University of Delaware
Disaster Research Center

REPORT SERIES
#13

DECISION MAKING UNDER CONDITIONS OF
UNCERTAINTY: CIVIL DISTURBANCE AND
ORGANIZATIONAL CHANGE IN URBAN POLICE AND
FIRE DEPARTMENTS

Gary A. Kreps

1973
FOREWORD

This document is one of a series of publications prepared by the staff of the Disaster Research Center, The Ohio State University on sociological aspects of civil disturbances. The bulk of the Center's research deals with consensus types of community emergencies such as those generated by natural disasters. However, for purposes of analytical contrast, the Center has done research on dissensus types of community emergencies such as those generated by civil disturbances. The work reported here is part of that effort. The research for this report was done in part under Grant 5 RO1 MH-15399-01 to 05 from the Center for Applied Social Problems in the National Institutes of Mental Health.

During the 1960s, many American communities were confronted with situations of protest, confrontation, and violence. While it is difficult to identify a particular turning point of increased concern, much attention was given to the rather massive civil disturbances in Los Angeles (1965), Newark (1967), and Detroit (1967). Many other American communities also expressed violent outbursts in the years following 1965. While these episodes were local, each became national and international. They became an intimate feature of American life, coming into the living room via television, into the kitchen through radio, and onto the porch through newspapers. Such visibility made the events difficult to ignore. They became the major focus of daily conversation--from personal suggestions for public policy to the repetition of dramatic and usually traumatic experiences, and, at times, even humor. The widespread incidence of these events throughout American cities, plus the ease with which they could be transferred electronically to collective awareness, suggested that they might become a permanent feature of American life.

These racial disturbances, plus the campus disorders which also began about this time, combined with the assassinations of public figures, prompted, among other things, the appointment of four national commissions: the President's Commission on Law Enforcement and the Administration of Justice (1965); the National Advisory Commission on Civil Disorders (1967); the National Commission on the Causes and Prevention of Violence (1968); and the President's Commission on Campus Disorder (1970). These commissions have engaged the efforts of many--at both the scholarly and policy levels. They have, in turn, become the object of controversy. Some have been disappointed at their efforts to diagnose, since to the critics, the diagnosis was obvious. Others have been disappointed at the seeming reluctance of governmental bodies to implement the suggestions which these commissions developed.

In the recent attention given to disturbances, including the various commission reports, there have been many different themes and directions. Some have reexamined history. When violent epochs were rediscovered, some concluded that "violence is as American as cherry pie."
Another popular direction has been to focus on the participants in civil disturbances. Who becomes involved in riot situations? What are their motivations? How do they differ from the nonrioter? Most studies were consistent in finding that the "typical" rioter was not a hoodlum, habitual criminal, or a new migrant to the area, but a young, usually lifelong resident of the community, employed, and somewhat better educated than the nonrioters. Another direction has been to examine the conditions under which riots take place. Are the communities where riots erupt different from other communities which are "peaceful"? Some attention has also been given to the long-run consequences of the disturbances; apart from the immediate somewhat destructive ones for various groups and organizations within the community.

There is another aspect which was often ignored -- the consequences the disturbances had on the organizational life of the local community. In other words, what was the effect of the "disorganization" upon the "organization" of the community? For the various community organizations, these were "new" problems and they created uncertainty for their traditional organizational tasks. Thus, we wanted to look at the dynamics which characterized community organizations as they had to function in civil disturbances. In this study, Kreps examines the changes and the process of change which affected two of the most crucial community organizations--- the police department and the fire department. Because these organizations are seen primarily as "emergency" organizations, they immediately became involved in a variety of tasks associated with the disturbances. With their initial experience, they began to seek and to share them with other departments in other communities. One of the more interesting consequences of civil disturbances has been the creation of interorganizational networks which previously had not existed. These organizations also underwent significant internal changes in order to adapt to the "new" conditions that they faced. Kreps in a careful study attempts to understand this process of change. While the study is oriented to police and fire departments, the findings have generalizability in understanding the processes of change in other community organizations.

Russell R. Dynes
E. L. Quarantelli

-iv-
ACKNOWLEDGMENTS

I am deeply grateful to Professor Russell R. Dynes and Professor E. L. Quarantelli, Co-Directors of the Disaster Research Center. Completion of this study has involved the combined efforts of virtually the entire staff of the Disaster Research Center. Jack Weller, Robert Stallings, Thomas Forrest, J. Richard Ponting, Dennis Wenger, Michael Kearney, and George Runner worked diligently in the collection of data and made significant contributions in overcoming methodological problems. Barbara Tootle efficiently handled the travel and other administrative arrangements. Peggy Eshler performed the difficult and time consuming task of typing the final manuscript. My sincere appreciation to all of these people for their help and friendship.

Special thanks to Jack Weller who, perhaps more than anyone, assisted me in elaborating the conceptual and empirical issues in the study. Our long and frequent discussions over the months of this study have contributed greatly to this final product.

My gratitude also to the many organizational representatives who agreed to participate in the study and generously provided the necessary information. Overburdened as many of these officials were, they still managed to find the time necessary to adequately complete the study in their organizations.
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREWORD</td>
<td>iii</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>ix</td>
</tr>
<tr>
<td>Chapter</td>
<td></td>
</tr>
<tr>
<td><strong>I. INTRODUCTION</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>II. AN ORGANIZATIONAL CHANGE PERSPECTIVE</strong></td>
<td>5</td>
</tr>
<tr>
<td>Concepts</td>
<td></td>
</tr>
<tr>
<td>A Perspective of Change in Crisis Relevant Organizations</td>
<td></td>
</tr>
<tr>
<td>Outline of Change Perspective</td>
<td></td>
</tr>
<tr>
<td><strong>III. RESEARCH METHODS</strong></td>
<td>23</td>
</tr>
<tr>
<td>The Cases</td>
<td></td>
</tr>
<tr>
<td>Data Collection</td>
<td></td>
</tr>
<tr>
<td>Measurement of the Variables</td>
<td></td>
</tr>
<tr>
<td><strong>IV. THE EMPIRICAL EXAMINATION</strong></td>
<td>41</td>
</tr>
<tr>
<td>Specification of Rankings</td>
<td></td>
</tr>
<tr>
<td>Correlation Analysis of the Data</td>
<td></td>
</tr>
<tr>
<td>Case Descriptions</td>
<td></td>
</tr>
<tr>
<td>The Intelligence-Influence Hypothesis</td>
<td></td>
</tr>
<tr>
<td><strong>V. CONCLUSION</strong></td>
<td>65</td>
</tr>
<tr>
<td><strong>APPENDIXES</strong></td>
<td>69</td>
</tr>
<tr>
<td><strong>REFERENCES</strong></td>
<td>105</td>
</tr>
<tr>
<td>Table</td>
<td>Page</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1. Organizational Variables</td>
<td>36</td>
</tr>
<tr>
<td>2. Specification of Organizational Rankings By Basic Variables: Police Departments</td>
<td>42</td>
</tr>
<tr>
<td>3. Specification of Organizational Rankings By Basic Variables: Fire Departments</td>
<td>43</td>
</tr>
<tr>
<td>4. Specification of Organizational Rankings By Structural Variables: Police Departments</td>
<td>44</td>
</tr>
<tr>
<td>5. Specification of Organizational Rankings By Structural Variables: Fire Departments</td>
<td>45</td>
</tr>
<tr>
<td>6. Correlation Analysis of the Propositions in Police Departments</td>
<td>46</td>
</tr>
<tr>
<td>7. Correlation Analysis of the Propositions in Fire Departments</td>
<td>47</td>
</tr>
<tr>
<td>8. The Correlation of Subjective Threat with Basic Variables</td>
<td>47</td>
</tr>
<tr>
<td>9. Police Departments: Correlation Analysis of Basic with Structural Variables</td>
<td>49</td>
</tr>
<tr>
<td>10. Fire Departments: Correlation Analysis of Basic with Structural Variables</td>
<td>50</td>
</tr>
<tr>
<td>11. Influentials and Intelligence Boundary Personnel in Selected Police and Fire Departments</td>
<td>59</td>
</tr>
<tr>
<td>12. Intelligence Boundary Personnel and Influentials in Selected Police and Fire Departments</td>
<td>59</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

The Watts riot and those that followed had a tremendous impact upon contemporary American communities. Civil disturbances became defined as an urban problem of significant magnitude. Though the underlying causes of the phenomenon were exceedingly complex a civil disturbance event became a distinct emergency for a community. For many community organizations, such as police and fire departments, the problems emanating from civil disturbances fell directly within their organizational domain (Warheit and Quarantelli, 1969). For example, if the protection of life and property and the maintenance of law is an organizational mandate, these objectives often become problematic during an emergency of this nature.

With the advent of massive civil disturbance in 1965, The Disaster Research Center (DRC) initiated some research into organizational aspects of the problem. The exploratory work indicated that police and fire departments had often made changes in such areas as planning, training, or emergency equipment as a response to the possibility or experience of civil disturbance. These organizational adjustments represented efforts to create standby mechanisms to meet the demands posed by civil disturbance. In some cases, change took the form of preparation for emergency response such as the procurement of safety equipment in fire departments (Waxman, 1973) or by the development of civil disturbance plans in police departments (Wenger, 1973). In other cases, efforts were made in the area of prevention such as the establishment of community relations units and training (Blanshan and Smith, 1973). It also appeared that there were increased contacts between many of these organizations and police and fire agencies in other locales. Such factors as site visits, formal and informal exchanges of information, conferences, seminars, etc., were occurring. Knowledge about mutual problems and related programs was being transferred through these contacts. In addition, governmental funding in either the response or prevention areas often precipitated organizational changes. On the basis of observations such as these, DRC decided to analyze more systematically the organizational processes involved in the identification of problem areas, the search for relevant information, and the development of changes as an adaptive response to these identified problems. This report is a systematic part of the larger DRC research into organizational responses and reactions to the massive civil disorders in American society in the late 1960s (Dynes and Quarantelli, 1973).

Objectives

The objective of this particular study was to conceptualize and examine the process of organizational change as an adaptive response to an uncertain and threatening environment. In this regard, the study developed a theory of change in crisis relevant organizations. It then examined empirically and refined the perspective using data from a sample of urban
police and fire departments in the United States. The perspective analyzed organizational adaptations to the problems posed by the threat or actual occurrence of civil disturbance. Change was conceptualized as an intelligence processing organizational activity, i.e., bringing technical and political information and/or knowledge to bear upon the definition and elaboration of organizational problems and the execution of attempted solutions to meet these problems (See Wilensky, 1967, for a discussion of organizational intelligence).

Four central concepts underly the change process perspective; these are organization, organization-environment relationships, objective organizational change, and the process of organizational change. The concept of organization is important because it suggests the sociological level of analysis of the research. Organization-environment relationships are important because civil disturbances are extra-organizational, i.e., an environmental factor impinging upon an organization's affairs. Objective organizational change is the specific outcome the research will examine. Finally, the process of change, conceptualized as an intelligence processing organizational activity, is the pivotal concept of the approach. As these concepts are of substantial importance to an understanding of the perspective, the report will begin with a discussion and elaboration of them. This will be followed by the specific presentation of the theory. The perspective relates the following six variables: environmental threat to organizational charter (posed by civil disturbance), organizational intelligence, organizational change, comparative reference linkage, range of organizational problem solving, and complexity of the process of organizational change.

The remainder of the study through a comparative analysis of cases makes an empirical examination and refinement of the perspective. Included here will be a presentation of the methodology employed in the research phase, an enumeration of the findings, and a restatement of the model based upon this analysis. Each of the variables employed are measured in terms of a series of empirical indicators. In addition, several structural variables (size, wealth, professionalization, complexity, centralization, bureaucratization) are measured and their impact upon the theory assessed. The perspective will first be analyzed through correlation analysis and then several case illustrations will illustrate the main findings of the research.

The objective of this study, then was to conceptualize and empirically examine the process of organizational change as an adaptive response to an uncertain and threatening environment. In so doing, attempts were made to specify and elaborate propositions which were then addressed by data. In the final analysis, the aim was to make some contribution to an understanding of the applied as well as theoretical problems of organizational change. It is hoped that this analysis will describe and conceptualize what has evolved in these organizations under study, what changes have emerged and how they have been developed.

In using this change perspective, a number of important contributions can be made to the study of organizations. First, the importance attached
to research on change in organizations has been indicated so often as to be almost a cliché. And yet, adequate conceptualization of the phenomenon in the literature is generally lacking. Therefore, the effort is to partially fill the gap here by using an organizational change framework. It is hoped that the utility of this framework will be seen in the comparative analysis of the cases. Second, some existing theory in both decision making and the innovation adoption process will be used as the groundwork for the model of organizational change employed in this study. The adoption process literature has generally been individualistically oriented (e.g., Rogers, 1965) and, similarly the decision making literature, though extensive, is often in need of empirical and conceptual work at the organizational level of analysis (Taylor, 1965). While individual and social psychological approaches have predominated in the past, the present study treats the process of change as an alteration in a social system. In this way the emergent properties of organization as a system undergoing patterned adaptation can be better understood. Third, the area of organization-environment relationships is beginning to attract considerable attention among organizational analysts (Thompson, 1967; Guetzkow, 1965). By seeing these factors as primarily intelligence resources, a contribution can be made to that growing body of literature. In sum, this research examines organizational change in crisis relevant organizations, the internal processes of development of organizational adjustments and the role of environmental factors to these processes.

Nature of the Data

A complete account of the methodology employed for analysis will be described later in the report. By way of introduction, the study was based upon a population of police and fire departments in seventeen American cities. The primary source of data was interviewing organizational officials to obtain descriptive accounts of the changes that occurred in response to the threat of civil disturbance. Several different instruments were used depending upon the respondent's position or area of knowledge-ability. The substantive areas covered by interviewing were change in policy, planning, training, and where existent, community relations programs. In each case attempts were made to obtain information in the following areas: identification and measurement of environmental problems created by civil disturbance threat; description of any changes and the problems to which they were directed; identification of participants in the process of change and the basis of their participation; measures of the existence and sources of intelligence utilized in the development of changes; insight into the structure of decision making and measures of the complexity of the process of change; measures of the relevance of environmental linkages to the development of organizational changes. Of course, each of these sets of measures were related to variables included in the perspective. In addition, documentary information was obtained about each organization as a basis for comparison. In particular, data concerning structural dimensions such as size, wealth, professionalization, etc., were obtained from organizational records.
Outline of the Report

The study will contain four additional chapters and a concluding appendix. Chapter II presents the main concepts which underlie the theoretical perspective and their elaboration into propositional form. Chapter III will elaborate in some detail the data and the methodology employed for analysis. Included here will be a presentation of indicators used for the variables in the theory and the reasons for their employment. Chapter IV will present an empirical examination of the propositions. In systematic fashion supportive and negative findings will be presented and discussed. Chapter V re-examines the theory in toto, considers possible refinements and discusses some implications of the study. The concluding appendix contains the various instruments and other tools used in the research.
CHAPTER II

AN ORGANIZATIONAL CHANGE PERSPECTIVE

A necessary pre-requisite for an understanding of the perspective to be presented in this chapter is some conceptual groundwork. We begin by briefly considering broad conceptual areas which underly the perspective, couching them in terms of the present study. There are three general concepts which underly our approach; these are organization, objective organizational change, and the process of organizational change. The chapter will begin with a discussion of each of these concepts, as a means of showing their relationship to the present study. The chapter will conclude with a presentation and discussion of basic and derived propositions.

Concerts

Organization

As organization is the focus of the study, it is necessary to clearly specify the definition and usage of this concept. Organization is defined as a purposive and open system of patterned activity which is structurally integrated to solve organizationally defined problems.

Organization is essentially viewed as a problem solving social entity, which, as an open system, must control relevant internal and environmental affairs in order to effectively meet organizational objectives. It is recognized that organizations often have internal problems and that organizational environments are dynamic and ever changing. Thus the viable organization is one that is both flexible and adaptable.

This definition allows for the fact that organizations vary in complexity and the degree of specificity of objectives. Admittedly such a definition relates most directly to large more complex forms of organization, although cut off points are always arbitrary. The key point is that organization represents a patterned problem solving system of social behavior which can be identified as a unique element in its ecological and social environment.

In defining organization it is necessary to specify its basic components. The following are considered to be the major organizational constructs or system elements: (1) organizational charter, (2) resources and technology, (3) activities, (4) normative structure, (5) authority structure, (6) power structure, (7) status structure, (8) environmental relationships (Bakke, 1959; Kroeps and Wenger, 1970). Each of these will be defined briefly and then inter-relations shown.
1. Organizational Charter

The organizational charter is defined as the image of the organization maintained by both organizational members as well as individuals, groups, and organizations which come into contact with it (Bakke, 1959). Dimensions of charter include the name of the organization, its formal objectives and its relationship to the environment. Charter also includes policies which specify and legitimize goals as well as define rights and obligations of the organization and its members. Charter essentially distinguishes the organization as a unique part of the social and ecological environment.

2. Resources and Technology

The resources and technology of the organization include the actual or potential human, material, capital, intelligence, and natural resources, and techniques employed by the organization in its activities. These resources and techniques have implications for organizational structure because they specify relevant activities for their enactment, continuance or alteration. In effect, they establish boundaries for how effectively charter can be met (Kreps and Wenger, 1970). Organizational wealth and physical resources are examples of material means. Levels of education, experience and training of organizational incumbents are good illustrations of human resources. In more general fashion, we can also refer to the intelligence resource of the organization (Wilensky, 1967). This represents the existent level of technical and political information and/or knowledge which can be brought to bear in the solution of organizational problems. Intelligence is essentially an ideational resource and includes such factors as bodies of data and other forms of organized knowledge, the expertise of organization members, standby mechanisms for handling problems, and awareness of extra-organizational intelligence sources.

3. Activities

The activities of an organization are the ongoing differentiated behaviors which implement charter objectives. The integration of these activities preserve the organization as a unique entity. All organizational behavior is included under this dimension and its degree of complexity is an important variable. Change will be discussed later as an intelligence processing organizational activity. Variation in the complexity of this activity is an important consideration and will be incorporated in the perspective.

4. Normative Structure

The normative structure is composed of prescribed and proscribed rules for behavior and indicates required and permissible forms of interaction between positions or individuals. The norms are both official and unofficial in nature. The official normative structure refers to those patterns of norms related to specific positions in the organization.
An important variable here is the degree of formalization of official rules. The unofficial norms refer to both the positions and the people who occupy them. Embedded in this unofficial structure are patterns of interpersonal relations. This refers to the sets of person to person orientations that develop among organizational members and groups independent of specified relationships (Haas and Drabek, 1970). The previously discussed dimension, organization activities, are permeated by the normative structure. For example, output and control activities contain directive, evaluative, coordinative, and sanctioning aspects which are all normative. In similar fashion, work group relations and influences contain a built-in normative structure.

5. Authority Structure

The authority structure is the pattern of authority relations within the organization. Authority is formal and legitimated power and its basis is in the office or position. Major dimensions of the authority structure (such as degrees of bureaucratization and centralization) have been examined in the literature and these have been related to such factors as size, level of professionalization, specialization, effectiveness, etc. (Haydebrand, 1967). Thus, authority has been deemed an important concept for research.

6. Power Structure

The power structure is the pattern of power relations within an organization. Power is the ability of an organizational member or unit to effect its interests, thereby affecting the activities in the organization. In other words, power takes place in interaction between organizational personnel and components and is of great significance for organizational action (Kreps and Wenger, 1970).

7. Status Structure

The status structure includes the patterns of differential status in the organization. Status is the differential assignment of members of the organization on scales pertaining to such factors as prestige, expertise, competence, power, authority, respect, popularity, etc. Status may be ascribed to the office or achieved in the form of advancement, promotion or reward. Of course, the status structure is related to the authority, normative, and power structures of the organization. In fact, these all may be viewed as elements of a general system of organizational hierarchy (Kreps and Wenger, 1970).

8. Environmental Relationships

Lastly, the conception of organization includes the important dimensions of environmental relationships. An organization's environment is the sum product of its linkages with individuals, groups, publics, other organizations, and the physical setting. Because of central importance of this dimension to the perspective, a few comments are in order.
The organization exchanges products, services, information, and resources with other organizations and social units in its environment. As the environment is dynamic rather than static, the organization must adjust to those changing conditions which affect its operations. In reciprocal fashion, the organization, as an integral part of the environment, may affect that environment through its activities. Environmental relationships are particularly important for this study because the occurrence of civil disturbance is an extra-organizational, i.e., environmental impingement upon organizational affairs. Therefore, the primary theme of this discussion should be the recognition of the impact of environment upon internal organizational activities.

There are essentially six considerations or themes concerning this concept which are directly relevant to the present study. First, organization-environment relationships represent one aspect of organizational activity. Therefore, specification of these relationships is necessary for complete understanding of organizational behavior. Second, the environment represents a dynamic set of other organizations, publics, individuals, and the ecological setting. Thus, the environment is a fluid and in some measure uncertain situational field. Third, as purposive systems, organizations attempt to minimize environmental uncertainty when it impinges upon charter. When charter is threatened by uncertainty, organizations often adapt in the form of measures to either remove or mitigate its impact. Fourth, the organization may not have sufficient information, knowledge, or other resources necessary to make appropriate adjustments; it therefore requires inputs from environmental sources. Fifth, all environmental inputs and relationships become operative through varied and complex mediating relationships. These include interorganizational relationships, relations with other social units, or direct links to the physical environment. These linkages may be cooperative, coordinative, facilitating, competitive, conflictual, bargaining, or some combination of these (Evan, 1965; Guetzkow, 1965). They may involve exchanges of information, resources, or services on the one hand, or they may be of a ideological, physical, or violent nature (Levine and White, 1961). Finally, organization-environment relationships have rather distinct structural consequences, ranging from organizational autonomy to coalition (Guetzkow, 1965). The linkage itself may be direct such as communicative interaction, or indirect, such as through public information, mass media, etc. Particular organizational input points can be conceived of as boundary spanning features of the organization (Thompson, 1962). In some cases these may be officially specified boundary roles such as a liaison officer; in another sense, all organizational incumbents are boundary spanning positions, i.e., they are possible input and output links with the environment.

Police and fire department adaptation to the possibility of civil disturbance was analyzed in the present study. In this case, environmental uncertainty was a clear threat to charter. In many instances these organizations have adjusted by creating mechanisms such as emergency plans to deal with this organizational problem. In doing so they have often required intelligence inputs from the environment such as knowledge of
other police and fire department activity and resources in the area. Thus the environment constitutes both a threat to charter on the one hand, and a source of inputs to minimize that threat on the other. One goal of this research, therefore, was to conceptualize and measure environmental uncertainty and then relate it to the process and objective product of organization change. A further effort was to elaborate and measure the importance of specific linkages, such as other police or fire departments, to the process of change. These will be referred to as comparative reference linkages, i.e., contacts among similar organizations (Evan, 1966). The theoretical perspective to be presented at the end of this chapter incorporates the above considerations.

The inter-relations among organizational elements has been implied or indicated at various points in the preceding discussion. For example, charter is actualized through organizational activities. Charter specifies, at least partly, authority relationships and the official normative structure. Resources and technology are defined as requisite by charter and, in turn, specify activity processes, influence power and authority relationships, and delimit goal attainment. The normative structure pervades organizational activity. The environment represents a source of material and human resources for organizational performance. It also presents a variable but continuing source of uncertainty. And so on. The point is that organization, as a problem solving system with discernible analytical boundaries, has the above dimensions. These dimensions provide a way of discerning the complexity of organizational behavior.

Objective Organizational Change

The remaining two conceptual areas could be subsumed under one heading, i.e., organizational change. However, since the perspective views change as both a product and a process, the presentation is divided into two parts. The first briefly defines organizational change as a general concept. The second elaborates the perspective of the actual process of change used in this study. This represents the final conceptual groundwork for the theoretical perspective to follow.

Organizational change will be defined as a relatively permanent alteration in the internal elements or external environmental relationships of an organization resulting from the effect of a change agent, within a specific space-time context (Kreps and Wenger, 1970). As objective change was the specific behavioral outcome examined by the research, a clarification of its usage is needed.

First, although change is couched in organizational terms, it is felt that the conception can be applied to other social units as well. Second, alterations can occur within an organization which may or may not have any relationship to changes in environmental relationships and vice versa. For example, an organization may change the time of its morning coffee break (a change in the normative structure) without having any effect on its relationships with other organizations. While the example is rather simplistic, it does illustrate the principle that alterations...
in the internal and external conditions of an organization are not necessarily inter-related. Third, change agents can be grouped into one of three classes: an event, a social act, or a social process (Smelser, 1967). Thus a change agent may vary from an innocuous pronouncement to a complex process of occurrences.

Fourth, whether or not change has occurred is determined by the degree of alteration and a defined space-time context. In the final analysis this decision resides with the investigator who must clearly indicate (1) what organization is being analyzed, (2) a space-time context, e.g., the period 1965-69 in a given city, (3) some judgment as to the degree of alteration that has occurred. An alteration that is considered a change in one space-time context may be only a fluctuation, i.e., a relatively impermanent alteration, in another. For example, a positional promotion may be considered a change if one views a few months of the organization's life. If one establishes the entire history of the organization as the space-time context, however, the investigator may decide that this promotion does not constitute significant change.

Fifth, a crucial consideration is what specifically can change; in other words what organizational dimensions can undergo alteration. The previously defined dimensions of organization are quite logically the variables of organizational change. Reiterating, these are (1) organizational charter, (2) resources and technology, (3) activities, (4) normative structure, (5) authority structure, (6) power structure, (7) status structure, (8) environmental relationships. These variables answer the question, "What can change?" In any empirical analysis of organizational change the connections between measures and these organizational elements must clearly and logically be shown. Change in any of these dimensions may lead to changes in others in a very dynamic, reactive way. Therefore what is an independent or dependent variable is highly bound by the particular space-time context employed by the researcher.

Finally, in the present research, the changes made were formally instituted adaptations. Hence, they can be referred to as planned changes or organizational innovations; either reference is adequate. Bear in mind, however, that change can result from many factors other than rational decision. For example human and material losses brought about by an explosion represents a substantial change in organizational resources that was neither planned nor anticipated.

This completes the discussion and elaboration of the concept of organizational change. The next section of this chapter presents the perspective of the process of change which was used in the study.

The Process of Organizational Change

In this study, the process of change is viewed as an intelligence processing organizational activity, thus directly linking change with the concept of organization. Of particular interest is decision making under conditions of uncertainty because of its direct relevance to organizational behavior in response to the uncertainty and threat posed by civil disturbance.
The notion of informational search behavior is very important in this regard. In terms of the present research, police and fire departments were confronted by environmental uncertainty brought about by the threat of civil disturbance. In many cases, performance of organizational activities required the development of new strategies and techniques. As Thompson (1967) would suggest, coping with uncertainty became a fundamental problem for these organizations.

Decision making under conditions of uncertainty is a problem solving enterprise in which the impact of information and other knowledge is expressed in terms of (1) knowledge of alternatives, and (2) knowledge of outcomes. Given the assumption of rationality in organizational behavior, organizations will attempt to reduce uncertainty in the above two factors. This involves, at least in part, the allocation of resources for gathering, assessing and using information and other forms of knowledge and expertise (Taylor, 1965). In the author's judgment, this is an intelligence processing organizational activity. The process of innovation can be referred to as a form of decision making in which, as stages unfold, the salience of intelligence is identified. Furthermore, innovations diffuse through social networks by the process of intelligence transfer (Rogers, 1965). In order to conceptualize this organizational process on its own terms, it is referred to as an intelligence processing organizational activity. Organizational change, the present focus, is therefore an intelligence processing phenomenon. In sum the concept of intelligence processing captures an important aspect of organizational activity (one of the eight basic dimensions of organization) and is crucial to an understanding of the process of organizational change.

The work of Wilensky (1967) has been of primary value in the perspective of organizational intelligence processing. Wilensky (1956) developed the concept of intelligence from an interest in the relationship between experts, intellectuals, and policy makers. He suggests that intelligence represents gathering, processing and communicating the technical and political information used in the decision making process. He is concerned with the determinants of the use of intelligence, the structural and doctrinal routes of intelligence failures, and the conditions which facilitate the flow of high quality intelligence. In Wilensky's judgment, the latter is clear, timely, reliable, valid, adequate, and wide ranging. Intelligence failure is the inability to generate the intelligence needed for pursuit of organizational goals. And, as Wilensky reviews military, government, and corporate history, he finds that these failures have been frequent. So paramount is the concept of intelligence for Wilensky, that he argues it is one of the four fundamental problems of complex organizations, i.e., goal setting, control, innovation, and intelligence.

Wilensky argues that the resources devoted to intelligence and its functions are a product of several inter-related factors. Among these are the availability of intelligence, the relation of the organization to its internal and external environment, and the organization's structural complexity (size, heterogeneity of membership, diversity of goals, centralization of authority). He develops on this basis a series of propositions.
about intelligence allocation. For example, he hypothesizes that the
more the organization is in conflict with its environment, or depends
upon it for goal attainment, the greater the resources allocated for the
intelligence function. Another example is his hypothesis that size
specialization, centralization, heterogeneity of goals, etc., generate
the need for intelligence because they expand the variety and number of
units in the environment which must be taken into account, increase the
need for internal control, and intensify the search for uniformity which
can be formalized in the form of explicit rules.

Of specific interest to this study is Wilensky's argument that as
costs and uncertainty increase, and as the need for change becomes
increasingly significant, the more intense the search for intelligence.
Furthermore, urgency activates high quality intelligence because delib-
erations move out of prescribed hierarchy to sources of generalized
intelligence (e.g., men of knowledge) wherever they are located in the
organizational structure or environment. In other words, the hypothesis
is that under conditions of urgency, intelligence will often supercede
authority positions in decision making.

The preceding discussion of Wilensky neglects some very important
aspects of his argument. For example, he spends a great deal of time
examining internal sources of intelligence distortion such as hierarchy,
specialization, centralization, etc., and argues cogently for measures
to combat them. He is particularly concerned with intelligence pathologies
and supplies a wealth of conceptual clues for any empirical work about
intelligence failures. Furthermore, he defines and elaborates the
typology of intelligence experts he had developed in an earlier work
(Wilensky, 1956). The primary concern, however, is to convey the concept
of intelligence as an intellectual tool for examining the process of
change in organizations.

By means of the notion of intelligence processing, which is a basic
organizational activity, it is felt that a perspective of organizational
change can be developed. Summarizing, intelligence processing is defined
as an organizational activity in which information and other forms of
knowledge are brought to bear in the definition of problems, selection of
alternatives, and the choosing of courses of action to solve these
defined problems. In this particular study formally instituted change or
innovation in organizations is examined. Therefore, the concern is with
the processes of obtaining (searching, gathering) and employing (inter-
preting and evaluating) the technical and political information (knowledge,
values) requisite in problem solution and implementation of these solutions
in the form of objective alterations of extant organizational dimensions.
In this case intelligence processing refers to purposive change as an
adaptive response to an indeterminant environment.

This concludes the conceptual groundwork necessary for the perspective
of organization change to be presented next. The concepts of organization,
organization-environment, objective change, and the process of change are
the central concepts underlying the model.
A Perspective of Change in Crisis Relevant Organizations

The theoretical perspective presented here concerns the process of planned organizational change when charter is threatened in an indeterminant environment. Organizationally, change is viewed as an intelligence processing organizational activity. Thus intelligence is seen as a basic property of organizations, just as it is of individuals. We know that organizations can and do make changes on the basis of varying degrees of intelligence. The empirical question is to measure these varying degrees and their effect upon the process and final outcome of change. In the present study, the types of intelligence utilized in solving problems associated with civil disturbance were at issue. The problem was one of developing a perspective in which relevant dimensions could be interrelated in some testable format.

In this regard, we chose the format of developing explicit sets of basic and derived propositions. This approach forces one to be explicit about what dimensions of organization are to be examined and how they are to be measured. It further requires precisely depicting important inter-relationships among these dimensions. If the resultant propositions can be supported by data, then there is some justification for continuing work with them; that subsequent work being theoretical, applied or perhaps both.

There are six primary dimensions or variables to be incorporated into basic and derived propositions. These variables include the following:

1. Environmental threat to charter
2. Organizational change
3. Organizational intelligence
4. Comparative reference linkage (contact among organizations of similar type)
5. Range of problem solving
6. Complexity of the process of organizational change

Charter, of course, was defined as a basic component of organizations. Environmental threat represents the uncertainty dimension of organization-environment relationships which affects charter. Organizational change specifically reflects the more encompassing concept of change as it has been defined. Intelligence is an organizational resource. Comparative reference linkage, or contact among organizations of similar type, is a particular type of organization-environment relationship and is viewed as an extra-organizational resource of intelligence. Range of problem solving and complexity of the process of change are varying properties of change as an intelligence processing organizational activity.

Before elaborating basic and derived propositions, it is important to make fundamentally clear the assumptions about organizational behavior which underlie them. Any theoretical perspective makes certain kinds of premises about the topic under consideration. It is essential that they be clearly expressed and some reasons given for their acceptance.
We assumed that organizations, as problem solving social systems, will attempt to pursue charter objectives in a dynamic and often uncertain environment. It logically follows that organizations facing environmental uncertainty and threat to charter will adapt in response to that threat. Change, as defined, is one form of organizational adaptation. In the populations of police and fire departments analyzed, uncertainty and resultant threat to charter objectives was often considerable. In many instances, routine performance of organizational activity became problematic, existing structures inappropriate and human and material resources inadequate. In a very real sense the situation demanded some form of organizational adaptation. Whether or not change will occur as an organizational adaptation is, of course, an empirical question. One form of response is to do nothing and face the impairment or loss of charter. For example, the empirical work of The Disaster Research Center concerning change as an adaptive response to natural disaster indicates that very often little change results from this experience (e.g., Anderson, 1969). Short-term adjustments during emergency response do not often lead to many permanent alterations. On the other hand, organizations can actively attempt to remove, control, or mitigate environmental threat through the development of appropriate mechanisms, some of which may be organizational changes. And we suggest that as threat to charter increases, the need for organizational change becomes more pronounced. In this regard it is necessary to specify what can change. As previously discussed, change can occur in any of the eight components of organization, i.e., organizational charter, resources and technology, activities, normative structure, authority structure, status structure, power structure, and environmental relationships.

By way of illustration, in this study the possibility of civil disturbance posed a direct threat to an important aspect of charter in many of these police and fire departments; namely, maintaining the law or effectively fighting fires to avert human and material loss. And, many of these organizations developed changes as an adaptive response to that threat. For example, by establishing a new community relations unit, a police department made not only a structural change, but also an alteration in charter definitions, a specification of new requisite human resources, an expanded organizational technology, and quite likely a change in environmental relationships. A change in emergency planning represented, in many cases, an alteration in routine activities as well as in the normative and authority structures. Emergency equipment represented change in resources and technology. Establishment of mutual aid agreements represented change in organization-environment relationships. And so forth.

The implicit hypothesis is that change is a frequent form of adaptive response to environmental threats of this nature and it is hoped that the study will give credence to this view. In so doing, the study will also specify the conditions under which substantial change will occur, e.g., under conditions of high threat, high intelligence, high comparative reference linkage, etc. The conceptual underpinnings for change as an organizational adaptation to environmental threat come most directly
from Thompson (1967) who elaborated the concept of environmental uncertainty and the organizational efforts to control it. Basic here is the position that organizations attempt to maintain the actualization of charter in a fluid environment. An organization's success at any given point is thus dependent upon its ability to viably sustain a balanced control of environmental influences. When this balance is threatened or altered, organizations can, and often do, change structures and processes to establish desired relationships with their environmental fields.

Organizations also require resources to bring about change; one of these requisites is intelligence as it has been defined. The broader assumption is that certain requirements must be met if organizations are to act at all (Weller, 1969). Among these are human and material resources employed in organizational technology. This is one of the basic elements of organization presented and intelligence is quite logically one resource of organizational activity. In the present study, police and fire departments often developed plans, policies, training, etc., to respond to the problems posed by civil disturbance. In so doing, they required intelligence, both internally generated and from environmental resources. Thus, if a major threat to organizational charter is to be met successfully intelligence resources must be obtained in increasing amounts. The implementation of effective adjustments, many perhaps organizational changes, requires this expanded resource.

As will be seen, the preceding assumptions can be readily translated into specific sets of basic and derived propositions concerning the organizations in question. Thus, in empirically examining what has occurred in these organizations, we test not only the propositions, but also the premises which underlie them. The following are the basic and derived propositions. They will be listed along with arguments for their use.

Basic Propositions

1. The greater the environmental threat to organizational charter, the greater the organizational intelligence.
2. The greater the organizational intelligence, the greater the organizational change.
3. The greater the comparative reference linkage, the greater the organizational intelligence.
4. The greater the organizational intelligence, the broader the range of problem solving.
5. The greater the organizational intelligence, the more complex the process of organizational change.

In Proposition 1 a correlation is suggested between increased environmental threat to charter and amounts of organizational intelligence relative to that threat. In effect, the objectives of the organization become problematic and its relationship to the environment altered and unstable. It is posited that an increasing amount of intelligence is brought to bear under these conditions. The uncertainty and threat must be defined and evaluated, possible courses of action elaborated, and decisions made as to appropriate types of response. All this requires increasing amounts
of intelligence. In the case of police and fire departments, the occurrence or threat of civil disturbance was a direct environmental impingement upon the charter of these organizations. This was a new contingency, at least partly undefined, to which an effective emergency response was essential. This necessitated intelligence resources concerning the development of appropriate policies, emergency plans and procedures, training, etc., to prevent or minimize associated problems. Therefore, it was hypothesized that increasing environmental threat would be associated with increasing amounts of intelligence in these organizations.

Proposition 2 posits an association between degree of organizational intelligence and organizational change. At the more general level, it is suggested that organizations with large amounts of intelligence employed in decision making will be adaptive, changing organizations. This is akin to Burns and Stalker's (1961) distinction between mechanistic and organic forms of organization. High intelligence organizations are more amenable to fluid environments, have a more elaborate technology, and will more readily change its structures and activities to meet new contingencies. In this particular study it was therefore hypothesized that those police and fire departments having greater amounts of intelligence related to the phenomenon of civil disturbance would show objectively greater amounts of change.

Proposition 3 deals with a particular type of interorganizational relationship. Evans's (1965) discussion of organization sets refers to comparative reference linkages as relations between similar organizations, i.e., organizations having similar charters and perhaps structures and processes. In the context of this particular study, comparative reference relationships were other police or fire agencies with which the focal departments had been in contact. It was hypothesized that as comparative reference linkage (number of such contacts) increased there would be a concomitant increase in organizational intelligence. The reasoning was that since these comparative reference organizations had similar environmental problems, they required similar kinds of technical knowledge for effective operation. Therefore those organizations having many such relationships had available intelligence resources which could be obtained and employed in organizational activities.

In Proposition 4 a positive association between degrees of organizational intelligence and the range of problem solving in any given change area was suggested. For example, the definition or elaboration of a problem may reveal underlying complexity. Various courses of action not previously considered are likely to become possibilities with increased intelligence. With regard to the present focus, there has been a growing body of information within the safety network concerning the response or prevention of civil disturbance. This has emanated from various sources such as journals, associations, meetings, seminars, government agencies, and various police and fire departments as they develop their own programs. The intelligence deals with numerous aspects of the problem and has relevance for policy, planning, training, operations, and community relations in these organizations. It was suspected that those departments utilizing substantial amounts of this information would give consideration to more courses of action in the development and implementation of changes than those who did not.
Proposition 5 suggests that the greater the amount of organizational intelligence the more complex the process of organization change as has been discussed. It was argued that with increasing objective amounts of intelligence, the process of its gathering, interpreting, and evaluating would become much more complex in its elaboration. As was mentioned in Proposition 4, there has been a growing body of literature concerning civil disturbance which has been accessible to police and fire departments. Some departments have utilized rather substantial amounts of this literature in incorporating changes in various aspects of emergency related activities. In turn, in the development of organizational changes, variable numbers of organizational incumbents and subunits have become involved, various types of activities have been performed, and variable amounts of time have been expended. In effect, the process of change varies along a continuum which can be conceptualized as relatively simple to increasingly complex. The key point, of course, is the hypothesized positive association between the degrees of intelligence and increases in the complexity of the process of change. With increasing intelligence, there is more data to be processed, the likelihood of more individuals being involved, and more time spent in the interpretation and evaluation of intelligence as well as the development of changes.

Derived Propositions

Propositions 6 through 15 were derived from the basic propositions and exhaust all logical possibilities.\(^3\)

6. The greater the environmental threat to organizational charter, the greater the degree of organizational change. (Deduced from 1 and 2)
7. The greater the environmental threat to organizational charter, the greater the comparative reference linkages. (Deduced from 1 and 3)
8. The greater the environmental threat to organizational charter, the broader the range of problem solving. (Deduced from 1 and 4)
9. The greater the environmental threat to organizational charter, the more complex the process of organizational change. (Deduced from 1 and 5)
10. The greater the comparative reference linkage, the greater the degree of organizational change. (Deduced from 2 and 3)
11. The broader the range of problem solving, the greater the degree of organizational change. (Deduced from 2 and 4)
12. The more complex the process of organizational change, the greater the degree of organizational change. (Deduced from 2 and 5)
13. The greater the comparative reference linkage, the broader the range of problem solving. (Deduced from 3 and 4)
14. The greater the comparative reference linkage, the more complex the process of organizational change. (Deduced from 3 and 5)
15. The broader the range of problem solving, the more complex the process of organizational change. (Deduced from 4 and 5)

* The greater the intelligence of an organizational incumbent, the greater his influence in the process of organizational change.

Propositions 6 through 15 are logical derivations from the basic propositions of the model. For example, in Proposition 6 there is a hypothesized association between threat to charter and degree of change brought about by mutual association of these variables with degrees of organizational intelligence; and so on. Just a few additional comments will be made.

A number of factors could have been included propositionally. The most prominent would be the inclusion of structural variables, e.g., the larger the organization, the more complex the process of change. The view is that variables such as these are not as crucial as those in the model, i.e., they may complement the above interdependent factors but do not remove or "explain away" these relationships. Yet, efforts should be made to measure these variables so that variance explained is not unnecessarily confused. Second, it is felt that the system of propositions is distinctly organizational and captures the key emergent elements of the process of change without violating any assumptions about the individual decision maker. The organization is viewed as an intelligence processing decisional entity. In this case objective change is the product of this process. Third, the above is essentially a theory of purposive or planned change, precipitated by an environmental contingency (civil disturbance) to which the organization purposefully responds. It should be noted, however, that organization change can result from many other factors which are not planned. For example, an impacting disaster agent such as a tornado may significantly change the resources of an organization in a very direct, spontaneous manner. Fourth, the research deals specifically with police and fire departments and the sample was not randomly drawn. Strictly speaking, the inferences are restricted within these populations. However, it is felt that the theory is relevant for these types of organizations generally as well as other cases where planned organizational change is at issue. We trust that this judgment can be evaluated through this study as well as other research.

Finally, the last proposition is not included in the system of propositions for the reasons mentioned. But, it is deemed to be an interesting hypothesis concerning the role of the individual decision maker which can be examined by this study. Furthermore, this hypothesis allows for examination of the validity of the variable of intelligence and the concept of intelligence processing. The perspective attaches great importance to the relationship between intelligence and organizational change. If intelligence is an important factor, then those individuals who play intelligence boundary roles, i.e., who mediate intelligence resources, ought to exert greater influence in organizational decision making; sometimes exceeding incumbents.
of higher authority. Wilensky (1967) suggests that urgency activates high quality intelligence because deliberations move out of prescribed hierarchy to sources of generalized intelligence (men of knowledge) wherever they are located. This is similar to March and Simon's (1958) discussion of uncertainty absorption which refers to the editing of information to the point where it can guide policy. The incumbents or units which perform this function are given unusual latitude to define situations and control events.

This concludes the perspective of organization change adopted in this study. The next two chapters discuss the methodology employed and the findings of the study. Immediately following is an outline of the change perspective discussed in this chapter.
OUTLINE OF CHANGE PERSPECTIVE

Concepts

I. Organization: A purposive and open system of patterned activity which is structurally integrated to solve organizationally defined problems. Organizations have the following analytical elements: organizational charter, resources and technology, activities, normative structure, power structure, authority structure, status structure, and environmental relationships.

II. Organization-Environment Relationships: Sum products of an organization's linkages with individuals, groups, publics, other organizations and the physical setting. Important model dimensions include the following: uncertainty, threat, and comparative reference and other network linkages.

III. Objective Organizational Change: A relatively permanent alteration in the internal elements and/or external environmental relationships of an organization resulting from the effect of a change agent, within a specified space-time context.

IV. The Process of Organizational Change: An intelligence processing organizational activity in which technical and political information and/or knowledge are brought to bear in the definition of problems, selection of alternatives, and choosing courses of action to solve these defined problems.

Variables

1. Environmental threat to organizational charter.
2. Organizational change.
3. Organizational intelligence.
4. Comparative reference linkage.
5. Range of problem solving.
6. Complexity of the process of change.

Basic Propositions

1. The greater the environmental threat to organizational charter, the greater the organizational intelligence.
2. The greater the organizational intelligence, the greater the organizational change.
3. The greater the comparative reference linkage, the greater the organizational intelligence.
4. The greater the organizational intelligence, the broader the range of problem solving.
5. The greater the organizational intelligence, the more complex the process of organizational change.
Derived Propositions

6. The greater the environmental threat to organizational charter, the greater the degree of organizational change. (Deduced from 1 and 2)

7. The greater the environmental threat to organizational charter, the greater the comparative reference linkage. (Deduced from 1 and 3)

8. The greater the environmental threat to organizational charter, the broader the range of problem solving. (Deduced from 1 and 4)

9. The greater the environmental threat to organizational charter, the more complex the process of organizational change. (Deduced from 1 and 5)

10. The greater the comparative reference linkage, the greater the organizational change. (Deduced from 2 and 3)

11. The broader the range of problem solving, the greater the organizational change. (Deduced from 2 and 4)

12. The more complex the process of organizational change, the greater the organizational change. (Deduced from 2 and 5)

13. The greater the comparative reference linkage, the broader the range of problem solving. (Deduced from 3 and 4)

14. The greater the comparative reference linkage, the more complex the process of organizational change. (Deduced from 3 and 5)

15. The broader the range of problem solving, the more complex the process of organizational change. (Deduced from 4 and 5)
FOOTNOTES: Chapter II


2. Whether or not a purposive change is labeled as innovative is dependent upon such factors as the source of the idea or the time the change was made relative to other changing organizations (e.g., other police and fire departments). This is another question, which though crucial to any diffusion model, is not of concern here. To handle such a research problem would require a specified adoption period and some form of diffusion curve which would differentiate between adopter categories (innovators, early adoptors, late adoptors, etc.). See Everett M. Rogers, Diffusion of Innovation (New York: The Free Press, 1965).

3. "A fundamental principle of deriving propositions is that given (n-1) basic hypotheses where n = the number of variables, and given that all variables appear in at least one of the (n-1) hypotheses, then all other hypotheses within the theoretical system may be derived. The total number of basic and derived hypotheses is therefore n(n-1)/2." See Schwirian and Prehn, "An Axiomatic Theory," p. 814.

4. This proposition can not be incorporated directly into the model because it presents an independent dimension of the phenomenon and is individualistically stated. It is presented as an additional hypothesis which will be addressed by the study because it has relevance for the role of the individual decision maker.
CHAPTER III

RESEARCH METHODS

We will now discuss the research methods employed in the study. This discussion will be organized in terms of three topical areas. First, we will discuss the departments selected for research and the strengths and weaknesses of them, as a group, in meeting our research needs. Second, we will discuss the specific data collection techniques used in the study and some associative problems. Third, we will then elaborate the specific measures used for the variables selected for research. Thus the present chapter should be seen as a complete detailing of the manner in which the study was undertaken.

The Cases

During 1968-1972 about 20 cities in the United States were systematically studied monitoring their natural disaster and civil disorder history and examining the types of adjustments made by various community organizations to these types of threat. The present study focused specifically upon police and fire departments in the following selected cities:

Brownsville, Texas
Buffalo, New York
Cincinnati, Ohio
Columbus, Ohio
*Dayton, Ohio (police only)
*Detroit, Michigan (fire only)
Indianapolis, Indiana
Los Angeles, California
Louisville, Kentucky
Lubbock, Texas
Miami, Florida
New Orleans, Louisiana
Oklahoma City, Oklahoma
*St. Louis, Missouri (fire only)
Toledo, Ohio
Topeka, Kansas
Youngstown, Ohio

These cases were not selected to test the present propositions specifically, but had been chosen sometime earlier for more encompassing community analysis. Thus the sample was not randomly drawn and, as it is relatively small, there were no built-in controls. In spite of these limitations the cases presented some rather distinct advantages. Of crucial import was the fact that entree with these organizations was pre-established. As civil disturbance was a sensitive area for social research, the pre-existent legitimation and rapport with these respondents was essential to research efforts and greatly facilitated candid and complete answers. Second, the sample had fairly broad geographic representation. Though five of the cases are Ohio cities, three are more southerly (Miami, New Orleans, Louisville), four are westerly (Los Angeles, Oklahoma City, Lubbock, and Brownsville), one (Buffalo) is an eastern city, and four are from other midwestern states (Indianapolis, Detroit, and

*We were only able to study one of the two relevant departments in each of these cities.

-23-
St. Louis, and Topeka). Though this was not a national representative sample, there was rather broad coverage for so small a number of cases.

Another relevant point is that the cities themselves represented considerable variability on one dimension of the perspective, i.e., environmental threat to charter. There was considerable difference among these cities in terms of civil disturbance history and potential. For example, Los Angeles, Detroit, and Cincinnati had experienced civil disturbances of great magnitude while Oklahoma City, Lubbock, and Brownsville up to the time of our field work had experienced very little threat. In all cases, however, at least some objective threat was anticipated, either in terms of actual unrest experience or in terms of a substantial minority population (Black and/or Mexican American).

Finally, there was considerable variability among the specific police and fire organizations in terms of the remaining elements of the model, i.e., organizational change, intelligence, comparative reference linkage, range of problem solving, and complexity of change. Thus an assessment of the importance of and relationships among these variables was clearly possible. Furthermore, these organizations varied along structural dimensions such as size, wealth, education, centralization, complexity, and bureaucratization, thus allowing analysis of the possible impact of these variables upon the model developed.

In sum, the chief weaknesses of the sample were that it was not randomly drawn and its size did not allow for any built-in statistical control. Thus, generalizations were not statistically possible, nor were more sophisticated multi-variate analysis techniques based upon larger samples. The former weakness was tempered by the fact that the sample contained considerable geographic and social structural variation. The latter weakness, though clearly important, was mitigated by the fact that the impact of several variables not in the model could be measured and evaluated relative to those included.

The major advantage of the sample was its amenability to systematic case analysis. An adequate examination of the perspective required thorough empirical study of the process of change through in depth interviewing and other data. This proved possible in fifteen police and sixteen fire departments. Furthermore, the cases provided sufficient variability in the model elements to make meaningful distinctions.

Data Collection

Initial observations in these police and fire departments indicated that changes had occurred from 1965-1969 in one or more of the following five areas: policy, planning, training, operations, and where existent, community relations. Of course these five areas were not mutually exclusive. For example, new policy represented, at the very least, change in the organization's official normative structure, and was also likely to affect organizational activities and resources. Therefore, a specific policy statement concerning crowd control had direct implications for
emergency operations of police departments. Similarly, a new policy in fire departments concerning false alarms clearly affected emergency alarm procedures. And so on.

In order to get coverage of these topical areas, certain standard procedures for interviewing were employed. For policy, the chief of the department appeared to be most appropriate. As head of the organization, it was felt that he was most likely to have overall knowledge of the organization's affairs as well as play an important role in policy development. In the planning area, some departments maintained a specific subunit to perform this function. In these cases, the head of these units was usually knowledgeable about changes in emergency planning. Where this subunit did not exist, those persons specifically involved in the writing or revision of emergency plans were sought out as respondents. For training, in most cases a member of the training academy (usually the director) was identified as the appropriate informant. In the operations area, someone who had operational responsibility during civil disturbances was interviewed. In most cases this turned out to be the operations head (usually an assistant chief). Where community relations units existed, the director of this subunit was readily identifiable as an appropriate informant.

The study was initiated in the following manner for each case in the sample. A letter explaining the purpose of the research was first sent to the chief of the department. A followup telephone call further elaborated the research interests and attempted to arrange specific dates and times for the required interviews. These arrangements were possible in all but two police departments who were unable to participate in the study. A confirmatory letter finalized the arrangements. At the designated dates, a field team (usually two men) was sent to complete the study. Data collection spanned approximately a ten month period, March to December 1970.

Specific instruments were designed for each interview. These instruments can be examined in the appendices. The policy instrument was designed to perform essentially two functions. First, a change checklist was administered to each chief. The specific change items were, of course, different for police and fire departments. The purpose of the checklists was to determine the range of changes which had occurred in any particular department during the space-time context that had been specified, i.e., 1965-1969. It was felt that the head of the organization would be most able to adequately complete the checklist. This proved to be the case. Changes were categorized in terms of six general areas with specific items subsumed under each. The following categories were used for all organizations: planning for emergency response, training, resources, specialized subunits, relationships between the focal organization and other emergency organizations, and relationships with the public and community groups. Based upon our knowledge of police and fire departments, it was felt that the checklists encompassed all possible organizational changes which might have occurred. This assessment was substantiated in virtually all cases. A second function of the policy instrument was to isolate which of the
six change areas the chief was most involved in and then raise a series of questions, specific to the perspective, about these changes. The restriction to one area was necessitated by the overall length of the questionnaire and the interview period required to complete it. It was therefore impossible to tap completely the chief's knowledge of all changes in his organization.

The planning and training instruments raised the same specific questions as the policy interview but couched them in terms of changes in the planning and training areas. These three instruments as a whole guaranteed relatively detailed data in at least two and in some cases three of the six change areas.

The operations instrument provided two kinds of information. First, it attempted to determine the impact that changes in policy, planning, and training had on emergency operations. For example, was planning merely at the paper stage or did it actually permeate emergency organizational activity? Second, the instrument determined what role operations people played in the development of these changes and their evaluation of them. This allowed the more clear determination of the total range of participation in the process of change as well as a check of the validity of information gained in other interviews.

The community relations instrument was not developed to examine the propositions and forms the basis of a different study (see Teuber, 1972). However, the instrument did perform an important role for this research. This questionnaire asked detailed questions about the development of community relations programs and their present status in terms of number of personnel and range of activities. As considerable variation existed among organizations in community relations effort, the instrument provided important discriminating information about this change and its development.

Two additional instruments of some importance were utilized. Since intelligence gathering is an important aspect of the model, when a person had personally engaged in substantial intelligence search, a liaison instrument was incorporated into the interview situation. The purpose of the instrument was to gain more detailed information about this dimension and the uses put to intelligence once it was obtained. Finally, a documentary checklist was given to appropriate records personnel to have filled out and returned. This instrument provided measurement of a series of structural variables to be assessed relative to those included in the model.

A total of 68 interviews were made in police departments, with a mean of 4.5, a range of 2-8, and a median of 5 interviews. A total of 68 interviews were also made in fire departments with a mean of 4.3, a range of 1-6 and a median of 4.25 interviews. Those departments experiencing low change of course had fewer interviews as there were fewer change areas to discuss. Thus in police departments, three low change departments had only 2 interviews while 4 higher change departments had 6 and one had 8 interviews. In fire departments, 2 low change departments had 2 interviews and a third only one, while 4 relatively high change departments had 5 interviews.

-26-
and another had 6. The interviews averaged approximately one to one and one half hours, the longest generally being the policy interviews. The interviews essentially attempted to obtain the following types of information: identification and measurement of perceived problems brought about by civil disturbance threat; descriptions of changes and the problems to which they were directed; identification of participants in the development of changes and the basis of their participation; measures of the existence and sources of intelligence utilized in the development of changes; insight into the structure of decision making and measures of the complexity of the change process; measures of the relevance of environmental linkages to the development of changes; data concerning structural dimensions of each organization.

This section will be concluded with a discussion of methodological problems encountered in the collection of data. The following discussion focuses upon three issues: the substantive area of research, the validity of the data, and its reliability.

There was some initial concern that the subject of civil disorders would be a sensitive area for research, particularly since large amounts of data were required. The concern was articulated in terms of two possible problems: the willingness of respondents to cooperate and the candor and completeness of the information provided. The former proved to be a relatively minor problem. Only two of the selected organizations chose not to participate; this was an acceptance rate of over 93 percent. In most cases, assistance was provided at all phases of the research, from entree, to identification of appropriate respondents, to supplying complete information. Though more difficult to document, the completeness of information did not appear to be a problem. With a few exceptions, efforts were made by respondents to relate to all questions and answer them to the best of their knowledge. When several accounts of similar situations were presented substantial factual agreement was noted.

Did the respondents provide a factually accurate picture of the phenomenon under consideration? The study attempted to obtain information from a four year period through in depth interviewing. In this regard, there are always problems such as the lack of accurate and complete information by certain respondents, recall decay of those having necessary information, and the possible misrepresentation of facts. The first problem was overcome in large measure by the prior identification of those persons knowledgeable in the areas under consideration. This identification was initially established through the head of each organization and subsequently continued in interviewing of those initially identified. Identified individuals were directly involved in the development of changes in most cases, thus enhancing the accuracy of description. The problem of recall decay was mitigated by the desire of many respondents to seek out specific information when they could not remember needed details. Furthermore, interviewers were instructed to probe carefully for data when gaps became evident. Inevitably there were some gaps due to the breadth of the data required and the extended time period covered. The problem of misrepresentation was difficult to detect. Therefore, some assumption as to the
Reliability in this study concerned the extent to which similar data was obtained from each department in the study. Reliability was addressed in three ways. First, a series of formalized instruments were developed for the study. Thus the same questions were presented to each organization. Second, similar interviewing instructions were given for all organizations contacted both in terms of the identification of appropriate respondents and the necessity of administering the instrument as closely as possible in its present format. Third, great efforts were made in instrument design to remove ambiguous questions. Undoubtedly problems in reliability were not completely overcome. The study often demanded considerable clarification and probing in order to gain accurate information. In some cases this resulted in lack of continuity in the administration of instruments from organization to organization. However, to the extent that validity was enhanced through probing, it was felt that reliability would be less of a problem.

Measurement of the Variables

The propositions presented in Chapter II relates the following six variables:

1. Environmental threat to organizational charter
2. Organizational change
3. Organizational intelligence
4. Comparative reference linkage
5. Range of problem solving
6. Complexity of the process of organizational change

Each of these variables was operationalized in terms of two or more indicators. In virtually all cases there was no precedent in the literature for the measurement of these variables. Consequently, efforts were made to tap several indicators for each variable, not knowing at the outset how successful their individual measurement would be. It was hoped that through these indicators differences among organizations along each variable in the model could be determined. In addition, several structural variables were measured for their possible relevance to the model.

Thus the samples should be seen as populations of police and fire departments whose representativeness allows for some, but not systematic generalization to all U.S. urban police and fire departments. Several indicators for each variable in the model were measured, some successfully and some not. As a result, it was possible to make ranking distinctions with some confidence, but the data could not be treated as interval level. In other words, we were able to distinguish between higher and lower organizations along each variable, but could not be exact as to how much. The measures should thus be treated as ordinal data whose purpose is to
discriminate among variables.

In analyzing each organization, data was initially coded from the interviews using an "Interview Analysis Form." As data had to be extracted from relatively long interviews, this form of qualitative and quantitative coding was essential. After initial interview coding, data was then aggregated for each organization using a "Data Analysis Form." The aggregated data was subsequently used to establish ranks on each variable. The possible problem of comparability of change areas was an initial concern in coding the data. However, comparability proved not to be a problem in either police or fire departments. When fewer change areas were discussed, it was the result of lower overall change; and this was what the propositions were specifically attempting to address. One other point should be mentioned at the outset. Police and fire departments were treated as separate populations. Though grossly similar as para-military structures, these organizations have different charters, technologies, activities, and at the very least, a different range of changes and intelligence resources. Consequently, to attempt systematic comparisons across these sets of organizations would be unwarranted at this point.

Environmental Threat to Charter

Environmental threat reflects the degree to which accomplishment of charter responsibilities are rendered problematic by the phenomenon of civil disturbance. Three pieces of data were utilized in the measurement of this variable. The first set of indicators elaborates the civil disturbance history and minority population of each city in the study and is therefore identical for both police and fire departments in each locale:

1. Number of civil disturbance events 1965-1969
2. Total number of days of civil disturbance 1965-1969
3. Total number of civil disturbance related deaths 1965-1969
4. Total number of civil disturbance related injuries 1965-1969
5. Total number of civil disturbance related deaths to police and fire personnel 1965-1969
6. Total number of civil disturbance related injuries to police and fire personnel 1965-1969
7. Total amount of civil disturbance related property damage 1965-1969
8. Percent minority population in the community

Number of civil disturbance events and total number of days of civil disturbance reflected actual civil disturbance experience. Deaths, injuries, and property damage were directly related to these occurrences. Percent minority population was examined as a measure of potential or propensity for disturbance. It was felt that, as a group, these indicators factually represented the civil disturbance experience of these cities and therefore reflected variations in threat to organizational charter.
In this case threat was operationalized as an objective historical dimension.

Further probing this variable from the standpoint of subjective or perceived threat, the policy, planning, and training instruments contained the following two questions:

1. What particular problems did civil disturbance or the threat of them present to (policy, planning, training) in your organization?

2. In viewing these problems, we would like you to rate generally how important the solution of these problems was to the (policy, planning, training) objectives of effective emergency response.

very important
moderately important
of little or no importance

Question 1 examined the ability of the respondent to articulate civil disturbance related problems. The assumption was that as more problems were defined there was both greater knowledge of the organizational ramifications of the phenomenon and greater perceived threat. Question 2, in the form of a forced rating, further probed the subjective definition of threat. Data from these questions became quite useful when making distinctions on the basis of perceived threat.

Of the several measures of objective threat attempted, it was felt that number of civil disturbance events and total number of days of civil disturbance experience were the best measures. Arrests, deaths, and injuries were already incorporated in the criteria used for determining civil disturbance events. Deaths and injuries to police and fire personnel, and property damage did not yield reliable data. Percent minority group did not correlate well with any of the other measures. Number of events and total number of days inter-correlated quite well (.93). Number of days was selected as the final measure because it allowed for finer discrimination (no tied ranks). The organizations were also ranked on the basis of subjective or perceived threat using number of articulated civil disturbance related problems and the problems rating question. The correlations between objective and subjective threat were moderate: .43 for police departments and .68 for fire departments. (The implications of this finding will be indicated in the analysis of the model.)

Organizational Change

Change was defined as a relatively permanent alteration in the internal elements and/or external environmental relationships of an organization resulting from the effect of a change agent, within a specified space-time context. In this case civil disturbance threat was the precipitating agent and the period 1965-1969 the context employed for analysis. The change checklist was the major tool for measuring this variable and was administered
to all heads of departments. Each of the change categories can be expressed in terms of one or more of the eight analytical dimensions of organizations discussed in Chapter II. Thus relationships between the police and other emergency organizations represent change in organization-environment relationships. The acquisition of new emergency equipment or the development of new training techniques represents change in organizational resources, etc. Only those items specifically established or modified from 1965-1969 and still existent in 1969 were labeled as change. Therefore, a community relations program established in 1967 but disbanded in 1968 was not considered as a change within the specified context.

The checklist alone was not felt to discriminate sufficiently in all cases. For example, there is considerable variation in the depth and coverage of civil disturbance plans, emergency and community relations training, emergency resources, and community relations units and programs. The checklist merely specifies presence or absence and each item has equal weight. The following data, when available, provided further discrimination in degree of change:

1. Civil disturbance plan
   Number of pages _____
   When established _____
   Number of revisions _____
   Number of interorganizational relationships specified in plan _____
   Provisions for alternative operational procedures yes no
   Provisions for updating plan yes no
   Provisions for training using plan yes no
   General Comments on plan (coverage, complexity, etc.)
2. Number of hours of emergency and/or community relations training
   Recruit ____
   In-service ____
3. Percent of budget spent on emergency planning _____
4. Percent of budget spent on emergency equipment _____
5. Size of community relations staff _____
6. Number of community relations programs _____
7. List of civil disturbance related grants _____

Several factors were used to discriminate among civil disturbance plans. Number of pages, percent of budget expended for planning, when the plan was established, and number of revisions gave greater insight into the overall magnitude of planning changes. As interorganizational relationships are often very important in emergency response (e.g., mutual aid pacts, emergency operations centers, etc.), the incorporation of this factor into planning represented an additional dimension of change. Provisions for alternative operational procedures got at the complexity of planning. Provisions for updating and training gave some indication of the extent to which changes in emergency planning have been built into organizational routines. With regard to training, the percent of budget expended
for training gave some indication of the overall magnitude of training changes. In the community relations area, size of staff and number of programs specified the magnitude of community relations change. Percent of budget spent on equipment examined change in organizational resources. Finally, civil disturbance related grants gave some indication of the external resources generated directly or indirectly by civil disturbance phenomenon.

These measures allowed for making further distinctions in magnitude of the change variable. This was particularly important when organizations had similar configurations on the checklist. The assumption in using both the checklist and the other measures was that the higher the number and magnitude of the items, the greater the change which had occurred in these organizations. In sum, organizations were first ranked in terms of the number of items on the change checklist. Additional data concerning magnitude of planning, training, equipment, and community relations changes allowed for slightly more precise rankings.

Organizational Intelligence

Intelligence was defined essentially as technical and political information used in the development of organization changes. The problem was one of determining the types and degree of intelligence employed in change development. A series of questions in the policy, planning, training, and liaison instruments were developed to elicit measures for the following indicators of organizational intelligence:

1. Number of site visits to other departments to obtain information about emergency operations or specifically change related programs
2. Number of civil disturbance related conferences attended
3. Number of civil disturbance related training seminars attended
4. Number of emergency plans examined
5. Number of relevant publications utilized
6. Number of other intelligence sources
7. Formalized feedback from experience (e.g., after action reports) yes no
8. Formalized feedback from intelligence gathering (e.g., a filing system for outside intelligence) yes no

The above list exhausted all possible objective intelligence sources in the civil disturbance area from either a response or prevention standpoint. The assumption was that increasing amounts of these types of information represented greater degrees of intelligence existent within an organization.

Ranks were determined for both police and fire departments by first aggregating the number of site visits made, number of conferences or training seminars attended, number of plans examined, number of
publications used, and the number of other intelligence sources mentioned. When tied ranks resulted, formalized feedback from experience and/or intelligence gathering were criteria for further discrimination.

Comparative Reference Linkage

Comparative reference linkage refers to a particular type of inter-organizational relationship and is defined as relations between similar organizations, i.e., organizations having similar charters and perhaps structures and processes as well (Evan, 1965). In this study, comparative reference was represented by other police or fire organizations with which the focal departments had been in contact. The following question in the policy, planning, and training instruments attempted to measure comparative reference contacts.

Your department may have been in contact with other (police, fire) agencies from time to time to discuss problems, exchange information, obtain advice about new programs, techniques, etc.

a. What particular departments were you in contact with?
b. What was the nature of the contact?
c. Which of the following most nearly describes the extent of this contact?
   - frequent contact with many departments
   - frequent contact with a few departments
   - relatively infrequent contact with other departments
   - little or no contact with other departments

Therefore, comparative reference was operationalized in terms of the specific number of contacts, some indication as to the nature of the linkage, and a ranking of the magnitude of comparative reference generally by the respondent. It was assumed that the number and nature of other police and fire department contacts adequately reflected comparative reference as conceptualized. It was further assumed that respondents would be able to characterize this dimension in terms of a close ended ranking question. Organizational ranks were first determined by the number of comparative reference contacts mentioned in the interviews. Ties and ambiguous findings were resolved by using the average score on the comparative reference rating question.

Range of Problem Solving

Range of problem solving is defined as the degree to which various alternatives are considered in the development of changes. The model posits that there will be an expansion of alternatives consideration with increased organizational intelligence. For example, does the examination of ten plans as opposed to one broaden the range of problem solving? The following two questions were developed for the policy, planning, and training interviews to measure this dimension:
1. It is possible that time was spent considering possible courses of action in (policy, planning, training). Which of the following most clearly describe your organization?
   - a great deal of time was spent considering possible courses of action
   - a small amount of time was spent considering possible courses of action
   - practically no amount of time was spent considering possible courses of action

2. What other alternatives were seriously considered?
   a. Why were these alternatives rejected?
   b. Were there any disagreements over the merits of these alternatives?
   c. How were these disagreements resolved?

The variable was therefore operationalized in terms of a rating question characterizing the change process in general, the specific number of alternatives mentioned in the interview, and any elaboration of alternatives consideration which could be gleaned through probing. It is assumed that problem solving reflects the consideration of various courses of action, has a time dimension, and can be conceptualized as falling along a continuum from low to high.

This variable was particularly difficult to rank and the results were not completely satisfactory. The number and elaboration of alternatives as well as a ratings question were used as measures. In many cases respondents were unable to relate specific details about courses of action considered. Analysis was forced to fall back on the average score on the rating question and any elaboration in the interviews which could be used for further distinguishing organizations. The resultant ranks were based on qualitative data as much as they were on a quantified score.

Complexity of the Process of Organizational Change

It was suggested here that the process of change varies along a continuum from relatively simple to increasingly complex. The model hypothesized that with increasing objective amounts of intelligence, the process of its gathering, interpreting, and evaluating becomes much more complex in its elaboration. The following questions in the policy, planning, and training instruments attempted to measure complexity of the change process:

1. Was a particular department of the organization assigned the primary responsibility for developing these changes?
   a. If so, how was this responsibility assigned?
   b. How was this responsibility carried out?
2. Which existing departments in the organization participated in making these changes?
   a. What was the nature of their participation?
b. Who represented these departments?

3. Was any standing committee formed to develop or consider these changes?
   a. If so, who composed the committee?
   b. What were its activities?
   c. How often did it meet?

4. Approximately how many man hours were spent considering alternatives, gathering and evaluating information, and developing the (policy, planning, training) changes we have been discussing?

Based upon these questions, complexity of the change process was operationalized in terms of the following indicators: number of subunits involved in the development of changes, total number of persons involved, number of man-hours expended, number of meetings held, existence and activities of standing committees. It was assumed that each of these measures reflected degree of complexity, but there was no assurance that data could be obtained for all of them. Number of subunits was considered to be the primary measure due to its associated use in the literature for the measurement of complexity generally.11

Of the several measures attempted, the number of subunits and the total number of persons involved in the development of changes were most productive. Number of man hours and number of committees and meetings did not yield complete data. Since it was felt that number of subunits most clearly represented complexity, this became the prime measure. Number of persons involved was then used to break tied ranks. The additional measures and elaboration in the interviews, where usable, were employed to make further distinctions.12

By way of summary, objective threat was measured in terms of civil disturbance experience. Subjective threat was operationalized as the number of articulated civil disturbance related problems and a rating question. Change was measured in terms of a checklist of organizational changes and a series of other factors which discriminated among various types of change. Intelligence was measured in terms of a series of intelligence inputs as well as the intelligence feedback mechanisms employed. Comparative reference was operationalized as the number of comparative reference contacts and a rating question concerning magnitude of contact. Range of problem solving was measured by the number of alternatives considered in the development of changes and a rating question concerning degree of alternative consideration. Finally, complexity of the process of organizational change was measured primarily in terms of subunit and total individual participation in the development of change.

**Structural Variables**

Measurement of several structural variables was attempted to determine their possible relevance to the perspective. No prior predictions were made as to the direction or magnitude of possible association. The effort was to measure the strength of these variables relative to those in the
perspective as a means of subsequent theoretical expansion. In some cases there was less confidence in the measures utilized than might have been desired. Though some have precedent in the organizational literature, the problems inherent in their measurement have been pointed out often (Burns, 1967). Table 1 outlines the variables with their associated indicators.

TABLE 1
ORGANIZATIONAL VARIABLES

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police</td>
<td>Fire</td>
</tr>
<tr>
<td>1. Size</td>
<td>Number of uniformed personnel</td>
</tr>
<tr>
<td>2. Wealth</td>
<td>Annual operating budget</td>
</tr>
<tr>
<td>3. Professionalization</td>
<td>Number of officers having college training</td>
</tr>
<tr>
<td>4. Complexity</td>
<td>Number of subunits</td>
</tr>
<tr>
<td>5. Centralization</td>
<td>Ranked/total personnel</td>
</tr>
<tr>
<td>6. Bureaucratization</td>
<td>Clerical/uniformed personnel</td>
</tr>
</tbody>
</table>

A few comments are in order about these indicators. Size is a relatively straightforward variable, has a direct empirical link, and requires few assumptions in measurement. Wealth is a somewhat ambiguous variable. A high operating budget does not necessarily represent high economic levels. It does, however, indicate potential economic resources having a possible bearing upon the phenomenon under consideration, e.g., money for new emergency equipment, planning, training, community relations programs, intelligence gathering, etc. Professionalization was measured quite grossly. Hall's work (1968) points out the difficulty in measurement of this variable and it is recognized that there are clear limits in this use of the term.
The measures for complexity used in police departments is not unprecedented in the literature (Aiken and Hage, 1967) although specification of meaning is often left unstated. The study utilized the variable as a dimension of organizational administration; we realize there is an important technical dimension as well. It was impossible to utilize the same measure of complexity in fire departments because subunits are too highly standardized. The number of fire stations was chosen because it was felt to most clearly represent administrative complexity in this type of organization. In both cases, the ambiguity of the concept and the need for more systematic empirical research is recognized (Haydebrand, 1967).

We hoped to use number of ranks in the chain of command as a measure of centralization. Authority structures are so standardized in both police and fire departments as to make distinctions impossible. Therefore, a gross measure using the ratio of ranked to total uniformed personnel was attempted (Hage, 1965). It is assumed that a lower ratio represented a lower portion of incumbents having some decision making function, thus higher centralization. Bureaucratization was measured by the ratio of clerical to uniformed personnel. This is similar to the A/P ratio used by Bendix (1956) and others.

With a few exceptions, measurement of these structural variables proved possible. It was impossible to get usable measures for professionalization and bureaucratization in fire departments. Length of recruit training was similar across fire departments and thus did not discriminate adequately. The only possible substitute was length of in-service training, but the data was incomplete, and even when obtained was very similar. The ratio of clerical to uniformed personnel as a measure of bureaucratization did not work either. Fire departments have few specifically administrative personnel, i.e., this role is incorporated into other organizational positions. Unfortunately, there was no alternate data which would tap this variable. Finally, measures of professionalization were possible in only twelve police departments as three did not supply the necessary data. However, it was felt there were sufficient cases to analyze this variable.

Other Measures

The instruments attempted to address the additional proposition of potential relevance which was not incorporated in the perspective at the outset. The proposition stated that the greater the intelligence of an organizational incumbent, the greater his influence upon the process of change. Influential members were identified by the following question in the policy, planning, and training instruments:

What members of the department were most influential in the development of these (policy, planning, training) changes?
   a. What is their position in the organization?
   b. Why were they influential?

Organizational incumbents having intelligence were identified by determining
the specific individuals who gathered or had access to existing organizational intelligence. Thus the policy, planning, training, and liaison instruments attempted to determine factors such as who specifically made site visits, attended seminars or conferences, examined plans, publications and other data. The research question was to what degree individuals possessing intelligence played influential roles in the development of changes.

Therefore, when intelligence sources were identified, it was then determined who played intelligence boundary roles and what was their specific organizational rank. The result was a list of intelligence boundary personnel by position for each organization. By the same token, when organizational members were identified as influential in the development of change, their authority position was determined. This produced a list of influential organizational personnel and their ranks for each organization.

In conclusion, this chapter has attempted to elaborate the research methods used in the study. Advantages and disadvantages of the cases selected for analysis were first discussed. This was followed by a presentation of the data collection techniques utilized and a general account of associated problems. The remainder of the chapter concerned specification of the measurement of variables. Methodological difficulties are inherent to any empirical examination of organizational process, particularly when change is the focus of analysis. As can be seen from the preceding discussion, this study was no exception. Several measurement and other methodological problems were confronted. However, the direction provided by the perspective allowed for a more coherent and orderly research. The subtlety of the change process could be approached by theoretically generated concepts and variables. The next chapter shows how this was accomplished.
FOOTNOTES: Chapter III

1. For example, if the chief chose resources in one organization and planning in another, there might be fewer change areas discussed in the latter organization.

2. In police departments, the chief chose planning, training, or community relations in all but two cases. In these two cases, the chiefs chose emergency interorganizational relationships, but only as they related to planning. Consequently no comparability was lost here, although the overlap did enhance the quality of the data. In fire departments, emergency interorganizational relationships was chosen three times, but, here again, only as it related to planning.

3. Data for measurement of the following indicators was derived from the following two sources: "Riots, Civil and Criminal Disorders: Part 13," from Hearings Before the Permanent Sub-committee on Investigation of the Committee on Government Operations, The United States Senate, Ninetieth Congress, pp. 2762-2777; and Riot Data Review (Waltham, Mass.: Brandeis University, Lemberg Center for the Study of Violence, reports from April 1968; May 1968; May-August 1968; January-December 1969).


5. The following criteria were utilized for all reported incidents: If a community reported a riot connected death, it was automatically included as an event. Otherwise, two or more of the following conditions had to be met: (1) two or more injuries (2) sniping, (3) looting, (4) twenty or more fires, (5) fifty or more arrests. These criteria were taken directly from "Riots, Civil and Criminal Disorders: Part 13," pp. 2762-2777.

6. The organizations were first ranked in terms of number of articulated problems. If there were any tied ranks, an average score on the rating question for each organization was utilized to break the ties.

7. Four pairs of consecutive rankings switched places in fire departments largely on the basis of more elaborate planning, training, and community relations programs. In police departments, two tied ranks were broken and one rank was slightly changed on the basis of formalized feedback from experience in the former two cases and an elaborate community relations program in the latter.
8. One tied rank in police departments and two tied ranks in fire departments were broken in this way.

9. In both police and fire departments, those highest on comparative reference could be readily discriminated by the specific number. Those lower on comparative reference linkage required discrimination by use of the rating question.

10. The rating question resulted in numerous tied ranks. These were resolved by interview data where possible.

11. Tied ranks were more frequent in fire departments; thus great reliance was placed upon the additional measures in these organizations.

12. For a summary of some of this literature, see Wolf V. Haydebrand, "The Study of Organizations," Social Sciences Information, 6 (October 1967): 59-86.
CHAPTER IV

THE EMPIRICAL EXAMINATION

The entire range of data analysis completed in the study is summarized in this chapter. The underlying concepts have been defined; propositions have been presented and their conceptual logic discussed; and the measurement of variables has been specified. The study now moves to empirical examination.

Specification of organizational rankings on both model and structural variables will first be presented in table form. This will be followed by an elaboration of the propositions through correlation analysis. The perspective will then be more clearly illustrated by case description of several organizations in the population. Discussion of unique cases will be included here. The chapter will conclude with an assessment of the intelligence-influence hypothesis, thus providing an additional possibility for refining the perspective.

Specification of Rankings

The following tables specify the rankings for both model and structural variables analyzed in police and fire departments. On the basis of these rankings, Spearman rank order correlation techniques will be employed to examine the data. In presenting these tables, the following designations for variables are employed:

- Environmental threat to charter -- Threat
- Organizational change -- Change
- Organizational intelligence -- Intell.
- Comparative reference linkage -- Com. Ref.
- Range of problem solving -- R. P. S.
- Complexity of the process of organizational change -- C. P. C.
- Size -- Size
- Wealth -- Wealth
- Professionalization -- Prof.
- Complexity -- Complex.
- Centralization -- Central.
- Bureaucratization -- Bur.

The variables will be listed horizontally and the organizations vertically in each table. For purposes of anonymity, the organizations will be designated by letters.
### TABLE 2

**SPECIFICATION OF ORGANIZATIONAL RANKINGS BY BASIC VARIABLES: POLICE DEPARTMENTS**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>C</td>
<td>7.5</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>D</td>
<td>11</td>
<td>5</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>10</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>F</td>
<td>10</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>G</td>
<td>9</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>H</td>
<td>4</td>
<td>8</td>
<td>10</td>
<td>7</td>
<td>11</td>
<td>9</td>
</tr>
<tr>
<td>I</td>
<td>12</td>
<td>9</td>
<td>12</td>
<td>11</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>J</td>
<td>13</td>
<td>11</td>
<td>8</td>
<td>9</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>K</td>
<td>6</td>
<td>10</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>L</td>
<td>7.5</td>
<td>12</td>
<td>11</td>
<td>12</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>M</td>
<td>14.5</td>
<td>13</td>
<td>14.5</td>
<td>15</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>N</td>
<td>5</td>
<td>14</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>13</td>
</tr>
<tr>
<td>O</td>
<td>14.5</td>
<td>15</td>
<td>14.5</td>
<td>14</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

**Correlation Analysis of the Data**

**Analysis of Basic Variables**

Spearman rank order correlation techniques were used to statistically analyze the data. To facilitate discussion, table 6 and table 7 present correlation matrices for police and fire departments using basic variables.
<table>
<thead>
<tr>
<th>Organization</th>
<th>Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>10</td>
</tr>
<tr>
<td>E</td>
<td>9</td>
</tr>
<tr>
<td>F</td>
<td>11</td>
</tr>
<tr>
<td>G</td>
<td>13</td>
</tr>
<tr>
<td>H</td>
<td>12</td>
</tr>
<tr>
<td>I</td>
<td>5</td>
</tr>
<tr>
<td>J</td>
<td>4</td>
</tr>
<tr>
<td>K</td>
<td>6</td>
</tr>
<tr>
<td>L</td>
<td>8</td>
</tr>
<tr>
<td>M</td>
<td>14</td>
</tr>
<tr>
<td>N</td>
<td>15.5</td>
</tr>
<tr>
<td>O</td>
<td>7</td>
</tr>
<tr>
<td>P</td>
<td>15.5</td>
</tr>
<tr>
<td>---------------</td>
<td>------</td>
</tr>
<tr>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>4</td>
</tr>
<tr>
<td>C</td>
<td>11</td>
</tr>
<tr>
<td>D</td>
<td>5</td>
</tr>
<tr>
<td>E</td>
<td>8</td>
</tr>
<tr>
<td>F</td>
<td>7</td>
</tr>
<tr>
<td>G</td>
<td>10</td>
</tr>
<tr>
<td>H</td>
<td>3</td>
</tr>
<tr>
<td>I</td>
<td>9</td>
</tr>
<tr>
<td>J</td>
<td>14</td>
</tr>
<tr>
<td>K</td>
<td>2</td>
</tr>
<tr>
<td>L</td>
<td>6</td>
</tr>
<tr>
<td>M</td>
<td>13</td>
</tr>
<tr>
<td>N</td>
<td>12</td>
</tr>
<tr>
<td>O</td>
<td>15</td>
</tr>
<tr>
<td>Organization</td>
<td>Variables</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Size</td>
</tr>
<tr>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>6</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>9</td>
</tr>
<tr>
<td>E</td>
<td>12</td>
</tr>
<tr>
<td>F</td>
<td>7</td>
</tr>
<tr>
<td>G</td>
<td>11</td>
</tr>
<tr>
<td>H</td>
<td>8</td>
</tr>
<tr>
<td>I</td>
<td>10</td>
</tr>
<tr>
<td>J</td>
<td>4</td>
</tr>
<tr>
<td>K</td>
<td>5</td>
</tr>
<tr>
<td>L</td>
<td>3</td>
</tr>
<tr>
<td>M</td>
<td>15</td>
</tr>
<tr>
<td>N</td>
<td>14</td>
</tr>
<tr>
<td>O</td>
<td>13</td>
</tr>
<tr>
<td>P</td>
<td>16</td>
</tr>
</tbody>
</table>
The correlations show considerable support for propositions in both police and fire departments. The mean correlation for police departments is .81, with a median of .91 and a range of .51 to .97. The mean correlation for fire departments is .77, with a median of .84, and a range of .52 to .98. Although the data shows substantial consistency, lower correlations along the threat variable clearly stand out. (They range from .52 to .60 in police and .52 to .61 in fire departments.) By removing the threat variable, the mean correlation becomes .93 in police departments, with a median of .93 and a range of .89 to .97. In fire departments, the mean becomes .90 with a median of .94 and a range of .78 to .98. In this case the consistency is very high.

The consistently lower correlations along the threat variable, objectively defined, is interesting. The implication is that in some cases change was relatively high when objective threat had not been high. This suggests that perhaps subjective or perceived threat may have also played an important role in the process of change. To further address this question, the remaining model variables were correlated with the measures of subjective or perceived threat. Recall that inter-correlations between objective and perceived threat were only moderate (.43 for police and .68 for fire departments). Therefore it was suspected that the introduction of this dimension of threat might be important. The following table (8) indicates the new correlations with the threat variable.
### TABLE 7
CORRELATION ANALYSIS OF THE PROPOSITIONS IN FIRE DEPARTMENTS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Threat</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>.57</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intelligence</td>
<td>.56</td>
<td>.98</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comparative Reference</td>
<td>.52</td>
<td>.91</td>
<td>.94</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range of Problem Solving</td>
<td>.56</td>
<td>.78</td>
<td>.79</td>
<td>.88</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Complexity</td>
<td>.61</td>
<td>.95</td>
<td>.98</td>
<td>.94</td>
<td>.84</td>
<td>---</td>
</tr>
</tbody>
</table>

### TABLE 8
THE CORRELATION OF SUBJECTIVE THREAT WITH BASIC VARIABLES

<table>
<thead>
<tr>
<th>Variables</th>
<th>Police</th>
<th>Fire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change</td>
<td>.75</td>
<td>.70</td>
</tr>
<tr>
<td>Intelligence</td>
<td>.70</td>
<td>.74</td>
</tr>
<tr>
<td>Comparative Reference</td>
<td>.71</td>
<td>.76</td>
</tr>
<tr>
<td>Range of Problem Solving</td>
<td>.76</td>
<td>.87</td>
</tr>
<tr>
<td>Complexity of Change</td>
<td>.82</td>
<td>.76</td>
</tr>
</tbody>
</table>
Note that there are increases in these correlations. With this change, the overall mean correlation of police departments becomes .87 with a median of .91 and a constricted range of .70 to .97. The overall mean of fire departments becomes .85 with a median of .88 and a constricted range of .70 to .98. The findings suggest that subjective threat has some relevance to change. As civil disorder became an important dimension in the social network of these organizations, there was greater possibility for awareness of potential threat even when a department had not experienced a major disturbance. The present analysis indicates that to the extent the network was operative through comparative reference linkages and intelligence sources, subjective threat increased.

The particularly high correlations with the intelligence variable should be noted, e.g., change = .94 and .98, comparative reference = .91 and .94, and complexity = .97 and .98. Though zero-order correlations of this nature should always be interpreted with caution, it is quite clear that this central variable plays an important role in understanding the process of change. Thus the concept merits continuing research. Taken in entirety, the propositions hold together well. The high and fairly consistent correlations indicate that organization change can be fruitfully addressed with these variables and the underlying theory they represent.

Analysis of Structural Variables

The impact of several structural variables was next assessed. Tables 9 and 10 present correlation matrices which summarize relationships between structural variables and basic variables in the perspective. The structural variables run horizontally and the basic variables run vertically.

The correlations indicate mixed results. In general, they are substantially lower and less consistent than among the basic and derived propositions. However, the correlations are still relatively good for many of these variables, e.g., .79 for professionalization and R.P.S., and .70 for wealth and C.P.C. in police departments. The size, wealth, and complexity variables hold up well in both sets of organizations; in addition, professionalization appears to have relevance in police departments. The centralization variable shows no association in police departments and the bureaucratization variable does not hold up as well or as consistently as the others. Centralization does show association with change in fire departments (.63), although overall, it does not correlate well with model variables.

Subjective as opposed to objective threat showed generally lower association with these other structural variables. A more systematic interpretation of this difference would require another complete study. At this point it is suggested again that perceived threat appears to have research import. However, its treatment as an organizational property requires, at the very least, a more extensive sampling of organizational members to determine the magnitude of perceived threat.

These findings indicate that although the additional organizational variables appear to have in many cases less explanatory importance in the
# TABLE 9

POLICE DEPARTMENTS: CORRELATION ANALYSIS OF BASIC WITH STRUCTURAL VARIABLES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*O. Threat</td>
<td>.70</td>
<td>.58</td>
<td>.44</td>
<td>.74</td>
<td>.00</td>
<td>.11</td>
</tr>
<tr>
<td>*S. Threat</td>
<td>.15</td>
<td>.28</td>
<td>.55</td>
<td>.26</td>
<td>.53</td>
<td>.33</td>
</tr>
<tr>
<td>Change</td>
<td>.59</td>
<td>.62</td>
<td>.66</td>
<td>.52</td>
<td>.06</td>
<td>.46</td>
</tr>
<tr>
<td>Intell.</td>
<td>.56</td>
<td>.59</td>
<td>.69</td>
<td>.56</td>
<td>.09</td>
<td>.39</td>
</tr>
<tr>
<td>Comp. Ref.</td>
<td>.51</td>
<td>.64</td>
<td>.70</td>
<td>.56</td>
<td>.04</td>
<td>.61</td>
</tr>
<tr>
<td>R.P.S.</td>
<td>.54</td>
<td>.62</td>
<td>.79</td>
<td>.53</td>
<td>.04</td>
<td>.48</td>
</tr>
<tr>
<td>C.P.C.</td>
<td>.65</td>
<td>.70</td>
<td>.62</td>
<td>.60</td>
<td>.05</td>
<td>.47</td>
</tr>
</tbody>
</table>

*The letters O and S designate objective and subjective threat.*
TABLE 10
FIRE DEPARTMENTS: CORRELATION ANALYSIS OF BASIC WITH STRUCTURAL VARIABLES

<table>
<thead>
<tr>
<th>Variables</th>
<th>Size</th>
<th>Wealth</th>
<th>Complex.</th>
<th>Central.</th>
</tr>
</thead>
<tbody>
<tr>
<td>*O. Threat</td>
<td>.78</td>
<td>.76</td>
<td>.76</td>
<td>.37</td>
</tr>
<tr>
<td>*S. Threat</td>
<td>.55</td>
<td>.55</td>
<td>.52</td>
<td>.56</td>
</tr>
<tr>
<td>Change</td>
<td>.61</td>
<td>.69</td>
<td>.60</td>
<td>.63</td>
</tr>
<tr>
<td>Intell.</td>
<td>.60</td>
<td>.63</td>
<td>.59</td>
<td>.31</td>
</tr>
<tr>
<td>Comp. Ref.</td>
<td>.61</td>
<td>.61</td>
<td>.52</td>
<td>.26</td>
</tr>
<tr>
<td>R.P.S.</td>
<td>.52</td>
<td>.55</td>
<td>.36</td>
<td>.49</td>
</tr>
<tr>
<td>C.P.C.</td>
<td>.62</td>
<td>.65</td>
<td>.58</td>
<td>.29</td>
</tr>
</tbody>
</table>

*The letters O and S designate objective and subjective threat.*
analysis of organizational change (relative to basic variables), some provide interesting directions for expansion of the perspective. As this is the goal of the next chapter, the logic for their inclusion will be an important issue at that time. There seems to be considerable empirical justification for their employment.

Case Descriptions

A few case illustrations will now be presented to more fully elaborate the findings. Cases which represent high and low extremes on the variables for both police and fire departments will be summarized. In addition, cases will be highlighted which are somewhat unique, i.e., organizations which had relatively high threat but low change and vice versa.

Police Department Case Analyses

Organization B: High Threat - High Change

By way of introduction, Organization B had the following ranks on each of the basic variables. As can be seen, the organization typifies the high extreme on the change perspective.

Objective Threat - 2
Change - 2
Intelligence - 2
Comparative Reference - 3
Range of Problem Solving - 2
Complexity - 2

There was considerable objective threat during the period 1965-1969. The surrounding city experienced 7 civil disturbance events and a total of 31 days of civil unrest. During this unrest, there were at least 6 deaths, several hundred injuries, approximately 1,000 arrests, over 40 injuries to police and fire personnel, and property damage in excess of $3,000,000. This objective threat was matched by an equally high perceived threat score (a rank of 2.33).

Organization B underwent dynamic change during this same period. For example, detailed civil disturbance planning was formally staffed as of 1966 and all plans were revised yearly. Crowd control became a formalized aspect of both recruit and in-service training. In addition, 43 hours of community relations training was developed and formalized for recruits and 16 hour community relations workshops were established at the in-service level. The organization created a specialized subunit for community relations, staffed it with 7 full time personnel (and numerous part time precinct level personnel), and developed over 20 new programs.

Comparative reference was extensive as the organization maintained contact with departments from 32 major cities in the United States with the specific intent of exchanging information about mutual problems. The department also had extensive state wide contacts, most often for the purpose of exchanging training bulletins.
Intelligence gathering specific to the civil disturbance area was substantial. The organization made frequent use of site visits, conferences and seminars, other civil disturbance plans, and numerous police and other professional journals. Furthermore, after-action reports were mandated for all civil disturbance operations, thus insuring formalized feedback from experience. Formal feedback from outside intelligence was also required. Detailed written and verbal reports prepared after all site visits, conferences, and seminars were fed into appropriate committees. The organization also maintained data files in the training academy, research and development section, and police library.

The range of problem solving appeared to be quite broad. All respondents indicated that a great deal of time was spent considering possible courses of action in the development of changes. For example, the merits of several different procedures for interorganizational coordination were analyzed by the permanent emergency planning committee. Several other alternatives were elaborated for various phases of planning. In the community relations area, elaboration of over forty possible programs was given to interviewers by the director. Only twenty of these programs were then existent in the organization.

In terms of complexity, at least twelve subunits were directly involved in the development of change, an associated sixteen persons had substantial participation, and at least twelve others played an evaluative role. Since most related aspects of civil disturbance were formally staffed, there were numerous standing committees and meetings. For example, when the emergency plan was initially developed, a planning committee was permanently established and sub-committees were created to draft various parts of the plan, thus increasing bureau wide participation. All subsequent revisions were coordinated by the permanent planning committee.

Structurally, the organization ranked fourth in size, fifth in wealth, third in professionalization, third in complexity, twelfth in centralization and thirteenth in bureaucratization. These findings indicate the possible relevance of size, wealth, professionalization, complexity, and a decentralized decision making structure for the process of change. For example, there was, in fact, widespread involvement in the development of changes and decision making appeared to be highly decentralized.

In sum this case illustrates predictions for high organization change, i.e., substantial objective threat, an extensive comparative reference linkage, elaborate intelligence gathering and use, an expanded range of problem solving, a complex process of change, and an associated high degree of objective organizational change.

**Organization J: Low Threat - Low Change**

This organization does not represent the low extreme on all variables, but it does provide an interesting example. Organization J had the following ranks on each of the model variables:
Objective Threat - 13
Change - 11
Intelligence - 8
Comparative Reference - 9
Range of Problem Solving - 9
Complexity of Change - 11

Direct civil disturbance experience was virtually non-existent for this organization. It had no single incident which met the criteria for a civil disturbance event. There were a few one or two day periods in which some potential for unrest existed. In these cases, some crowd formation occurred, some arrests were made, a few minor fires were reported, but nothing more. The organization also scored low on the subjective threat dimension (11).

Although ranked low on the change variable, the organization did make some specific civil disturbance related adjustments. For example, a specific civil disturbance plan was developed. The plan was not elaborate, but it did provide general statements of responsibilities and a lengthy series of lists which specified relevant resources and their locations. The department also formalized training at the recruit and in-service levels which included crowd control, equipment use, and community relations. Over forty pages of relevant training bulletins were developed in less than a two year period. The question becomes why was there this much change under conditions of relatively low threat?

The answer may have been in terms of comparative reference and intelligence. The organization had a much higher ranking on these variables (eighth and ninth). Organization J maintained relatively frequent contact with at least seven cities, most of which had some civil disturbance experience. In general, regular comparative reference appeared to be restricted to two or three contiguous states. The department also gathered substantial amounts of intelligence. For example, at least six site visits were made and six civil disturbance related conferences and seminars attended during the four year period. In addition, a minimum of six civil disturbance plans were examined and several relevant publications used on a continuing basis. The changes clearly reflected the use of this intelligence as incumbents who gathered the information also developed the changes.

The range of problem solving appeared to be moderate. In the planning area, most consideration was given to delineating responsibilities; the rest was perfunctory. Training appeared to generate a greater range of alternatives. The intelligence in this area was more extensive and provided, as respondents indicated, various techniques to consider. The complexity of change was relatively low; four subunits were involved, but most of the work was done by two men who formed a standing committee. Their effort began on a part time basis and subsequently was formally assigned. A few other staff members gave assistance from time to time, e.g., in developing equipment lists.

Structurally, the organization ranked fourteenth in size, fourteenth in wealth, eighth in professionalization, eleventh in complexity and
bureaucratization, and thirteenth in centralization. The interesting point here is the relatively high rank on the professionalization variable. This finding may help to explain the fact that intelligence and comparative reference existed in some magnitude. One might argue that intelligence gathering and comparative reference imply normative dimensions of professionalism and change, in this case, was the outcome of this orientation.

In sum, this case presents important insights for the perspective. Both threat and change were low relatively, but intelligence, comparative reference, and professionalization appeared to have considerable relevance where change did occur. The case thus provides support for the inclusion of professionalization as an additional variable in the perspective.

**Organization N: High Threat - Low Change**

The following is clearly an anomalous case. With the exception of high objective threat, Organization N ranked low on all of the basic variables.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective Threat</td>
<td>5</td>
</tr>
<tr>
<td>Change</td>
<td>14</td>
</tr>
<tr>
<td>Intelligence</td>
<td>13</td>
</tr>
<tr>
<td>Comparative Reference</td>
<td>13</td>
</tr>
<tr>
<td>Range of Problem Solving</td>
<td>14</td>
</tr>
<tr>
<td>Complexity of Change</td>
<td>13</td>
</tr>
</tbody>
</table>

The surrounding community had experienced three civil disturbance events for a total of nine days. This objective threat was matched by a relatively high perception of threat on the part of respondents (7.5 ranking). The interesting factor about these events was the immediate call-up of the national guard, in two cases before the department itself was mobilized in any complete sense. This is an important point and will be referred to later.

As stated, the organization experienced little change, both relatively and absolutely. There was no formal civil disturbance planning of any kind. There was some crowd control training, but it was unsystematic and few organizational personnel received it. A new community relations unit was established but it was disbanded after only three months operation. Though not used until 1970, a twelve week specialized training course was developed in 1969.3 This course covered both crowd control and community relations and was to be given to fifty men.

The organization was equally low on the comparative reference and intelligence variables. The department maintained a few statewide police contacts, but that was the extent of reference linkage. Intelligence was predominantly in the form of two or three police publications and several training seminars. There was no formalized feedback system for either outside intelligence or direct civil disturbance experience.

Alternatives consideration was quite low although some thought was given to various community relations techniques and a few types of emergency call-up procedures were discussed. The organization clearly depicted
the low end of the complexity continuum. The chief and his administrative assistant developed the changes and no other organizational subunits were involved in any way.

The perspective holds up well, as predicted, with the exception of the threat variable. A key point appears to have been the fact that respondents generally defined civil disturbance as being beyond organizational capabilities. The national guard was called in very quickly under disturbance conditions for this very reason. If organizational capability was quite low, then at least some insight should lie in rankings on the structural variables.

The organization ranked twelfth in size, twelfth in wealth, last in professionalization (N of twelve), ninth in centralization, and fifteenth in bureaucratization. Size, wealth, and professionalization specifically reflect organizational resources and were quite low in this case. The organization was, in fact, small and operating below authorized strength. Its facilities were defined, and appeared to be, antiquated and inadequate. Top command was determined by political patronage, thus stability may have been a problem here. It appears that respondents may have had some justification in their assessment of the organization's ability to respond during unrest. In sum, the case is negative in terms of the objective threat dimension, but supplies substantial support for remaining inter-relationships. The case also provides justification for expansion of the perspective.

Fire Department Case Analyses

Organization C: High Threat - High Change

The following were the specific ranks on the basic variables:

Objective Threat - 2
Change - 3
Intelligence - 1
Comparative Reference - 3
Range of Problem Solving - 2.5
Complexity of Change - 1

Objective threat was major for this fire department. The surrounding city had 5 civil disturbance events totalling 24 days; including some of the most devastating to occur in the United States. These events had an associated 11,258 arrests, 47 deaths, 353 injuries, 6 deaths and 153 injuries to police and fire personnel, and over $44,000,000 in property damage. The organization's ranking on perceived threat was equally high (2.5).

Environmental threat was accompanied by extensive organizational adjustments in all change areas. Planning was comprehensive, detailed, and programmatic in terms of alternative operational procedures. New training, developed at both the in-service and recruit levels, included riot simulations. Though no formal community relations unit was established,
the organization developed two or three community relations programs as a direct result of riot experience.

Comparative reference linkage and intelligence gathering were quite pronounced. With regard to the former, the organization not only maintained contact with departments from major cities, but had become an important intelligence resource for many of them. Extensive use was made of all intelligence outlets as evidenced by the top score on that variable. In addition, the department produced a large volume of written material concerning its own riot experience. Understandably, the organization relied greatly upon its own informational feedback, yet made great efforts to collect and file outside data.

The range of problem solving was quite broad. Alternative courses of action were considered in such areas as protection of firemen, riot training, command post locations, and the laying out of operational task forces. In terms of complexity, at least six subunits participated in the development of changes with an associated twelve to fifteen people. Planning alone took well over three months to initially formulate.

Structurally, the organization ranked second in size, second in wealth, and second in complexity, thus illustrating the potential relevance of these variables in fire departments as well. A ranking of third in centralization typifies the relatively high overall correlation of this variable with organizational change (.63). This finding highlights an interesting difference between police and fire departments. Police departments showed absolutely no correlation between centralization and any basic variable, while fire departments did indicate some association, particularly with the change variable. If centralization is an important factor in fire departments, then one might expect the change process to be centralized. This question will be examined more closely at the end of this chapter by examining the intelligence-influence hypothesis. In conclusion, the organization presents an excellent example of the perspective predictions and suggests again the importance of theoretical expansion.

Organization N: Low Threat - Low Change

This organization represented the low extreme as illustrated by the specific ranks on the basic variables:

- Objective Threat - 15.5
- Change - 14
- Intelligence - 14
- Comparative Reference - 13
- Range of Problem Solving - 12
- Complexity of Change - 14

By established criteria, organization N had no direct civil disturbance experience during the 1965-1969 period, and experienced nothing more than a few minor incidents. The community's 7 percent minority
population was mostly Mexican American. Although change was quite low, some civil disturbance planning took place. This planning covered emergency call-up and task force operation, but in very simplistic form. There were some minor equipment changes, but no new developments in training other than one simulation developed and staged by the national guard.

Comparative reference and intelligence existed on a very small scale. Respondents listed only four inter-departmental contacts and these were not on a continuing basis. Two training seminars, three plans, and two publications represented the extent of intelligence gathering. A number of ideas were presented and evaluated with regard to task force locations, but this represented the total range of problem solving. Only two subunits were involved in the development of change, totalling three people; thus complexity of change was quite low.

Structurally, the organization ranked fourteenth in size and wealth, eleventh in centralization, and 14.5 in complexity. Thus the pattern continues, i.e., low scores on size, wealth, and complexity are associated with low change. You will recall that high centralization and high change was found in Organization C.

Summarizing, the predictions hold up well for this case. It is interesting that change, though quite low, still encompassed a specific civil disturbance plan and riot simulation training. As far as can be determined, the major impetus for these changes was written material obtained from the Los Angeles Fire Department concerning the Watts riot. Thus outside intelligence, mediated by a comparative reference linkage, had the effect of producing change in this very low threat case.

Organization D: Low Threat - High Change

The final case illustrates the other major anomaly in this study. The following summarizes the variable rankings:

Objective Threat - 10
Change - 5
Intelligence - 5
Comparative Reference - 5
Range of Problem Solving - 4
Complexity of Change - 4

Although not ranked relatively high, there was objective threat as the surrounding city experienced one disturbance lasting 3 days. There were 222 arrests, 3 deaths, 48 injuries, 27 injuries to police and fire personnel, and approximately $250,000 in property damage. The organization's ranking on subjective threat was about the same (ninth).

Organizational change was rather pronounced. For example, in the planning area, a comprehensive, systematic and remarkably succinct operational manual was developed. This manual became a formalized aspect of recruit training and a basis for biannual in-service testing as well.
Furthermore, several simulations had resulted in refinement of task force and other riot procedures.

There was considerable comparative reference and intelligence gathering activity. The former existed locally, regionally, and nationally. (The chief was a member of a national fire departments' association.) The department utilized all intelligence outlets on a regular basis, filed this material in the training academy, and formally critiqued their own civil disturbance operation.

Alternatives consideration was elaborate, particularly in the area of planning. It was clear that intelligence resources were instrumental in this process. At least five subunits were directly involved in the development of changes and an associated seven to nine people participated on a systematic basis. It was further estimated that 450 man hours were expended in the development of planning and training changes. Thus the change process was relatively high on the complexity scale.

Structurally, the organization ranked ninth in size, ninth in wealth, and 12.5 in complexity and first in centralization. Based upon the previous case illustrations, one might have expected higher ranks on size, wealth, and complexity. As no convincing argument can be made for centralization at this point, we return again to the model. Threat was low but clearly present. We suspect that this threat factor, combined with a facilitating comparative reference network, resulted in substantial intelligence gathering. This intelligence was subsequently used in the development of organizational changes.

It is hoped that these illustrations have further elaborated how consistently the variables held together from case to case. As the statistical analysis indicated initially, the threat variable presents some interesting anomalies. The case illustration should have provided tentative explanation for them. The examples also point out more cogently the possibility for expansion of the perspective. This is, of course, a major goal of further research.

The Intelligence-Influence Hypothesis

This proposition, though not in the model directly, was of some relevance. The proposition states that the greater the intelligence of an organizational incumbent, the greater his influence in the development of organizational changes. Analysis of this proposition sheds some light on the uses put to intelligence as well as its degree of centralization.

Findings

Tables 11 and 12 form the basis of data analysis. Table 11 lists the total number of identified influentials and those below the top three command levels. This is followed by the proportion of influentials who were intelligence boundary personnel. Table 12 lists the total number of identified intelligence boundary personnel as well as those below the top three command levels. This is followed by the proportion of intelligence
### TABLE 11
INFLUENTIALS AND INTELLIGENCE BOUNDARY PERSONNEL IN SELECTED POLICE AND FIRE DEPARTMENTS

<table>
<thead>
<tr>
<th>POLICE</th>
<th>FIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Below Top Three</td>
</tr>
<tr>
<td>Total</td>
<td>Command Levels</td>
</tr>
<tr>
<td>Influentials</td>
<td>110 (3%)</td>
</tr>
<tr>
<td>Influentials Who Were Intelligence Boundary Personnel</td>
<td>80 (77%)</td>
</tr>
</tbody>
</table>

### TABLE 12
INTELLIGENCE BOUNDARY PERSONNEL AND INFLUENTIALS IN SELECTED POLICE AND FIRE DEPARTMENTS

<table>
<thead>
<tr>
<th>POLICE</th>
<th>FIRE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Below Top Three</td>
</tr>
<tr>
<td>Total</td>
<td>Command Levels</td>
</tr>
<tr>
<td>Intelligence Boundary Personnel</td>
<td>122 (24%)</td>
</tr>
<tr>
<td>Intelligence Boundary Personnel Who Were Influential</td>
<td>80 (66%)</td>
</tr>
</tbody>
</table>

-59-
boundary personnel who were influential. For our purposes the data can be organized to address the following four dimensions:

1. The percentage of influentials who were intelligence boundary personnel.
2. The percentage of intelligence boundary personnel who were influentials.
3. The percentage of influentials below the top three command levels; and the percentage of these who were intelligence boundary personnel.
4. The percentage of intelligence boundary personnel below the top three command levels; and the percentage of these who were influential.

The first dimension essentially addresses the role of the "expert" in the development of organizational change. If intelligence is an important concept, then the proportion should be relatively high. In police departments, 73 per cent of identified influentials were intelligence boundary personnel; in fire departments, 56 per cent were intelligence boundary personnel. Pearson correlation analysis of the number of intelligence boundary personnel with the number of influentials who were intelligence personnel gives further evidence of this relationship. In police departments, the relationship was $r = .872$ overall and $r = .973$ below the top three command levels. In fire departments, the relationship was $r = .949$ overall. (The relationship below the top three command levels was meaningless in fire departments due to the almost complete concentration at the top of both intelligence boundary personnel and influentials.) This data indicate that "men of knowledge" played a significant role in the development of organizational change, particularly in police departments (Wilensky, 1967).

The second dimension relates to the question of intelligence uses. The loss of intelligence represents an "intelligence pathology" (Wilensky, 1967). In other words, to what extent was usable technical and political information wasted in organizational activities. In police departments, 66 per cent of intelligence boundary personnel were influentials; in fire departments, 85 per cent of intelligence boundary personnel were influential. These findings indicate that although intelligence is an important factor for change, there still were intelligence losses, particularly in police departments. Of course, possible distortion of these data is clearly recognized. For example, information gained by intelligence boundary personnel may have been used even though these specific individuals were not involved. For example, detailed reports were often made by officers making site visits and then subsequently used by others to make changes. This mitigates intelligence loss, but the data do not reflect this factor.

The third and fourth dimensions look at the centralization of influence and intelligence. With regard to the top three levels, 30 per cent of influentials in police departments were below the top three command levels and of this figure 63 per cent were intelligence boundary personnel. In fire departments, 3 per cent (3) of influentials were below the top three command levels, and of this figure, 33 per cent (1) were intelligence personnel.
boundary personnel. Summarizing the results on the fourth dimension, 24 per cent of intelligence boundary personnel in police departments were below the top three command levels; of this figure, 73 per cent were influentials. In fire departments, 3 per cent (2) of intelligence boundary personnel were below the top three command levels; of this figure, 50 per cent (1) were influentials.

The results are therefore somewhat mixed, depending on the specific organization. Both intelligence and influence were clearly centralized in fire departments. It is logical to conclude that in this case authority position was prerequisite for intelligence boundary roles and that top command people developed organizational changes. The situation in police departments was somewhat different. Compared to fire departments, intelligence and influence were clearly more decentralized. And where lower echelon personnel were involved in the change process, an intelligence boundary role of some kind appeared to be an important factor in their involvement.

The question of the extent of decentralization of influence and intelligence merited further attention. Influence and intelligence were so clearly centralized in fire departments as to make further analysis problematic. However, more detailed analysis of police departments was possible. For example, was the frequency of influentials and intelligence boundary personnel at various command levels a function merely of the mechanics of organizational size. An alternative explanation also considered was the level of professionalization in these departments. Many police departments in the United States are taking a more "professional" as opposed to a quasi-military orientation to police work and organization. Thus the implicit hypothesis here was that the more professionalized the police department, the greater the number of influentials and intelligence boundary personnel at various command levels.

You will recall that size was measured by the number of uniformed personnel. Professionalization was measured both by the number of personnel having college training and by the proportion of uniformed personnel having college training. Size was associated at best moderately with influence and intelligence boundary as indicated by the following Pearson r's:

1. Size and number of influentials = .216
2. Size and number of intelligence boundary personnel = .338
3. Size and number of influentials below the top three command levels = .181
4. Size and number of intelligence boundary personnel below the top three command levels = .150
5. Size and number of influentials who were intelligence boundary personnel = .181
6. Size and number of influentials below the top three command levels who were intelligence boundary personnel = .134
7. Number below the top three command levels and number of influentials below the top three command levels = .110
8. Number below the top three command levels and number of intelligence boundary personnel below the top three command levels = .025

9. Number below the top three command levels and number of influentials below the top three command levels who were intelligence boundary personnel = .033

Certainly these results should be interpreted with caution due to the inherent weaknesses of the sample. However, the range in variation in size was considerable in the cases analyzed (164-14.05). The relatively weak correlations were interesting and indicated that perhaps alternative explanations should be pursued. The professionalization variables showed more substantial association as indicated by the following Pearson r's:

1. Professionalization and number of influentials = .511 (number); .659 (proportion)
2. Professionalization and number of intelligence boundary personnel = .732 (number); .457 (proportion)
3. Professionalization and number of influentials below the top three command levels = .479 (number); .467 (proportion)
4. Professionalization and number of intelligence boundary personnel below the top three command levels = .505 (number); .383 (proportion)
5. Professionalization and number of influentials who were intelligence boundary personnel = .614 (number); .623 (proportion)
6. Professionalization and number of influentials below the top three command levels who were intelligence boundary personnel = .443 (number); .383 (proportion)

Here again the results should be interpreted with caution. However, the more substantial correlation of professionalization both as an absolute number and a proportion is intriguing. Individual case analyses indicated a breadth of intelligence and influence in some departments in our sample. A few of these organizations were of relatively smaller size, but all appeared to be much more inclined toward a "professional model" of law enforcement.

In order to further assess the professionalization variable, partial correlations were next run, controlling for size. The following partial correlations were determined with size controlled:

1. Professionalization and number of influentials = .644 (number); and .657 (proportion)
2. Professionalization and number of intelligence boundary personnel = .586 (number); .501 (proportion)
3. Professionalization and number of influentials below the top three command levels = .504 (number); .464 (proportion)
4. Professionalization and number of intelligence boundary personnel below the top three command levels = .478 (number); .379 (proportion)
5. Professionalization and number of influentials who were intelligence boundary personnel = .640 (number); .629 (proportion)
6. Professionalization and number of influentials below the top three command levels who were intelligence boundary personnel = .441 (number); .377 (proportion)

The interrelationships between professionalization, influence, and intelligence boundary were not noticeably weakened with size controlled and in some cases actually increased. This seems to indicate that professionalization, as measured, is an important dimension for further study.

The above findings are both interesting and difficult to interpret. Though any statement should be considered as tentative, the relatively weak correlations along the size variable perhaps would suggest that police departments as para-military structures with rigid hierarchies, tend to have centralized decision making structures, regardless of size. However, size was correlated with professionalization (.732). And, as professionalization in police departments increases, its impact upon the decision making structure appears to be pronounced. Thus the influence of size operates predominantly in an indirect fashion, via the professionalization variable. Indeed, in examining the partial association of size, influence, and intelligence boundary (with professionalization controlled), the relatively weak associations with size listed earlier dissipated further.

It should also be asked what accounts for the much greater centralization of fire departments. Granted, police and fire departments are similar as paramilitary structures, this perhaps contributing to centralization in both. However, the range of tasks and complexity of functioning in fire departments appears to be lower, as have been pressures for professionalization (particularly in the 60's). A somewhat more rigid structure of decision making may be the consequence. By the same token, the range of crisis relevant demands (though not necessarily the magnitude), from both response and prevention standpoints, are smaller for fire departments. Thus pressures for restructuring during emergencies of this nature are less pronounced. It might be concluded that the change process is a logical extension of a normally centralized decision making structure.

Clearly more comprehensive analysis of a broader sample of police and fire departments is needed. Beyond that, the introduction of additional variables would appear to be essential. At this point we know that in this small non-random sample professionalization is a relatively strong variable with regard to the process of change in police departments; and that the impact of size on that process is not nearly as clear cut. One implicit hypothesis is that the more professionalized the department, the more decentralized the decision making process in general as well as in change conditions. This would be a useful hypothesis for more systematic examination.
FOOTNOTES: Chapter IV

1. With regard to the threat variable, the rankings refer to the objective measurement of threat as defined by civil disturbance history. In developing the perspective, this was considered to be the prime measure of threat.

2. Bear in mind, however, that the measure of subjective threat is admittedly crude. Its full fledged treatment as an organizational property requires considerably more aggregated data based upon incumbent perceptions.

3. This course was subsequently initiated through federal funding.

4. This was a particularly salient issue because the department had experienced numerous injuries and two deaths during disturbances.
CHAPTER V

CONCLUSION

The preceding chapter elaborated the findings of the study. The attempt was to determine how well the perspective fit the data, i.e., whether or not it had contributed to a better understanding of the process of change in these organizations. The propositions were first analyzed and positive and relatively consistent results were found. Where somewhat unique cases existed, efforts were made to provide some insight into the reasons for their uniqueness. Several structural variables were also introduced and assessed in terms of their relevance to the perspective. This was followed by a series of brief case studies which illustrated and highlighted some of the main findings. Finally, the relationship between possessing intelligence and influence in the process of change was examined. In this regard, the importance of intelligence as a property of change was supported.

From this, what kind of picture emerges about the nature of organizational change? It seems clear that objective threat to the charter responsibilities of an organization stimulates a response. In addition, the perception of threat also is important in triggering a response. In many cases, the responses which were made entailed significant organizational changes: changes in policy, planning, training, resources, community relations, etc. In the social networks of both police and fire departments, civil disturbances became an important dimension in the late 1960's.

The development of these changes required certain types of information and knowledge. If a civil disturbance plan was to be formulated, what should it include? If new types of training is required, what can new training techniques accomplish? If a community relations program is seen as being needed, how can it be developed? If new programs and emphases are needed, what are requisite equipment needs? All such questions represent distinct intelligence needs, some of which can be filled internally through the knowledge and experience of present personnel, but some of which have to be sought externally, through contact with other similar organizations. Within the organization, increasing amounts of intelligence were associated with increasing amounts of change. In addition, already existing relationships with other similar organizations became an important impetus to change. If these relationships did not exist, they were established. What developed in the case under study was the emergence of an interorganizational network among organizations which had previously had minimum contact. Police and fire departments are the creation of municipalities and other political units and previously had had very little contact with one another.

As the flow of intelligence increased, within the specific organization, the range of alternatives which had to be considered were broadened. This made the process of change more complex. Within each organization,
more personnel and organizational sub-units become involved. More time was devoted to the consideration of alternatives. More organization mechanisms were created to explicitly develop change.

While the process just described was general, certain organizational variables seemed to affect the process. The size of an organization, in itself, becomes an intelligence resource because it provides a larger potential pool of intelligence gatherers. Organizational wealth becomes important since it provides financial resources for the intelligence search. The degree of professionalization becomes important since it implies the expansion of human skills and motivation for the gathering and use of intelligence. A more complex organizational structure demands a complex orientation to the organizational problems. For example, elaborate planning was done at the command, bureau, and precinct levels in one highly complex police department. The purpose of this planning was to maintain total organizational coverage. Thus complexity resulted in increasing amounts of intelligence gathering because each of these levels had its own intelligence demands. These dimensions do not exhaust the range of structural properties which might affect the change process. By the same token, these variables appear to have direct relevance.

It also appears that the uses put to intelligence is very important. Who possesses intelligence? What is their position in the organizational hierarchy? Are intelligence boundary personnel influential in the process of change? The research indicated that intelligence and influence go hand in hand. In some cases, however, particularly in fire departments, authority position was a prerequisite for both intelligence boundary and influence in the development of change.

Most research ends with more questions raised than when the initial research question was formulated. Only some of these can be indicated here. For example, how do police and fire departments differ in terms of the magnitude of the response that they made to civil disturbances? What characteristics of the differences in the social networks of these organizations might account for this difference? Or is the difference accounted for in the different structures of these organizations and their different tasks and objectives? If an organization is multi-functional, is it more subject to change than organizations with a narrower charter? It would, of course, be useful to extend the study to a wider range of crises organizations. Police and fire departments were not the only organizations which experienced a threat to their charter with the advent of civil disturbances. What about the changes which occurred in hospitals, civil defense agencies, departments of public works, Red Cross, Salvation Army, etc.? In addition, it is useful to speculate about the implications of different types of crises events. How do civil disturbances differ in their impact compared with natural disasters, ecological disasters, or energy crises? All of these questions are important and timely.

All of the questions, however, point to encompassing concern of the behavior of organizations under conditions of environmental uncertainty. This is not unique to just police and fire departments or to other " crises" organizations; it is a fact of life in every organization. How is uncertainty monitored and defined? What organizational resources are brought
to bear in meeting this uncertainty? What are the action consequences of environmental uncertainty expressed in terms of adaptive organizational activities? If it is assumed that organizations attempt to control relevant dimensions of their environment, then uncertainty must be confronted in some way. This study has offered a perspective for describing and understanding how this adaptation occurs.

A final comment is necessary on the difficult and perplexing question of organizational effectiveness. Did the extensive utilization of intelligence resources result in a more effective organizational response? This question cannot be answered easily. How can one measure effectiveness? If we consider the relative decline in central city civil disturbance events since 1969 as a prime measure of effectiveness then, of course, we can answer the question in the affirmative. However, we know that would be a simplistic and probably foolish assessment. The range of factors which account for the presence, duration and magnitude of civil disturbance are simply not known; those which focus only upon these organizational changes and their development would be inadequate. Even if we were able to make that claim of effectiveness for police and fire departments, which broad types of change, for example, in the direction of control or prevention, have been most important. A given crisis may be diverted by an effective civil disturbance mobilization plan, but, in a similar instance, a community relations program might have been crucial to a peaceful resolution of an issue. Weighting of these kinds of factors can not be done here.

We do know, however, that the property of organizational intelligence is important to the process and product of change in this area. In terms of the effectiveness of change, then, intelligence gathering and utilization was a requisite to a rational more comprehensive adaptation. Police and fire departments varied to the extent to which they generated and employed this adaptation. It is our conclusion that the greater utilization of this resource had positive impact upon the performance of their charter objectives. This is not a trifling matter.
SCHEDULE #1 (POLICY)

Name_________________________ Position_________________________

Organization___________________ Date___________________________

Interviewer______________________ Tape recorded: Yes______ No_____

I. General Questions

1. What problems did the possibility of civil disturbance present to your organization?

2. In viewing these problems, we would like you to rate, generally, how important the solution of these problems was to the department's objectives of emergency prevention and response.


   very important

   moderately important

   of little or no importance

Now, we would like to get some idea of the general emergency features of your organization and determine how long you have had them.

3. Will you please look at this list. For each item, I would like you to indicate three things: whether it is a current feature of the organization, and if there have been any changes in that item since 1965 (when civil disturbances started to occur on a large scale in American cities).

II. Policy Questions

1. As you may have noticed, we have grouped the specific features into six general categories:

   Planning for response
   Training
   Adding resources
   Establishing specialized subunits
   Developing relationships with other organizations
   Developing relationships with the public

We want to learn to what extent problems associated with civil disturbances brought about changes in these six general areas.

2. I would like you to rate each of these areas according to whether you feel this involved either an "extensive policy change," a "moderate policy change" or "little policy change." By policy change I mean not only approval from yourself (or whoever may have occupied the position earlier) but those policy changes which required a great deal of your time and effort.
In other words, did these involve major or extensive policy changes, moderate policy changes, or little policy change?

Let's take the first one: planning for response to civil disturbances -- Did changes in planning involve extensive policy changes, moderate policy changes, or little policy change? etc.

<table>
<thead>
<tr>
<th></th>
<th>EXTENSIVE</th>
<th>MODERATE</th>
<th>LITTLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>Planning for response</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2)</td>
<td>Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3)</td>
<td>Adding resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td>Establishing specialized subunits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5)</td>
<td>Developing relationships with other organizations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6)</td>
<td>Developing relations with the public</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. We want to discuss ONE of these policy areas in greater detail. In which one of these six areas were policy considerations of greatest importance for meeting the problems posed by civil disturbances?

(GET THE FEATURE PAGE BACK FROM THE RESPONDENT AFTER HE PICKS ONE OF THE SIX AREAS)

4. What changes in policy were made in this area?
   a. What were these changes intended to accomplish?
   b. Why were these important problems for your organization?
   c. How did these policy changes affect these problems?

After determining that policy adjustments were necessary in this area, the organization was, of course, faced with making appropriate changes. Along these lines, we would like to learn who participated in making these policy changes and how this participation was organized.

5. Which existing departments of the organization participated in making these policy changes? (Probe for list of departments.)
   a. What contributions did these departments make?
   b. Who represented these departments?

6. What members of the organization were most influential in the development of these policy changes?
   a. What is their position in the organization?
   b. Why were they influential? (knowledge, authority position, experience, etc.)
7. Was a particular department of the organization assigned primary responsibility for developing these policy changes?
   a. If so, how was this responsibility carried out?

8. Was any standing committee formed to develop or consider policy changes in this area?
   a. If so, who composed the committee?
   b. What were its activities?
   c. How often did it meet?

9. It is possible that time was spent considering possible courses of action. Which of the following most nearly describes what occurred in your organization?
   ____ a. A great deal of time was spent considering possible courses of action.
   ____ b. A small amount of time was spent considering possible courses of action.
   ____ c. Practically no amount of time was spent considering possible courses of action.

10. What other alternatives were seriously considered?
    a. Why were these alternatives rejected?
    b. Were there any disagreements over the merits of these alternatives?
    c. How were these disagreements resolved?

11. Approximately how many man hours were spent considering alternatives, gathering and evaluating information and developing the policy changes we have been discussing?

12. Your department may have been in contact with other (police, fire) agencies from time to time to discuss problems, exchange information, obtain advice about new programs, techniques, etc.
    a. What particular departments were you in contact with?
    b. What was the nature of this contact?
    c. Which of the following most nearly describes the extent of this contact?
       _____ 1. frequent contact with many departments
       _____ 2. frequent contact with a few departments
       _____ 3. relatively infrequent contact with other departments
       _____ 4. little or no contact with other departments

Exchanges of information with other (police departments, fire departments or hospitals as the case may be) may have a bearing on these particular policy changes.
13. Did you make site visits to other (police, fire) departments?
   a. How frequently?
   b. Who made these visits? (Establish both names and positions)

14. (ONLY IF PLANNING IS BEING DISCUSSED) Did you examine other 
   (police, fire) civil disturbance plans?

15. Did members of your organization attend any conferences or 
   seminars in which these policy changes were discussed?
   a. Which ones?
   b. Who represented your organization? (Establish both names 
      and positions)

16. Have there been frequent informal exchanges of information 
   between your organization and other (police, fire) departments?
   a. If so, how did this informal exchange take place?
   b. Who has been involved from your organization? (Establish 
      names and positions)

17. Have any journals or publications been particularly helpful in 
   making policy changes? Which ones?

18. Was someone in the organization assigned the responsibility of 
   looking at journals, magazines or publications that were relevant 
   to these policy changes?

We would like to get your opinion on the overall usefulness of the 
information we have just been talking about.

19. Was the information you received generally consistent or 
   contradictory?
   a. If contradictory, in what ways?

20. Was there enough information available?
   a. Was there too much information to keep up with?

21. Did the information you received increase the number of possible 
   policy changes. For example, police, fire, hospitals, civil 
   defense, mayor's office, Red Cross, Salvation Army, utilities. 
   (The list provides examples, there may be others.)

22. Were any of these groups or organizations involved with your 
   organization in a joint committee for planning of community 
   response to civil disturbance?
   a. If so, what was the nature of this joint activity?
b. Which organizations were involved?
c. Who represented your organization? (Establish both names and positions.)
d. What influence did this committee have on policy changes?

(OONLY FOR POLICE AND FIRE DEPARTMENTS)

23. Did meetings or contacts with the National Guard influence these policy changes?
   a. What was the nature of these contacts?
   b. Who represented your organization in these contacts?
      (Establish both names and positions.)

To end up, there are just two more questions:

24. Has your organization received funding from any new source for changes relating to civil disturbances (e.g., LEAA, etc.)?
   a. From what source?
   b. For what purpose?

25. In general, have civil disturbances or the threat of them, led to changes in the mission or responsibilities of the organization within this community?
   (MAKE SURE THAT THE FEATURE PAGE HAS BEEN OBTAINED BACK FROM THE RESPONDENT)
### FEATURES OF POLICE DEPARTMENTS

<table>
<thead>
<tr>
<th>Presently</th>
<th>Date</th>
<th>Any Modification Since 1965?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feature?</td>
<td>Established?</td>
<td></td>
</tr>
</tbody>
</table>

#### A. PLANNING FOR EMERGENCY RESPONSE
1. Written civil disturbance plans?
2. Emergency call-up procedures?
3. Mass arrest procedures?
4. Policy on looters?

#### B. TRAINING
1. Riot training for recruits?
2. In-service riot training?
3. Community relations training?

#### C. RESOURCES
1. Equipment especially for crowd or riot control?
2. Emergency operations, command, and communications center?
3. Mobile command and communications facilities?
4. Reserve or auxiliary police or manpower?

#### D. SPECIALIZED SUBUNITS OF THE DEPARTMENT
1. Rumor control center?
2. Community relations unit?
3. Emergency planning unit?

#### E. RELATIONSHIP BETWEEN THE POLICE AND OTHER EMERGENCY ORGANIZATIONS
1. Written agreements with the National Guard?
2. Mutual aid agreements with other law enforcement agencies?
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>Written agreement with fire department?</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Written agreement with utilities?</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Written agreement with educational institutions?</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Written agreements with mass media?</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Written agreements with other city government agencies?</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Written agreements with Red Cross?</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Written agreement with Salvation Army?</td>
<td></td>
</tr>
</tbody>
</table>

---

**F. RELATIONS WITH THE PUBLIC AND COMMUNITY GROUPS**

1. Special efforts to recruit officers from minority groups? |   |
2. Use of integrated patrol teams? |   |
3. Efforts to concentrate present officers from minority groups in minority neighborhoods? |   |
4. Regular communication with leaders of militant minority groups? |   |
5. Regular communication with leaders of traditional minority groups? |   |
6. Regular communication with other citizen groups? |   |
# FEATURES OF FIRE DEPARTMENTS

<table>
<thead>
<tr>
<th>Presently Feature Established?</th>
<th>Any Modification Since 1965?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. PLANNING FOR EMERGENCY RESPONSE</td>
<td></td>
</tr>
<tr>
<td>1. Written civil disturbance plans?</td>
<td></td>
</tr>
<tr>
<td>2. Task force operations?</td>
<td></td>
</tr>
<tr>
<td>3. Emergency call-up procedures?</td>
<td></td>
</tr>
<tr>
<td>4. False alarm procedures for emergency?</td>
<td></td>
</tr>
<tr>
<td>5. Armed guards on trucks during emergencies?</td>
<td></td>
</tr>
<tr>
<td>6. Use of firemen for riot control?</td>
<td></td>
</tr>
<tr>
<td>7. Policy for protection of firemen during extreme situations?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. TRAINING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recruits given riot training?</td>
</tr>
<tr>
<td>2. In-service riot training?</td>
</tr>
<tr>
<td>3. Community relations training?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. RESOURCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Protective safety equipment (e.g., vests, covered cabs, safety goggles)?</td>
</tr>
<tr>
<td>2. Addition of auxiliary firemen?</td>
</tr>
<tr>
<td>3. Riot guns?</td>
</tr>
<tr>
<td>4. Emergency operations, command, and communications center?</td>
</tr>
<tr>
<td>5. Mobile command and communications facilities?</td>
</tr>
<tr>
<td>6. Reserve fire fighting equipment?</td>
</tr>
<tr>
<td>7. Emergency water supply?</td>
</tr>
</tbody>
</table>
### D. SPECIALIZED SUBUNITS OF THE DEPARTMENT

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Community relations unit?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Security unit?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### E. RELATIONSHIP BETWEEN THE FIRE DEPARTMENT AND OTHER ORGANIZATIONS

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mutual aid pacts with other departments?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Written agreements with police departments?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Written agreements with National Guard?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Written agreements with utilities?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Written agreements with Red Cross?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Written agreements with Salvation Army?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Written agreements with local hospitals?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### F. DEVELOPING RELATIONS WITH THE PUBLIC

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Special efforts to recruit firemen from minority groups?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Department sponsored community service projects?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Our purpose in interviewing you is to obtain some information and understanding on how civil disturbances or the threats of them have affected the (planning) (training) of your organization. We are interested in what problems the possibility of civil disturbances presented and the changes or innovations that were made in (planning) (training).

So we wouldn't take too much time, we have put together some fairly specific questions about changes in (planning) (training). There are about a dozen questions in all. If you have time afterwards, perhaps you could give us some additional thoughts about the matter.

1. What particular problems did civil disturbances or the threat of them present for (planning) (training) in your organization?

2. In viewing these problems, we would like you to rate, generally, how important the solution of these problems was to the (planning) (training) objectives of effective emergency response?
   
   _ very important
   _ moderately important
   _ of little or no importance

3. What changes in (planning) (training) in your organization have been made?
   
   a. What were these changes intended to accomplish (i.e., what problems were they focused upon)?
   b. When were these changes made?

After determining that changes or adjustment in (planning) (training) were necessary, the organization was, of course, faced with making these appropriate changes. Along these lines, we would like to learn who participated in making these changes and how this participation was organized.

4. Was a particular department of the organization assigned the primary responsibility for developing these changes?
   
   a. If so, how was this responsibility assigned?
   b. How was this responsibility carried out?

5. Which existing departments of the organization participated in making these changes?
a. What was the nature of their participation (i.e., what did they contribute)?
b. Who represented these departments?

6. What members of the organization were most influential in the development of these (planning) (training) changes?
   a. What is their position in the organization?
   b. Why were they influential? (knowledge, authority, experience)

7. Was any standing committee formed to develop or consider these changes?
   a. If so, who composed the committee?
   b. What were its activities?
   c. How often did it meet?

8. It is possible that time was spent considering possible courses of action in (planning) (training). Which of the following most clearly describes what occurred in your organization?
   ______ a. a great deal of time was spent considering possible courses of action.
   ______ b. a small amount of time was spent considering possible courses of action.
   ______ c. practically no amount of time was spent considering possible courses of action.

9. What other alternatives were seriously considered?
   a. Why were these alternatives rejected?
   b. Were there any disagreements over the merits of these alternatives?
   c. How were these disagreements resolved?

10. Approximately how many man hours were spent considering alternatives, gathering and evaluating information and developing the (planning) (training) changes we have been discussing?

11. Your department may have been in contact with other (police, fire) agencies from time to time to discuss problems, exchange information, obtain advice about new programs, techniques, etc.

   a. What particular departments were you in contact with?
   b. What was the nature of the contact?
   c. Which of the following most nearly describes the extent of this contact?

       ______ 1. frequent contact with many departments
       ______ 2. frequent contact with a few departments
       ______ 3. relatively infrequent contact with other departments
4. little or no contact with other departments

Exchanges of information with other (police, fire) organizations may have had an influence on these particular changes in (planning) (training).

12. Did you make site visits to other (police, fire) departments?
   a. How frequently?
   b. Who made these site visits? (Establish name and position)

13. Did you examine other (police, fire) civil disturbance plans?

14. Did members of your organization attend any conferences or seminars concerning (planning) (training) in the area of civil disturbances?
   a. Which ones? (Establish when and where.)
   b. Who represented your organization? (Establish name and position.)

15. Have there been frequent informal exchanges of information between your organization and other (police, fire) departments?
   a. If so, how has this occurred?
   b. Who has been involved from your organization? (Establish name and position.)

16. Have any journals or publications been particularly helpful in making changes? Which ones?

17. Was someone from your organization assigned the responsibility of looking at publications, journals, magazines, etc., that would include material relevant for (planning) (training)?

   We would like to get your opinion about the overall usefulness of the information we have been talking about.

18. Was the information you received generally consistent or contradictory?
   a. If contradictory, in what ways?

19. Was there enough information available?
   a. Was there too much information to keep up with?

20. Did the information you received increase the number of possible courses of action open to the organization? In what areas?
(TRAINING ONLY)

21. Did any local groups or organizations influence changes in training?
   a. If so, what groups?
   b. What was the nature of the influence?

(PLANNING ONLY)

   Relationships with other community organizations may have influenced changes in planning. For example, police, fire, hospitals, civil defense, mayor's office, Red Cross, Salvation Army, utilities. (The list provides examples, there may be others.)

22. Were any of these organizations or groups involved with yours in a joint committee for planning of community response to civil disturbance?
   a. If so, which ones?
   b. What was the nature of the committee's activities?
   c. Who represented your organization? (Establish names and position.)

23. Were any of these organizations individually coordinating their emergency planning with yours?
   a. If so, what was the nature of this coordination?
   b. Who from your organization participated? (Establish name and position.)
   c. What influence did this have on your planning?

24. Did coordination with the National Guard influence changes in planning?
   a. If so, in what way?
   b. Who represented your organization in this coordination? (Establish name and position.)

There are just a couple of more questions to finish up.

25. Has your organization received funding from new sources for emergency (planning) (training)? (e.g., LEAA, etc.)
   a. If so, from what sources?
   b. For what purposes?

26. Besides those we have already discussed, have there been any other individuals, groups, or organizations which have influenced changes in (planning) (training) for civil disturbances?
26. a. If so, who?
   b. What was the nature of this influence?

27. In general, have civil disturbances or the threat of them led to a change in the mission of (planning) (training) within your organization?
   a. If so, in what ways?

The last question I would like to ask is:

28. As you view the problem of civil disturbance, what still needs to be done in the area of (planning) (training)?
   a. How can these things be done?
   b. Why have they not been done up to now?
You have been mentioned to us as someone who has been in contact with other organizations or groups for the purpose of getting information which might assist your organization in problems associated with civil disturbances.

We have talked to others in your organization about their part in developing or deciding upon changes in policy, planning, training, and so forth.

Now we want to talk to someone such as yourself, who gathered information which could be used for training, planning, operations; community relations, policy and things like that.

First, we want to find out how sources of information were located. Then, we want to see how the information was obtained and things like that. Finally, we will want to know something of the uses to which the information was put within your organization.

Let's start out with the general question:

1. What sorts of information gathering have you done for your organization? (e.g., attending seminars, conferences, site visits, etc.)

2. Where did you do these things?
   a. When?

3. How did it happen that you were the one in this organization to do these things?

4. In general, what sorts of things did you learn?
   a. Was what you learned new information for your organization?

5. In general, was there enough information available or was there too much to keep up with?
   a. In this respect, did the situation change over time?

6. Overall, was the information you received consistent or contradictory?

7. How great do you feel the overall value of this information was?
a. Were any of your sources of information of particular value?

8. Once you got this information, what was done with it within your organization?
   a. To whom did you communicate it? (Establish name and position)
   b. Was it communicated in the form of information as you received it or in the form of specific recommendations or alternatives for changes in your organization?
   c. If specific, along what lines?

9. How were your communications received?
   a. Were there any parts of your organization that seemed most favorable to your communications?
   b. Were there any parts of your organization that seemed less favorable to your communications?

10. What ultimate effects, as far as you know, did the information which you got have on the practices of your organization?
   a. If little or none, why not?
   b. If great, why?

11. Do you know if what you learned had any specific effect on specific:
   a. Policies for handling civil disturbances?
   b. Planning for civil disturbances?
   c. Training for civil disturbances?
   d. Community relations activities of your organization?
   e. Operations in civil disturbances?

To finish up:

12. Would you recommend that other similar organizations have people do the same things you did in gathering information?
   a. Why or why not?
We have been studying changes in policy, planning and training within your organization that have been instituted as a result of the possibility of civil disturbances. Many of these changes have to be actually carried out or implemented at the operational level of your organization.

In order to see how such changes are actually carried out, there are a few things we would like to know.

First, let's start with planning.

1. What effect, if any, have changes in planning for civil disturbances had upon emergency operations?
   a. How have these changes in planning been carried out in actual practice?
   b. Have any problems arisen in carrying them out?
   c. If so, how have they been resolved?
   d. What is your evaluation of these changes in planning? (Good points and shortcomings.)
   e. Did people at the operational level play any part or role in the development of the planning changes?

2. What effect, if any, have changes in training for civil disturbances had upon emergency operations?
   a. How have these changes in training been carried out in actual practice?
   b. Have any problems arisen in carrying them out?
   c. If so, how have they been resolved?
   d. What is your evaluation of these changes in training? (Good points and shortcomings.)
   e. Did people at the operational level play any part or role in the development of the training changes?

3. What effect, if any, have changes in policy regarding civil disturbances had upon emergency operations?
   a. What key policy changes have been instituted?
   b. How have these changes in policy been carried out in actual practice?
   c. Have any problems arisen in carrying them out?
   d. If so, how have they been resolved?
e. What is your evaluation of these changes in policy?
   (Good points and shortcomings.)

f. Did people at the operational level play any part or role
   in the development of the policy changes?

4. Has your work been at all affected by the community relations
   program of your organization?

   a. If so, in what way?

To finish up, let me ask a general question.

5. Generally speaking, what major problems do civil disturbances
   present for operations in your organization?

   a. How well have the changes we have been talking about solved
      those problems?

   b. Which of these problems are still unresolved?
The Disaster Research Center has been studying for a number of years the planning and responses of emergency organizations to such community crises as natural disasters. In the last few years, we have turned our attention also to the problem of civil disturbances.

Some of our research deals with the actual operational responses of emergency organizations involved in a civil disturbance.

However, the purpose of this study is to get information on the long-range adjustments or changes in your organization in response to civil disturbances or their possibility. Thus, in police (fire) departments, for example, we are talking to those officials involved in planning, training, and policy to see what changes have been made in response to civil disturbances.

We also feel that police (fire) relations with the community have become more prominent as a result of civil disturbances. Therefore, we wish to talk with you about what has happened over the last few years in your community relations program.

First, we want to find out how this community relations program came into existence.

1. When was this community relations program established?

2. What were the conditions in the community which led to the decision to start a community relations program?
   a. (IF ANSWER IS GENERAL) Were there any particular events that led to the establishment of the program?
   b. How was it thought that the CR program would affect the conditions or events you mentioned?

3. When this CR program was first established, what was its mission in the department supposed to be?

   We would like to learn something of how the decision to establish a community relations program was reached within your department.

4. Where did the idea for a CR program come from?
   a. Did the initiative come from within or outside the department?
b. At the time the idea was being considered, what parts of the department seemed to be most in favor of the program?
c. Were there any particular parts of the department which resisted, opposed, or were unfavorable to the idea?
d. What was the basis of the objections?
e. Did these objections affect the initial program in any way? (e.g., size, budget, activities, date of starting, etc.)

Now we would like to know something of the influences other groups and organizations may have had on the initial decision to start this community relations program. (For example, some may have provided you with important information, expert advice, or some kind of resource which was taken into account in the decision.)

5. Were there any such groups?

a. How did they affect the decision to start a CR program?
b. How did they affect how the CR program was first set up?
c. Who in your organization was in contact with these groups? (Establish name and position.)
d. What was the nature of these contacts (i.e., how often were there meetings, and over how long a period of time)?

It is also possible that there may have been other groups or organizations which affected the initial decision to start the CR program, through some sort of pressure on the department.

6. Were there any such groups?

a. Which ones were most important?
b. How did they affect the decision to start a CR program?
c. How did they affect how the CR program was first set up?
d. Who in your organization was in contact with these groups? (Establish name and position.)
e. What was the nature of these contacts (i.e., how often were there meetings, and over how long a period of time)?

We now want to turn to the initial structure and activities of the community relations program.

7. When the CR program was started, what were its major activities and programs?

8. How many people were in the program?

a. How many full time?
b. What were their ranks?

9. Where did the CR program fit into the table of organization of the department?
a. Who did it report to and things like that?

Now in this last part we would like to look at the changes in the CR program since the possibility of civil disturbances, that is, since about 1965.

10. Has there been a change in the goals or mission of the CR program since 1965?
   a. If so, what is the difference between the new mission and the old?

11. Has there been any change in the types of problems which the CR program is trying to deal with?
   a. What changes?
   b. Did the CR program see the problems in a different way than before?

12. Have there been any changes in the methods or ways which the CR program uses to attack these problems?
   a. What were they?
   b. How were these methods or ways different?

13. Has the CR program grown larger in the number of men assigned to it?
   a. How much larger is it since 1965?
   b. When did this growth in size start?
   c. Has the budget of the program also increased?
   d. How much has it increased?
   e. When was it increased?
   f. Where did these additional funds come from?

14. Have there been any other changes in the CR program other than those we have already discussed?
   a. Have there been any changes in the way the program fits into the department's table of organization?
   b. When did these changes occur?
   c. Why did they occur?

15. Are any of these changes we have been discussing the result of changes in the department's overall policy regarding community relations?

Let's look now at the factors that influenced the changes you have mentioned.

16. Were there any events or conditions in your community which led to a decision to change the CR program?
a. What were they?
b. If they were specific events, when did they occur?

17. Were there any groups or organizations that may have affected the changes made in the CR program? (For example, some may have provided you with important information, expert advice, or some kind of resource which was taken into account in the decision to make a change.)

a. How did they affect the decision to change the CR program?
b. How did they affect how the CR program was changed?
c. Who in your organization was in contact with these groups? (Establish name and position.)
d. What was the nature of these contacts (i.e., how often were there meetings, and over how long a period of time)?

It is also possible that there may have been other groups or organizations which affected the decision to change the CR program, through some sort of pressure.

18. Were there any such groups?

a. Which ones were most important?
b. How did they affect the decision to change the CR program?
c. How did they affect how the CR program was changed?
d. Who in your organization was in contact with these groups? (Establish name and position.)
e. What was the nature of these contacts (i.e., how often were there meetings, and over how long a period of time)?

19. At the times these changes were considered and adopted, how were they viewed within your department?

a. Within the community relations staff?

20. At the time the changes were being considered, were there any reservations, objections, or opposition to them?

a. In which parts of the department?
b. What was the nature of the objections?
c. How did these objections affect the changes that were made in the CR program?

21. Were there any parts of the department that were particularly in favor of the changes being proposed?

To finish up:

22. Are there any things about changes in the CR program that we have not covered and that would enable us to understand better what has been going on?
23. Is there anything you feel should be done by a CR program, which is not being done by your program?

   a. What?
   b. Why are they not being done by your program?
1. Number of uniformed personnel ________
2. Number of clerical personnel ________
3. Number of officers above the rank of patrolman ________
4. Number of separate bureaus in the department ________ (list)
5. Number of ranks in the chain of command ________
   a. Number of personnel in each rank ________
6. Base salary for patrolman ________
7. Length of training period for recruit patrolmen ________
8. Number of hours of in-service training per month ________
9. Number of officers having college training ________
10. Number of officers from minority groups ________ (1964-1969)
11. Annual operating budget of the department ________ (1969)
12. Per cent of total annual budget allocated for emergency planning ________ (1969)
13. Percent of total annual budget allocated for emergency equipment ________ (1969)
14. Listing of grants at state and federal levels for law enforcement (e.g., LEAA) 1964-1969 ________
DOCUMENTARY INFORMATION: FIRE

1. Number of uniformed personnel ________
2. Number of clerical personnel ________
3. Number of officers above the rank of fireman ________
4. Number of battalions in the department ________
5. Number of stations in the department ________
6. Number of separate bureaus in the department ________ (list)
7. Number of ranks in the chain of command ________
a. Number of officers in each rank ________
8. Base salary for firemen ________
9. Length of training period for recruit firemen ________
10. Number of hours of in-service training per month ________
11. Number of officers from minority groups ________ (1964-1969)
12. Annual operating budget of the department ________ (1969)
13. Per cent of total annual budget allocated for emergency planning ________ (1969)
14. Per cent of total annual budget allocated for emergency equipment ________ (1969)
15. Listing of grants at state and federal levels for fire fighting ________ (1964-1969)
APPENDIX C
INTERVIEW ANALYSIS FORM

Name of Organization ____________________________

Name and Position ________________________________

Schedule ______________________________________

1. Defined civil disturbance related problems. (List)

2. Rating question -- Solution of problems ________________

3. Rating question -- Extent of policy changes
   A. ________________  D. ________________
   B. ________________  E. ________________
   C. ________________  F. ________________

4. Specific changes made in the discussed area. (Designate area and summarize)

5. Listing of subunits and representative subunits involved in changes.
   (Summarize description of involvement)

6. Listing and position of influential persons in the development of changes. (Summarize the nature of their influence)

7. Rating question -- Alternatives of action considered ________________

8. Discussion of alternatives.

9. Number of man-hours spent in developing changes ________________

10. Listing of contacts with comparative reference or network linkages.
    (Summarize contact)

11. Rating question -- Extent of contact ________________

12. Listing of site visits. (Description and designation of boundary personnel)

13. Listing of conferences or seminars attended. (Description and designation of boundary personnel)

14. Listing of plans examined. (Who did the analysis)

15. Other sources of intelligence. (Other publications, informal inputs, etc., designation of boundary personnel)
16. Discussion of feedback from experience. (Listing of personnel)

17. Information evaluation. (Liaison instrument for further boundary personnel)

18. Listing and description of other interorganizational contacts.

19. Content analysis of community relations interviews
   a. Changes since 1965
   b. Sources of intelligence (boundary personnel)
   c. Who and how were changes developed (listing with positions; description of development)

20. Operations instruments (content analysis)
   a. Participation in various change areas (planning, policy, training, etc.)
   b. Who specifically was involved (listing and positions)
DATA ANALYSIS FORM

Variables

1. Environmental Threat to Charter
   a. Number of civil disturbance events 1965-69 ________
   b. Total number of arrests ________
   c. Total number of deaths ________
   d. Total number of injuries ________
   e. Number of injuries to police and fire personnel ________
   f. Number of deaths to police and fire personnel ________
   g. Total property damage ________
   h. Percent minority group in the community ________
   i. Rating, Problems question ________ Average ________

Comments:
   A. List of problems discussed in interviews (number)
   B. Impact from experience

2. Organizational Intelligence
   a. Number of site visits ________
   b. Number of conferences attended ________
   c. Number of training seminars ________
   d. Number of plans examined ________
   e. Number of publications ________
   f. Formalized feedback from experience ________yes ________no
      Describe:
   g. Formalized feedback from outside intelligence ________yes ________no
      Describe:
   h. Other intelligence sources (list)
   i. Boundary personnel (list by source of intelligence)
   j. Intelligence evaluation (describe)

3. Organization Change
   a. Number of items on checklist ________
      Comments:
   b. Plan
      1. Number of pages ________
      2. When plan established ________
      3. Number of revisions ________
      Comments:
      4. Number of interorganizational relationships in plan ________
      5. Provisions for alternative operational procedures ________yes ________no
         Describe:

   -103-
6. Provision for updating plan ______yes ______no
   Describe:
7. Provision for training ______yes ______no
   Describe:
8. General comments on plan:
   c. Number of hours of emergency or community relations training
      1. Recruit ______
         Describe:
      2. In-service ______
         Describe:
      d. Percent spent on emergency planning ______
      e. Percent spent on emergency equipment ______
      f. Size of community relations staff ______
      g. Number of community relations programs ______
         Comments:
      h. List of relevant grants
4. Comparative reference
   a. Number of departments in contact ______
   b. Rating question, extent of contact ______ Average ______
   c. Nature of contacts (describe, e.g., informal versus formal)
   d. Number of departments on mailing list_______
5. Normative reference
   a. Community (list)
   b. State (list)
   c. Federal (list)
6. Alternatives of action
   a. Number of alternatives considered ______
   b. Rating question, alternatives of action considered ______
      Average ______
   c. Comments:
7. Complexity of change
   a. Number of subunits involved ______
   b. Total number of persons involved ______
   c. Number of manhours expended ______
   d. Number of meetings ______
   e. Standing committees ______yes ______no
      Describe:
   f. Comments:
8. Incumbent influence
   a. List of influential members:
   b. Basis of influence
   c. Description of influential activity
REFERENCES


Hearings Before the Permanent Sub-committee on Investigation of the Committee on Government Operations. United States Senate, Ninetieth Congress, pp. 2762-2777.


Warheit, George and Quarantelli, E. L. An Analysis of Los Angeles Fire Department Operations During Watts. Disaster Research Center Monograph Series. Columbus: Disaster Research Center, The Ohio State University, 1969.


APPENDIX C
INTERVIEW ANALYSIS FORM

Name of Organization ________________________________

Name and Position ________________________________

Schedule ________________________________

1. Defined civil disturbance related problems. (List)

2. Rating question -- Solution of problems ________________

3. Rating question -- Extent of policy changes
   A. ____________________  D. ____________________
   B. ____________________  E. ____________________
   C. ____________________  F. ____________________

4. Specific changes made in the discussed area. (Designate area and summarize)

5. Listing of subunits and representative subunits involved in changes. (Summarize description of involvement)

6. Listing and position of influential persons in the development of changes. (Summarize the nature of their influence)

7. Rating question -- Alternatives of action considered ________________

8. Discussion of alternatives.

9. Number of man-hours spent in developing changes ________________

10. Listing of contacts with comparative reference or network linkages. (Summarize contact)

11. Rating question -- Extent of contact ________________

12. Listing of site visits. (Description and designation of boundary personnel)

13. Listing of conferences or seminars attended. (Description and designation of boundary personnel)

14. Listing of plans examined. (Who did the analysis)

15. Other sources of intelligence. (Other publications, informal inputs, etc., designation of boundary personnel)

-101-
16. Discussion of feedback from experience. (Listing of personnel)

17. Information evaluation. (Liaison instrument for further boundary personnel)

18. Listing and description of other interorganizational contacts.

19. Content analysis of community relations interviews
   a. Changes since 1965
   b. Sources of intelligence (boundary personnel)
   c. Who and how were changes developed (listing with positions; description of development)

20. Operations instruments (content analysis)
   a. Participation in various change areas (planning, policy, training, etc.)
   b. Who specifically was involved (listing and positions)
DATA ANALYSIS FORM

Variables

1. Environmental Threat to Charter
   a. Number of civil disturbance events 1965-69 ______
   b. Total number of arrests ______
   c. Total number of deaths ______
   d. Total number of injuries ______
   e. Number of injuries to police and fire personnel ______
   f. Number of deaths to police and fire personnel ______
   g. Total property damage ______
   h. Percent minority group in the community ______
   i. Rating, Problems question ______ Average_______

Comments:
   A. List of problems discussed in interviews (number)
   B. Impact from experience

2. Organizational Intelligence
   a. Number of site visits ______
   b. Number of conferences attended ______
   c. Number of training seminars ______
   d. Number of plans examined ______
   e. Number of publications ______
   f. Formalized feedback from experience _____yes _____no
      Describe:
   g. Formalized feedback from outside intelligence_____yes_____no
      Describe:
   h. Other intelligence sources (list)
   i. Boundary personnel (list by source of intelligence)
   j. Intelligence evaluation (describe)

3. Organization Change
   a. Number of items on checklist_______
      Comments:
   b. Plan
      1. Number of pages ______
      2. When plan established ______
      3. Number of revisions ______
      Comments:
      4. Number of interorganizational relationships in plan ______
      5. Provisions for alternative operational procedures __________
         yes _____no
         Describe:
6. Provision for updating plan _______yes _______no
   Describe:
7. Provision for training _______yes _______no
   Describe:
8. General comments on plan:
   c. Number of hours of emergency or community relations training
      1. Recruit _______
         Describe:
      2. In-service _______
         Describe:
      d. Percent spent on emergency planning _______
      e. Percent spent on emergency equipment _______
      f. Size of community relations staff _______
      g. Number of community relations programs _______
         Comments:
      h. List of relevant grants:
4. Comparative reference
   a. Number of departments in contact _______
   b. Rating question, extent of contact _______ Average _______
   c. Nature of contacts (describe, e.g., informal versus formal)
   d. Number of departments on mailing list _______
5. Normative reference
   a. Community (list)
   b. State (list)
   c. Federal (list)
6. Alternatives of action
   a. Number of alternatives considered _______
   b. Rating question, alternatives of action considered _______
      Average _______
   c. Comments:
7. Complexity of change
   a. Number of subunits involved _______
   b. Total number of persons involved _______
   c. Number of manhours expended _______
   d. Number of meetings _______
   e. Standing committees _______yes _______no
      Describe:
   f. Comments:
8. Incumbent influence
   a. List of influential members:
   b. Basis of influence
   c. Description of influential activity
REFERENCES


Hearings Before the Permanent Sub-committee on Investigation of the Committee on Government Operations. United States Senate, Ninetieth Congress, pp. 2762-2777.


Warheit, George and Quarantelli, E. L. An Analysis of Los Angeles Fire Department Operations During Watts. Disaster Research Center Monograph Series. Columbus: Disaster Research Center, The Ohio State University, 1969.


