

THE POLICE LABOR MOVEMENT'S IMPACT
UPON PUBLIC ATTITUDES OF POLICE
SERVICES IN EAST LIVERPOOL, OHIO

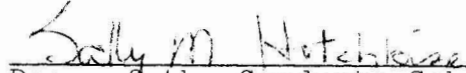
by

Michael W. McVay

Submitted in Partial Fulfillment of the Requirements
for the Degree of
Master of Science
in the
Criminal Justice
Program



Advisor July 31, 1984
Date



Dean of the Graduate School August 21, 1984
Date

YOUNGSTOWN STATE UNIVERSITY

August, 1984

ABSTRACT

THE POLICE LABOR MOVEMENT'S IMPACT
UPON PUBLIC ATTITUDES OF POLICE
SERVICES IN EAST LIVERPOOL, OHIO

Michael W. McVay

Master of Science

Youngstown State University, 1984

This study investigated how a small community views a strong police labor organization to have impacted police services. The specific purpose was to investigate citizen attitudes on police services in 1984, if attitudes of police services had changed since 1976, and citizen attitudes regarding the impact of the police union on any perceived changes in police services.

The general hypothesis of the study was based on a direct relationship existing between police union activity and development of negative public attitudes regarding police services since 1976. It was believed that the constant state of conflict between the police labor organization and municipal government would cause the relationship between the community and police to decline as quality and levels of police service were reduced.

The geographical area chosen for study was the City of East Liverpool, Ohio. East Liverpool has experienced a strong police labor organization since 1976.

A questionnaire was developed and administered to approximately one percent of the population who worked or resided in East Liverpool from 1976 through February 1984. One hundred ninety-three people were surveyed by convenience sampling.

The questionnaire surveyed the six independent variables of sex, age, income, ethnic origin, place of work or residence, and frequency of contact. Also surveyed were six attitudes regarding changes in quality of police services since 1976, police union membership and the union having the right to strike, the impact of the police labor organization on quality of police services, the impact of the police union on police-community relations, how well the respondent was informed about municipal services, and the impact of other economic factors on police services.

The methodology used for the study was Factor Analysis and frequency comparison based on a computed mean for each question. Factor analysis was performed to determine if each group of questions was measuring the same dependent variable.

A hypothesis was developed for the six citizen attitudes measured by the questionnaire. These were individually tested by comparison of the computed mean of the frequency response to a mean of three on a five point Likert Scale.

Results of the study indicated that the sample population's attitudes did not support the general hypothesis. The findings indicated that citizens did not perceive the police labor organization to have impacted police service reductions since 1976.

ACKNOWLEDGEMENTS

It gives me great pleasure to express my appreciation to the members of my thesis committee: Dr. Lawrence Cummings, Dr. C. Allen Pierce, and especially my major professor, Dr. Calvin Swank for his invaluable help, guidance, and assistance without which this thesis would never have been successfully completed.

I would like to thank my family and friends for their support throughout the completion of this study. I especially would like to thank friend and fellow student Robert Bloor for his help in innumerable ways.

For the typing of this paper, I am deeply grateful to Mrs. Janet Colucci.

Finally, I wish to thank my wife, Connie, for her continuous help and support. Not only did she read, criticize and check the paper, but also assisted in collection of data. This thesis could not have been completed without her help.

TABLE OF CONTENTS

| | PAGE |
|---|------|
| ABSTRACT | ii |
| ACKNOWLEDGEMENTS | v |
| TABLE OF CONTENTS. | vi |
| LIST OF TABLES | viii |
| CHAPTER | |
| I. INTRODUCTION | 1 |
| Community Attitudes Toward The Police. . . | 4 |
| Police-Community Conflict. | 5 |
| Why Measure Public Attitudes Toward The Police | 6 |
| General Orientation. | 6 |
| Operational Definitions. | 8 |
| II. LITERATURE REVIEW. | 10 |
| Police-Community Relations | 10 |
| The Police Labor Movement. | 16 |
| Studies Relative To East Liverpool, Ohio . | 23 |
| Summary. | 26 |
| III. RESEARCH PROCEDURES. | 28 |
| Sample | 29 |
| Instrumentation. | 30 |
| Hypotheses | 35 |
| Measurement. | 38 |
| Summary. | 39 |
| IV. ANALYSIS OF RESULTS. | 41 |
| Hypotheses Testing | 43 |

| | |
|---|----|
| Analysis Of The Independent Vairables. . . | 50 |
| Summary. | 58 |
| V. SUMMARY AND CONCLUSIONS. | 61 |
| Conclusions. | 62 |
| General Implications For Future Research . | 65 |
| APPENDIX A. Questionnaire and Coding. | 67 |
| APPENDIX B. Tables. | 71 |
| BIBLIOGRAPHY | 77 |

LIST OF TABLES

| TABLE | PAGE |
|--|------|
| 1. Frequency Distribution Of The Question Response. | 44 |
| 2. Analysis Of The Dependent Variables Of The Sample Population | 45 |
| 3. Frequency Distribution Of The Questionnaire Response Of The Independent Variable of Sex | 52 |
| 4. Frequency Distribution Of The Questionnaire Response Of The Independent Variable of Age | 53 |
| 5. Frequency Distribution Of the Questionnaire Response Of The Independent Variable Of Ethnic Origin | 55 |
| 6. Frequency Distribution Of The Questionnaire Response Of The Independent Variable Of Income Level. | 56 |
| 7. Frequency Distribution Of The Questionnaire Response Of The Independent Variable Of Place Of Work Or Residence. | 57 |
| 8. Frequency Distribution Of The Questionnaire Response Of The Independent Variable Of Contact Frequency | 59 |

CHAPTER I

INTRODUCTION

The number of police labor organizations has increased dramatically over the past twenty years. Police unionization has brought significant changes to police management, organization, policy, and practices. These labor organizations have also impacted on the political and governmental structures of the community.

The police are an organized civil force whose role is maintaining order, preventing and detecting crime, and enforcing laws within the community. The police function is incredibly complex with many responsibilities and tasks and because of their around the clock availability they represent the only contact many members of society have with government. In this context a large portion of the police role is providing called for services to the community much more than enforcing laws.

Prior to the 1960's, the public generally held the police in high esteem and police goals to be consistent with community needs. Starting with the civil disorders of the 1960's, communities began to critically examine all agencies of government, including the police.¹ Because of this

¹Robert Clark, Police and the Community (New York: New Viewpoints, 1979), p. 114-115.

criticism the police countered with a growing sense of alienation from the community. Often police goals and those of the community differed. The police became more introspective regarding salaries, working conditions, job status, and what they perceived as an unresponsive organizational structure. They often noticed the large gains made by employees in the private sector since the 1930's and saw in the civil disorders the power small groups could obtain by political activism. This created somewhat of a national movement toward unionization on the part of many police organizations.

Public reaction to this police backlash was greater dissatisfaction with police goals and the police themselves, and in many communities the relationship between the police and the community deteriorated. In some cases the police became isolated and less capable of understanding and adapting to the changing needs of the community. In many cases citizens believed the police were no longer under administrative control due to the strength of their labor organizations. Although the police labor movement has a history predating the Boston Police Strike of 1919, most such activity is relatively recent, having taken place in the last twenty years.

Since 1960, police labor organizations and associations have shown rapid growth in both numbers and influence. As a rapidly expanding public labor movement gained increasing power, previous beliefs about police

involvement in the labor movement changed rapidly. By 1973, the National Advisory Commission on Criminal Justice Standards and Goals stated that "every police agency should be allowed to engage in collective bargaining in arriving at the terms and conditions of employment that will maintain police service effectiveness and insure equitable representation for both parties."² Three hundred thousand of the estimated five hundred thousand law enforcement officers at the municipal, county, state, and federal level belong to some form of police organization that has national association.³

How a given community will deal with the power of rapidly growing police unions while attempting to meet organizational goals is a perplexing problem. For many communities the tax base has been decreasing while the need for services and costs increased. During the years ahead, police employee expectations will steadily rise as the public financial base erodes and citizens will still demand increased levels of service with no corresponding increase in taxes. These conflicting expectations will substantially influence the attitudes and strain the relationship between the community and the police.

²National Advisory Commission on Criminal Justice Standards and Goals, Police (Washington, D.C.: United States Department of Justice, 1973), p. 457.

³Calvin Swank and James Conser, The Police Personnel System (New York: John Wiley & Sons, 1983), p. 308.

It is, therefore, the purpose of this study to assess how citizens of a given community perceive the effect of a police labor organization on the quality of police services provided.

Community Attitudes Toward the Police

Each individual's behavior is closely linked to his or her perception of the world. The perceptions of the individual are important to the community because they are one of the major concepts for the development of attitudes. Every person's attitudes are unique to that person and many factors, such as differences in past experiences, knowledge, and individual needs relative to the modeling process of generalization, distortion, deletion, can be responsible for the differences in attitudes of each individual member of the community.⁴

Individual members of the community hold differing expectations about police behavior and types and levels of police service. Many variables such as age, sex, ethnic origin, income level, place of residence, and frequency of contact with the police may significantly alter these views and expectations about the police role.

While each individual's attitude of the police may be unique, a community is often composed of groups of

⁴Pamela Mayhall and David Geary, Community Relations and The Administration of Justice (New York: John Wiley & Sons, 1979), p. 76.

individuals who share similar attitudes on specific issues of police behavior and levels of service. These groups often attempt to influence the attitudes of other individuals in the community.

Police-Community Conflict

A major characteristic of American society is the presence of various groups in conflict with each other. This is increasingly evident regarding conflict between the police and the community. As one of these groups in conflict, the police often view themselves as an oppressed minority. The community's view of the police as a conflict group is one of being united in common interests but in opposition to the common good of the public and the community. The tensions created by this conflict can affect the quality of living that the community cherishes most.⁵

Our political system, of which the police are a part, is geared to conflict; yet, confrontation and conflict are not always dysfunctional for individuals or the community. Conflict is often a consequence of specific frustrating situations or can appear even with strenuous efforts to suppress or confine the participants. Robert Clark states that "the very foundations of government in

⁵Robert Clark, Police and the Community (New York: New Viewpoints, 1979), p. 106.

this country have trembled at issues that commenced with low level perceptions of conflict and confrontation."⁶

Why Measure Public Attitudes Toward The Police

Robert Clark lists five major reasons for measuring public attitudes of police services:

1. Formal police organizations in the United States have existed for more than one hundred years as a segment of the community impacting upon it.
2. Organized scientific research has undergone a great revolution during this period. Yet little has been done recently in this area.
3. The community and the police are only beginning to participate with each other in such studies.
4. Previous impressionistic, descriptive studies have not produced scientific results.
5. Too many questions still remain unanswered,⁷ too many unsupported generalizations exist.

Public attitudes, with individual perceptions as a major concept, have a direct relationship upon the style and quality of police services the community will receive. The police agency will mirror perceived community attitudes.

General Orientation

As stated earlier it is the purpose of this research to assess how citizens of a given community perceive the effects of a police labor organization on the quality of

⁶Ibid., pp. 106-107.

⁷Ibid., p. 137.

police services provided. The method used was to collect information by questionnaire and evaluate the impact of attitudes. The community chosen was East Liverpool, Ohio, but it is hoped that this information will serve as an aid to other cities concerned with the public's attitude regarding the quality of police services.

There were three factors involved in formulating this study. The first is that a strong police labor organization has existed in East Liverpool since 1976. This labor organization, The East Liverpool Fraternal Order Of Police, represents all twenty police officers of the City of East Liverpool, Ohio.

The second factor is that police services have been diminished since 1976. This reduction of services is defined as a reduction in maintaining order, preventing and detecting crime, enforcing laws and municipal codes, and the provision of general services to the community.

The third factor is the belief that the citizens of the community have changed their attitudes regarding police service since 1976. Increased coverage of the actions and activities of the police union by the media have resulted in increased citizen awareness of the existence of the police labor organization. During this same period of time it appears that the citizens of the community have realized that police services have been reduced for a number of reasons. Citizens became aware of these reduced services through the media and unfulfilled requests for police service.

It is therefore believed that a direct relationship will exist between police union activity and the development of a negative public attitude regarding the quality of police service since 1976. This most likely occurs because of the state of conflict existing between the police union and municipal government as each attempts to consolidate their power. It is therefore felt that the relationship between the police and the community declined as the conflict was perceived to affect the quality of the services provided.

Overview And Operational Definitions

This study is divided into five chapters. Chapter One addresses the need and direction of the study.

Chapter Two reviews the pertinent literature applicable to the police labor movement, police-community relations, and public attitudes of police service.

The methodology used is discussed in Chapter Three and an analysis of results obtained is presented in Chapter Four.

For the purpose of this study the following operational definitions are to be used:

1. Attitude - a long-lasting perceptual, motivational, emotional, and adaptive organizational process concerned with a person or object and contains the five dimensions of

direction, degree, content, consistency, and strength.⁸

2. Perception - the mental process by which the nature of an object is recognized through the association of its qualities with special senses bring it at the time to consciousness through insight, intuition awareness, comprehension, understanding, and knowledge.⁹
3. Police-Community Relations (PCR) - a philosophy of administering and providing police services which embodies all activity within a given jurisdiction aimed at involving members of the community and the police in the determination of (1) what police services will be provided, (2) how they will be provided, and (3) how the police and members of the community will resolve common problems.¹⁰
4. Police Labor Union - an association of police officers to promote and protect the welfare, interests and rights of its members, primarily by collective bargaining.¹¹

⁸Alan Coffey, Edward Eldefonso, and Walter Hartinger, Human Relations (Englewood Cliffs: Prentice-Hall, Inc., 1982), p. 87.

⁹Pamela Mayhall and David Geary, Community Relations and The Administration of Justice (New York: John Wiley & Sons, 1979), p. 76.

¹⁰Ibid., p. 26.

¹¹Calvin Swank and James Conser, The Police Personnel System (New York: John Wiley & Sons, 1983), p. 308.

CHAPTER II

LITERATURE REVIEW

The review of the literature is provided in three sections. The first addresses police-community relations and provides insight into public attitudes toward the police and ultimately to perceived levels of police service.

The second provides a detailed examination of the police labor movement including studies which show the reasons for the growth of the police unions and their development outside the traditional police organizational structure.

The third provides an analysis of two governmental studies conducted within the geographical boundary of East Liverpool, Ohio. These studies assess levels of police service in the community as well as studying other governmental services in East Liverpool.

The summary of Chapter Two provides an overview of the major findings of all three segments.

Police-Community Relations

Police-community relations is not a formal program between the police and the public, but rather the relationship of the officer to the community. As early as 1830, Sir Robert Peel recognized the concept that the manner in which the police were viewed would influence public cooperation. James Q. Wilson stated, "The fact is that the

police can no longer take for granted that noncriminal citizens are also non-hostile."¹² The behavior and attitude of the individual police officer tends to alter public attitudes. The President's Commission on Law Enforcement and Administration of Justice found "a community's attitude toward the police is influenced most by the actions of individual officers on the street."¹³

Beginning with the decade of the 1950's, the police and their relationship with the community have been in a mode of slow and continuous philosophical change. Community relations have been forced to change to accommodate new concepts.¹⁴ However, some propositions of police-community relations often overlooked were (1) the fact that police departments are service organizations and law enforcement is only one function, (2) that public cooperation is essential if the police are to be successful in their mission, (3) that what police do and how they do it often influences the public's attitude toward them, (4) that public cooperation must be superordinate to all police activities, and (5) that police activities that alienate

¹²Bernard Garmire, Editor, Local Government Police Management (Washington, D.C.: International City Management Association, 1977), pp. 351-352.

¹³President's Commission on Law Enforcement and Administration of Justice, Task Force Report: The Police (Washington, D.C.: United States Government Printing Office, 1967), p. 178.

¹⁴Paul Whisenand and R. Fred Ferguson, The Managing of Police Organizations (Englewood Cliffs: Prentice-Hall, Inc., 1978), p. 501.

the public are contrary to the police mission.¹⁵

The average citizen has direct contact with the criminal justice system most often through contact with the police and they come to symbolize the entire system. Unfortunately, most people have a narrow view of the police role based primarily on crime repression.¹⁶ The attitude of the public toward the police and the services they provide are often based on an incomplete understanding of the total police role in society.

Historically, police administrators have based their decisions for types and levels of police services on the assumption that citizens of the community are supportive of police policies and practices. However, the community's expectations of police services often differ greatly from those of the police. In this sense the police must understand the community's desire for services to improve police-community relations.

A study by Daniel J. Bell surveyed the attitudes of a community in Mahoning County, Ohio, during the late 1970's. This study was conducted "specifically to identify the community attitudes toward the police personnel and

¹⁵Bernard Garmire, Editor, Local Government Police Management (Washington, D.C.: International City Management Association, 1977), pp. 351-352.

¹⁶William Hewitt and Charles Newman, Police-Community Relations (New York: The Foundation Press, 1970), p. 70.

organizational practices."¹⁷ The design included a survey to collect data on the variables of organizational competency and integrity, external relations, and organizational effectiveness. Bell found that citizens often hold negative attitudes toward their police agency and perceive the need for improvements in the manner in which their police perform their role. The respondents often indicated that the police were doing an unsatisfactory job.¹⁸

While Bell's survey does not directly address police union activity, many of his findings are important. Using the Spearman-Brown prophecy formula to evaluate instrument responses from a five point Likert scale,¹⁹ under the category of "Organizational Competence and Integrity", citizen response indicated that service (3.13) and due process (3.17) show an awareness of the need for police integrity and responsibility. Citizens were supportive of the necessary discipline (3.05) to maintain it. These findings and a low score on professionalism (2.76) indicate that citizens expect high standards of their police and support methods to obtain this goal but were disappointed in their expectations of the police. Bell's variables of "External Relationships" found citizens positive on the

¹⁷Daniel J. Bell, "Police and Public Opinion", Journal of Police Science and Administration 7 (June 1979): 196.

¹⁸Ibid., p. 205.

¹⁹Ibid., pp. 203-204.

issues of "law and order", by responses of (3.13) on service and (3.16) on community relations, but "expressed reservations regarding the capability of the police under existing conditions."²⁰

The "Organizational Effectiveness" category of Bell's survey was interesting because all ten variables were negative. The change agent factor was extremely negative (2.48) and with negative scores for motivation (2.68) and risk-taking (2.71), "implies a lack of insight and sensitivity (community awareness 2.96) to the community and citizens' needs."²¹

The major weakness of Bell's study is the non-response factor. Bell grouped his responses into three categories based on the response completion rate of the mail questionnaire. Bell then ignored all responses that fell outside of Group One and constituted a rejection of fifty-one percent of all returned questionnaires. While the overall mean for Groups One and Two were similar (2.79 and 2.77), the response to individual areas differed greatly. However, the findings of Bell's study are important since they clearly indicate positive public attitudes toward crime repression. They strongly reject other police services being offered. The general conclusion of Bell's

²⁰Ibid., p. 204.

²¹Ibid.

study found public frustration with police services and a need for improvement.

Phyllis P. McDonald conducted a survey of community attitudes in Montgomery County, Maryland, and found that "citizen expectations for police is for a service-oriented organization."²² McDonald conducted a 1981 telephone survey in Montgomery County to determine what purpose or goals the police should meet. The largest response was for service (Helping Citizens - thirty-seven percent) as opposed to crime prevention (twenty-one percent) and law enforcement (seventeen percent). McDonald states that this data can be interpreted as indicating "that citizens do have expectations for their police department; these expectations are for service and protection of the citizens as compared to a stance that directs the police to take action against offenders."²³

McDonald's survey found citizens opinions of police service were based upon visability and behavior of the individual police officer on the street. Findings indicate that the behavior of the individual police officer is transferred to attitudes regarding the total police services provided.

²²Phyllis P. McDonald, "Survey of Community Perceptions of Montgomery County (Maryland) Police: Implications for Inservice Training", Journal of Police Science and Administration 9 (September 1981): 343.

²³Ibid., p. 339.

A major limitation of McDonald's survey is that the sample surveyed was not stratified evenly across population density. The same number of people were surveyed in each telephone prefix which differed in population by up to twenty thousand people.

The Police Labor Movement

The police labor movement impacts the community beyond the traditional collective bargaining process. This review will focus on two major areas. The first area of emphasis is on the evolution of police unionization and its influence upon internal organizational factors. The second is the increased political power gained by police labor organizations and their ability to impact upon community attitudes regarding the quality of police services.

During the early years of American policing, police departments responded to the local political leaders who exerted great control over their operations. Police departments slowly became more independent with the emergence of the strong police chief system and its associated reforms. By the 1960's, police labor organizations began to challenge this system and exert a greater influence over the police organization.

Paul B. Weston and Phillip Fraley state there are ten major reasons for this forming of police labor organizations:

1. To combat public hostility toward the police.
2. Awaken legislators unresponsive to police needs.
3. Make public officials responsive to police needs.
4. To protect job security.
5. Protect and improve police image.
6. To increase salary and fringes.
7. To better conditions.
8. Protect individuals and constitutional rights.
9. Train and select group spokesman to represent group.
10. Secure a variety of other services available to employee organizations.²⁴

Most police employee organizations are local independent associations that include benevolent and fraternal peace officer associations. These associations were founded initially to provide social and recreational outlets for their members but through the years have developed into collective bargaining units.

As John K. Swann writes, the ultimate overriding cause of unionization is generally employee dissatisfaction with intrinsic job factors. Many of the aspects prevalent for police unionization are poor economic benefits, poor working conditions, a desire for self-recognition, poor communications, and lack of management leadership. Once

²⁴Paul B. Weston and Phillip Fraley, Police Personnel Management (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1980), p. 180.

the police labor organization is formed, its goals are to provide service and grow, improve members conditions of employment, control jobs through membership, and formulate and jointly administer with management a system for dispute resolution.²⁵

Paul Whisenand and Fred Ferguson in addressing this point out that "police unions are here and will remain with us in the future and they are on the increase in terms of both numbers and power."²⁶ An International City Management Association Study found that in cities with a population of ten thousand, two thirds of the workers were unionized; in cities over twenty-five thousand population, seventy-five percent were unionized; and for those cities under twenty-five thousand population, fifty percent of the municipal workers were unionized.²⁷

There has been a rapid growth of police employee organizations since 1960. The 1974 United States Census found that fifty-five percent of those involved in police

²⁵Calvin Swank and James Conser, The Police Personnel System (New York: John Wiley & Sons, 1983), pp. 310-312.

²⁶Paul Whisenand and R. Fred Ferguson, The Managing of Police Organizations (Englewood Cliffs: Prentice-Hall, Inc., 1978), p. 322.

²⁷Ibid., p. 323.

protection belonged to some form of employee organization.²⁸
By 1980, over two thirds of all states had enacted some form of legislation that prescribed collective bargaining in the public sector.²⁹

According to Herman Goldstein there are four major reasons for the rapid growth of the number of police unions:

1. Long-suppressed job dissatisfaction.
2. Widespread feeling that police were imposed upon during the confrontation of the 1960's.
3. Observation by the police of other minority groups improving their position through collective action.
4. An influx of young officers who brought radically different attitudes toward authority and management.³⁰

There are two different views of the impact of unions on the police organization according to Goldstein. The negative viewpoint is that unions are the natural enemy of change and committed to protecting the status quo. The positive view of police unions is that they are a new and dynamic force for positive change that will create more democratic organizations.³¹

²⁸Bernard Garmire, Editor, Local Government Police Management (Washington, D.C.: International City Management Association, 1977), p. 310.

²⁹Pual B. Weston and Phillip Fraley, Police Personnel Management (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1980), p. 193.

³⁰Herman Goldstein, Policing In A Free Society (Cambridge: Ballinger Publishing Co., 1977), p. 311.

³¹Ibid.

While the number of police labor organizations and membership has grown, so has their power and ability to influence factors outside the traditional police organization structure. Louis Radelet describes how the police have emerged as a selfconscious, independent, political force. He points to the fact that the police labor organization has become quite influential but is still expected to be politically "neutral" to maintain public confidence in the legal system. What originally began as fraternal organizations have now evolved into potent political entities willing to confront police management and city government on issues of power and control. Police unions have become the new power centers in the cities, causing important changes on the urban political scene.³²

According to Radelet, members of the community often find themselves powerless onlookers to this confrontational process, even though their interests are directly affected. The police often masquerade these union activities to keep the public from gaining a true understanding of their activity and influence. However, the actions of these aggressive police unions, created by the militant attitudes of society in the 1960's, are often not bound by the constraints of law even though they are publicly unpopular.³³

³²Louis Radelet, The Police and The Community (Encino: Glencoe Publishing Company, Inc., 1980), pp. 458-463.

³³Ibid.

Due to such factors the police have developed attitudes of isolation and rejection from society that results in a sense of alienation from the public. This sense of alienation has been transferred to the police labor movement and has strengthened the unions in their ability to carry out unpopular actions.

Duncan Chappell and John C. Meyer, Jr., in a study of police attitudes, found police believe the public has developed negative attitudes toward them (seventy-two percent as opposed to seventeen percent believing for the better). The survey found that one quarter of America's police believed that the public held little respect for them. Seventy-two believed that the public had mixed feelings, and only two percent believed that the public held the police in great respect. While the study found some significant statistical differences, there is a major weakness. Data was combined from three empirical studies from several different countries and did not provide an indepth study of the country as a whole.³⁴

Another study, by Terry L. Cooper, attempted a Delphi forecast for police values by measuring a group of police administrators and academicians and a second group

³⁴Duncan Chappell and John Meyer, Jr., "Cross-Cultural Differences in Police Attitudes: An Exploration in Comparative Research", Police: Perspectives, Problems, and Prospects, Ed. Donald MacNamara and Marc Riedel (New York: Praeger Publishers, 1974), pp. 65-74.

of "working police officers." Cooper's study attempted to make forecasts for police values based on professionalization and unionization.³⁵ This study found that "the key factor underlying unionization seems to be a double sense of alienation both from the public, whose recognition and support is being sought, and from efficiency-minded chiefs and administrators."³⁶

Further, the study found that the basis of police unionization is a response to a sense of alienation from society while being aware their function is needed (police administrators and academicians: seventy-five percent agreement and "working policemen": sixty-nine percent agreement). There was widespread disagreement about unionization being caused by traditional labor problems of collective bargaining (sixty-seven percent to eighty-nine percent). Both groups agreed that police unions will become increasingly involved in the political arena (seventy-seven percent and seventy-four percent respectively).³⁷

Another interesting finding is that unionization often occurs because traditional managerial styles often frustrate younger officers who desire greater change and participation in decision-making (eighty-eight percent and

³⁵Terry L. Cooper, "Professionalization and Unionization of Police: A Delphi Forecast on Police Values", Journal of Criminal Justice 2 (Spring 1974): 19-35.

³⁶Ibid., p. 31.

³⁷Ibid., pp. 19-35.

ninety-eight percent). Both groups believed these younger, educated officers developed alienation from the public (ninety-four percent and seventy-nine percent). This finding is significant since both groups strongly believed (ninety-two percent and ninety-eight percent) that these younger officers would begin in time to replace the older traditional police officer as well as his approach to law enforcement. According to them these younger officers will attempt to expand their influence on decision-making through the police union and circumvent the traditional structure that frustrates them. To be successful, the police union will need to become more active, more radical, and more politically powerful.

The major weakness of the Cooper study is that it is a Delphi forecast and only a quasi-empirical study. The underlying assumption and its major weakness is that predictions are made on the basis of an expert panel and not scientific research design.

Studies Relative To East Liverpool, Ohio

During 1982, the East Liverpool Planning Department conducted a survey of the city's marketing area to seek information on problems regarding downtown shopping. This survey was conducted by telephone and asked several general questions relating to the downtown shopping area. The respondent was then given an opportunity to state what he or she considered the major problem of downtown East Liverpool.

Of the 3,430 people surveyed, forty-five percent replied to the open question. While the greatest percentage expressed concern for general economic conditions, eight percent expressed the quality of police service to be a major problem.

The City of East Liverpool contracted with the Northern Ohio Valley Economic Development Agency (NOVEDA) to develop a Central Business District Economic Development Plan during the summer of 1983. This plan was to be the key to developing a central business district revitalization strategy. Various groups, including members of city government, the East Liverpool Planning Department, a Revitalization Task Force of business people, and the Center for Urban Studies, Youngstown State University, were involved.³⁸

Three opinion surveys were conducted. First, fifty eight merchants were surveyed and second, a random telephone survey of adults in the East Liverpool area was conducted. Finally, a third sample of consumers in the downtown area was conducted by questionnaire.³⁹

While this study was directed toward problems in the downtown business district, the survey found security was

³⁸Northern Ohio Valley Economic Development Agency, "Central Business District Economic Development Plan", City of East Liverpool Central Business District Revitalization Strategy, (Unpublished Study, 1983) Introduction.

³⁹Ibid., Table 4.5.

perceived to be a major problem, especially during evening hours. Merchant attitudes were measured on eighteen topics, two of which were police related: personal safety and evening security. Personal safety was rated by twenty-one percent of the merchants as excellent/good, by forty-nine percent as average, and by thirty percent as fair/poor. Only nine percent of the merchants stated evening security was excellent/good, while twenty-eight percent stated it was average, and sixty-three percent of the merchants stated evening security was a major problem.⁴⁰ Overall findings of the study showed seventy-nine percent of the merchants, fifty-seven percent of the telephone survey, and forty-five percent of the consumer survey stated that security was perceived to be a major problem.⁴¹

When the study asked the general public to suggest improvements in the central business district, street security was rated thirteenth (four percent as opposed to parking at twenty percent). These findings indicate attitudes for increased police service greater among the business community than the general public.

The NOVEDA Study recommended "that with the potential increase in consumers in the Central Business District, the City will need to concern itself with:

⁴⁰Ibid., Table 5.6.

⁴¹Ibid., Table 4.5.

provision of additional parking, dedication of public space, lighting, and increased police protection."⁴²

Summary

Public attitudes of police services are influenced by many factors. Two major factors reviewed are police-community relations and the impact of police labor organizations. It has been pointed out that in the last twenty years the number of police labor organizations has grown rapidly and have become a political power within the community. As their political power grows, they feel less constrained in actions that are viewed by the public as illegal or unpopular and affect community attitudes of the police.

Studies by Daniel Bell and Phyllis McDonald measured community attitudes about police and both found that the public has varied expectations of their police to provide more than crime prevention functions. McDonald's study found that the behavior of the individual police officer is often transferred to general attitudes toward the police and police services by the public. These individual police officers are often brought to public attention because of their police labor organization activities. The public, often finding themselves powerless onlookers to publicly unpopular activities of the police

⁴²Ibid., p. 58.

labor organization, transfer negative attitudes to police services.

Police alienation increases transfer of negative public attitudes. This alienation is a key factor for continued support of union activities and greater effort for political power, causing even greater negative impact on public attitudes of police and police services. The process becomes cyclical with one constantly feeding the other and generating greater alienation.

CHAPTER III

RESEARCH PROCEDURES

In 1976, the Police Department began collective bargaining with the City of East Liverpool, Ohio. Using the Fraternal Order Of Police as the authorized bargaining agent, agreement was reached to merge with the East Liverpool Fire Department to form a local "Safety Forces" bargaining unit. Because this unit changed the style and scope of collective bargaining as of 1976, it has been chosen for the beginning date of this study.

Since that time, the City of East Liverpool has reduced police services and manpower by thirty-four percent through normal attrition. Municipal revenue has declined and the City has been placed under a fiscal emergency program by the State of Ohio.

Between 1976 and 1984, two incidents of "Blue Flu" and a fifteen day strike, the longest in the history of the State of Ohio, have been experienced by the citizens of East Liverpool. During this eight year period, the police labor organization concluded four separate collective bargaining agreements with the City and budgetary decisions by municipal government reduced the levels of police service through attrition and layoff.

Prior to 1976, there was a fragmented police labor organization operating in East Liverpool. Police services

and numbers of personnel were continuously expanded by municipal government.

The population of this study is therefore those citizens who potentially experienced a change in the quality of police service from 1976 to the present day, while realizing the growth of the police labor organization.

Sample

The universe or population of this study is all persons who continuously worked or resided in East Liverpool, Ohio, from January 1, 1976 through February 7, 1984. The population of East Liverpool numbers approximately nineteen thousand persons as of February 7, 1984.⁴³

A sample of one hundred and ninety-three persons was drawn for this study. Since East Liverpool had a 13.8 percent population decline in the previous decade, the sample represents at least one percent of those persons who worked or resided in East Liverpool from January 1, 1976 until February 7, 1984.⁴⁴

The sample was obtained by convenience sampling through chance encounters. While understanding the inherent limitations, a convenience sample was selected because of

⁴³Ibid., p. 24.

⁴⁴Ibid., Table 3.18.

time and financial constraints. The size of the sample, one percent, is believed to be of sufficient size to remove most associated sampling bias.

The survey was conducted by a neutral third party through direct personal contact with each individual. A neutral third party was utilized because pretesting showed surveying by members of the police labor organization influenced questionnaire response.

The survey was conducted over a period of seven days during February, 1984. Individual contact was conducted by chance encounter on the street, in businesses, and at individual residences throughout the East Liverpool area. The time of day and place of encounter were changed daily in an attempt to sample a cross-section of the entire population. The use of volunteers was rejected in order to reduce sampling bias.

Instrumentation

Once the sample was determined, a questionnaire was administered which separated the sample from the general population. This allowed only those aware of the differences in police services in East Liverpool between 1976 and 1984 to be measured.

The sample was examined on the basis of six independent variables and six attitudes. The instrument was administered on a convenience basis. No initial attempt was

made to plot any particular variable as opposed to each and every other variable.

Independent Variables

Six independent variables measured various segments within the sample population to determine if results obtained by the instrument varied across the population or were homogenous to the sample population as a whole. No attempt was made to stratify regarding any variable. The six independent variables measured by the instrument were: Sex, Age, Ethnic Origin, Income Level, Place of Work or Residence, and Contact Frequency.

Age

A five response grouping was provided to measure the variable of age. While the response groupings began with those age eighteen in 1984, only those twenty-four years of age or older were measured. During the administration of the questionnaire, it was discovered that respondents under age twenty-four had difficulty forming attitudes regarding changes in quality of police services since 1976. Therefore, those persons under twenty-four were excluded from the survey population by those administering the questionnaire.

The groupings were based on ten year groups with the last response designed to include all those over sixty-two years of age. During the sampling, great difficulty was

encountered in administering the instrument to the over sixty-two group. Respondents of advanced age were found to have problems comprehending the instrument.

Ethnic Origin

A four response grouping was provided for the determination of minority groups in the sample population. The City of East Liverpool was composed of only four and one-half percent minorities in 1980.⁴⁵ There is no information available to determine what portion of the defined population minorities may constitute. A minority population of four and one-half percent is believed to constitute a measureable factor.

Income Level

Income level was measured with two response categories. Respondents to the questionnaire instrument were asked to specify if their income level was less or greater than \$15,000. An income level of \$15,000 was chosen because the United States Bureau of Census found this to be the approximate mean level of income in East Liverpool in 1980.⁴⁶ An interval scale for income was rejected because of bias for revealing such data by those sampled.

⁴⁵Ibid., p. 23.

⁴⁶Ibid., Table 3.14.

Place of Work or Residence

Response, based on five choices, provided a geographical breakdown of East Liverpool into five major geographical subregions. These subregions were based on local topographical subregions of East Liverpool. The five subregions are:

1. East End - This area consists of a flat plain that borders the Ohio River and extends from the Pennsylvania state line west to the Jennings Randolph Bridge. This section of the City is transversed by a major state route lined with small commercial business establishments. This section also contains the industrial base as well as residential areas.
2. West End - A residential area that extends west from Jefferson Street to the City limits. This area contains a large school complex and the junction of three major state routes which have greatly reduced population and housing.
3. Downtown - This section extends from McKinnon Avenue south to the Ohio River. The area contains the central business district and has the greatest population in residential areas.
4. Northside - A residential area that extends from McKinnon Avenue north to the City limits along St. Clair Avenue. This section contains no industrial or commercial areas.
5. Pleasant Heights - A residential area located on a hilltop and isolated from other areas of the City except for Lisbon Street. This section has a small residential population and business area with no industrial base.

No information was available detailing population composition for each subregion.

Police services to the City of East Liverpool are based along these topographical subregions. As they are

diminished, police services and resources are allocated to each topographical subregion on an unequal basis. Police services may be greatly reduced in one subregion and not affected in another.

Contact Frequency

A five point scale was provided to measure the frequency of contact the respondent has had with police and police services available altered their attitudes regarding the overall quality of police services.

Dependent Variables

The instrument was designed to contain fifteen closed questions or statements. Persons surveyed were asked to respond to each question. The respondents were to record their answer on a five point Likert Scale. A central, neutral "No Opinion" choice was available.

The fifteen questions of the instrument measured public attitudes in six areas. These included:

1. Public attitudes regarding the change in quality of police services since 1976. (QS-1 and QS-2)
2. Public attitudes regarding police unions and their right to strike. (PU-1 and PU-2)
3. Public attitudes regarding the impact of the police labor organization on the quality of police services. (PLO-1, PLO-2, PLO-3, PLO-4, and PLO-5)
4. Public attitudes regarding the impact of the police labor organization on police-community relations. (PCR-1, PCR-2, PCR-3, and PCR-4)

5. How well the respondent believes himself informed about municipal services. (INF-1)
6. The impact of other factors on the quality of police services due to general economic conditions. (EC-1)

Hypotheses

Hypotheses for each of the six areas are:

1. It is hypothesized that the population perceived the quality of police services to have declined from 1976 to 1984.

Two previously discussed studies by Bell and McDonald found that the public holds many expectations for provisions of police service beyond crime repression. Citizen's expectations for police services are also service oriented. The public perceives negative qualities of service when these services are reduced to only crime repression.

2. It is hypothesized that the population will reflect positive attitudes toward police unionization but will be greatly divided over the right of the police to strike.

East Liverpool has historically maintained a large labor force based in pottery and steel manufacturing. These industries have always been heavily unionized with supporting populational beliefs in unionization.

Strikes by the police in East Liverpool have disrupted police services on three occasions between 1976 and 1984. These service disruptions will cause many negative citizen responses to the right of police to strike.

3. It is hypothesized that the population views police unionization as detrimental to the quality of police services.

Louis Radelet previously described that as power and membership of police labor organizations grow, so does their ability to influence factors outside the police organization through acquired political power. This effect causes the police labor organization to become highly visible to the public.

Terry L. Cooper's Delphi Forecast found data which shows that certain groups of police officers, through unions, will attempt to expand their influence on decision making on the police organization and upon the government structure. These groups of police officers will often force the labor organization to become more radical and politically active to achieve their goals. These same groups of police officers will quickly come to the attention of the public because they will not be bound by constraints that their actions are illegal or publicly unpopular.

Another previously discussed study by McDonald found citizen attitudes of police services are based on the public's transfer of their perceptions of individual officers to the police services provided. The public perceives the actions of the individual officer are often those actions affiliated with the local police labor organization.

Daniel Bell's study found general public dissatisfaction with police services. This satisfaction level was reinforced with low ratings for attitudes

regarding police integrity and professionalism. Attitudes regarding discipline, often distorted by police union activity, can affect public attitudes of professionalism and integrity.

4. It is hypothesized that police-community relations are not negatively impacted upon by the police labor organization.

The Chappell and Meyer study, previously discussed, found the police believe the public holds negative attitudes toward them. Yet, police constantly seek support and recognition from the public.

Radelet found police develop a sense of isolation and rejection from society that results in alienation. This alienation is transferred to police labor activities and provides the strength and rationale to carry out unpopular police labor organization activities that are publicly unpopular or illegal.

However, citizens generally express greater support for the police than believed by the police. Both Bell and McDonald's studies found police-community relations rated generally positive but found citizens do express concerns about police-community relations. As previously discussed, Radelet stresses the public often has no understanding of the police union's true activity or political influence.

5. It is hypothesized that the population will express divided attitudes regarding how well they are informed about municipal services.

The activities of the labor organizations and the local municipal government have received extensive media

exposure between 1976 and 1984. The media coverage presented to the public a large volume of conflicting statements, facts, and charges regarding municipal services, leaving the citizen to form individual opinions about municipal services.

6. It is hypothesized that the population will express a positive attitude that police and municipal services have been reduced because of general economic conditions.

The 1982 study by the East Liverpool Planning Department found that most citizens expressed fear of economic conditions causing reductions in municipal services. This reflects the depressed general economic condition in the geographical area of study.

Measurement

A descriptive analysis of each of the six areas of the questionnaire was made by comparison of the response data for each question of the six major areas of study.

The mean and standard deviation were computed for each question and tested against the stated hypothesis. A determination of difference was found if the mean was plus or minus 3.0.

A determination was also made using factor analysis. Factor scaling computations were conducted with the Statistical Analysis System computer program. The mean and standard deviation were computed for each variable. The eigenvalues of the correlation matrix were computed and a

scree plot developed. Factor scaling was performed using both the initial factor method and the varimax rotation method. Correlation of all variables were considered significant if $r > .5$.

Summary

In 1976, the East Liverpool Police Department merged with members of the East Liverpool Fire Department to form a new "Safety Forces" bargaining unit to collectively bargain with the municipal government. Prior to 1976, there was a fragmented police labor organization operating in East Liverpool. Therefore, the population of the study was determined to be all those people who worked or resided in East Liverpool from January 1976 through February 1984.

A sample of one hundred ninety-three persons was drawn from the defined population and a questionnaire administered. The questionnaire was administered on a convenience basis and measured six independent variables and six attitudes. Hypotheses for the six attitudes were developed and a detailed analysis of the independent variables were also provided.

A system of measurement for the data obtained was discussed. A mean was to be computed from the response data for each question. A determination of difference was found if the mean was plus or minus 3.0. Factor scaling was also to be performed to determine if the instrument questions were measuring the attitudes they were designed

to measure. Analysis of the measurement results will be provided in Chapter Four.

CHAPTER IV

ANALYSIS OF RESULTS

The analysis of the data was accomplished by computer for the factor analysis and mathematics for the percentage results. The methods of factor extraction were principal component analysis and varimax rotation of the initial factor method.

Principal component analysis output included all eigenvalues and the pattern matrix for the eigenvalues greater than one. The eigenvalues are from the matrix of quadratic parameter estimates that determines the curvature of the response surface. A scree plot was produced to plot each eigenvalue. The five largest eigenvalues were observed to account for over sixty percent of the standardized variance of fifteen. Factor analysis was performed using the first five component variables retained by the mineigen criterion of having a variance greater than zero.

The initial factor method of principal component analysis found the final communality estimates ranging from 0.415525 to 0.744509. The final communality estimates show all variables well accounted for by the five components except for the two variables below 0.571868. These two dependent variables (PLO-6 and PLO-8) were not heavily weighted for purposes of analysis because of low communality scores.

Analysis of the factor loadings of principal components indicated an underlying dimension that correlated highly with the variables of police unionism. Those questions that produced a low correlation of factor loadings were the variables of quality of service, economic conditions, and how well citizens were informed only. The data of factor component one of the varimax rotation factor analysis supports the findings of component factor one of the principal components method.

Analysis of the factor loadings for component factor two of both the principal components and the varimax rotation found the underlying dimension being factored, correlated highly with the variable of police belonging to unions. The data of the principal components method produced low factor loadings for all questions that combined other variables with the police union variable. The varimax rotation produced high factor loadings for both questions directly addressing police union membership (PU-1 0.81121 and PU-2 0.776673).

Analysis of the factor loadings for component factor three found the underlying dimension that the principal components method and the varimax rotation method factored correlates highly with the variable of individual attitudes of police officers. The factor loadings for two questions (PCR-1 and PCR-4) were high in correlation in the principal components data and three questions (PCR-1, PCR-2, and PCR-4) were on the varimax rotation results.

The underlying dimension factored by component factor four correlates highly with those variables not associated with the police labor movement. Factor loadings for the principal component and varimax rotation methods were high for the variables of economic conditions (EC-1) and being well informed about municipal services (INF-1) only.

The final analysis of the factor loadings, component factor five of the principal component and the varimax rotation methods found the underlying dimension being factored, correlated highly with the variable of change in police services since 1976 without measuring union impact. Questions of quality change (QS-1) and dealing with the economy (EC-1) were found to have high factor loadings. Corresponding factor loadings approaching 0.0 were found for all other varimax rotation findings except one.

Analysis of the six dependent variables of this study was based upon responses to groups of questions from the questionnaire instrument. Factor analysis was performed to determine that the questions of each group were measuring the same dependent variable.

Hypothesis Testing

Hypothesis One

The defined population perceives the quality of police services in 1984 to have declined from 1976 levels.

Frequency Distribution Of The Question Responses

| | Strongly Agree | Agree | No Opinion | Disagree | Strongly Disagree |
|-----------|----------------|----------------|----------------|----------------|-------------------|
| 1. QS-1 | 10.9% | 37.8% 48.7% | 15.0% 15.0% | 26.9% 36.2% | 9.3% |
| 2. PCR-1 | 8.8% | 17.1% 25.9% | 14.0% 14.0% | 42.3% 59.9% | 17.6% |
| 3. PLO-1 | 10.4% | 22.8% 33.2% | 30.1% 30.1% | 27.5% 36.8% | 9.3% |
| 4. PU-1 | 25.4% | 45.1% 70.6% | 9.3% 9.3% | 13.0% 20.3% | 7.3% |
| 5. EC-1 | 21.8% | 61.7% 83.5% | 6.7% 6.7% | 10.9% 15.0% | 4.1% |
| 6. PLO-2 | 7.3% | 31.1% 38.4% | 22.3% 22.3% | 28.5% 39.4% | 10.9% |
| 7. PU-2 | 14.5% | 34.7% 42.9% | 10.9% 10.9% | 23.3% 39.5% | 16.6% |
| 8. PCR-4 | 5.5% | 26.4% 32.1% | 17.6% 17.6% | 40.9% 50.2% | 9.3% |
| 9. PLO-3 | 3.6% | 13.5% 17.1% | 26.9% 26.9% | 40.9% 55.9% | 15.0% |
| 10. PCR-3 | 7.8% | 21.8% 29.6% | 17.1% 17.1% | 41.5% 53.4% | 11.9% |
| 11. PLO-4 | 12.4% | 28.0% 40.4% | 28.0% 28.0% | 24.3% 31.6% | 7.3% |
| 12. QS-2 | 8.3% | 26.9% 35.2% | 21.8% 21.8% | 21.1% 31.6% | 11.9% |
| 13. PLO-5 | 5.2% | 32.6% 37.8% | 30.6% 30.6% | 25.4% 36.8% | 11.4% |
| 14. PCR-2 | 7.3% | 22.8% 30.1% | 16.6% 16.6% | 37.3% 53.4% | 16.1% |
| 15. INF-1 | 10.9% | 30.1% 41.0% | 21.2% 21.2% | 29.5% 37.8% | 8.3% |

Analysis Of The Dependent Variables
Of The
Sample Population

| Variable | Mean | Standard Deviation |
|-----------|------------|-----------------------|
| 1. QS-1 | 2.90155440 | 1.21862613 |
| 2. PCR-1 | 3.40932642 | 1.22189916 |
| 3. PLO-1 | 3.03108808 | 1.15878320 |
| 4. PU-1 | 2.30570948 | 1.19234479 |
| 5. EC-1 | 2.15025600 | 0.98065265 |
| 6. PLO-2 | 3.04663212 | 1.15149430 |
| 7. PU-2 | 2.93264249 | 1.36753460 |
| 8. PCR-4 | 3.21761658 | 1.11069635 |
| 9. PLO-3 | 3.50777202 | 1.02122869 |
| 10. PCR-3 | 2.72020730 | 1.16120266 |
| 11. PLO-4 | 2.85492228 | 1.14094676 |
| 12. QS-2 | 3.11398964 | 1.17591327 |
| 13. PLO-5 | 3.13627940 | 1.08955137 |
| 14. PCR-2 | 3.32124352 | 1.19913793 |
| 15. INF-1 | 2.94818653 | 1.16699816 |

Analysis of the frequency response found forty-nine percent of the defined population responded positively that the quality of police services has not declined from 1976 levels. Responses indicating there was reduction in quality of service was found to be thirty-six percent. A mean of 2.90, computed from the frequency response, differed from the expected value ($M > 3.0$). The hypothesis that there will be negative attitudes of the quality of police services is therefore rejected.

An interesting result occurred when the respondent was asked if the police union had an impact on the quality of police services. Forty-three percent of those surveyed indicated that the police union was perceived to have no negative impact on quality of police services. A frequency of thirty-five percent responded they believed the quality of police services was impacted by the police union.

Hypothesis Two

The defined population will reflect positive attitudes for the police to unionize but be strongly divided over the right of police labor organizations to strike.

Question number four of the instrument (PU-1) measured the attitudes of the respondent about police rights to belong to a union. Seventy-one percent of those surveyed expressed positive attitudes that favor police having the right to belong to unions. Only twenty percent of those surveyed did not favor police belonging to unions. A mean

of 2.30 was computed for the response and found to differ from the mean ($M < 3.0$).

Question number seven of the instrument (PU-2) measured the defined population's attitudes regarding police belonging to unions and having the right to strike. Instrument response indicated the defined population was extremely divided, almost evenly (forty-three percent to forty percent), on allowing police the right to strike. This reflects a twenty-eight percent change in the defined population from positive to negative attitudes when the right to strike is added to police union membership. A mean of 2.93 was computed for this data. The hypothesis is therefore accepted.

Hypothesis Three

The defined population holds negative attitudes of the impact of police unionization upon police services.

Five questions on the instrument were designed to measure this attitude. Question number nine measured attitudes of the population to determine if reduced police services were directly perceived to be caused by the police union. The results indicated that fifty-six percent responded that the police union was not responsible for reduced police services. A frequency of only seventeen percent expressed attitudes that the union had caused police services to be reduced. These findings indicate the police union was perceived to have had no impact on police services.

A mean score of 3.51 was computed from the instrument response which differed from the mean ($M > 3.0$). The hypothesis is therefore rejected.

Interestingly, the defined population perceived the police union as having a secondary impact on the level of police services. Action taken by the previous Mayor, because of the police union, was perceived to have had a negative impact on police services. Question number eleven (PLO-4) found forty percent of the defined population surveyed believed the previous Mayor reduced police services in an attempt to control the police union. A computed mean of 2.85 differed from the expected value ($M > 3.0$).

Three other questions on the instrument attempted to measure the public's attitudes of the police union's impact on police services by confronting municipal government. For these questions, numbered three (PLO-1), six (PLO-2), and thirteen (PLO-5), no difference was observed.

Hypothesis Four

The defined population perceives that the police labor movement has no negative impact on police-community relations.

An interesting finding was discovered with the response to question number eight (PCR-4) of the questionnaire. A majority of those surveyed (fifty percent) indicated positive attitudes of performance of duties by the police. Interpretation of the response for question ten

(PCR-3) indicated that a majority of respondents (fifty-three percent) perceived the police union had not caused citizens to develop negative attitudes toward the police. The same percentage (fifty-three) of the defined population surveyed, perceived that police services have not declined because of any poor attitude expressed by the police toward the public.

A mean was computed for both of these findings (3.28 and 3.32) and both found to differ from the mean ($M > 3.0$). These findings indicate that the population does not perceive the police union as adversely affecting police-community relations. The hypothesis is therefore accepted.

Hypothesis Five

The defined population will express divided attitudes regarding how well they are informed about municipal services.

Instrument response indicated a divided response of forty-one percent believing they were well informed as opposed to thirty-eight percent who believe they were not well informed about municipal services. A mean of 2.95 was computed indicating no difference could be determined. The hypothesis was therefore accepted.

Hypothesis Six

The defined population will express positive attitudes that police and municipal services have been reduced because of general economic conditions.

A large portion of those surveyed, eighty-three percent, expressed positive attitudes that police services were reduced because of the economy. A computed mean of 3.58 differed greatly from the mean ($M > 3.0$). The hypothesis is therefore accepted.

Analysis of the Independent Variables

Sex

The variable of sex was found to be homogenous for two of the hypotheses. These were quality of service and the right of police to belong to unions and to strike. Results found that males generally believed themselves more informed about municipal services. The instrument response also indicated that women more often agree that the police union has caused reductions in service and damaged police-community relations.

Age

Age was not found to be homogenous for any of the hypotheses. While most age groups expressed agreement that quality of services had not changed since 1976, those aged thirty-one to forty strongly disagreed.

Those persons age fifty-one to sixty-two expressed attitudes that strongly supported police unionization and the right to strike. While other groups expressed disagreement, this age group, and to a lesser extent the

sixty-two and over age group, expressed strong agreement. Those persons over sixty-two years of age also expressed attitudes of feeling well informed about municipal services that were much greater than those of other age groups.

Those twenty-four to thirty differed from the other age groups on attitudes regarding the impact of police unionization on police services and police-community relations. This group expressed high levels of "No Opinion" for both areas (PLO-3 forty-five percent).

Ethnic Origin

Compilation of the data for this variable found that Blacks differed from the other groups for most of the areas surveyed. Interestingly, Hispanics registered no "No Opinion" answers while the Caucasian group was the only one to express attitudes that they were not well informed about municipal services.

Income Level

The variable of income level was not found to be a factor for quality of service and impact of the police union on services. Those respondents with income levels greater than fifteen thousand dollars agreed that police should be allowed to unionize and strike while those under fifteen thousand dollars believed they should not be allowed to strike.

Frequency Distribution Of The Questionnaire Response
Of The
Independent Variable Of Sex

| | Question | Male | Female |
|------|----------|--------|--------|
| SA/A | QS-1 | 49.41% | 45.37% |
| | PU-2 | 42.37% | 38.89% |
| | PLO-3 | 9.41% | 23.15% |
| | PCR-2 | 25.89% | 33.33% |
| | INF-1 | 45.88% | 37.03% |
| NO | QS-1 | 11.76% | 17.59% |
| | PU-2 | 7.06% | 12.96% |
| | PLO-3 | 27.06% | 25.93% |
| | PCR-2 | 18.82% | 14.81% |
| | INF-1 | 18.82% | 21.30% |
| D/SD | QS-1 | 38.83% | 37.04% |
| | PU-2 | 50.58% | 48.15% |
| | PLO-3 | 63.53% | 50.93% |
| | PCR-2 | 55.30% | 51.85% |
| | INF-1 | 35.29% | 41.67% |

Frequency Distribution Of The Questionnaire Response
Of The
Independent Variable of Age

| Question | 18-30 | 31-40 | 41-50 | 51-62 | Over 62 |
|----------|--------|--------|--------|--------|---------|
| SA/A | | | | | |
| QS-1 | 52.94% | 35.78% | 44.74% | 57.50% | 45.45% |
| PU-2 | 34.50% | 35.85% | 39.48% | 55.00% | 36.36% |
| PLO-3 | 19.60% | 15.09% | 10.53% | 20.00% | 27.27% |
| PCR-2 | 35.29% | 18.86% | 26.31% | 37.50% | 45.45% |
| INF-1 | 41.17% | 37.73% | 47.37% | 32.50% | 63.63% |
| NO | | | | | |
| QS-1 | 17.65% | 13.21% | 23.68% | 2.50% | 27.27% |
| PU-2 | 11.76% | 7.55% | 7.89% | 12.50% | 18.18% |
| PLO-3 | 45.10% | 18.87% | 76.32% | 17.50% | 9.09% |
| PCR-2 | 29.41% | 11.32% | 13.16% | 12.50% | 9.09% |
| INF-1 | 27.45% | 15.09% | 15.79% | 25.00% | 9.09% |
| D/SD | | | | | |
| QS-1 | 29.41% | 50.95% | 31.58% | 40.00% | 27.27% |
| PU-2 | 52.95% | 56.61% | 52.63% | 32.50% | 45.45% |
| PLO-3 | 35.29% | 66.06% | 63.16% | 62.50% | 63.62% |
| PCR-2 | 35.29% | 69.82% | 60.53% | 50.00% | 45.45% |
| INF-1 | 31.37% | 47.17% | 36.84% | 42.50% | 27.27% |

Those with income levels less than fifteen thousand dollars expressed attitudes that police-community relations had declined because of police union activity.

Place of Work or Residence

Frequency distribution showed that results for this variable varies greatly for each of the areas. Those respondents from the West End of the city expressed attitudes that the quality of police services had declined since 1976.

Those respondents from the Pleasant Heights expressed the greatest negative response to police belonging to unions and having the right to strike and having negative impact on services by unions. These respondents and those from the Northside expressed high levels about feeling well informed about municipal services while respondents from other areas believed they were less informed.

A major reason for these findings is because police and municipal services are reduced on an unequal basis. The Pleasant Heights, Northside, and West End have experienced the greatest reduction in services since 1976.

As previously stated, no statistics are available detailing the population composition for each subregion of the City of East Liverpool.

Frequency Distribution Of The Questionnaire Response
Of The
Independent Variable Of Ethnic Origin

| Question | Black | Caucasian | Hispanic | Other |
|----------|--------|-----------|----------|--------|
| SA/A | | | | |
| QS-1 | 37.50% | 48.02% | 0.00% | 42.86% |
| PU-2 | 75.00% | 39.55% | 0.00% | 28.57% |
| PLO-3 | 25.00% | 16.94% | 100.00% | 0.00% |
| PCR-2 | 62.50% | 28.81% | 0.00% | 28.57% |
| INF-1 | 50.00% | 40.11% | 0.00% | 57.15% |
| NO | | | | |
| QS-1 | 0.00% | 15.82% | 0.00% | 14.29% |
| PU-2 | 12.50% | 10.17% | 0.00% | 14.29% |
| PLO-3 | 0.00% | 27.68% | 0.00% | 28.57% |
| PCR-2 | 0.00% | 16.95% | 0.00% | 28.57% |
| INF-1 | 0.00% | 22.03% | 0.00% | 0.00% |
| D/SD | | | | |
| QS-1 | 62.50% | 33.16% | 100.00% | 42.86% |
| PU-2 | 12.50% | 50.28% | 100.00% | 57.14% |
| PLO-3 | 75.00% | 55.36% | 0.00% | 71.43% |
| PCR-2 | 37.50% | 54.24% | 100.00% | 42.86% |
| INF-1 | 50.00% | 37.85% | 100.00% | 42.86% |

Frequency Distribution Of The Questionnaire Response
Of The
Independent Variable Of Income Level

| Question | | Under \$15,000 | Over \$15,000 |
|----------|-------|----------------|---------------|
| SA/A | QS-1 | 46.82% | 47.76% |
| | PU-2 | 34.13% | 52.24% |
| | PLO-3 | 17.46% | 16.42% |
| | PCR-2 | 34.13% | 22.40% |
| | INF-1 | 38.89% | 44.78% |
| NO | QS-1 | 16.67% | 11.94% |
| | PU-2 | 11.90% | 7.46% |
| | PLO-3 | 27.78% | 23.88% |
| | PCR-2 | 17.46% | 14.93% |
| | INF-1 | 23.81% | 13.43% |
| D/SD | QS-1 | 36.50% | 40.30% |
| | PU-2 | 53.97% | 40.30% |
| | PLO-3 | 54.76% | 59.71% |
| | PCR-2 | 48.42% | 62.69% |
| | INF-1 | 37.30% | 41.79% |

Frequency Distribution Of The Questionnaire Response
Of The
Independent Variable Of Place Of Work Or Residents

| Question | Eastend | Westend | Downtown | Northside | Pleasant Heights |
|----------|---------|---------|----------|-----------|------------------|
| SA/A | | | | | |
| QS-1 | 56.00% | 31.25% | 48.84% | 42.22% | 52.38% |
| PU-2 | 44.00% | 37.50% | 38.37% | 46.67% | 33.33% |
| PLO-3 | 20.00% | 25.00% | 16.28% | 15.56% | 14.28% |
| PCR-2 | 36.00% | 31.25% | 33.72% | 26.67% | 14.29% |
| INF-1 | 28.00% | 50.00% | 39.53% | 57.78% | 19.04% |
| NO | | | | | |
| QS-1 | 16.00% | 18.75% | 13.95% | 15.56% | 14.29% |
| PU-2 | 12.00% | 12.50% | 11.63% | 6.67% | 9.52% |
| PLO-3 | 20.00% | 25.00% | 30.23% | 26.67% | 19.05% |
| PCR-2 | 12.00% | 25.00% | 12.79% | 17.78% | 28.57% |
| INF-1 | 16.00% | 25.00% | 19.77% | 18.78% | 28.57% |
| D/SD | | | | | |
| QS-1 | 28.00% | 50.00% | 37.71% | 42.72% | 33.33% |
| PU-2 | 44.00% | 50.00% | 50.00% | 46.67% | 57.14% |
| PLO-3 | 60.00% | 50.00% | 53.49% | 57.78% | 66.67% |
| PCR-2 | 52.00% | 43.75% | 53.48% | 55.56% | 57.14% |
| INF-1 | 56.66% | 25.00% | 40.70% | 24.44% | 52.38% |

Contact Frequency

Analysis of the frequency distribution indicated the majority of the respondents who had the largest number of official contacts with an East Liverpool police officer disagreed that the quality of police services had changed since 1976. These respondents also favored police belonging to unions and having the right to strike. Those persons who had no official contact with police services did not differ from those groups having had at least one but less than six official contacts.

Summary

Analysis of the results was accomplished in three major steps. First a Statistical Analysis System computer package was used to determine if the instrument questions were measuring the six dependent variables they were designed to measure. Principal component analysis produced a pattern matrix for five eigenvalues greater than one. Analysis by the Initial Factor Method: Principal Components and Varimax Rotation Factor Analysis established that response correlated highly with the underlying dimensions of the dependent variables.

Secondly, a mean was computed for the frequency response to each question of the instrument. This mean was compared to a mean of 3.0 on a five point Likert Scale used for questionnaire response. The hypothesis was

Frequency Distribution Of The Questionnaire Response
Of The
Independent Variable Of Contact Frequency

| Question | None | One | 2-3 | 4-5 | 6 or More |
|----------|--------|--------|--------|---------|-----------|
| SA/A | | | | | |
| QS-1 | 48.97% | 47.37% | 50.00% | 50.00% | 26.67% |
| PU-2 | 40.00% | 31.50% | 50.00% | 0.00% | 53.33% |
| PLO-3 | 18.62% | 15.79% | 8.33% | 0.00% | 13.33% |
| PCR-2 | 29.66% | 31.58% | 16.66% | 50.00% | 40.00% |
| INF-1 | 44.82% | 26.31% | 50.00% | 50.00% | 13.33% |
| NO | | | | | |
| QS-1 | 17.24% | 10.53% | 16.67% | 0.00% | 0.00% |
| PU-2 | 10.34% | 5.26% | 0.00% | 0.00% | 26.67% |
| PLO-3 | 28.97% | 21.05% | 16.67% | 0.00% | 20.00% |
| PCR-2 | 15.17% | 15.79% | 33.33% | 0.00% | 20.00% |
| INF-1 | 21.38% | 5.26% | 25.00% | 0.00% | 26.67% |
| D/SD | | | | | |
| QS-1 | 29.80% | 42.11% | 33.33% | 50.00% | 73.34% |
| PU-2 | 49.65% | 63.16% | 50.00% | 100.00% | 20.00% |
| PLO-3 | 52.41% | 63.16% | 75.00% | 100.00% | 66.67% |
| PCR-2 | 55.17% | 52.63% | 50.00% | 50.00% | 40.00% |
| INF-1 | 33.80% | 68.42% | 25.00% | 50.00% | 60.00% |

accepted if the mean was observed to differ from the expected value ($M > 3.0$).

Lastly, analysis of the independent variables was performed. This was accomplished by comparison of percentage results of the frequency distribution of the questionnaire response for five questions. An attempt was made to discover if questionnaire response was homogenous to the population as a whole or divided within each independent variable.

Each hypotheses and independent variable was analyzed independently. Chapter Five will provide an overview of general conclusions of all variables.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this study was to assess how citizens of a given community perceive the affects of a police labor organization on the quality of police services provided. The method used was to collect information and evaluate the impact of attitudes, age, sex, ethnic origin, income level, residence, and frequency of contact with police. These were established to determine if all findings were homogenous to the population sampled.

The sample population's attitudes were measured regarding six areas:

1. Change in quality of police services since 1976.
2. The right of police to belong to unions and strike.
3. The impact of the police labor movement on police services.
4. The impact of the police union on police-community relations.
5. How well the sample population was informed about municipal services.
6. The impact of other economic factors on service.

Factor analysis of the data was performed in order to determine if factors could be identified that related to public attitudes regarding changes in the quality of

police services created by the police labor movement. Frequency percentages and a mean were computed for each question of the instrument and analysis performed based on deviation from the mean score. Results indicated the sample population's attitudes did not support the general hypothesis.

Conclusions

Since 1976, East Liverpool has experienced a strong police labor movement. The general hypothesis of this study predicted the labor organization would cause a negative impact on public attitudes of police services. The data obtained from the instrument failed to support the general hypothesis.

Interestingly, the data indicated the sample population did perceive that the police labor organization had a secondary impact causing reduced services. Collective bargaining is often a confrontational process between the union and municipal government. However, for instrument questions regarding the impact of union-municipal government confrontation no difference could be determined. The sample population did express attitudes that the municipal government reduced services because of union activity.

The frequency of "No Opinion" responses for the five questions regarding the impact of the police labor organization on services were extremely high. This

frequency averaged twenty-nine percent for all five questions as compared to an average of fifteen percent for the other ten questions of the instrument. The complexity of the issues and the conflicting data presented has divided the sample population on issues of confrontation. This interpretation is based on the frequency results and because no difference could be determined for how well the sample was informed about services.

Public attitudes regarding the quality of police services was also hypothesized to be impacted negatively by the labor organization. This hypothesis was also rejected by the data. The sample expressed attitudes that quality would not improve with a reduction in union activity or that quality had declined since 1976.

Like quality of service, public attitudes toward the police were not negatively impacted upon by the police union. It was hypothesized that police-community relations would remain positive because the public maintains more positive impressions and greater support for the police than the police believe they do. The sample expressed attitudes that the police have not developed poor attitudes toward the public and the public has not developed poor attitudes toward the police because of the union.

Since 1976, police services have been reduced in East Liverpool. The sample rejected the hypothesis that public attitudes would perceive the police labor organization as negatively impacting services. The police

union did not create negative impressions. The right of police to strike strongly divided the community but police unionization was strongly supported.

The data obtained from the instrument indicates the sample believes that general economic conditions are a major cause of the reduction in services. Since 1976, East Liverpool has suffered a steady decline in industry and jobs that reduced the tax base of the community. Confrontations and disagreements between the union and municipal government often centered over interpretation of financial resources available. East Liverpool was placed under fiscal control of the State of Ohio in 1981. Findings indicating general economic conditions were believed responsible for service reductions.

The survey by McDonald found that citizen opinions of police services are based on the transfer of perceptions of the individual officer's behavior to attitudes regarding total police services provided. The sample population did not transfer negative attitudes to police services because they strongly supported police unionization. The sample did perceive positive impressions of individual officer behavior which was transferred to police services and affected the attitudes regarding quality of service and police-community relations.

The failure of the sample to transfer negative attitudes of service because of union activity and the

general effect of poor economic conditions resulted in the sample population rejecting the general hypothesis.

General Implications For Future Research

It is thought that there is a significant educational benefit inherent in this study. The information contained herein is admittedly generalizable only to East Liverpool, Ohio, but the implications may have much broader application and provide a basis for future study in other locales.

Future researchers may be interested in applying some of the variables used in this study to determine causal relationships between the variables and the formation of attitudes. A particular topic that might be expanded upon would be investigation of other variables or combinations of variables that may be impacting upon public attitudes regarding levels of government service. This study focused on the police labor organization only.

A second area that might be addressed would be a more detailed study of the issue of confrontation between the union and municipal government, and why the public did not perceive negatively the reduction of services that it frequently created.

Another potential area that could be expanded upon is what sources of information were used by the population in the formation of attitudes. If personal experience is determined to be a major component, will attitudes regarding

the police labor organization change if economic conditions improve.

It is hoped in the broadest sense that the results of this work may be used by others to gain a more complete understanding of the impact of the police labor organization upon their community.

APPENDIX A

Sample Questionnaire and Coding

Did you reside or work in East Liverpool, Ohio in 1976?

- YES...Please continue to complete the questions of this questionnaire.
 NO....This questionnaire is a survey of people who resided or worked in East Liverpool in 1976. ONLY those who resided or worked in East Liverpool should complete this questionnaire. Please Stop.
-

- . Sex: Male Female
. Age: 18-30 31-40 41-50 51-62 Over 62
. Ethnic Origin: Black Caucasian Hispanic Other
. Income Level: Under \$15,000 Over \$15,000
. Where Do You Reside Or Work In East Liverpool: East End West End
 Downtown Northside Pleasant Heights
. Have You Had Any Official Contact With An East Liverpool Police Officer In The Last Six Months: No One Time 2-3 Times
 4-5 Times 6 or More Times
-

Please answer the following statements using your HONEST OPINION.

Just CIRCLE the appropriate answer according to your agreement with the statement.

A = Strongly Agree

A = Agree

N = No Opinion

D = Disagree

SD = Strongly Disagree

- . SA A N D SD The quality of police services in East Liverpool has changed very little since 1976.
- . SA A N D SD City police officers are no longer as helpful or courteous as they were in 1976.
- . SA A N D SD Since 1976, police union leaders have disrupted police services by bickering with City Officials.
- . SA A N D SD Police officers should be allowed to join unions.

5. SA A N D SD Since 1976, police services have been reduced in East Liverpool because of general economic conditions.
6. SA A N D SD Police services will continue to decline from 1976 levels if the police union continues to confront City Government.
7. SA A N D SD Police officers should be permitted to belong to unions and allowed to strike.
8. SA A N D SD East Liverpool Police Officers have always performed their duties excellently.
9. SA A N D SD Since 1976, police services, in East Liverpool, have been reduced because of the police union.
10. SA A N D SD The citizens of East Liverpool have developed negative attitudes toward the police because of the police union.
11. SA A N D SD The previous Mayor reduced police services as a method of controlling the police union.
12. SA A N D SD The quality of police services would improve if the police and their union would stay out of City government affairs.
13. SA A N D SD Police officers and their union have forced many excellent changes upon City Hall since 1976.
14. SA A N D SD Police services, in East Liverpool, have declined because of the poor attitude of the police toward the public, since 1976.
15. SA A N D SD I feel well informed about municipal services in East Liverpool.

Questionnaire Coding

| <u>Question Grouping</u> | <u>Coding</u> |
|----------------------------|---------------|
| Quality of Service | INF |
| Police Unionism | PU |
| Police Labor Organization | PLO |
| Police-Community Relations | PCR |
| Citizens Informed | INF |
| Economy | EC |

Groupings:

| | |
|--|---|
| <u>Quality of Service</u> Question One (QS-1) | Question Twelve (QS-2) |
| <u>Police Unionism</u> Question Four (PU-1) | Question Seven (PU-2) |
| <u>Police Labor Organization</u> Question Three (PLO-1) Question Nine (PLO-3) Question Thirteen (PLO-5) | Question Six (PLO-2) Question Eleven (PLO-4) |
| <u>Police-Community Relations</u> Question Two (PCR-1) Question Fourteen (PCR-2) | Question Eight (PCR-4) Question Ten (PCR-3) |
| <u>Citizens Informed</u> Question Fifteen (INF-1) | |
| <u>Economy</u> Question Five (EC-1) | |

APPENDIX B

Tables

Table One

Initial Factor Method: Principal Components

| | Eigenvalue | Difference | Proportion | Cumulative |
|-------|------------|------------|------------|------------|
| QS-1 | 3.702004 | 1.817832 | 0.2468 | 0.2468 |
| PCR-1 | 1.884172 | 0.561442 | 0.1256 | 0.3724 |
| PLO-1 | 1.322731 | 0.188101 | 0.0882 | 0.4606 |
| PU-1 | 1.134629 | 0.096789 | 0.0756 | 0.5362 |
| EC-1 | 1.037840 | 0.194973 | 0.0692 | 0.6054 |
| PLO-2 | 0.842867 | 0.022973 | 0.0562 | 0.6616 |
| PU-2 | 0.819895 | 0.034275 | 0.0547 | 0.7163 |
| PCR-4 | 0.785620 | 0.131056 | 0.0524 | 0.7687 |
| PLO-3 | 0.654564 | 0.019040 | 0.0436 | 0.8123 |
| PCR-3 | 0.635523 | 0.107801 | 0.0424 | 0.8547 |
| PLO-4 | 0.527722 | 0.060127 | 0.0352 | 0.8898 |
| QS-2 | 0.467595 | 0.034489 | 0.0312 | 0.9210 |
| PLO-5 | 0.433106 | 0.039878 | 0.0289 | 0.9499 |
| PCR-2 | 0.393228 | 0.034724 | 0.0262 | 0.9761 |
| INF-1 | 0.358503 | | 0.0239 | 1.0000 |

Table Two

Scree Plot Of Eigenvalues

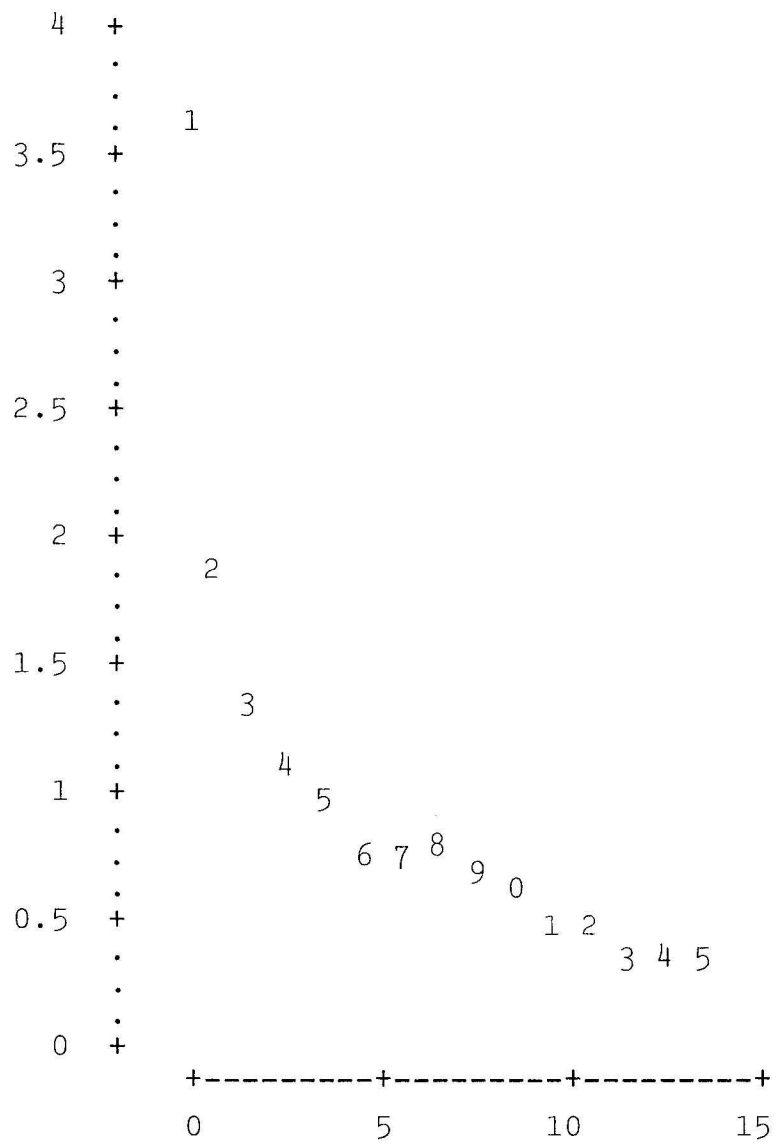


Table Three

Initial Factor Method: Principal Components
Factor Pattern

| | | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|-----|-------|----------|----------|----------|----------|----------|
| 1. | QS-1 | -0.13142 | -0.05364 | -0.38174 | 0.33551 | 0.68269 |
| 2. | PCR-1 | 0.54078 | -0.05283 | 0.55549 | -0.23839 | 0.13334 |
| 3. | PLO-1 | 0.65376 | 0.35366 | 0.11377 | 0.24055 | -0.00191 |
| 4. | PU-1 | 0.56130 | -0.43990 | -0.33307 | 0.09753 | -0.27495 |
| 5. | EC-1 | 0.06002 | -0.27515 | 0.16930 | 0.64022 | 0.29626 |
| 6. | PLO-2 | 0.55037 | 0.42277 | -0.10238 | -0.03531 | 0.00470 |
| 7. | PU-2 | 0.60163 | -0.39424 | -0.21585 | 0.21238 | -0.26315 |
| 8. | PCR-4 | 0.49592 | -0.35726 | 0.42263 | -0.01517 | 0.26670 |
| 9. | PLO-3 | 0.52161 | 0.35491 | -0.18381 | -0.24030 | 0.17825 |
| 10. | PCR-3 | 0.57914 | 0.47193 | -0.15579 | 0.16348 | 0.00813 |
| 11. | PLO-4 | -0.40864 | 0.51682 | 0.08378 | 0.11099 | 0.06205 |
| 12. | QS-2 | 0.60000 | 0.30959 | -0.23550 | 0.19298 | -0.15271 |
| 13. | PLO-5 | 0.31910 | -0.53697 | -0.13603 | -0.08275 | -0.00290 |
| 14. | PCR-2 | 0.70650 | -0.03704 | 0.18934 | -0.27088 | 0.28158 |
| 15. | INF-1 | -0.00047 | 0.14518 | 0.55256 | 0.47659 | -0.33453 |

Table Three-continued

Variance Explained By Each Factor

| Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|----------|----------|----------|----------|----------|
| 3.702004 | 1.884172 | 1.322731 | 1.134629 | 1.037840 |

Final Communalities Estimates: Total = 9.081377

| | | | | |
|----------|----------|----------|----------|----------|
| QS-1 | PCR-1 | PLO-1 | PU-1 | EC-1 |
| 0.744509 | 0.678408 | 0.623288 | 0.704615 | 0.605621 |
| PLO-2 | PU-2 | PCR-4 | PLO-3 | PCR-3 |
| 0.493396 | 0.678320 | 0.623551 | 0.521342 | 0.609181 |
| PLO-4 | QS-2 | PLO-5 | PCR-2 | INF-1 |
| 0.457273 | 0.571868 | 0.415525 | 0.689029 | 0.665452 |

12. QS-2 0.71469 0.23012 -0.04799 0.07428 -0.01770

Table 4

Rotation Method: Varimax
Rotated Factor Pattern

| | | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 |
|-----|-------|----------|----------|----------|----------|----------|
| 1. | QS-1 | 0.00663 | -0.08366 | -0.13413 | -0.30986 | 0.78960 |
| 2. | PCR-1 | 0.17393 | 0.05740 | 0.77922 | 0.10681 | -0.16208 |
| 3. | PLO-1 | 0.70239 | 0.06371 | 0.25291 | 0.24333 | 0.05202 |
| 4. | PU-1 | 0.21455 | 0.81121 | -0.00527 | -0.01048 | -0.01965 |
| 5. | EC-1 | -0.07602 | 0.13931 | 0.12321 | 0.38835 | 0.64377 |
| 6. | PLO-2 | 0.68039 | 0.00550 | 0.13007 | -0.07050 | -0.09247 |
| 7. | PU-2 | 0.26294 | 0.76673 | 0.05417 | 0.13132 | 0.03348 |
| 8. | PCR-4 | 0.01208 | 0.27777 | 0.71399 | 0.11071 | 0.15561 |
| 9. | PLO-3 | 0.59923 | -0.00862 | 0.20883 | -0.33662 | -0.07262 |
| 10. | PCR-3 | 0.77766 | 0.02158 | 0.03864 | 0.03186 | 0.03818 |
| 11. | PLO-4 | 0.04072 | -0.61554 | -0.25507 | 0.10493 | 0.02551 |
| 12. | QS-2 | 0.71469 | 0.23012 | -0.04799 | 0.07428 | -0.01770 |
| 13. | PLO-5 | -0.10096 | 0.58621 | 0.19546 | -0.14457 | 0.05088 |
| 14. | PCR-2 | 0.38121 | 0.20378 | 0.68114 | -0.19444 | -0.02047 |
| 15. | INF-1 | 0.04456 | -0.13765 | 0.05996 | 0.79869 | -0.05500 |
