relationship disappears for the middle age categories (including officers who are between 30 and 50 years old).[9]

Lateral Entry (H_{5E})

There is a weakly negative relationship between college work done and opposition to lateral entry (tau_c = -.16) which holds for patrolmen

(tau$_c$ = -.14) and grows slightly stronger for command personnel (tau$_c$ = -.21). The relationship also remains in categories of age and length of police service. However, the effects of college are different in different sized departments. The relationship is negligible in the smallest departments, is very weak in the largest department (-.11), but is slightly stronger than the overall relationship in the middle-sized departments (tau$_c$ = -.17 for both muni and County police). The reaction to lateral entry varies by size of department. · If we compare the extreme answers we obtain the following percentage distribution:

Table II

Relationship Between Size of Department and Attitude Toward Lateral Entry

Number of Full-Time Officers	Mini (0-11)	Muni (12-70)	County (422)	St. Louis City (2200)
Strongly Oppose	32%	37%	40%	66%
Strongly Favor	19%	13%	12%	5%
Grand N = (686) tau$_b$ = .17	(68)	(409)	(94)	(115)

Military Model of Police Organization (H$_{6E}$)

The traditional reliance of police departments on a military model of organization has been identified by some reformers as a barrier to recruiting and retaining college educated policemen. For Bittner, the resistance college educated men will pose to perpetuation of the military style of organization is a major reason for having educated policemen. (Bittner, 1970.86-87) However, is education level related to an officer's

view of the appropriateness military command and discipline in police work? At this point, we cannot conclude that it is.

In our survey 64% of all officers expressed acceptance of military organization as a model for police. Years of college was negligibly related to acceptance or rejection (tau - .04). When controls are introduced the relationship remains negligible.

Feelings of preparedness (H$_{7E}$)

The levels of association between amount of college education and reported feelings of preparedness are mixed. Although in four of the six preparedness items, the relationship is negligible, family disturbances and civil disorders show a tau of .13 and .12, respectively. However, the direction of the relationships is the opposite of the reformers' expectations. In each case, the more college work an officer had done, the less likely he was to choose "very well" prepared and the more likely "not very well" appears as his answer.

In addition to the specific preparedness questions, officers were asked a general question related to James Q. Wilson's contention that police work lacks a body of knowledge, a "proven technology." A large majority of the respondents in our survey (84%) agree or strongly agree with the statement: "There is available today the knowledge to enable policemen to handle almost any of the situations they face." Agreement with this statement does not vary appreciably with length of training or amount of college education, nor does it vary with the officer's age, length of service as a policeman, or the size of the department in which he works.

While it seems clear that the police surveyed agree on the existence of the knowledge necessary to cope with the demands of their jobs, it is

less clear how this knowledge is to be obtained. Only 25% of all

respondents would set the formal education requirement for new police

officers at higher than high school. Most of that group specified only

"some college." Less than 5% would require a degree of any kind and only

0.6% would require a baccalaureate as recommended by the Task Force.

On this question, college education of the respondent is positively

related to requiring college of recruits.

Summary

In summary, as Table III shows, the simple relationship between

training of officers and their attitudes rank from negligible to weak.

The direction of some of the relationships is opposite that which reform

advocates would predict.

Table III

Summary of Simple Relationships Between Training and Education Levels of Police and Their Attitudes Toward Work

		Amount of Training (tau_c)	Length of Basic Training (tau_c)	College Credits (tau_c)
H_1	Use of Force Effective	-.03	-.12**	.11*
H_2	Probable Cause Reduces Effectiveness	.08	-.02	.12*
H_3	Supreme Court Decisions Harmful	-.03	-.03	.19*
H_4	No Justification for Protest or Dissent	.07	.05	.14*
H_5	Lateral Entry	.01	.05	-.16*
H_6	Military Model of Police Organization	-.01	-.10**	.04

* A weak relationship (tau $\geq$ .10 and <.25) in the reform-predicted direction

** A weak relationship (tau $\geq$ .10 and <.25) in the opposite direction of reform prediction

While education generally shows relationships which have the sign predicted

by the advocates of these reforms all relationships are weak except one

which is negligible. Furthermore, as noted in the preceding discussion,

these weak relationships are altered by the introduction of controls.

In particular, controlling for size of department often resulted in the

finding that the relationship obtains only in the middle-sized departments;

it is reduced to a negligible level for the largest and the smaller depart-

ments. This preliminary finding points to a conclusion tentatively asserted

previously that relationships between police-relevant variables may not

be the same in different sized jurisdictions. (Ostrom and Parks, 1973: 385)

Findings Regarding the Relationship Between Training and Police Performance Evaluated by Citizens (H_{8T} - H_{12T})

Each officer interviewed was asked about each of his training

experiences--where they occurred, the type of training and the length

of each training experience. From these responses a score was computed

for each officer for the amount of training (in weeks) he had received.

From these individual scores, a departmental average was computed (or

for districts in the City of St. Louis or St. Louis County--a district

average was computed). The average weeks of training for a department

(or district) was then collapsed into three categories:

1) Departments (or districts) whose average weeks of training was less than or equal to 12 weeks.

2) Departments (or districts) whose average weeks of training was 13 through 16 weeks.

3) Departments (or districts) whose average weeks of training was more than 16 weeks.

Each citizen respondent was then assigned the appropriate score for the

police department (or district of a department in the City of St. Louis
or St. Louis County) serving his neighborhood. All police officers
hired after September 28, 1971, must have a minimum of 16 weeks training.
But at the time of our survey, approximately equal numbers of citizens
interviewed were served by police departments (or districts of depart-
ments) which were distributed across the three categories of training
level.

The citizen survey included the following five questions:

1. What rating would you give police services in your neighborhood?
   (Outstanding, Good, Adequate, Inadequate, or Very Poor)

2. When the police are called in your neighborhood, in your opinion,
   how fast do they come? (Very Rapidly, Quickly Enough, Slowly,
   Very Slowly and Not At All)

3. Do you think crime in your neighborhood is increasing, about
   the same, or decreasing?

4. What rating would you give police-community relations in your
   neighborhood? (Outstanding, Good, Adequate, Inadequate, or Very
   Poor)

5. The police in your neighborhood treat all citizens equally
   according to the law. (Strongly Agree, Agree, Disagree, Strongly
   Disagree)

If the average level of training of police officers serving a neigh-
borhood affects citizen evaluation of police performance, one would
expect that those respondents served by departments (or districts of
departments) with the highest levels of training would be more likely to:

1. Rate police services in their neighborhood as outstanding.

2. Rate police as responding very rapidly in their neighborhood.

3. Evaluate crime trend as not increasing.

4. Rate police-community relations in their neighborhood as
   outstanding.

5. Agree that police in their neighborhood treat all citizens
   equally according to the law.

Table IV

Relationship Between Average Weeks of Training of Officers Serving a
Neighborhood and Citizen Evaluations of Police Performance

Citizen Evaluations of Police Performance

Average College Credits of Officers in Department Serving Neighborhood	Rate Police Service Outstanding	Rate Police Response as Very Rapid	Rate Crime as Increasing in their Neighborhood	Rate Police-Community Relations as Outstanding	Agree or Strongly Agree Police Treat All Citizens Equally
Less than or Equal to 12	34% (376)	59% (601)	24% (229)	24% (234)	79% (735)
13 to 16	27% (429)	52% (779)	29% (400)	15% (198)	84% (1069)
Over 16	22% (256)	41% (447)	39% (418)	14% (134)	82% (1790)
N for full Table	(3903)	(3634)	(3414)	(3193)	(3164)
Predicted Sign of Relationship	+	+	−	+	+
Tau	-.10	-.12	.10	-.05	-.01

However, as shown on Table IV, three of the relationships are very weak and opposite of that predicted. The other two relationships are negligible.

The possibility of a stronger relationship between race, length of residence and the educational level of a respondent with these five evaluations has also been examined. A respondent's race is weakly related to his rating of police services (tau = .13), his rating of police-community relations (tau = .13) and to whether he agrees that police treat all equally (tau = .11). In each of the above three cases, black respondents are more likely to give negative evaluations of police services received. The educational level of a respondent is not related to responses on any of the five evaluation questions while the length of residence is weakly related only to one--rating of police-community relations (tau = .11).

In order to examine the differential effect of training on significant sub-populations of the sample frame, each of the cross tabulations between levels of training and evaluations of police services were run controlling for race, length of residence and educational levels. Introducing length of residence and educational levels as controls had minimal effect on the signs or strength of coefficients. The signs of all but a few coefficients remained opposite to those predicted and all remained extremely weak. When race of respondent is used as a control, the sign changes for each relationship except for that between the average level of training of the police serving a neighborhood and respondent's evaluation of the crime trend. All relationships are negligible except for the weak relationship between black respondents agreeing to the statement that police treat all

equally and the average level of training of the department (or district) serving a neighborhood (tau = .12).

From these findings one would have to conclude that, in general, only weak or negligible relationships exist between the level of training of police serving a neighborhood and any of the evaluations given by residents of that neighborhood. For white respondents, the sign of the relationship is consistently the opposite of that predicted by the advocates of training as a major reform, while for black respondents the sign of the relationship is that predicted. On the basis of this data, one could not find support for the hypotheses posited above concerning the relationship between the average levels of training provided police and police performance as evaluated by citizens.

Findings Regarding the Relationship Between College Education and Police Performance Evaluated by Citizens $(H_{8E} - H_{12E})$

Each officer interviewed was asked about the number of college credits he had obtained. From these individual responses, a departmental (or district) average was computed. The average number of college credits for the officers interviewed within a department (or district) was then collapsed into three categories:

1. Departments (or districts) whose average number of college credits was 15 credits or less.

2. Departments (or districts) whose average number of college credits was 16 to 30 credits.

3. Departments (or districts) whose average number of college credits exceeded 30 credits.

Each citizen respondent was then assigned the appropriate score for the police department or district of a department in the City of St. Louis or St. Louis County serving his neighborhood .

We then examined the relationship between the average level of college work completed of police serving a neighborhood and the ratings citizens gave their police on the same five questions examined in the preceding section on training. The expected direction of all relationships for average level of college work completed would be the same as that expected for average level of formal police training.

As shown on Table V, the sign for all five relationships is the same as that predicted, but the strength of the relationships is negligible. Controlling for length of residence or level of respondent's education did not change the direction of the relationships nor, in general, increase their strength. Controlling for race produced two slightly stronger relationships for black respondents: 1) the relationship between the level of college work completed for police serving a neighborhood and the respondent's general evaluation of police services (tau = .11) and 2) the relationship between the level of college work completed by police serving a neighborhood and the respondent's rating of police response rate (tau = .13).

In general, these preliminary findings provide little support for the hypotheses on the effects of college education derived from the literature on police reform.

The Relationship Between Education and Training Levels of Police Departments and Success at the Warrant Office

One of the frequently cited negative effects of "inadequate" training and "insufficient" education of police is the loss of convictions as a result of mishandling of cases by police. Clark states:

If police are not familiar with the law, there is no law--
there is only arbitrary force. Police ignorant of the law risk

destroying important prosecutions in a number of ways, as when evidence is obtained illegally or wrongful arrests are made . . . . If government is to be more than arbitrary and capricious power, police must be thoroughly familiar with the laws they enforce. This is a difficult intellectual undertaking. It must rest on a solid educational base. It requires continuing and sophisticated education to keep current. (Clark, 1970: 139)

Saunders stresses the need for better trained police. He quotes approvingly J. Edgar Hoover's statement that

The efficiency of law enforcement today is commensurate with the degree of training of its officers. Only through modern police training can we keep abreast of the times in the unceasing fight against lawlessness . . . . Police work by untrained men . . . is as obsolete as the practice of medicine by sorcery. (Saunders, 1970: 118)

In light of such statements it seemed appropriate to find a means to measure the degree of police effectiveness in their role as legal agents. To do this, we measured police success in obtaining warrants from the Prosecuting Attorney for their jurisdiction. This measure is the number of warrants issued by the Warrant Office expressed as a percent of the total number of warrants for which application was made (excluding checks, nonsupport and traffic cases).[13] This measure pertains to an entire department (or district of larger departments), not to individual officers. It is, of course, a summary measure. We assumed that Prosecutors allocate their scarce resources to cases they believe will have a high probability of success before judge and jury. The items that comprise the score reflect the judgment of lawyers in the Prosecuting Attorney's office that the applying department

-has accurately identified a violation;

-has presented sufficient evidence;

-has obtained the evidence properly, i.e., it will be admissable;

-is capable of bringing forth appropriate witnesses;

-has officers who perform capably in court appearances.

Obviously, different Prosecuting Attorneys' offices operate or may operate under somewhat different criteria, for a variety of reasons. Fortunately for comparability, twenty-eight of the twenty-nine departments included in our study work with the same Warrant Office of the Prosecuting Attorney of St. Louis County. The districts of the St. Louis Metropolitan Police Department included in our study take their applications to the Circuit Attorney for the City of St. Louis. We found (by examining the data including and excluding the City Districts) that the relationships were not affected by this factor.

Although success in obtaining warrants is obviously a crude measure (a "batting average" of sorts), there is no single precise and convincing measure of police performance. Consequently, we suggest warrant success as a measure, among others. (Ostrom, 1971; Parks, 1973) Furthermore, we recognize the appropriateness of considering other factors (such as volume of work load, types of criminal activity occurring, etc.). Since reform propositions have not countenanced the complexity of the relationships involved, we feel justified in presenting simple correlations at this stage of the analysis. We will, however, in future analysis introduce other relevant variables.

The Findings (H_{13T} and H_{13E})

We calculated Warrant Success Scores for each department for 1970, 1971, and 1972. For the City of St. Louis, we calculated scores for each of the three districts of the St. Louis Metropolitan Police Department serving the neighborhoods included in our citizen survey. For the three-year period considered the average score ranged from a high of 88% to a low of 33% (both earned by very small departments). Most (90%) had a three-year average score falling within a 40% to 70% range.

For the years 1970, 1971, and 1972, the mean level of college education of officers in a department was weakly and negatively related to success in obtaining warrants.[14] For 1970, the correlation coefficient (r) is -.38; for 1971, -.30; and 1972, -.31. An average success score for the three years shows a similar negative correlation coefficient (r = -.25). The strength and direction of the relationship remained relatively constant for the three-year period. Despite the fact that relationships are weak, the finding that they are opposite the direction predicted by those who call for increased education as a police reform means our findings do not support the hypothesis derived from reform literature.

Mean total weeks of training, which ranges from 5 to 22, show a weak correlation with success scores and for each of the three years (.29, .14, -.07, for 1970-1972, respectively). Note that over the three years, the tendency is in the direction of a weaker and, ultimately, negative relationship. Given the small size of the correlation coefficient, we cannot provide much support for the hypothesized relationships between levels of training and education of department and success in obtaining warrants. Our hesitation is reinforced by the perplexing fact that, while levels of training and education of police in St. Louis County have presumably been rising from 1970 through 1972, the percent of total applications issued (for felonies and misdemeanors) has decreased from 60% in 1970 to 55% in 1971, to 50% in 1972. (McNary, 1970: 19; McNary, 1971: 27; McNary, 1972: 6)

Conclusion

The point of departure for this discussion was an observation of the prevalence of proposals calling for increased training and education for American policemen. The notion that higher levels of training and more college educated policemen will improve the quality of police services approaches the status of "conventional wisdom." The limited extent and substantive findings of the reported research on the effects of training and education suggested to us the need to pursue this topic at an early stage in our analysis of data collected in a sizeable survey of police services in a major metropolitan area. The preliminary character of the analysis require us to emphasize the tentativeness of our conclusions.

We found little evidence to support the claims which have been made for the beneficial effects of longer periods of training for police. We found little basis to conclude that an officer's total weeks of training or length of training as a recruit had an important impact on his feelings of preparedness for specific assignments or his attitudes towards selected law enforcement controversies. We did not find that departments with higher levels of training got appreciably higher evaluations from the citizens they serve, nor were they particularly more successful in obtaining warrants when they applied for them from the Prosecuting Attorney.

The relationships between college education levels and the dependent variables included in our analysis were weakly consistent with predictions of those advocating education as an important reform in the police field with a few exceptions. Although college educated officers did tend somewhat to manifest the reform predicted attitudes toward use of force, probable cause requirements, the Supreme Court, and lateral entry, they

did not differ from less educated officers in the assessment of the appropriateness of a military model of organization for police departments. On questions about their feeling prepared for specific police assignments, college educated officers tended to be less confident. Departments whose officers had higher levels of college education were not given higher ratings by the citizens they serve. Nor were they more successful than less educated departments in obtaining warrants.

While considerably more analysis is obviously required, the results from our study thus far provide slight confirmation for hypotheses derived from police reform literature calling for higher levels of training and education.

Appendix A

Given that the type of neighborhood served is a major factor affecting many aspects of police performance, we utilized a "most similar systems" research design in the selection of neighborhoods within the St. Louis area. (Przeworski and Teune, 1970) A neighborhood is defined for this study as consisting of either:

1) an independently incorporated community in St. Louis County with a population in 1970 less than or equal to 28,900;

2) a census tract within an independently incorporated community in St. Louis County with a population in 1970 of greater than 28,900;

3) an urban place as designated by the 1970 census within the unincorporated portion of St. Louis County; or

4) a Planning Neighborhood (as designated by the St. Louis City Planning Commission) within the City of St. Louis.[15]

Using these criteria, over 170 neighborhoods existed in the City of St. Louis or St. Louis County at the time of our study.

The selection of sample neighborhoods first focused on the elimination of neighborhoods in which:

1) the percentage of population over 65 years of age exceeded 20%;

2) the percentage of population under 21 years of age exceeded 45%;

3) the median value of owner-occupied housing was greater than or equal to $25,000;

4) less than 60% of the dwelling units were owner occupied (this criterion was relaxed slightly in two cases to allow inclusion of two predominantly black communities).

The remaining relatively homogeneous neighborhoods were then stratified along dimensions of neighborhood wealth on the one hand and community size (or form of police provision) on the other. Along the community size and form of police provision dimension were seven strata:

1) independently incorporated communities containing between 500 and 4,999 population;

2) independently incorporated communities containing between 5,000 and 15,999 population;

3) independently incorporated communities containing between 16,000 and 28,900 population;

4) neighborhoods within communities ranging in size from 28,901 to 66,000;

5) neighborhoods within the City of St. Louis;

6) neighborhoods within the unincorporated sections of St. Louis County served by St. Louis County Police;

7) independently incorporated communities which contract with other police departments for service.

In the first six categories above, police services are provided to citizens by the jurisdiction in which they live. In the seventh category, a separate jurisdiction provides police services to the community under contract arrangements.

Our wealth dimension contained three strata:

1) those communities and neighborhoods in which median value of owner-occupied housing units is less than $10,000;

2) those communities and neighborhoods in which median value of housing is between $10,000 and $14,999 plus those communities and neighborhoods in which median value of housing is between $15,000 and $19,999 and median contract rent per month is less than $120;

3) those communities and neighborhoods in which median value of housing is between $15,000 and $19,999 and median rental per month is greater than or equal to $120 plus those communities and neighborhoods in which median value of housing is between $20,000 and $24,999.

Stratification utilizing these factors in combination produces a seven by three matrix with 21 cells. For seven of these logically possible cells there were no existing cases. From the fourteen remaining cells, we chose 45 sample areas for examination as illustrated in Table A1. In

choosing from the potential neighborhoods for each cell, we first dichotomized
these into neighborhoods with greater than 30% black population in 1970
and those with less than or equal to 30%. Sensitivity to this dichotomy
in selecting neighborhoods for inclusion ensured that--to the extent allowed
by the existence of appropriate neighborhoods--we would include a signifi-
cant black sample.

Having determined through use of the criteria described above those
neighborhoods which were of interest, we proceeded to choose among them
on the basis of contiguity into clusters of neighborhoods. These consider-
ations allowed us to choose our 45 sample areas in such a way that meaning-
ful variations along the dimensions of size and organization for provision
of police service, individual wealth within the community, and presence or
absence of a sizeable black population could be obtained while maintaining
the "most similar systems" research design.

Data Collection

For each of the neighborhoods in our sample frame we obtained data
from five types of sources: 1) interviews with citizens residing in the
neighborhoods; 2) interviews with police officers serving the neighborhoods;
3) internal and published police and other local agency records pertaining
to the neighborhoods; 4) published and unpublished data relating to the
neighborhoods from agencies external to the communities studied; and
5) unobtrusive observation of neighborhood conditions. Wherever possible
we attempted to obtain overlapping information from two or more sources,
a procedure which can often provide additional credence in the data as
well as additional insight. (Webb, et. al., 1966) Data analysis in this

paper relies primarily on surveys of citizens and police, supplemented to
some degree by agency records. (Sources 1, 2, and 3 above)

In obtaining interviews from citizens residing in the neighborhoods,
we used a combination of in-person, mail and telephone interviews. In
the neighborhoods of relatively higher SES rank in our sample frame, we
utilized exclusively mail questionnaires for initial contact, following
with a second wave of mail questionnaires to non-respondents and an attempt
to contact second wave non-respondents by telephone. (Hochstim, 1967)
In the neighborhoods of middle SES rank, and in a few of the higher ranked
neighborhoods (to provide a control group), we utilized mail questionnaires
for initial contact with one-half of the neighborhood respondents and in-
person interviews for the initial contact with the other one-half. The
follow-up on the mail questionnaires was the same as described above.
Several call-backs were attempted for respondents who were not at home for
the initial in-person contact. Telephone interviews were attempted with
potential respondents who were not at home after several in-person attempts
or with those who had refused an in-person interview. In the lowest SES
rank neighborhoods in our sample frame, and in some in the middle rank, we
relied entirely on in-person interviews for initial contacts with return
attempts and telephone follow-up where needed.

For the mail sample, a random sample of addresses was drawn from land-
use files maintained at the University of Missouri-St. Louis. In-person
interview respondents were chosen by selecting census blocks at random
from a list of all blocks in the neighborhood. All households on the
chosen blocks were included in the sample.

The mail questionnaire utilized essentially a shortened version of
the in-person questionnaire. Telephone follow-up interviews for both the

in-person sample and the mail sample were a very short version of the

in-person interview. The primary purposes of the telephone follow-up

included:

1) obtaining data on a limited set of major questions;

2) using the data so obtained to evaluate the potential differences in the patterns of response which might have occurred had the "not-at-home" respondents and those respondents who refused to be interviewed all had been included;

3) gaining a validity check on interviewer remarks concerning refusals and not-at-homes.

The differences found so far among the three methods of data collection

(in-person, mail and telephone) are not so great that we are hesitant to

combine data collected by these different methods. We did find respondents

returning the mail questionnaire to have slightly higher educational levels

than respondents to the in-person or telephone interviews. We plan to

introduce controls for educational levels in all our analysis of the citi-

zen survey data.

In departments with 25 full-time officers or less the goal was to

interview all police officers. In those departments with more than 25

full-time officers, a sample was drawn by first stratifying the department

roster into command and non-command groups, and then drawing a combined

sample of 25 men at random from these two strata, choosing from each

strata in proportion to its percent of the department. For the St. Louis

City and St. Louis County departments this sampling method was employed

at departmental headquarters and in each of the districts serving neigh-

borhoods in our sample frame. All interviews with police officers were

conducted in-person during working hours.[16]

Officers were interviewed in every department serving the neighborhoods

in the sample frame. These interviews are distributed by department size

as shown in Table A2.

Table A2. Distribution of Police Interviews

Number of Full-Time Officers	Number of Departments	Number of Interviews
1-5	5	15
6-10	4	33
11-25	8	135
26-50	8	215
51-100	2	100
Over 100	2	214
	29	712

In addition to survey data, a variety of records including crime

statistics, calls for service, and budgets were obtained from departments.

Additional data from related agencies such as the Prosecuting Attorney's

office were collected. Census data and other materials descriptive of

the communities studied were obtained.

NOTES

[1] Skolnick, however, notes: it is rarely recognized that the conduct of police may be related in a fundamental way to the character and goals of the institution itself--the duties police are called upon to perform, associated with the assumptions of the system of legal justice--and that it may not be men who are good or bad, so much as the premises and design of the system in which they find themselves (Skolnick, 1966: 4-5)

[2] As noted by Bordua and Reiss, some police reformers use the label "professionalization" to refer to organizational changes involving tightening of internal discipline and centralization of control which, for the patrolman at least, are at variance with a model of professional work in which practitioner autonomy derives from personal competence. (Bordua and Reiss, 1967: 288-293).

[3] For a more extensive discussion of these issues, see Smith (forthcoming).

[4] The extent to which different measures of police performance are associated is the subject of a paper by Roger B. Parks. (1973).

[5] The fact that some of the propositions are not logically consistent with the model of profession summarized earlier reflects the noted tendency of advocates of professionalization to ignore the issue of autonomy. The consistency of the propositions derives instead from a tendency which Goldstein observed: "It is now commonplace to refer to practically any effort that is aimed at improving law enforcement as a contribution to the professionalization of the police" (Goldstein, 1967) There is a corollary tendency to attribute all preferred changes in police to professionalization.

[6] This proposition which reflects the stated expectation of advocates of increased education and training is indicative of the tendency of proponents of these reforms to overlook the element of autonomy in the professional model. If the element of autonomy is considered salient, one could hypothesize the reverse of the reformers expectations. Professionalized police might see court "interference" as an affront to their expertise.

[7] The designation of categories is arbitrary and exploratory at this point in the analysis. In some instances there appear to be quantitative breaks in the array of data. Size of department exemplifies this: A number of departments cluster in a range from 0 - 11 full-time sworn officers. There are no departments from 12 to 19, 15 fall in the 20 to 70 officer range, one has 440 officers and another has 2,200. These clusters correspond to our mini, muni, county, St. Louis City categories. Included in each of the two largest size categories are districts in single departments.

For other variables, different criteria were used. The aggregate high, middle and low levels of training and education categories were selected because it corresponds to university practices for designating class standing. There appeared to us too few police respondents holding a baccalaureate degree to consider that a separate category to contrast with all other officers. Age was arbitrarily broken into decades, tenure into five-year units which had the practical effect of giving each variable four values.

None of the above categorizations are completely satisfactory. As the analysis proceeds, we will continue to explore the effects of different categorization schemes and report the consequences of using different categories.

[8] In this paper we have chosen to measure the degree of association among variables by Kendall's tau. The larger the magnitude of that measure, the higher the association between variables and vice versa. Our use of the entire sets of police and citizen respondents, which do not constitute a random sample (we sampled within neighborhoods and within departments)

preclude the use of tests of significance. To guarantee a modicum of consistency in our verbal interpretation, we follow the advise of Davis in specifying arbitrary rules for interpretations of strength of relationships. Our decision to consider tau between .10 and -.10 as negligible was intended to make it relatively easy for slight associations to be acknowledged. Associations between .11 and .29 are considered to be weak; .30 to .49 to be moderate; .50 to .69 to be substantial and over .70 to be very strong. A recent article in the American Political Science Review illustrates the need for the general adoption of conventions noted by Davis. (Davis, 1971: 49) In that article, authors who express a desire similar to ours to make it easy for the existence of relationships to be conceded "adopt .20 as a marginal buy perhaps acceptable relationship" and consider Tau scores under .30 to be weak. (Searing, Schwartz and Lind, 1973: 424)

[9]We decided to use the extreme cases, the shortest and longest recruit training programs, to examine the effects of length of recruit training programs because of the invidious comparisons between short and long programs found in the literature, because a sizeable number of officers have attended one or the other of the two programs over similar periods of time, and those attending the two programs are distributed across a number of departments. There are, however, no members of the largest department who attended the shorter program. We must eventually decide the proper way to treat those officers who have attended both programs.

[10]McNamara noted a choice between strategies, "whether to emphasize training strategies aimed at the development of self-directed and autonomous personnel or to emphasize strategies aimed at developing personnel over whom the organization can readily exercise control." He concluded: "It appears that the second strategy is the one most often emphasized." (McNamara, 1967: 251)

[11]Literature on police reform tends to treat college education as a simple concept when, in fact, it is quite complex. Many highly diverse institutions grant "college" credits and programs within institutions vary remarkable. It also seems reasonable to hypothesize that the impact of a college education (whatever it is, wherever it is obtained) varies with the age and prior experience of the student and the degree of concentration of his college attendance (part-time v. full-time). Further refinements are conceivable, but the point is that reform recommendations calling for college education police usually do not include the degree of refinement suggested above. One reason for this is, as Charles B. Saunders, Jr. states: "There is no common agreement among police officials or educators as to what is meant by 'higher education for police.'" (Saunders, 1970:92) The Task Force, citing a lack of analysis, recommends: "Until the educational needs of field officers are more fully evaluated...undergraduate programs should emphasize the social sciences and liberal arts." (The Task Force on the Police, 1967:128) In addition to problems of guaging the content, setting, and pace of college, college education as a variable poses other measurement problems which are ignored at this point. A slight exception to the above and a step in the right direction is found in a very recent study of New York police officers' personnel files in which education prior to recruitment was treated as a variable separate from total education regardless when obtained.) (Cohen and Chaiken, 1973)

Most of the officers included in our sample who have college credits have acquired them recently. Most began college work on a part-time basis after entering police work and have been only part-time students. Most have attended only the junior colleges in the area which now offer a two-year program awarding an Associates of Arts degree in Law Enforcement.

[12]Age is categorized by decade (under 30, 30 through 39, 40 through 49, 50 and above). When the analysis is refined further, considerable attention must be paid to possible confounding influences resulting from the inverse relationship which exists between age and college education (tau$_c$ = .25).

[13]The use of "warrant success scores" as a measure of police performance has impllications for police relations with the warrant office. For a variety of reasons, police-prosecutor relations have manifested straing (Skolnick, 1966; Reiss, 1971) Refusals of police applications for warrants do not endear the prosecutor's office to the police. In our survey, 45% of the officers (N=684) rated the cooperation of the prosecuting attorney's office as "outstanding" or "good," 27% rated prosecutor cooperation as adequate and 28% rated the level of cooperation as "inadequate," "very poor" or "worse than very poor." The most common complaint was that the prosecutor was only willing to accept "sure thing" cases. They typically attribute his unwillingness to take on "hard" cases to the fact that his performance is measured by a "conviction success score." If warrant success scores were institutionalized as a measure of department performance, pressure to improve the score could 1) improve the quality of policing or 2) result in fewer applications for warrants. We can see potential advantages and disadvantages to the second prospect. Bittner, for example, acknowledges the possibility that the Supreme Court decision restructing the admissability of evidence may have had the effect of encouraging harrassment arrests. (Bittner, 1970: 29) In any case, we would expect general use of warrant success scores to increase police-prosecutor tensions.

[14]The availability of ostensibly interval measures of both variables in the relationship seemed to justify the use of the more widely and easily interpreted Pearson's r. Variables explaining less than 10% of the variance were designated as "weak."

For districts in the City of St. Louis, warrant data were obtained only for 1971 and 1972.

The correlations were calculated excluding one case. In that case (a very small department), one officer, majoring in music education, reported having an excess of 170 hours of college credits. The effect of this number on the small department's average college credits seemed to justify its exclusion.

[15]The St. Louis City Planning Commission has divided the city geographically into 70 Planning Areas or Planning Neighborhoods. This division was designed to take account of natural boundaries such as highways or industrial concentrations, natural focii such as parks or community centers, and existing neighborhood organizations. We are indebted to Mr. James Schoonover of the Planning Commission Staff for a pre-publication copy of the document describing these Planning Areas.

[16]Departments to be included were chosen indirectly. We automatically included departments serving neighborhoods selected. In contrast to the legendary "code of secrecy" under which, according to Bittner, "no members of the department talk about anything remotely connected with police work with any outsiders" (Bittner, 1970:64), we received outstanding cooperation from the departments included in our survey. That is not to say that all Chiefs were equally enthusiastic about us privately interviewing themselves and all those members of the department whom we chose. Ultimately, every single department agreed to be interviewed and provide such other requested

data as were available. There was only one refusal among all officers
selected to be interviewed: (He maintained that his aversion to interviews
had also led him to refuse to be interviewed by representatives of the
U.S. Census Bureau).

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