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THE IMPACT OF MAJOR EMERGENCIES ON
THE FUNCTIONAL INTEGRATION OF FOUR
AMERICAN COMMUNITIES.

The Ohio State University, Ph.D., 1968
Sociology, general

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THE IMPACT OF MAJOR EMERGENCIES
ON THE FUNCTIONAL INTEGRATION
OF FOUR AMERICAN COMMUNITIES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in the Graduate
School of The Ohio State University

by
George Jay Warheit, B.A., B.D., M.A.

*****

The Ohio State University
1968

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ACKNOWLEDGMENTS

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Finally, I must express my appreciation to my wife Elizabeth and to my children Karl and Melissa for their encouragement and patience.
VITA

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CHAPTER I
INTRODUCTION

The Research Problem

This study focuses on the changes which occur within communities as the result of major community emergencies. More specifically it is one which focuses on the impact of major community emergencies on the functional integration of selected complex organizations. The research was oriented toward the acquisition of data which would hopefully provide some answers to the following questions: (1) What impact do major community emergencies, for example, hurricanes, floods, civil disturbances, and so on, have on the interorganizational structures of the communities affected by them? (2) What short-term interorganizational changes occur? (3) What long-term changes occur? (4) What is the nature of these changes? (5) When do they occur? (6) How can they be explained? As we examined interorganizational change, we did so on the basis of these

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1 The term "complex organization" is consistently used in preference to other terms appearing in the literature, e.g., "formal organizations," to avoid conceptual confusion. Distinctions between "informal" and "formal" organizations contain several theoretical pitfalls. See, for example, the contrast between the "rational" and "natural system" models which this dichotomy often reflects in Alvin W. Gouldner, "Organizational Analysis," Sociology Today, ed. Robert K. Merton et al. (New York: Basic Books, Inc., 1959), pp. 400-428. Several current theorists suggest that analysis of any complex organization or group must be "holistic" in approach, i.e., must include both "formal" and "informal" elements. See for example: Theodore Caplow, Principles of Organization (New York: Harcourt, Brace and World, Inc., 1964), pp. 18-24.
variables: authority, leadership, decision making, interdependence and coordination.

Social Change and Major Community Emergencies

Social change has been of great interest to sociologists for a long time. In disaster research this interest was expressed clearly by Samuel Prince in 1920 when he wrote the following.

There are many virgin fields of Sociology. This is one of the attractions the subject has for the scientific mind. But of all such fields none is more interesting than the factor of catastrophe in social change.

Some researchers have noted that community emergencies precipitate the creation of new community agencies, public services and public personnel. Others have pointed out that emergencies function as catalysts in that they result in the acceleration of pre-disaster patterns of social change. Still others have concluded that community emergencies provide a climate within which the social structure can be manipulated and changed. Drawing on a wealth of disaster research Fritz writes:

Disaster provides an unstructured social situation that enables persons and groups to perceive the possibility of introducing desired innovations into

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the social system. . . . The breaking of the 'cake of custom' is often perceived by many groups in the society as desirable once the immediate problems of rescue, medical care, subsistence, and shelter become solved. Changes and adjustments made during the emergency give proof that the restructuring or changing of the social system is possible. People see the opportunity of realizing certain wishes which remained latent and unrealized under the old system.5

It was in keeping with this general interest in emergency-induced social change that this study was conducted.

Significance of the Research

Much previous disaster research was centered either on the behavior of individuals or on the functioning of particular communities viewed as macro-units.6 Other research, such as that conducted by the Disaster Research Center (DRC), at The Ohio State University, has utilized particular organizations such as police and fire departments as the basic units of analysis. While some attention has been given to an analysis of interorganizational interaction prior to, during and following disasters, little research has been conducted, to this writer's knowledge, which has focused more or less exclusively on interorganizational change


resulting from community disasters. This study seeks to fill part of the gap in the sociological analysis of major community emergencies. In addition, it was designed to make a contribution to the general fund of knowledge concerned with social change, especially as it relates to the functioning of complex organizations. Moreover, in this research we have provided a comparative analysis of the similarities and differences which arise from two distinctly different community emergencies: natural disasters and civil disturbances. Finally, it is hoped that our contributions will add to the fund of knowledge by which we will be able to understand more fully the processes of social change as they apply to a wide range of social phenomenon. Thompson and Hawkes suggest this possible outcome when they say:

Undoubtedly growth and decline of organizations vary with such factors as organizational purpose and the nature of the context out of which organizations grow. Disaster is perhaps a very special case, but we suggest that it is a special case of a more general pattern which is not yet well understood. To that extent the community in disaster has provided a useful laboratory in which to study general processes. Some of the same problems and processes, for example, seem to occur when rapidly developing nations attempt to synthesize complex organizations to operate long-linked technologies, using national resources which have typically been allocated and integrated into very different patterns. By considering disaster as one type of system stress, and community as one type of social system, we can

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7 One study which examines interorganizational relationships in a peripheral fashion is: William A. Anderson, "Disaster and Organizational Change: A Study of the Long-Term Consequences of the March 27, 1964, Alaska Earthquake" (unpublished dissertation, The Ohio State University, 1966); another is W. H. Forn and S. Nosow, Community in Disaster (New York: Harper Brothers, 1958).
begin to identify parallels in the processes by which nations or firms respond to such stresses as nationalistic competition or economic decline.

**Inception of the Study**

The Disaster Research Center at The Ohio-State University has been studying organizational functioning in disaster settings for the past five years. As a part of their past investigations, they had studied each of the major emergencies which provide the contextual focus of this research. These earlier studies, which began in every instance, immediately after the emergency, sought largely to analyze *intraorganizational structures* and the changes which occurred in them following community emergencies. Thus, this study is a continuation of a number of earlier ones conducted by the DRC. However, this study has attempted to go beyond these earlier ones, to investigate other empirical questions. In this research we have been interested in developing an understanding of the community as a problem solving entity, especially as the community influences the functioning of its emergency-relevant organizations. We have felt that by studying interorganizational relationships in communities following emergencies we would be able to secure important insights into the functioning of the organizations within these communities and further that we would be able to observe social change as it is reflected in emergency-induced *interorganizational change*.

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The Concepts Utilized in this Research

In the conduct of this research we have relied on a number of basic concepts which we considered as essential for our purposes. Since these concepts are not used consistently throughout sociological literature, it is important that we make more explicit the meanings we have attached to them. As we discuss these concepts, we will from time to time introduce certain theoretical notions associated with them in an effort to make our overall theoretical framework more explicit.

The community

This research utilizes communities as the context for its analysis of interorganizational change. As such, communities are seen not as the basic units of analysis but as the social and natural environment within which organizations function to solve problems common to a group of persons living in geographic, political and social proximity to one another. In offering our definition of community, it is not our desire to add merely to the existing plethora of definitions of community but instead to set forth a definition which will be useful for our purposes.

There is, however, more definitional consensus than one might suspect at first. Hillery points out that of the ninety-four definitions of community employed by sociologists, sixty-eight were in accord that social interaction, area and common ties or tie are commonly found in

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community life. Thus, persons interacting in a particular geographic area and who share common ties are the basic components of all definitions. These three components are, however, combined and formulated in a great variety of ways and it is from these combinations and/or emphases that much definitional dissensus occurs. Jonassen points out that most definitions of the community possess a combination of the following characteristics:

(1) A population
(2) A territorial base
(3) Interdependency of specialized parts and division of labor
(4) A common culture and social system which integrates activity
(5) A consciousness of unity or belonging among the inhabitants
(6) An ability to act in a corporate fashion to solve problems.  

He suggests that "community" be used as a generic term and that a given community be described in terms of the degree of presence or absence of the various critical elements and their combinations.

We have relied heavily on the work of Warren in conceptualizing the definition of community utilized in this study. He defines a community as a combination of social units and systems which perform the major social functions having locality relevance. He states that:

The interaction which is the appropriate focus for analysis in community phenomena is that which arises from common location. Such interaction arises out of the necessary provision for a number of locality-relevant functions which must be available

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in the immediate, daily accessible vicinity. . . While these functions are not exclusive to the locality, the organization for their provision in the immediate accessible locality constitutes the primary task of the community.11

Thus, for Warren, communities are problem solving systems - systems which must provide for the maintenance of certain irreplaceable functions. The functions he suggests are these: production, distribution, consumption, socialization, social participation, social control and mutual support.12 We have taken the essential elements of Warren's definition and have defined a community as a multi-purpose problem solving social system which performs the major social functions having locality relevance. This definition is in keeping with our overall theoretical orientation, especially as it relates to the other concepts utilized throughout this research.

Community emergencies

Every year communities all over the world are affected by changes in their internal and external environments. Some of these disruptions are cataclysmic events which leave behind them deep scars on the affected community's social and psychological landscape. Frequently these events become reference points in a community's history. Other events are more cumulative and less dramatic in their impact. For example, an extended drought or some basic change in the technological or economic base on which the community depends may have a severe effect on that

12 Ibid., chapter 3.
community's structure and influence its very survival. Because these latter events are cumulative in nature and gradual in their impact, their influence on the community may be unperceived or the community may adjust to them so that their impact is mitigated and minimized. This study focuses on those changes which result from cataclysmic events, that is, from major community emergencies. We have been concerned with two major types of community emergencies which are: natural disasters and civil disturbances. When we refer to a major community emergency we will be referring to a serious disruption in the community system whereby all or some of its necessary functions are significantly altered. In a later chapter we will outline some of the basic similarities and differences between these two types of community emergencies but it is important to note here that each type is seen as precipitating serious disruptions in the communities in which they occur.

Stress

The concept stress has been used by researchers in a number of different disciplines but for our purposes we will rely heavily on the work of Drabek and others at the DRC. Succinctly stated their position

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asserts that intraorganizational change in disaster settings is closely related to the concept of organizational stress which they defined as a state or condition which exists when organizational demands exceed organizational capability. This definition assumes that organizational capability and demand represent a dynamic equilibrium, where under normal times a relatively stable relationship exists with capability exceeding demands. Organizational stress is not viewed as a set of external conditions, but rather is a term used to refer to the state of an organization when certain conditions are present. Further, organizational stress is seen, not as a discrete variable, but rather as existing along a continuum. The degree of stress is determined by the disparity between two variables: (1) change in organizational demands and (2) change in organizational capability. Hence a maximum stress situation such as might be initially produced by a major emergency would be characterized by:

1. Change in organizational demands
   a. quantity
      (1) sharp increase
      (2) increase is unanticipated
   b. priority
      (1) consequences of organizational action threaten central values of organization or society, i.e., organizational actions are viewed with increased seriousness
      (2) immediate organizational action is required
   c. qualitative changes
      (1) demands previously met, but not currently being met are made on the organization
      (2) new demands not previously made on the organization are made and temporarily accepted by the organization

2. Change in organizational capability
   a. intra-organizational
      (1) absence of personnel, especially key personnel
      (2) absence of important equipment, material, or buildings
      (3) absence of crucial information or records
b. extra-organizational
   (1) absence of personnel, especially key personnel
   (2) absence of important equipment, material, or buildings
   (3) absence of crucial information or records

Although these notions of stress were developed to help explain changes on an intraorganizational level, they are pertinent for our analysis as well. A basic assumption of this research, (like a great amount of other disaster research), is that community systems under normal conditions can be seen as existing in a state of relative or partial equilibrium. This equilibrium exists because there is a relative balance between the demands being made on the system and the problem solving resources possessed by that system. And while this balance between demands and resources is never complete, it is sufficient to give the community an element of stability.

Following the impact of a large-scale emergency, a number of factors militate toward disruptions in this systemic balance. There is first of all a sharp increase in the number of demands being made on the community, demands which must be met by the emergency-relevant organizations within that community until extra-local assistance arrives. These demands are usually of a high priority nature and require immediate organizational action. Furthermore, many of these demands may differ not only in the degree of their intensity but in kind as well since new types of demands are frequently created by the emergency event.

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15 Thomas E. Drabek, "Laboratory Simulation of a Police Communication System Under Stress," (unpublished dissertation, The Ohio State University, 1965), p. 49. The stress dimensions listed are in no way exhaustive. For example, historical, environmental and community contextual variables are not included. The dimensions offered are helpful for our purposes, however.
Hence, a community's emergency-relevant organizations are likely to face not only increased demands which are frequently unexpected, they may have to face new demands for which there is no response precedent. Moreover, it can be expected that certain organizations in a community will have lost some of their vital material and personnel resources. When this occurs, as it often does, the response capability of the affected organizations are reduced and so is the overall response capability of the community system. The end result is that there is an imbalance in the demand-capability ratio of both the organizations operating within the affected community and of the community itself. As a result of this imbalance, a number of intraorganizational and interorganizational changes occur. In this research, therefore, we have been particularly dependent on the notion of stress as we have sought to understand these changes.

**Complex organizations**

Following the impact of a disastrous event, the initial response of the community customarily comes from individual citizens. But the resources of individuals, even large numbers of them, are insufficient to cope with a large-scale emergency. This means that relatively soon after the emergency event has occurred the network of the community's emergency organizations begin to assume the major burdens of emergency action. Thus, the community is not only the site of the disruption, it is also the locus of collective activity which attempts to overcome this disruption. Under normal circumstances, the community can be seen possessing patterned social relationships which have developed around problems previously faced on a routine, regularized basis. This meeting
of problems over a period of years leaves a residue of sentiment, knowledge and organization within communities which can guide them as they face new disruptions as occasioned by major emergencies.

Coleman has suggested that it is through the processes of dealing with common problems that clusters of people develop certain organizational forms without which they can never really achieve the status of community.

It may seem paradoxical that problems create community organization, but such is nevertheless the case. A community without common problems... has little cause for community organization; neither does a community that has been largely subject to the administration of persons outside the community. When community problems subsequently arise, there is then no latent structure of organization, no "fire brigade" that can be activated to meet the problem. A new town, a budding community, is much like a child; if it faces no problems, it cannot grow. Each problem successfully met leaves its residue of sentiments and organization, without these sentiments and organization, future problems could not be solved.16

It is argued here that it is through the institutionalization of this sentiment and social organization that a community develops and maintains its problem solving mechanisms. These mechanisms in our society generally reside within complex organizations. A factory, for example, is organized around "solving" the problems associated with the production of goods. Schools are organized to deal with problems associated

with education, and so on. Following a major community emergency, however, the organizations in a community face vastly increased demands and because these demands are of high priority they require an immediate organizational response. The problem solving organizations are thus confronted with the necessity to meet a great many demands and to meet them immediately. This obligation is so urgent that there is little or no time for these organizations to develop the interorganizational structures necessary to meet these new demands. Hence, a great many ad hoc adaptations are required. In keeping with these notions regarding the problem solving nature of organizations, we have defined a complex organization as a discernible social system which has been established for the explicit purpose of performing specialized tasks which have relevance for the maintenance of the community within which it is located. 17

Not all of the organizations in a community become equally involved in responding to a community emergency, however. This differential response results largely from the fact that tasks associated with restoring or maintaining public order, fighting fires, handling the injured and dead, restoring public facilities, providing food and shelter, clothing and so on are generally assigned to those organizations

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in a community which possess both a community orientation and emergency-
relevant resources. And although a number of private organizations with
private resources frequently become involved in responding to a commun-
ity emergency, in this research we have been concerned only with those
organizations which have an immediate responsibility for responding to
major community crises--organizations around which communities histori-
cally have built their emergency responses.

Interorganizational change

Inherent throughout this research is the notion that complex organi-
izations are the chief problem solving mechanisms employed by communities
functioning as adapting and problem solving social systems. Thompson
and Hawkes suggest that while family units are the primary units of so-
cial organization operating within communities, the secondary units are

to a large extent complex organizational structures. They suggest
that one of the distinguishing characteristics of complex organizations
is their ability to utilize clearly defined and integrated decision mak-
ing processes. These processes are seen as involving previously esta-
blished organizational goals and an orderly synchronized activity by
which these goals are achieved. Moreover they see these same processes
resulting in the locking of many organizational tasks into long-linked
technologies which assure, within limits, that the necessary organiza-
tional resources are at the right place at the right time. Through this
linkage organizational functioning is integrated and coordinated and the

\[18\] See: Thompson and Hawkes, op. cit., pp. 268-300; and, Form an
goals of the organization achieved. When one shifts the focus of attention from the allocation of resources within organizations to the allocation of resources among organizations, he discovers, however, that there is not only a lack of prior agreement with respect to goals but also, as a consequence, a lack of agreement with respect to who should do what and when. This lack of agreement stems largely from the fact that under normal conditions organizations possess both an organizational domain within which they operate and the resources necessary to fulfill the goals implicit in that domain. Thus, the organizations in a community, even the emergency-relevant ones, are loosely integrated into the overall community system and operate in a semi-autonomous fashion in a pre-disaster environment. Following a major community crisis, when the demands on a community are greatly intensified, communities must make a collective effort to integrate and coordinate the tasks of its most vital organizations. This integration and coordination most frequently takes the form of the establishment of a new division of labor, the redesignation of organizational domains and the reallocation of scarce, divisible, community resources. Through these adaptive processes of integration and coordination the activities of a community's emergency organizations are seen as being provided the give and take which permits them to make both a multiple and simultaneous adjustment to one another as well as a collective response to their mutual emergency environment. These adaptive processes can be seen as the precipitants of interorganizational change.

It is recognized that it is difficult to separate the processes of organizational and interorganizational change, especially when the
organizations involved are elements within the same system. Nonetheless, for the purposes of this study, we have focused almost entirely on particular interorganizational relationships and on the changes which occurred in them following community emergencies. Changes of an intraorganizational nature have been examined only insofar as they have assisted us in our primary analytical tasks.

For our purposes those alterations which occur in the interorganizational structures of communities during and immediately following a community emergency have been defined as short-term interorganizational change. Those alterations in the interorganizational structures of a community which appear to have become structured into the ongoing life of the organizations involved have been defined as long-term interorganizational change. Short-term changes can be seen as temporary adaptations to the emergency event and to the problems associated with search and rescue, relief and reconstruction. In contrast, long-term changes are often associated with interorganizational efforts designed to meliorate the impact of future emergencies, although they may also be seen in the daily interaction of a community's organizations.
CHAPTER II

STUDY DESIGN AND METHODOLOGICAL APPROACH

The purposes of this chapter are to outline the historical background, focus, design and methodological approach of this study. As a part of this outline we shall discuss the nature of our data, the community contexts within which each of the disasters occurred, the types of organizations selected and our methods of analysis.

Background of This Research

This study is an extension of a number of prior ones conducted by the Disaster Research Center at The Ohio State University. For this reason, the study design and methodology we have used are inextricably related to the ones developed and utilized earlier by DRC personnel. It is, therefore, necessary to discuss aspects of both approaches.

Research conducted by the DRC from its inception to the present has focused almost entirely on organizations as the primary units of analysis. This has been done for two reasons. First it was recognized that there was a dearth of information on organizational functioning in disaster environments. It has already been noted that much of the previous disaster research dealt with other levels of analysis; for example studies focusing on the individuals' emotional response to crisis have been popular. Secondly, it was felt that the crucial roles
which many organizations play during periods of community disaster, for example, police and fire departments, hospitals, public utilities, and so on, warranted more systematic study.

The data gathered in these initial research efforts deal with the emergency responses of organizations and was oriented toward acquiring answers to the following questions: (1) What was the organization like prior to the disaster? In other words, what were the internal characteristics of the organization, such as size, authority and decision making patterns, and activities? (2) What was the nature of its relationship to other organizations in the community? (3) What were the major activities of the organization during the emergency period? (Disaster created problems and adaptations were particularly noted.) And finally, (4) What was the nature of the organization's involvement with other organizations and groups during the emergency period. In this regard, attention was given to instances of interorganizational cooperation and conflict.

Stated in more general fashion, these studies were directed chiefly toward determining the nature of intraorganizational functioning. These studies, and consequently the data on which they were based focused on two time periods: The pre-disaster period which was designated as Time-One; and, the emergency and immediate post-emergency time period which was designated as Time-Two. Since these studies were initiated during the emergency or immediate post-emergency periods and

19 This summary of the Disaster Research Center's work is from Anderson, op. cit., pp.29-30.
terminated soon thereafter, little information of a longitudinal nature was gathered. \footnote{20 The one major exception has been the work of Anderson, \textit{Ibid}.}

The results of these studies have been or are being published at the present time. Many of these are case studies of particular organizations and as such give little explicit attention to the community as the social context within which the respective emergencies occurred.

\textbf{The Design of This Study}

The design of this study is quite similar to the ones on which it builds. We selected four communities as our contextual framework. The four cities selected and the emergencies which occurred in them are: New Orleans flooding from Hurrican Betsy, September 1965; Los Angeles, the Watts civil disturbance, August, 1965; Detroit, the Detroit civil disturbance, July-August, 1967; and, the Fairbanks flood, August, 1967.

These emergencies were selected for a number of reasons. For the purposes of studying long-term interorganizational change, we needed to choose two emergencies already studied by the DRC that would give us sufficient base line data on which to focus our analysis. Moreover, we needed to select two recent emergencies which would enable us to gather extensive data on short-term interorganizational change. (Although we had considerable data on short-term intra and interorganizational change from previous DRC research efforts, we wished to collect additional data which would serve as a check against these earlier data and permit an
expansion of our particular research interests.) Finally, we wanted to secure sufficient data on two different types of emergencies which would enable us to make extensive comparisons of their short-term and long-term effects on interorganizational relationships.

Our analysis of long-term interorganizational change derives largely from data gathered in New Orleans, a natural disaster, and Los Angeles, a civil disturbance. Our analysis of short-term interorganizational change has come from data gathered in these two cities and from more recent field investigations conducted in Fairbanks, a natural disaster and Detroit a civil disturbance.

Data Sources

Several sources of data have been used for this study. They include interview data which were gathered by DRC personnel in 1965 during and immediately following the community emergencies in New Orleans and Los Angeles. As indicated, these data are of particular importance in that they provided us with the necessary base line information on which to build an analysis of long-term change. They were also of importance for our analysis of short-term change. In addition to these data, field investigations were conducted in all four cities during the fall and early winter of 1967-1968. Interview data were gathered during these recent investigations and were obtained with the assistance of two sets of schedules. One identical to the schedule utilized in collecting the New Orleans and Los Angeles data (Schedule A), was employed in Detroit and Fairbanks during and immediately following their emergencies. This was done so that we would have data equivalent to that gathered earlier
in New Orleans and Los Angeles. This schedule is found in Appendix A. Another set of schedules was prepared and employed in all four cities with these purposes in mind: (1) We were interested in securing data in New Orleans and Los Angeles which would enable us to examine long-term interorganizational change in these two cities. (2) We wished to secure additional information which would increase our knowledge of the short-term changes which occurred in the interorganizational structures of New Orleans and Los Angeles. (3) We desired to explore some new dimensions in our analysis of short-term change. The cities of Detroit and Fairbanks provided current emergencies where these dimensions could be examined without experiencing certain practical research problems related to the attrition of organizational personnel and the difficulty of recalling events after a two and one-half year time span. This second set of interview schedules (Schedule B), is found in Appendix B.

The interviews conducted with Schedule A were intended to gather information from persons at more than one level in an organization. The usual pattern was to interview personnel from at least three organizational levels; the top administrative echelon, those in charge of field operations (a middle echelon), and from lower echelon persons actually involved in field operations. The interviews conducted with Schedule B were designed to elicit information from at least three organizational incumbents; a top administrative officer, a middle echelon operations officer, and the officer or officers responsible for liaison functions with other organizations under normal and/or emergency conditions.
In both phases of this study, the determining factor in the selection of persons to be interviewed was what Killian refers to as constructing a sample of points of observation. That is, as far as possible, persons interviewed were those who were thought to have been most familiar with a given situation or event as it affected their particular organization.  

The interviews obtained by use of schedules A and B were both structured and semi-structured and of an in-depth nature. They were tape recorded in almost all instances and varied from approximately thirty minutes to eight hours in length. This study has utilized 345 of these interviews. The number of interviews obtained in the various cities is as follows.

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21Kilian notes in this regard: "Sometimes... the investigator cannot define statistically the universe to be sampled. Some of the basic units of investigation are likely to be events or chains of events, rather than the distribution of attitudes, emotional reactions, or behaviors in a population. Here his concern is to obtain the most accurate reconstruction of the event possible and this need may best be served by tracing down and interviewing those persons who were participants in or witnesses to that event. His concern is sometimes with a particular decision -- for example a decision to form a disaster committee representing different agencies -- or a particular point in a process -- for example, the origin of a rumor." Lewis M. Killian, An Introduction to Methodological Problems of Field Studies in Disasters (Washington, D. C.: National Academy of Sciences -- National Research Council, 1956, publication 465), pp. 18-19. Quoted from Anderson, Ibid., p. 36.
TABLE 1
NUMBER OF INTERVIEWS OBTAINED

<table>
<thead>
<tr>
<th>City Obtained</th>
<th>Number of Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Orleans</td>
<td>135 (13)</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>64 (14)</td>
</tr>
<tr>
<td>Fairbanks</td>
<td>75 (25)</td>
</tr>
<tr>
<td>Detroit</td>
<td>71 (29)</td>
</tr>
<tr>
<td>Total</td>
<td>345 81</td>
</tr>
</tbody>
</table>

The figures in parentheses after New Orleans and Los Angeles indicate the number of interviews obtained in 1967-1968 for the purposes of analyzing long-term change. The figures in parentheses after Detroit and Fairbanks indicate the number of interviews conducted for the purposes of analyzing short-term changes among the organizations selected for analysis. Most of the remaining interviews in New Orleans and Los Angeles provided us with valuable base line data since they were obtained in 1965. The remaining interviews in Detroit and Fairbanks provided us with information of a general nature and comes from a wide variety of sources including the mass media, welfare agencies, church groups and governmental units.

A second source of data used in this research is from on the scene observations made during the emergency periods in the various cities.
These observations were customarily recorded by hand then put on tape and later transcribed, along with the formal interviews, by secretarial personnel at the DRC.

A third major source of data came from various kinds of organizational documents. These included operations reports, policy statements, disaster plans, logs, budgets, legislative documents, tables of organizations, reports by governmental agencies, extensive newspaper accounts and radio and television reports. These data have been of particular importance for our analysis of long-term change since they represent in many cases the codification and legitimatization of changes made during the emergency and immediate post-emergency periods.

A final source of data came from library materials and research reports made available by the DRC.

To summarize, we have secured the data necessary to complete this study from these four sources: personal in-depth interviews, on the scene observations, documents dealing with the responses of the various organizations in our sample, and library materials and research reports made available by the DRC.

**Organizations Selected for This Study**

As previously indicated, not all organizations are equally involved nor equally affected by a major emergency. Some organizations, especially those with both a community orientation and disaster-relevant resources are inevitably confronted with increased demands of high priority. Others may experience some increase in demands but these may be of non-crucial importance, while still others may face no increase in
in demands, so that they may continue to function in a normal or near-normal fashion. Since one of our basic hypotheses asserts that the number and kind of demands placed on an organization will affect the number and kinds of interorganizational changes that organization will experience, we felt it was important to select those organizations customarily involved in a community's response to disaster events and hence most likely to experience those precipitants of both short-term and long-term change. On the basis of past research, we were able to determine those organizations which fitted into this desired category. We also wished to get a cross section of organizational types so that we could discover whether or not the particular structure possessed by an organization influenced its tendency for change. And lastly, we were compelled by practical considerations to select those organizations with whom we had established sufficient rapport to acquire the necessary data, some of which were quite sensitive from the standpoint of organizational and community security.

Basing our selection on these three criteria, we decided upon these six organizations, which we have studied in each of the cities included in our sample: police and fire departments, electric and telephone, and where feasible other utility companies, and the local units of the Red Cross and Salvation Army. All of these organizations possess, especially under emergency conditions, both a community orientation and emergency-relevant resources. As a result of this, they frequently become involved in a community's response to major emergencies. Secondly, and of great importance for our purposes, the organizations selected represent a cross section of organizational types and finally, since
researchers from the DRC had established favorable relationships with several of these organizations as a result of previous research, we felt we could secure the additional data necessary to complete this study. By selecting the organizations we did, we feel we have been able to satisfy the prerequisites considered necessary for our research purposes.

The Analysis of the Data

The data gathered for this study are voluminous and are of such a nature that they are amenable to a wide variety of analyses. Although the data are not quantitative in the sense of representing the attitudes or opinions of respondents, they do provide a vast reservoir of information about twenty four different organizations. Because of our sample size, some arithmetic manipulation and analysis would have been possible. We have felt, however, that a sophisticated statistical analysis is not warranted by the data gathered and moreover that such an analysis would not appreciably enhance our findings. We have, therefore, relied heavily on the comparative and descriptive methods as we analyzed and interpreted our findings.

Our analysis has centered around one major independent variable, two major intervening variables and one major dependent variable. The major independent variable is community emergency; the two intervening variables are types of emergency and organizational structures; the dependent variable is interorganizational change. Our chief assumption is that major community emergencies produce interorganizational change. However, we feel there are a number of intervening factors which influence the degree and type of interorganizational change which occurs.
In addition to our major working hypothesis which simply stated says that major community emergencies, because they place excessive demands on the emergency organizations, will produce interorganizational change, we have two major sub-hypotheses. These sub-hypotheses are: (1) the type of emergency which occurs, that is, whether it is a natural disaster or a civil disturbance will have a differential impact on the organizations functioning in a community and hence will produce different degrees and kinds of interorganizational change, and (2) the type of structures possessed by an organization will influence the degree and kinds of interorganizational change an organization will experience following a community-wide emergency.

We are hypothesizing, then, in a general way that the type of interorganizational change which occurs following a community emergency is closely related to the type of emergency which has taken place (because each type produces different degrees and kinds of demands on a community's emergency organizations), and further that the nature of an organization's internal structure will influence the degree and kind of interorganizational change which occurs. In keeping with these assumptions, we have chosen, for analysis four major emergencies which enable us to examine the first of these sub-hypotheses, two natural disasters and two civil disturbances. Furthermore, the organizations selected for this study were purposely chosen to enable us to investigate, in an exploratory fashion, the ramifications of our second sub-hypotheses. In order to examine the sub-hypothesis dealing with organizational structures, we selected organizations which can be broadly typed into three groups: those with bureaucratic structures; those
with technical structures and those with volunteer structures. We have therefore, placed each of the twenty four organizations selected into one of these three categories on the basis of their most dominant characteristics.

The criteria on which this typology has been established is as follows. Bureaucratic organizations are defined as those which possess: (1) clearly defined, hierarchical patterns of authority, (2) a personnel structure which consists of civil service employees whose roles are largely interchangeable and non-specialized; and, (3) chief administrative officers who are directly responsible to local governmental officials.\textsuperscript{22} We have placed all of the police and fire departments in this category.

Technical organizations are defined as those which possess: (1) a complex of line and staff positions, (2) a personnel structure which consists of managers and technicians whose roles and positions are highly specialized, technical, and non-interchangeable, and (3) chief administrative officers who are responsible to a board of directors and to shareholders in a business corporation or to a local governmental commission. We have placed all of the telephone and utility companies in this category.

\textsuperscript{22} Our criteria are dictated by a need to operationalize our definition. All of the organizations included in this study possess some of the characteristics outlined by Weber in his well known work on bureaucracies. His criteria do not, however, provide us with a meaningful definition. For a discussion of Weber's criteria see: H. H. Gerth and C. Wright Mills, translators and editors, From Max Weber: Essays in Sociology (New York: Oxford University Press, 1946), pp. 196-204; and in Weber, op. cit., pp. 329-336.
Volunteer Organizations have been defined as those which possess:
(1) loosely defined patterns of authority, (2) personnel structures which consist of a small body of professional and a large number of un-trained or semi-trained volunteers, and (3) administrative officers who are directly responsible to regional and/or national governing boards. We have placed all of the local units of the Red Cross and Salvation Army in this category.

By comparing the changes which take place in the interorganizational relationships of these three types of organizations, we will be able to evaluate our hypothesis regarding the influence of organizational structures on interorganizational change. Since we have a body of data dealing with each type disaster, we will be able to analyze the influence of each type context on each type organizational structure as manifested in interorganizational change.

The major dependent variable in this study is, of course, interorganizational change. We have selected five dimensions of this change for extensive analysis. As noted these are: authority, leadership, decision making, interdependence and coordination.

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As we analyzed our data it became obvious that there was a very close relationship between the structures possessed by an organization and the functions performed by that organization. The bureaucratic type organizations were chiefly responsible for performing protective functions; the organizations with technical structures were largely involved in providing utility services; those organizations with volunteer structures were primarily involved in offering welfare assistance. Thus, we typed, for purposes of description and analysis, the twenty four organizations included in this study into three major categories which encompassed both of these dimensions. These categories are: the bureaucratic-protective, the technical-utility and the volunteer-welfare. Thus, we really had a typology based on both structure and function and as will be pointed out later both of these dimensions were important as we attempted to describe and analyze the interorganizational changes which occurred.
CHAPTER III

CHANGES IN INTERORGANIZATIONAL RELATIONSHIPS--AUTHORITY

In this chapter and in the four chapters to follow we will examine the changes which occurred in the interorganizational relationships selected for analysis in this study. As noted the interorganizational dimensions selected for this purpose are: authority, leadership, decision making, interdependence and coordination. It is recognized that these dimensions are not discrete entities but rather closely related, and in some instances, interdependent. Authority, leadership and decision making, for example, appear to be especially interrelated. Nonetheless, it is felt that these dimensions can be separated for descriptive and analytical purposes. It is in keeping with this feeling that the following chapters are presented.

Authority

Under normal conditions the authority relationships which exist within a community can be seen as originating from several sources.  

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24 The concept of authority has been of interest to sociologists for a long time. The work of Max Weber has been particularly important and although some of his earlier concepts have been expanded or altered by recent research, we have relied heavily on his writings for our theoretical orientation. Authority exists, Weber says, when there is the probability that certain specific commands (or all commands) from a given sources will be obeyed by a given group of persons.
Much of the formal authority in a community accrues from political positions which bring with them the power to exercise control over persons and/or agencies. The authority possessed by mayors, governors, city councilmen and other elected officials would come within this category. The tasks associated with these offices are usually administrative in nature and include responsibility for the maintenance, creation and implementation of programs which affect the community at large. These officials customarily administer these programs through regularly established agencies and committees. The scope of authority held by public officials is broad and pervasive rather than specific in that they exercise control over a wide spectrum of community activities ranging from the raising of taxes to the collection of refuse.

A second source of authority is that accorded organizations because of their relationships to governmental units. Police and fire departments as well as the National Guard are, in fact, extensions of political units and as such derive their authority chiefly from those units. Most frequently these relationships are institutionalized

through the enactment of statutes and ordinances but, nonetheless, the
authority possessed by the social control and custodial organizations
in a community is in large measure delegated to them by political
jurisdictions.

Another formal source of authority is that accorded organizations
on the basis of specific responsibilities or services performed. These
organizations, unlike the protective or custodial ones, are not generally
extensions of political units but nonetheless receive statutory sanc-
tions which establish their domains and allocate to them their authority.
The public utilities companies are an example of such organizations. A
less obvious example would be the American National Red Cross which has
certain legal authority assigned it by the United States Congress. Fol-
lowing the declaration of a major disaster by the President, under pub-
lic law 875, the Red Cross does have certain legal recognition and can
exercise certain authority associated with the requisitioning of surplus
foods, military planes and vehicles and so forth. Public law 875 was
in effect in New Orleans and Fairbanks but not in either Los Angeles or
Detroit.

A final source of authority is one which all of the organizations
in this study possessed in varying degrees following the respective di-
sasters. This authority has been referred to as being rational-pragmatic
or rational-legal by Harrison and consists of an authority which arises
not from legal statutes but from the ability to achieve desired goals
and objectives. During and immediately following disasters, the type
of authority is assigned those organizations which possess skills and
resources needed to solve important problems confronting a community.
This type of authority is generally short-lived and tends to shift from one organization to another as the demands fluctuate following the impact period.

Thus, the range of public authority which operates within a community is derived from these sources: (1) direct political authority or extensions of it, (2) special mandates obtained from governmental and/or other regulatory agencies which assign a service domain to particular organizations, and (3) from the ability to solve community relevant problems through the possession of vital skills and material resources.

For our purposes we have defined interorganizational authority as the acknowledged right, power or duty to exercise interorganizational leadership and to have directives obeyed.26

The scope of authority derived from each of these sources varies markedly. The responsibilities of public officials, as noted, are quite pervasive and so is their authority. The responsibilities of police departments are generally much more diffuse than those possessed by other city departments and so is their authority. Fire departments, while performing a wide range of community services, have much more narrow areas of authority than police departments and apart from fire

25 For a more extensive discussion of this concept see Paul M. Harrison, Authority and Power in the Free Church Tradition (Princeton, N. J.: Princeton University Press, 1959), Chapter IV.

26 I am indebted to Irving Rosow for the wording of the definition of authority and for many of the ideas expressed below concerning leadership. See: Irving Rosow, Authority in Natural Disasters, Disaster Research Center Monograph Series (Columbus, Ohio: The Ohio State University), Chapter one.
suppression responsibilities which are assigned by legal statutes and quasi-legal regulations, they possess relatively little legal authority. Welfare organizations such as the Red Cross and Salvation Army, while subject to a wide range of demands during disaster periods, under normal conditions tend to possess narrowly defined authority, generally of the rational-legal or rational-pragmatic variety. Utility organizations possess highly specific and technical responsibilities and skills and as a consequence tend to have narrowly defined limits of authority under both normal and disaster circumstances.

The normal authority patterns are carried over into disaster situations and serve as the primary guidelines for the community's initial response. As the demands on the community's emergency organizations increase, however, alterations in the relationship among these organizations begin to appear. Authority relationships which had been implicit become more explicit as first one, then another organization becomes actively involved in responding to the emergency. At the highest levels the community's elected officials begin to allocate tasks and resources to those organizations which normally function under their supervision. Then as the situation becomes more clear, and the community's needs become more known, other organizations including the welfare and utility subsystems become involved. Attempts are made by public officials to coordinate the operations of these various organizations by allocating both tasks and resources and as a consequence authority as well.

Bureaucratic-protective organizations

Both types of emergencies analyzed tended to accentuate the authority of the police departments in that there was a strong consensus
among the majority of the persons and organizations in all four communities concerning the saving of life and the protection of property.

In natural disasters, the scope of police authority was quite diffuse and while it was more explicit than usual it was rather limited in terms of its control over other emergency organizations functioning in the community. There seemed to be a more conscious recognition of police authority on the part of the other community organizations, especially during the early hours of the emergencies, but as the need for police services related to search and rescue, traffic control, security, and so on diminished, so did this recognition. Fire departments functioning in natural disasters confined most of their tasks to non-fire related problems. As such, they did not obtain much of the authority which accompanies their leadership role at major fires. The fire departments studied performed a great many emergency tasks during the early hours of the natural disasters, but most of these were concerned with search and rescue, the guarding against dangers from fallen electric lines, and trees and other tasks of a general nature. As soon as the immediate emergency periods were over both police and fire departments attempted to resume their normal duties as quickly as possible and as a result they tended to restore their pre-disaster authority relationships.

27 The fire departments in New Orleans and Fairbanks were quite different in terms of size, resources, structures and past emergency experience. As a result of these differences, the Fire Department in Fairbanks reacted quite differently to the flood there—than did the Fire Department in New Orleans. The scope of these differences will be pointed out later but it is worth noting here that the Fire Department in Fairbanks lost much of its organizational identity during the disaster period.
In neither of the natural disasters studied was there any significant long-term changes in the interorganizational authority relationships of the police and fire departments. The civil disturbances, however, made severe demands on the police departments over a period of several days. These demands were of an extremely high priority since they dealt with both the preservation of life and the protection of property. Moreover, the tasks associated with social control are clearly assigned to a community's police department and they alone have the responsibility and authority to deal with these problems. As such, the police exercised a great deal of control over the other emergency organizations within the community. It was largely the police departments who decided when and where the other emergency organizations could function. For example, on one occasion during a civil disturbance, police officials strongly urged firemen to withdraw from an area because of possible mob harassment and sniping. While this "suggestion" was not a formal mandate, it did carry with it the overtones of an order. Moreover, this "suggestion" could be seen as a device by which police officials sought to free themselves from possible criticism in case fire personnel were injured by uncontrolled crowds. Similarly, on numerous occasions police officers notified utilities and welfare personnel that safe passage into and out of the disturbance areas could not be guaranteed and therefore such personnel ought to remain out of these areas. Moreover, the police departments in both Los Angeles and Detroit on numerous occasions ordered the operation of street lights, commandeered schools and other public property and generally exercised a great deal of control over the operations of other emergency organizations.
While police departments actually were accorded more authority over other emergency organizations operating within the community, they experienced simultaneously, a loss of authority in terms of their own freedom to operate as non-local agencies moved into the community to assist them. As sherriff's officers, state police, National Guardsmen and federal troops arrived, the overall authority of the police was diminished. During the Detroit disturbance, there were five different social control agencies representing four levels of government operating in the city at one time. In Los Angeles, there were four social control agencies representing four levels of government operating in an attempt to bring the disturbance to an end. The police departments in both of these communities were compelled, therefore, to adjust their normal authority relationships as county, state and federal personnel entered their cities and assumed certain police functions. Conflicts arose as each organization sought to control its own activities and in one instance these conflicts were not resolved for a period of hours during the height of the disturbance. The ultimate resolution of these conflicts took the form of a compromise in which each of the organizations were more or less assigned a given area for which they assumed responsibility and over which they were to exercise authority and control. As a result of these conflicts, in both Los Angeles and Detroit, the state legislatures and municipal governments enacted laws which allocated tasks and authority to the various state and local social control agencies likely to become involved in suppressing another large disturbance. These laws have since become a part of the ongoing structures of each of these organizations and represent some of the most significant of the long-term changes occasioned by these civil disturbances.
Fire departments, like the police departments, experienced marked changes in their authority relationships as the result of the civil disturbances analyzed. Their responsibilities were most conspicuous as they responded to literally hundreds of fires in a short period of time. Their response to these fires represented one of the most important dimensions of the community's effort to control the effects of the disturbances. Unlike their role in natural disasters where fire departments performed tasks of a general nature, during the two civil disturbances studied the fire departments performed one predominant task, that of suppressing fires. Since this function is the one which gives them a clear and statutory authority, fire officials in both Los Angeles and Detroit were consulted frequently by public officials and by representatives from other organizations concerning the definition of the emergency situation and ways to control it. In both of these cities, fire officials were included in the basic decision making process whereby strategies were being outlined concerning the ways to control the looting and burning. The overall authority of fire officials was never higher than it was during these civil disturbances.

The fire departments, like the police departments, had to depend on outside assistance during the course of the two disturbances. This dependence was especially conspicuous in Detroit where more than forty extra-local departments responded to requests for mutual aid. There was, however, no significant conflicts in the authority relations between fire departments. This absence of conflict can be attributed to two principal facts. First, the state laws in California governing the functioning of fire departments in times of declared disaster are quite explicit concerning
the allocation of resources and authority. Once a state of disaster was declared, fire officials in Los Angeles were bound by law to certain authority relationships. Secondly, fire departments across the United States frequently depend on one another for mutual aid. One of the common agreements developed by these fire departments in mutual aid situations is that host departments, through their officers, are automatically in charge of operations at the scene of a fire. Thus, in both Los Angeles and Detroit, local fire officials remained in charge of all fire operations throughout the disturbances.

The only long-term changes in the patterns of authority of fire departments accruing from either the natural disasters or civil disturbances being considered here are those related to the formalization of mutual aid pacts in the state of Michigan. Soon after the disturbance was over there, local fire officials were able to establish more clearly defined mutual aid agreements. A part of these agreements dealt with the scope and structure of interorganizational authority. These laws and agreements were already extant in California and were left almost entirely unchanged. All other authority relationships between local fire departments and the other emergency organizations functioning in all four disasters remained largely unchanged.

The technical-utility organizations

The utility organizations, like the police and fire departments also experienced different degrees of demands as a result of the two types of emergencies.

In both of the natural disasters studied, the utility services were seriously disrupted by the disaster agents. Since these services were
extremely vital to the other emergency organizations functioning in the community and to the public at large, their restoration was accorded a very high priority. Thus, the utilities companies were granted a very free hand to do those things necessary to restore important services. There was, then, simply an explicit recognition of the already existing legal responsibility and authority afforded utility organizations. There was, in addition, an increase in the rational-pragmatic authority of utility companies as the result of their technical and badly needed material resources. Following the restoration of utility services, this rational-pragmatic authority declined and the legal authority became more or less implicit once again. There were no significant long-term changes in their authority relations as the result of their involvement in either of the natural disasters studied.

The involvement of the utility organizations in the civil disturbances being considered was quite minimal, particularly during the actual disturbance periods. The telephone companies did handle more calls than usual but they, along with the other public utility organizations, had only a peripheral involvement in field operations until after the disturbances had been quelled. Then these organizations performed their tasks in much the same manner as they normally would. Perhaps the most important change in their interorganizational authority relationships resulted from the fact that they were somewhat restricted by the police departments in their movements into the disturbance areas. (This presented no interorganizational conflict since the utility organizations were not too zealous in their desire to enter these areas anyway.) The only long-term
change in their authority relationships as the result of the civil disturbances emerged from certain laws and ordinances enacted by state legislatures and city governments which gave to the social control agencies functioning during a civil disturbance, temporary powers to direct the field activities of other emergency organizations including the utility companies.

We can conclude, therefore, that the two types of emergencies affected the authority relationships of utility organizations in two ways. The natural disasters increased the interorganizational authority of utility organizations by making their implicit authority much more explicit and by increasing their rational-pragmatic authority as a result of their vital recovery roles. The civil disturbances left the overall authority of the utility organizations relatively unchanged although they did experience some restrictions which later became formalized and, hence, can be regarded as long-term changes.

Volunteer-welfare organizations

The welfare organizations in this study experienced sharply contrasting demands as the result of the two different types of emergencies. They also experienced markedly dissimilar changes in their interorganizational authority relationships. The natural disasters confronted the welfare organizations with a wide range of responsibilities which were extended over a period of days and even weeks. As the result of these disaster-induced demands, the latent emergency functions of both the Salvation Army and Red Cross became extremely manifest and as they did each organization experienced a sharp increase in its interorganizational authority. This increase was due largely to their increased emergency activities and as such can be
considered as rational-pragmatic authority. The Red Cross organizations, in addition, in both New Orleans and Fairbanks, were operating with the added authority provided by public law 875 following the designation of these cities as disaster areas. Because of this, the Red Cross had an increase in their legal authority as well. However, these increased authority relationships did not give these welfare organizations the authority to direct the activities of other organizations. Rather, what this increased authority did was legitimate the disaster functions being performed by the Salvation Army and Red Cross and furthermore it legitimated the demands these organizations were making on the scarce resources of the affected communities. Once again, we can note that the authority possessed by the welfare organizations in a community is largely an authority borne of function. This authority, like the functions on which it rests, remains latent under normal circumstances. When, however, these latent functions are made manifest by an organizational response to a community emergency, the latent authority possessed by these organizations becomes manifest as well. This is what occurred in both New Orleans and Fairbanks. As the emergency period in these cities subsided and the involvement of the welfare organizations diminished, their functions and their authority became latent once again. There were no long-term changes in the interorganizational authority relationships of the local units of the Salvation Army and Red Cross as a result of their response to the disasters in New Orleans and Fairbanks.

The two civil disturbances did not create enough significant demands on either the Salvation Army or Red Cross to necessitate the full activation of their local organizations and hence there was not an emergent
claim for legitimation and authority. The one possible exception was the Salvation Army in Detroit where that organization did respond in a limited way to the emergency. Again, the measure of its authority was in direct relation to the magnitude of its involvement.

The inactivity of the Red Cross in Los Angeles and Detroit was due not only to a general lack of demands but also to the fact that the national and regional Red Cross offices had strongly urged local Red Cross chapters to avoid involvement insofar as possible. This urging came in the form of a memorandum some months before either of the civil disturbances occurred. Soon after each of the disturbances, local Red Cross officials consulted with a large number and variety of other organizations in an effort to explain their non-involvement and to outline what services could be made available by them in the case of a similar future disturbance. In this case, the authority of the Red Cross was limited because of an intraorganizational policy which strongly urged local chapters to refrain as much as possible from active, conspicuous involvement. This policy suggesting the non-involvement of Red Cross chapters during civil disturbances was rescinded in 1968 and in a sense can be seen as a long-term intraorganizational change which will undoubtedly have interorganizational ramifications as well.

Summary
In summary, we can conclude that the two types of emergencies produced differing changes in the interorganizational relationships of the organizations included in this study. The natural disasters, particularly during their early hours, made the latent authority of police departments more manifest as these organizations formed the hub around which
much search and rescue, security operations, and so forth, revolved. As
the initial impact and immediate post-impact periods passed, however, the
role of the police departments decreased and so did their manifest authority
over other organizations. In contrast, civil disturbances placed spe-
cific and extensive demands of long duration on the police departments and
concomitantly the authority of the police departments was increased over
other local, non-social control organizations. At the same time, the
overall authority of the police departments was somewhat diminished in
civil disturbance situations as it became shared with other non-local so-
cial control organizations.

Fire departments exercised little authority in the natural disasters
studied for two reasons. First, they were not fighting fires, a role
which normally maximizes their legal authority, and secondly they were
performing a great many tasks quite like those being performed by many
other groups and organizations. These latter tasks were not particularly
within the domain of the fire departments involved; neither did these de-
partments possess either unique skills or resources which might have af-
forded them a rational-pragmatic type of authority. The fire departments
in Los Angeles and Detroit, on the other hand, possessed both of these
dimensions, hence, they obtained considerable authority. They were fight-
ing a large number of important fires which gave them certain legal au-
thority and they possessed vitally needed skills and resources which pro-
vided them with a basis for rational-pragmatic authority. There was,
then, in natural disasters, a diminution of fire department authority.

In civil disturbances, however, fire departments enjoyed a larger measure
of community authority than normally accorded them. The changes in the
authority relationships which occurred on a long-term basis were designed to institutionalize some of the ad hoc changes which occurred during the emergency periods. As such, these changes dealt with the passage of certain laws which spelled out in advance the functions to be performed and the authority to be possessed by police and fire departments in the event of future disturbance situations.

The utility organizations experienced few changes in their authority relationships as the result of either of the types of emergencies studied. The opposite was true for the welfare organizations which experienced a marked short-term increase in their authority as a result of their increased functions in the natural disasters. Both the Salvation Army and Red Cross chapters in New Orleans and Fairbanks also experienced marked changes in their intraorganizational authority patterns as well.

While there were many ad hoc, short-term changes in the interorganizational authority patterns of the organizations studied, there were few long-term changes. Following the natural disasters, there were no significant changes at all. There were, however, a number of long-term changes in the authority relationships of the police and fire departments following the civil disturbances. These changes were largely related to certain laws which were enacted after the disturbances which sought to outline the lines of authority which were to be followed in event of another disturbance. These laws were, in effect, attempts to avoid some of the confusion and conflict which arose among the social control agencies operating in the cities of Los Angeles and Detroit during the disturbance periods.

On the basis of our analysis of interorganizational change as it relates to interorganizational authority, we can offer the following conclusions.
1. As the demands on the community and its problem solving subsystems increased, so did the number of changes in the authority relationships of the organizations included in this study.

2. As the magnitude of an emergency increased so did the number of local and non-local emergency organizations functioning in a community increase. As a result of this increase in the number of organizations functioning in a community the lines of authority tended to include a wider circle of authority figures. This increase in authority figures resulted initially in a great deal of administrative confusion and conflict. As the emergency ran its course and as the division of labor in the community became more explicit, this confusion and conflict decreased.

3. When the organizations functioning in an emergency had prior disaster working relationships, there was a greater understanding of one another's roles and accompanying authority. Consequently there were fewer interorganizational conflicts between those organizations which had prior disaster working relationships than there were between those organizations which had not had prior disaster experience. We can conclude further that the changes in the interorganizational authority patterns of the organizations studied were related closely to: (1) the nature and scope of the authority possessed by an organization prior to the emergency, (2) the nature of the organization's internal structure, and (3) the degree and duration of an organization's dependence on other local and non-local organizations.
CHAPTER IV

CHANGES IN INTERORGANIZATIONAL RELATIONSHIPS--
LEADERSHIP AND DECISION MAKING

Since the concepts of leadership and decision making are so closely related, we will examine our findings regarding both of these dimensions in this chapter. While these interorganizational dimensions are closely related, they are, nonetheless different from one another. We will, therefore, differentiate between these concepts and then discuss our findings regarding them.

Leadership

The concept of leadership is closely related to the concept authority. Authority, we have said, is the acknowledged right to exercise leadership and to have directives obeyed. Leadership, then, can be seen as a function of authority or as a manifestation of the authority possessed by a person or organization. Since we are primarily concerned with leadership on an interorganizational level, we have defined leadership as the ability of certain organizations to direct the activities of other organizations in order to achieve certain goals. We can expect, then, that those emergency organizations which possess authority on the basis of political power, or legal mandates or as the result of their ownership of vitally important resources can be expected to possess leadership roles as well. One could further expect that in disaster and in non-disaster
environments, too, that emergency organizations would furnish leadership in those spheres which their authority covers. Moreover, under hypothetically ideal situations, the congruence between the authority possessed by an organization and the leadership provided by that organization ought to be found in close association. It is conceivable, however, that some organizations may exercise, or attempt to exercise, leadership roles in emergency situations even though that leadership is not based on any generally recognized authority. If, and when this occurs, conflicts are likely to arise between the organizations involved, as indeed they did.

Bureaucratic-protective organizations

The protective organizations in this study had the most comprehensive authority of any of the organizations being considered. We pointed out in the above section on authority that police departments in natural disasters do exercise a general authority over individuals and, especially during the early stages of a disaster, over other organizations as well. The same can be said for their leadership roles. In both types of disasters studied, the police departments provided leadership in those areas where they had: (1) a specific responsibility for the tasks at hand, (2) the necessary skills and/or resources to accomplish those tasks, and (3) a clear definition of their authority to exercise that leadership. The differences in their leadership roles in natural disasters as contrasted to civil disturbances can be accounted for in variations in these three factors. In natural disasters, the responsibilities of the police were quite general and for the most part they performed many tasks normally performed on a day to day basis only in greater numbers. Their activities associated with search and rescue, traffic control, security, and so forth
were clearly theirs and they responded accordingly. Later, as the recovery and rehabilitation periods unfolded, their responsibilities were not nearly so clear-cut and as a result they exercised far less interorganizational leadership in the later phases of these disasters than they did in the early ones.

During the civil disturbances, the police departments were confronted with one basic task of high specificity—the quelling of the disturbance with as little loss of life and property as possible. This task was clearly theirs and theirs exclusively as far as the emergency organizations in the affected cities were concerned. Furthermore, and quite importantly, the tasks assigned the police departments in the civil disturbances were of the highest priority as far as the majority of the community's residents were concerned. (This is in marked contrast to their functioning in the late stages of a natural disaster.) The police departments not only had the specific responsibility for dealing with the civil disturbances, they had the resources (weapons, vehicles, personnel, the power of arrest, and so on), and the exclusive authority for dealing with them as well. Given these factors, it is understandable that police departments exerted great interorganizational leadership throughout the emergencies. This leadership generally took the form of directives or suggestions of a tactical nature by which other emergency organizations ordered their own responses.

As the disturbances heightened, there was some questioning on the part of community and organizational officials concerning the ability of the local police departments to handle all of the demands being placed on them. When it became apparent that this was in fact the case, a number of
extra-local social control agencies entered the stricken cities. The arrival of these agencies represented a marked change in the overall leadership patterns of the local police departments. These departments discovered that their leadership prerogatives over other local organizations were being altered and moreover that the conduct of their own organizations were coming under the scrutiny of outside agencies. Thus, as the local police departments in Los Angeles and Detroit were unable to meet the emergency responsibilities assigned them, other agencies with similar resources were called in. These extra-community agencies not only possessed resources, they possessed a large measure of authority as well. Conflicts arose. These conflicts were resolved as the organizations involved were assigned areas of responsibility and authority, and hence, areas of leadership as well.

These ad hoc adjustments, in several instances, were later institutionalized by the passing of laws which provided for an orderly transferal of authority and leadership in the event of a future emergency of a similar nature. We indicated above in the section on authority that fire departments had far greater interorganizational authority during civil disturbances than they did during natural disasters. The same is true concerning their leadership functions. In natural disasters their assigned tasks were not particularly within the realm of their most important position within the community, that is, they were not fighting fires. Their interorganizational authority and leadership was, therefore, limited. While the fire department in New Orleans did not experience any great diminution of their interorganizational authority or leadership they were
functioning in areas where it was vulnerable to manipulation by other organizations. This was, it would seem, one of the primary reasons they withdrew from the field of operations as quickly as public opinion would allow.

The operations of fire departments in the civil disturbances studied were quite different. In these situations they were in positions which demanded leadership from them. This occurred because they were operating within an emergency climate which maximized their legal status and responsibility. They had, in addition to the sole responsibility for fighting fires, then, the authority to suppress the many fires as they saw fit. These responsibilities and attending authority provided the fire departments with a mandate to exercise interorganizational leadership. This they did. In both Los Angeles and Detroit, fire officials were consulted by the highest echelons of government before crucial decisions were made. Also, in both cities, fire officials presented to community leaders operational plans which outlined not only their own procedures but the logistical support they would need from other organizations as well. In one of the cities affected by a civil disturbance a conflict arose between the fire and police departments after fire officials presented a crisis operational plan to a group of state and local governmental officials which outlined in some detail the responsibilities of the police department as they related to the protection of fire personnel. This conflict was resolved after a lengthy discussion among the officials involved. The important factor to note here, however, is that fire officials were offering leadership in areas where they had neither an established precedent nor recognized authority. As mutual aid became a factor in their
responses, the local fire departments in Los Angeles and Detroit provided a great deal of leadership by which the many other fire departments operating in and around their communities were more or less integrated into a single functioning unit. The conflicts which arose between the police departments and the other social control agencies operating in their communities were not apparent in the relationships between fire departments. The leadership function of the host fire department is recognized by both law and tradition and as a result there was never any question as to which fire officers were in charge.

The long-term changes in the interorganizational leadership patterns of fire departments were confined for the most part to the formalization of certain mutual aid agreements. Since these were discussed under the authority section immediately above, there is no need to elaborate on them here.

Technical-utility organizations

The leadership roles of utility organizations, like the scope of their authority, was quite narrowly confined in the disasters studied. Their organizational involvement as noted above was markedly different in the two types of emergencies included in this research. As a consequence of their heavy involvement in the recovery and rehabilitation efforts of communities following the natural disasters, the utility organizations did exert some small amount of interorganizational leadership in New Orleans and Fairbanks. This leadership was limited almost entirely, however, to the areas of their technical competence and consisted largely of securing the support, understanding and cooperation of other emergency organizations functioning in the community. Their response to the civil
disturbances studied was quite minimal and so highly specific, technical and self-contained that they had little occasion to direct the activities of other organizations in any of the disasters studied.

**Volunteer-welfare organizations**

Almost all of the interorganizational authority granted the Salvation Army and Red Cross is of a rational-pragmatic variety. The one notable exception being the authority granted the National Red Cross under the provisions of public law 875. The authority of these organizations remains latent under normal conditions and does not become manifest until a disaster occurs. Then, as their services and resources are called upon, they are accorded enough authority to effectively pursue their assigned tasks. This authority is always rather limited in scope and is generally confined to those areas of their immediate involvement. It rarely spills over into the broader areas of authority possessed by city governments, police departments, and other emergency agencies. The same is true for the interorganizational leadership functions of welfare organizations. These functions emerge as the organizations become activated and begin to serve the welfare needs of those affected by a disaster. The Salvation Army and Red Cross are structured in such a way that neither of them is capable of exerting a great deal of interorganizational leadership, except under extreme crisis conditions. In the natural disasters studied, these organizations did exert an increased amount of interorganizational leadership as they sought to direct the shelter and feeding programs in the affected cities. But, by in large, their leadership functions were limited to these particular spheres. The interorganizational leadership provided by these organizations during the two civil disturbances is even
more conspicuously absent. In Los Angeles neither organization became sufficiently involved in the community's response to have an opportunity to lead other organizations. In Detroit their involvement, while slightly greater than in Los Angeles, did not provide them with enough crucial responsibilities and authority to enable their direction of other organizations. We can say, then, that there was an increase in the interorganizational leadership provided by the welfare organizations in times of extreme stress. As the latent resources of these organizations were activated, so were their authority and leadership functions. In the natural disasters studied, these organizations did provide many services and as a result they were able to offer a certain limited amount of interorganizational leadership. The leadership provided was generally confined to those areas of their specific competence and resources and in no instance did the welfare organizations direct the activities of any of the other organizations included in this study. As the services provided by these organizations declined in number and importance following the disasters, so did the extent of their leadership. There were no notable long-term changes in the interorganizational leadership roles ascribed to the welfare organizations studied.

Summary

We can summarize our findings on interorganizational leadership as follows. There is a definite carry over of non-disaster leadership roles into disaster situations. The police and fire departments in natural disasters largely perform tasks of a general nature. As a result of this fact, the overt leadership extended by these organizations were confined
largely to those areas wherein they have specific authority and responsibility. In civil disturbances, the police and fire departments provide extremely crucial services and in addition operate within those spheres where their authority is greatest. These conditions give an ascendancy to their leadership roles on an interorganizational level.

The utility organizations experience relatively little change in their leadership roles as the result of a community emergency. Where changes do occur, they tend to be largely insignificant and of a short duration.

The welfare organizations show a general increase in their interorganizational leadership in emergency settings when compared with their pre-emergency roles. This increase is a result of their increased participation in the life of the community as a result of a major crisis. The areas of their increased leadership are limited to those spheres of activity in which they possess skills or resources. As the effects of the emergency are reduced, the emergency operations of these organizations are reduced and their authority and leadership roles became latent once again.

The vast majority of interorganizational changes in the leadership functions of the organizations studied were of a short-term nature. The natural disasters did not produce any significant long-term changes. The civil disturbances did produce some long-term changes in the leadership roles of the police and fire departments in that these roles were made more explicit and in some instances given legal status as the result of certain laws which were enacted following the disturbances.
On the basis of the organizations studied, we can conclude that changes in interorganizational leadership functions as the result of major community emergencies derives largely from: (1) the pre-disaster authority and leadership possessed by an organization, (2) the relevance of an organization's skills and resources for the recovery and rehabilitation of the community, and (3) the ability of an organization to adequately perform the tasks assigned it.

Decision Making

Decision making is closely related to authority and leadership. It is, however, different from each of these phenomenon. Authority is a structural variable; it is an attribute possessed by a person or organization. Leadership is a function, an exercise of that authority. Decision making, unlike either of these tends to be a process which on the interorganizational level involves a number of different organizations. In crisis situations interorganizational decision making revolves around these factors: (1) the definition of the emergency situation, (2) a consideration of the various alternatives by which a community can be restored as quickly as possible to its pre-emergency state (3) the resources available to the community and its emergency-relevant organizations, (4) which organizations will get what resources, and (5) how are those resources to be used. Since there are several phases or stages through which an emergency goes, there must be a constant redefinition of the emergency situation and a concomitant reallocation of tasks, resources, authority, and so on. This entire process of appraisal and reappraisal, allocation and reallocation entails an increased amount of
interorganizational consultation and decision making. Thus, a major com-
munity emergency can be seen as precipitating changes in the way organi-
izations function. For whereas organizations were operating semi-autono-
mously within the realm of their own domains prior to the emergency, they
discover in the post-impact period that they are much more dependent on
other organizations. Moreover, as the authority structures of the vari-
ous organizations undergo change as the result of the disaster, the
leadership roles exercised by these organizations and their place within
the decision making process can be seen as changing also.

As we analyzed our data on interorganizational decision making we
did so in light of these assumptions. We made a concerted effort to de-
termine if, in fact, major crises do change the patterns of interorgani-
zational decision making which exist within a community and if so how
and when.

Bureaucratic - protective organizations

Under normal circumstances, the decision making prerogatives of
police departments are quite autonomous and, like their authority, quite
pervasive. Major emergencies, however, produce changes in this autonomy
as the result of the reallocation of tasks, resources and authority among
the various emergency organizations functioning in a community. In both
types of disasters studied, the police departments became involved in a
great amount of interorganizational consultation as crucial decisions
which affected the entire communities were being made. The natural di-
sasters greatly expanded the coordinative functions of police departments
as far as interorganizational decision making was concerned. The police
department in New Orleans on numerous occasions served as a catalytic
agent as they endeavored to assist in the integration of the responses of all the emergency organizations functioning in that city. The New Orleans Police Department could perform this task because their own organizational domain, resources and authority were not threatened by the disaster. Neither was their response of a crucial nature. The New Orleans Police Department was, in a limited sense, a disinterested party. In Fairbanks, however, the police department remained outside the larger coordination center which was established there. Early in the emergency, a local coordination center was established at police headquarters and from this location most of the local emergency response was being coordinated. Then, as a large number of extra-local organizations arrived in the city, they found it expedient to establish another center in another location. This decision was made on the basis of two facts: (1) the police building had experienced serious flooding and had very limited communications facilities, and (2) the Alaska Communication Service building offered communications with the outside world and more space within which to operate. There was, as a result of this bifurcation, considerable confusion and conflict between the local and non-local organizations operating in Fairbanks. This situation was not altered until the flooding conditions stabilized by which time a new division of labor and resources had been worked out largely on a trial and error basis.

The role of the police departments in civil disturbances was quite different. These disasters placed direct and unavoidable demands on them in both Los Angeles and Detroit. The police departments in these cities became the pivotal organizations around which most of the community's emergency response revolved. In these disturbances, every other community
organization depended on the police for protection, information and even direction as they sought to fulfill their own tasks. Thus, in the civil disturbances the ability and even in some instances the necessity of the police departments to exert leadership and decision making roles was paramount.

The interorganizational decision making functions of the fire departments parallel those of the police departments in many ways. In natural disasters, where the skills, resources, responsibilities and leadership of fire personnel were not crucial, their involvement in interorganizational decision making was rather minimal. The fire department in New Orleans did have liaison persons in the coordination center but their responsibilities there were chiefly of a perfunctory nature. In Fairbanks the fire department had no regularly established, formal liaison with either of the coordination centers. This fact can be accounted for when one recognizes that the resources and skills possessed by that fire department were not crucial to the community's recovery and had been, in effect, more or less assimilated into the community's general response.

The decision making role of the fire departments in the civil disturbances is quite different. In these instances, they exerted a great deal of influence on the ultimate decisions which were made regarding their community's disaster response. The liaison personnel in the disturbance situations were always high ranking administrative officers and on numerous occasions the departmental chiefs themselves were included in discussions of policy and priority. (This stands in stark contrast to the fire department liaison in the natural disasters where liaison
personnel were usually mid-echelon operations personnel.) Since the police and fire departments were the only emergency organizations operating in the disturbance areas during the early stages of the emergencies, they alone were able to provide an hour by hour definition of the emergency situation. It was largely on the basis of information provided by these organizations that community and other organizational officials were able to plan and coordinate the overall community response.

Thus, the influence that the protective organizations wielded in terms of their interorganizational decision making roles was in direct relationship to the operational roles they were performing. Where their involvement based on their responsibilities, skills, and authority were minimal, so was their place within the overall decision making structures of the community. Contrariwise, where they performed vital functions within the context of their organizational responsibilities and authority, their leadership and influence in the interorganizational decision making processes were paramount.

**Utility organizations**

The utility organizations in all of the emergencies studied were represented by liaison personnel at the respective community's coordination and control center. In the natural disasters, their operational roles were much more important in the overall response of the community and for this reason they were more influential in their impact on the interorganizational decision making processes. The utility organizations in New Orleans and Fairbanks had high echelon liaison personnel at the coordination and control centers. From their vantage point they were able to advise other organizational personnel of both problems and progress
in relationship to the restoration and rehabilitation of vital communications and other utility services. The operational roles of the utility companies in the civil disturbances were quite minimal since the services they provided were not disrupted on a community-wide basis. These organizations, nonetheless, had liaison personnel at both the police command posts in the disturbance areas and at the overall coordination and control centers at police headquarters. The responsibility of these personnel was chiefly confined to getting reports from the police and fire departments regarding the location and magnitude of the disturbances, especially as they related to utility installations and facilities.

One can contrast the interorganizational decision making roles of utility organizations in natural disasters and civil disturbances by comparing their losses and subsequent organizational involvement. In the natural disasters, where their services were seriously affected, these organizations were very instrumental in making key decisions, especially as they related to their own domains. These same organizations in the civil disturbances played a more passive role in the making of crucial interorganizational decisions. They were the sources of a great amount of important information in the natural disasters -- information which was most helpful to the other emergency organizations planning their own emergency responses. In the civil disturbances, they were primarily the recipients of such information. The utility organizations in all of the disasters studied, zealously guarded their organizational autonomy and their participation in the processes of interorganizational decision making reflects this concern.
The Volunteer-welfare organizations

There is a close relationship between the authority, leadership and decision making roles of the welfare organizations studied. Where these organizations became fully activated, such as in New Orleans and Fairbanks, they gained authority, exercised leadership and were included in the most important decisions being made by community and other organizational officials. For example, the representatives of these organizations at the coordination and control centers in the cities affected by natural disasters were consulted extensively by other community and organizational personnel. The Salvation Army and Red Cross liaison personnel were some of the most crucial in New Orleans and Fairbanks and their influence in the interorganizational decision making processes during these disturbances far exceeded that normally exercised by them. This importance was particularly in evidence during the sheltering and recovery periods.

The role of these organizations in the interorganizational decision making processes during civil disturbances was close to non-existent. In Los Angeles and Detroit, the Red Cross was not represented at the established coordination and control centers for reasons already noted. The Salvation Army did have a liaison officer on duty in Los Angeles during the latter stages of the disturbance there but his function was primarily confined to receiving information from police and fire personnel involved in field operations. The Salvation Army did not have a formal liaison person at the control center in Detroit but they were in communication with city welfare agencies throughout the disturbance period. They did not, however, experience any marked increase in their influence on the most crucial decisions being made by community leaders.
The long-term changes growing out of the participation of welfare organizations in the interorganizational decision making processes in the four disasters studied were quite minimal. The changes which did occur were related to the roles these organizations were to play in the event of a future disaster of a similar nature.

Summary

The interorganizational decision making roles of the various organizations studied during the course of this research varied markedly. The police and fire departments exercised little direct interorganizational leadership during the natural disasters and hence had only a limited influence on the decision making processes. By contrast, their influence on the interorganizational decision making processes during civil disturbances far outweighed that of all the other organizations studied. The protective organizations experienced no long-term changes in their interorganizational decision making relationships as a result of the natural disasters but they did experience a number of changes in these relationships through the enactment of certain laws following the civil disturbances. The utility organizations did not experience any appreciable changes in their interorganizational decision making relationships on either a short-term or long-term basis as the result of either type of emergency studied. They did experience some slight changes in their interorganizational decision making roles during the natural disasters but these were quite limited and were confined to greater interorganizational consultation and not to active decision making on the part of utility officials. The welfare organizations experienced a sharp increase in their influence as the result of their response to the natural disasters.
studied. Consequently, they were involved more directly in the interorganizational decision making processes at the community level than under normal circumstances. These short-term changes were not institutionalized, however, and the decision making roles of the welfare organizations returned to their pre-disaster status following the natural disasters. The welfare organizations did not become organizationally involved in responding to either of the civil disturbances and were not included in the basic decision making processes which were taking place at the interorganizational level.

We can offer these generalizations, then, regarding the changes which occurred in the interorganizational decision making processes as a result of the disasters studied. (1) Following a disastrous event, the emergency-relevant organizations in the communities studied came together at a common location in order to facilitate the interorganizational decision making processes. (2) The more vital an organization was to the recovery of a community, the more influential it was in making decisions, or in influencing decisions at the community level. (3) The more vitally involved an organization was in the decision making process, the higher within its organizational structures were its liaison personnel. (4) As the number of organizations functioning in a community increased, the more complex the interorganizational decision making processes became. This was especially true when this increase was due to an influx of non-local organizations. (5) On the basis of our data we can conclude that in none of the disasters studied did one organization possess exclusive decision making prerogatives. In every instance, the decisions made regarding the allocation of tasks, resources, authority, leadership
prerogatives and so on were arrived at through mutual consultation between governmental and organizational officials. The role that organizational officials had in the process was in direct relationship to the disaster-relevant resources possessed by the organization represented and by its pre-disaster status in the community.
CHAPTER V

CHANGES IN INTERORGANIZATIONAL RELATIONSHIPS--INTERDEPENDENCE

It is obvious from what has been said so far that we believe organizations do not normally, nor in disaster settings, function in isolation. Rather, we have asserted that the functioning of any organization is dependent to a large extent upon the larger context of other organizations and upon other elements within the community system. Under normal conditions the various organizations within a community are seen as interacting in such a fashion that they come to rely on one another in a great many different ways.

Following major emergencies this interaction continues but its patterns may be altered due to the impact of the emergency event. Some interorganizational interaction takes place by the interpenetration of groups by persons who hold simultaneous memberships in several organizations. Interaction among organizations may also take place through positions on the boundaries or organizations.

28 Much of the discussion dealing with interorganizational interdependence has been adapted from Russel R. Dynes, Organized Behavior in Disaster: Analysis and Conceptualization (Columbus, Ohio: The Ohio State University College of Administrative Science, 1968), chapter VIII. See also: William H. Evan, "The Organizational Set: Toward a Theory of Interorganizational Relations," in James Thompson editor, Approaches to Organizational Design (Pittsburgh: University of Pittsburgh Press, 1966).
Furthermore, interaction among organizations may take place when there is mediation in the affairs of certain organizations by processes which are above and beyond each individual organization. Sometimes this mediation may be expressed by regulatory agencies or, in the instance of a disastrous event, when coordination among organizations becomes necessary.

At least two forms of interaction among organizations can be observed. The exchange of goods and services can be observed through patterns of transportation. In addition, one can observe the exchange of information by focusing on the processes of communication. We shall explore each of these types of interdependence as we analyze interorganizational relationships. Since we are focusing particularly on those organizations which constitute the core of a community's emergency-relevant resources, it is anticipated that many of their interdependencies will be highly accentuated following the impact of an emergency. In determining the existence and extent of these relationships, we will focus on the exchange of information, personnel, material, services, and where possible, legitimation. Thus, when we refer to interdependence we shall be referring to that condition which exists whereby one or more organizations in a community depends

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on one or more others for information, personnel, material, services, or legitimation. It is understood that these resources are essential to the functioning of the dependent organizations. The organization supplying the needed resources shall be referred to as the resource organization. The organization being supplied will be referred to as the dependent organization.

Bureaucratic-protective organizations

The resources possessed by police departments are varied, many and of importance to the other emergency organizations functioning in a disaster environment. As has been previously noted, differing types of disasters tend to have differing affects on the organizations functioning in a community. This was true for police departments in terms of the interdependence patterns which emerged in the four emergencies studied.

In the natural disasters, the tasks of the police departments were quite pervasive, especially during the early stages of the emergencies. Initially, the departments in New Orleans and Fairbanks were called upon for assistance in search and rescue, information concerning the magnitude and duration of the disaster agent, traffic control, security from possible looters, the identification of victims and for the transmission of interorganizational communications. The scope of the police departments' activities in these two cities changed as the disaster moved from one stage to another. As the allocation of tasks and resources to the various other emergency organizations became a fait accompli, the overall dependency on the police
departments was diminished although they did continue to possess a great amount of authority over the community at large in terms of social control and did continue to serve highly important coordinating functions.

The police departments analyzed not only became resource organizations on which other organizations depended, they became dependent organizations as well. They were particularly dependent on a number of governmental agencies including the Civil Defense, the National Guard, the Army Corps of Engineers, the United States Weather Bureau and others. They also borrowed boats, high wheeled trucks, radio communications equipment, pumps and great many other pieces of equipment from a wide range of public and private organizations. Moreover, they relied heavily on the agencies of mass communications including the newspapers and radio and television stations for assistance in disseminating important information. Their normal dependence on telephone and other utilities companies was also increased.

The police departments in New Orleans and Fairbanks returned to their normal operations as quickly as possible and in both cities sought to free themselves from entangling dependencies as soon as the emergency subsided.

The long-term changes which occurred as the result of the police department's interorganizational dependencies in New Orleans (we do not have data on long-term changes in Fairbanks), were confined largely to the development of a community-wide mutual aid plan.
Since the New Orleans Police Department was called upon to secure needed emergency equipment such as boats, cranes, bulldozers, buses, and so on for a large number of other organizations in New Orleans, they prepared and activated a master mutual aid agreement with a large number of emergency and industrial organizations in the New Orleans area. Under the provisions of this pact, the police department is able to call upon other organizations for equipment and skilled personnel during times of crisis. These mutual aid agreements have been institutionalized in the form of an organization which elects officers and which meets regularly. One of the purposes of the organization is to keep a current status report of all emergency equipment available throughout the city. Apart from this, there were no other long-term changes in the dependency relationships of the police department as a result of Hurricane Betsy.

Whereas the emergency tasks of the police departments in the natural disasters studied were quite pervasive and varied, their tasks in the civil disturbances were very specific and limited almost entirely to three indispensable functions. These functions were: (1) the protection of life and property, (2) the dissemination of badly needed information regarding the disturbance itself, and (3) legitimation. All of the property owners in the disturbance areas were, of course, dependent on the police for the protection of their property. The utilities and fire departments were heavily dependent on the police department in each city for the protection of crucial installations and facilities and for the protection of personnel working in the disturbance areas. The police departments were
solely responsible for the protection of life and property throughout each of the cities until they received support from other police agencies and military organizations.

The second function of the police departments on which the community at large and the other emergency organizations in the community depended was that of providing a definition of the disturbance situation. During the early stages of the disturbances in both Los Angeles and Detroit, the police departments were the only emergency organizations present in the disturbance areas. (The fire departments were also present but they were frequently forced from the areas from time to time by crowd harassment.) The news media were limited in their ability to get their stories first hand and frequently presented a "command-post perspective" of the news. Thus, community leaders and other organizational officials were largely dependent on the police departments for their definition of the disaster situation. By in large, the initial emergency response made by the community and its emergency organizations was predicated on the information supplied by the police. This information was being conveyed by police officials at both their field command posts and from the coordination and control centers located at police headquarters.

The third resource being provided other organizations by the police departments in Los Angeles and Detroit was legitimation. It is important to note that while legitimation does not necessarily refer to legal recognition there were times in Los Angeles and Detroit
(following the imposition of curfews), when the police department did confer legal rights on other organizations to function in the curfew areas. In addition to these legal rights, the police departments were also the principal agents of non-legal organizational legitimation and it was they who largely recommended which other organizations "ought" to be in the disturbance areas and when. There was, then, a very significant increase in the dependency that other organizations had on the police departments in the civil disturbances studied.

Other organizations not only depended on the police more intensively during the civil disturbances, the police depended on other organizations more extensively as well. Notable among these organizations were the telephone companies, hospitals, various suppliers and most importantly of all, other social control organizations including sheriff's offices, state police organizations, the National Guard and in Detroit, federal troops. The overall dependency of the police departments on these other agencies has already been referred to and need not be elaborated here. It is worth pointing out, however, that as the police departments began to depend on other social control agencies their own position as a resource organization declined. For example, with the arrival of military personnel in both Los Angeles and Detroit, the utilities, fire departments, and other organizations began to depend more and more on the military for protection and in some instances for communications, information and other logistical support as well.
The fire departments experienced changes in their interorganizational dependencies much like those of the police. In the natural disasters, the fire departments performed a great many useful and sometimes vital tasks. Other organizations depended on them not only for protection in case of fire but for assistance in search and rescue, coordination, transportation, information, pumps and other material resources. The fire departments, at the same time, also depended on other organizations for a great many needed services and materials. Perhaps the most conspicuous of these dependencies was associated with the acquisition of boats which were needed for search and rescue during the early stages of the disasters. The fire departments in both New Orleans and Fairbanks had to secure a large number of boats inasmuch as neither of these departments had a sufficient supply of these on hand. They secured these additional boats from their own personnel, from other organizations and from private citizens. In Fairbanks, where the department was quite small, fire officials also had to depend on the Army Corps of Engineers, the United States Army and various other state and national organizations for trucks, pumps, generators, communications equipment and other material resources. The department in New Orleans, being many times larger and with much more disaster experience, had to rely on other organizations much less extensively.

There were a number of long-term changes in the interorganizational dependencies of the fire department in New Orleans. Most of these were quite minor and were associated with plans for the
exchange of information, duties of liaison personnel and a clearer understanding of mutual aid agreements. The only really important long-term change involved the establishment of an agreement between the fire department and the Red Cross whereby a supply of boats would be made available to the fire department during similar disaster situations.

The civil disturbances produced a number of both short-term and long-term changes in the interdependent relationships of the fire departments in Los Angeles and Detroit. These short-term changes grew out of the severe demands which were placed on these departments—demands for the protection of property and in a number of instances for the saving of lives as well. There were not many new types of demands being made on these departments as far as fire suppression and life saving responsibilities were concerned. What was unusual was the large number of fire demands being made and the harassment of organizational personnel in the performance of their duties. Thus, the primary dependency that other organizations had on the fire departments in Los Angeles and Detroit was closely related to their normal dependency relationships. The fire department did become a valuable source of information for community leaders, however, since they, along with the police departments, were the only emergency organizations operating in the disturbance areas.

The fire departments in Los Angeles and Detroit experienced a vast increase in their dependence on other organizations as the result of the disturbances in those cities. Their latent dependence
on city and state governments for legitimation became much more manifest as these departments were forced to deviate from the legal provisions of their charters. As these departments refused to respond to some fires, and as they left the scene of others before the fires had been extinguished, they became susceptible to legal actions. Thus, these departments were forced to have their aberrant behavior approved by governmental officials, even though this approval came most often in an ex-post-facto fashion.

These same fire departments also became extremely dependent on their respective police departments. Under normal conditions, the police and fire departments, in most cities, have a very close working relationship, especially at multiple alarm fires where the police provide traffic and crowd control for the fire companies on duty. However, this dependency became magnified many times as the fire departments began to be harassed by hostile crowds. This dependence on the police departments, and in the latter stages of the disturbances, on the military as well, became so great that the fire departments could not function without the complete cooperation and assistance of these social control agencies. Thus, the effective performance of the fire departments was in direct relationship to the protection they were receiving from these other organizations.

The fire departments in Los Angeles and Detroit also had an increased dependence on the fire departments in neighboring communities. In Los Angeles, the formal activation of mutual aid agreements did not come until after the disturbance had been brought under control. Nonetheless, the fire department in that city did have a far greater
dependency on other fire departments during the disturbance than it does under normal circumstances. The mutual aid agreements in the city of Detroit and Wayne county had not been formalized prior to the 1967 disturbance but the fire department in Detroit did call on forty-one other fire departments for assistance in fighting the hundreds of fires which occurred there.

Finally, the fire departments had an increased dependence on a number of other public and private organizations for services and resources. Chief among these were the city water departments and the telephone companies although they did depend to a lesser degree on the Salvation Army and in a few cases on the Red Cross for food service. There were, then, a great many changes in the normal interdependency patterns of the fire departments as they responded to the civil disturbances which occurred in their cities.

Out of these short-term changes a number of long-term changes took place. The most important of these in Los Angeles included the up-dating of community disaster plans in which the fire department has a prominent place. In Detroit there was a formalization of the mutual aid agreements shared by the fire departments in southern Michigan. A number of pieces of state legislation and city laws were passed which spell out in advance the legal prerogatives available to fire departments in the event of major crises. Also passed was a law making it a felony to interfere with a fireman in the performance of his duties. Furthermore, a large number of other agreements were worked out between the fire department and other organizations in the city. These agreements deal with the
acquisition of materials and services on the part of the fire department in times of extreme emergency. Notable among these is an agreement with the Detroit Board of Education whereby certain schools have been designated as operations centers from which the fire departments will work in the event of future disturbances. Additional agreements with the utilities companies, other city departments and private suppliers have also been completed and formalized in operations manuals.

**Technical-utility organizations**

Both of the types of emergencies studied altered the inter-organizational dependency patterns which existed between the utility companies and the other emergency organizations functioning in the four affected communities. The natural disasters had a far greater impact on these relationships because the responsibilities and resources of the utility companies in these instances were far more crucial for the entire community than they were during the civil disturbances. In both types of emergencies, however, the nature of the interorganizational dependencies was the same; the dependencies differed only in terms of magnitude. This fact stands in sharp contrast to the interdependencies of the police and fire departments in emergency settings. The protective organizations performed different kinds of tasks during the different emergencies. The utility companies, as noted previously, confined their organizational activity to those tasks and only those tasks routinely performed by them. Hence, in the natural disasters, the emergency organizations
along with all other organizations, and with the public at large, were dependent on the utility companies for the restoration of utility services. The emergency organizations were, of course, far more dependent on the restoration of these services than were non-emergency organizations for the former were being confronted with a large number of high priority demands while many of the latter were not functioning at all.

The utility organizations, for their part, were not particularly more dependent on other local organizations, once the nature of the emergency became well defined. They did have to depend to a somewhat increased degree on those organizations providing information to them and to the mass media which was in turn disseminating information on their behalf. There were never any questions as to their legitimacy or their organizational competence.

While the utility organizations were somewhat independent of most other local organizations, they did become increasingly dependent on a number of non-local organizations. These organizations were either other utility companies or organizations which possessed either technical skills or material resources. The Army Corps of Engineers was a particular source of assistance in both New Orleans and Fairbanks.

There were no long-term changes in the interdependency relationships of the utility organizations as a result of the natural disasters. As quickly as the utilities organizations in New Orleans
restored their services, they withdrew from the arena of involvement and returned to their pre-disaster interdependencies. Perhaps the reason for this lack of long-term change can be explained in part from the fact that the entire community and its emergency organizations had been through similar disaster experiences on a number of previous occasions and had some rather well defined interorganizational disaster plans.

The data on Fairbanks do not permit us to draw conclusions regarding long-term changes there. Some might be expected, however, for these reasons. (1) The utilities organization in Fairbanks experienced much more extensive damage than did the organizations in New Orleans (there were still major portions of the business district without telephone service two and one-half months after the flooding had subsided in Fairbanks). (2) The utilities organization in Fairbanks had far fewer intraorganizational and interorganizational resources upon which to draw than did the organizations in New Orleans. (3) The utilities organization in Fairbanks was isolated from outside sources of assistance. (4) The utilities organization in Fairbanks became far more dependent on other non-local sources of assistance (primarily the Army Corps of Engineers), than did the organizations in New Orleans. (5) The utilities organization in Fairbanks had little experience in dealing with major emergencies of the type which affected them and there was no community-wide natural disaster plan to guide their activities. For these reasons, we feel the utilities organization in Fairbanks was likely to undergo a number of long-term changes, but as indicated, our data do not permit such an analysis.
The operations of the utility organizations in civil disturbances was quite limited. There were, as a consequence, few changes in their interdependency relationships. The demands that were made on the utilities companies in Los Angeles and Detroit were placed largely on the telephone company and came in the form of requests for more telephone installations at the police and fire command centers. These installations were made largely on a routine basis and did not tax the resources of the telephone companies in either city.

The utilities companies, on their part, did depend on the police and fire departments more extensively than normal for information and for protection. Since these organizations were not conducting field operations in the disturbance areas, except in cases of extreme emergency, the protection afforded the utilities companies was centered around their vital facilities and around the escorting of telephone operators and other personnel to these facilities.

The long-term changes which occurred in the interdependence relationships of the utilities companies in Los Angeles and Detroit were related to the establishment of more explicit guidelines by which the relationships between the police, fire departments and other utility organizations in periods of civil disturbance became more explicit and formalized. The notification of interorganizational liaison personnel, the protection of key installations and the prior provision for telephone and other utility services became a part of the interdependence patterns of these organizations. That which had been either implicitly understood or had emerged on an ad hoc basis.
during these disturbances became much more explicit and in some cases formally documented. These plans underwent a number of revisions in the months and years following the Watts disturbance.

The volunteer-welfare organizations

The dependency patterns of the welfare organizations included in this study underwent different degrees of change as the result of their responses to the emergencies studied. Such changes are more or less "built in" to their organizational structures. This "built in" quality results largely from the fact that the functioning of the Salvation Army and Red Cross in non-disaster contexts is only peripherally related to those organizations which meet crises and emergencies on a day to day basis. When, however, a community emergency occurs, the latent emergency structures and functions of the Salvation Army and Red Cross are expanded. As the result of this expansion, these organizations become an important resource for the entire community. This expansion of both structure and function is dependent on an increase in the number of emergency-induced demands made on these organizations. It is logical to note, then, that the natural disasters precipitated more changes in the interdependence patterns of these organizations than did the civil disturbances, since the latter created far fewer tasks for the welfare organizations than did the former.

The resources provided by the welfare organizations in the natural disasters have been noted previously and need not be further elaborated here except to note that these services were confined
largely to problems associated with food, shelter, clothing, public health and financial assistance. These services were provided for the public at large and not particularly for any of the other emergency organizations functioning in the stricken communities. The Salvation Army and Red Cross did provide canteen food service for the rehabilitation and recovery workers in New Orleans and Fairbanks but this was rather minimal when seen the the context of their overall community services.

The welfare organizations were dependent on other emergency organizations (both local and non-local), for legitimation, information and material resources. Since the authority and leadership these organizations possess is largely achieved on the basis of the services they perform, the community at large, and in some instances the federal government must recognize the validity of these services and of the claims that these organizations make for the allocation of a domain and for the emergency-relevant resources available in a community. The welfare organizations must also depend on other organizations in the community for vital information on which they can base an assessment of the community's needs and the resources required to meet these needs. Salvation Army and Red Cross officials and liaison personnel were present in the coordination and control centers established in New Orleans and Fairbanks from which they received important information concerning the disasters and their implications for their organizations. The welfare organizations were
dependent during the natural disasters on a great many other emergency organizations for material and personnel resources. This aid came from both local and non-local sources including their own national and regional organizations, the Civil Defense organizations, the National Guard and other military organizations, food and drug wholesalers, the National Defense Transportation Agency, social casework agencies and many more. This extensive dependency is also "built in" to the structure of these organizations since they could not possibly stockpile on an intraorganizational basis all of the material and personnel resources required of them in times of major catastrophe.

We can conclude that the natural disasters produced a great many short-term changes in the dependency relationships of the Salvation Army and Red Cross in both New Orleans and Fairbanks. There were no long-term changes made in the dependency patterns of these organizations in New Orleans, except one which resulted from an understanding between the Red Cross and the fire department regarding the acquisition of boats to be used for search and rescue purposes. The most logical explanation for this absence of change in New Orleans is related to the fact that these organizations had been through these processes many times before and had more or less developed a regularized pattern of response.

The civil disturbances did not necessitate a great expansion of either the structures or functions of the Salvation Army or Red Cross in either of the cities affected by them. For this reason
there were few changes in the interorganizational dependency patterns of these organizations. Actually, the position taken by the Red Cross in both of these cities presented somewhat of a quandry, not only for themselves but for the other organizations involved. The resources available to the community in terms of expanded Red Cross assistance was non-existent in Los Angeles and very minimal in Detroit when compared with their involvement in either New Orleans or Fairbanks where their financial contributions alone ran into millions of dollars. In Los Angeles the tasks which might have been assumed by the Red Cross were performed by the Salvation Army and since these demands were quite small no problem for the community resulted. The situation in Detroit was different though and in that city many of the tasks which would have been handled by the Red Cross were taken over by the Salvation Army, other public welfare agencies and most notably by an emergent interdenominational religious group.

The long-term changes which occurred in these welfare organizations as the result of the civil disturbances studied were quite minimal. In both cities the Red Cross took great pains to forewarn other emergency organizations which normally rely on them for assistance during times of disaster of their organizational restrictions regarding such assistance. (This situation, as noted, has since been changed.) The Salvation Army had no appreciable long-term changes in their dependency relationships as the result of either of the disturbances. Again, the key to this lack of change seems to be related to the lack of involvement of these organizations in either city.
Summary

On the basis of our data and the above discussion, we can conclude that the interdependency patterns of organizations in the emergencies studied underwent a number of short-term and long-term changes. The natural disasters created a distinct climate within which the other organizations in the community depended on the police for assistance in a wide variety of circumstances. Police departments, for their part, had to depend on a great many other organizations for both material and non-material assistance. The civil disturbances posed more specific and continuing problems for the police departments. During the civil disturbances, the other organizations depended on the police departments for protection, information and legitimation while the police departments depended on other organizations for materials, personnel and services. There were two long-term changes noted, the development of a comprehensive, community-wide mutual aid organization in New Orleans and a master emergency plan in both Los Angeles and Detroit.

The dependency patterns of fire department in both types of emergency situations underwent both short-term and long-term changes. The natural disasters made more diffuse demands on the fire departments in terms of the services they rendered. The civil disturbances made extremely heavy demands on the fire suppression resources of the fire departments but not many other kinds of demands. In natural disasters, the fire departments became generally dependent on a wide variety of other organizations for resources while in civil disturbances these departments came to depend on fewer organizations than in natural disasters. The fire departments were especially dependent on the police departments in Los Angeles and Detroit.
The long-term changes took the form of more detailed interorganizational plans which spell out in advance the nature of the dependency relationships between the emergency-relevant organizations functioning within the affected communities.

Both of the types of emergencies studied affected the utilities organizations but in differing ways. The natural disasters had a far greater impact on the interdependency relationships of these organizations than did the civil disturbances. In both instances, however, the nature of the demands were largely the same, that is, demands for the restoration of community services. The big differences were that in the natural disasters the demands were much more severe and were being met with the assistance of the entire emergency subsystem operating in the affected cities. The civil disturbances prohibited utilities personnel from entering the affected areas to repair the damages being caused by wide-spread burning.

The welfare organizations studied experienced significant changes in the nature of their interorganizational dependency relationships as a result of the natural disasters studied. These changes are more or less "built in" to the structures of these organizations and begin to appear as they moved from a position of latency to one of activity in terms of their disaster resources. The public at large has a greater dependency on the welfare organizations following a major emergency than do the other emergency organizations functioning in the community. As the civil disturbances did not require a large scale response on the part of the welfare organizations studied, they did not become especially dependent on other organizations in the community. Neither did the public at large become dependent on either the Salvation Army or Red Cross to any great
extent in Los Angeles or Detroit. There were no significant long term changes in the dependency patterns of the welfare organizations studied.

On the basis of our findings we can offer the following generalizations regarding emergency-induced changes in the interorganizational dependency patterns of the organizations studied. (1) As the number of emergency-induced demands placed on a community increased, the greater were the changes in that community's interorganizational dependency patterns. (2) The different types of emergencies studied induced different types of changes in the dependency relationships of the organizations included in this research. (3) The more unexpected the demands were on the affected community, the greater were the changes in that community's interorganizational dependency relationships. (4) As the number of local and non-local organizations functioning in a community increased, the greater were the changes in the dependency relationships of the community's organizations. (5) As the emergency moved from one stage to another, for example from search and rescue to recovery and restoration, the nature of the interdependent relationships within the community changed. These changes were in keeping with the nature of the demands being made and the resources available. (6) The greater the emergency-relevant resources possessed by an organization were, the greater were the number of organizations dependent on that organization.
CHAPTER VI

CHANGES IN INTERORGANIZATIONAL RELATIONSHIPS--COORDINATION

Coordination

One of the most serious problems confronting all community systems in both pre-disaster and post-disaster environments is that of coordinating the various organizational elements within them. While there are undoubtedly many reasons for this, one of the principle ones is related to the autonomy possessed by organizations in our society. This autonomy can be seen as arising from the fact that organizations are either assigned or acquire their own domains, goals and resources and from the fact that they occupy a position within the division of labor of a community. Following a major emergency, however, the large increase in high priority demands placed on a community necessitate a reappraisal of that community's emergency-relevant resources. In order to effectuate this reappraisal, a community's governmental leaders and/or its organizational officials come together and characteristically attempt to reassign both organizational domains and the community's scarce resources. Moreover, these officials attempt to coordinate the activities of the emergency-relevant organizations in the community so as to maximize their effectiveness. In the

30 See: Levine and White, Ibid., for a more complete discussion of interorganizational interdependence and coordination.
process of this appraisal, many of the traditional interorganizational relationships within a community are disrupted. The autonomy normally enjoyed by organizations is altered as is their position within the division of labor of the community. Conflicts frequently arise which further increase the need for interorganizational coordination and in some cases control. Within the context of an emergency environment, then, the need for increased coordination is accentuated not only by the emergency but by the adaptations which the community and its organizations must make to it.

Coordination, as a phenomenon, is quite like decision making in that it is a process in which various organizations participate. We have, therefore, defined interorganizational coordination as that process whereby the activities of two or more organizations within a community are functionally integrated.

**Bureaucratic-protective organizations**

The interorganizational coordination responsibilities of police departments in non-emergency situations are quite minimal and consist largely of their notification of other organizations when the latter's services are needed. For example, when an electric power line is knocked down as the result of an auto accident, the police officer at the scene will notify the service department of the utility company and advise them of the situation. It is within this narrowly conceived definition of interorganizational coordination that the police department normally functions.

The emergencies studied greatly altered the role of the police departments in terms of their coordination functions. In the natural disasters, the most prominent single task performed by the police departments
was that of providing a community wide coordination service where requests for assistance were matched with available organizational resources. The police departments in both New Orleans and Fairbanks, once the immediate tasks of search and rescue had been completed and security established, became the focal point around which their community's rehabilitation activities were integrated. This was more true in New Orleans than in Fairbanks but it was true generally in both instances. The reasons the police departments assumed these tasks are related to at least four factors. (1) Persons and organizations confronted by unusual emergency situations in non-emergency environments generally call the police department when they are in doubt about organizational jurisdiction. This pattern carried over into the emergency situations and is clearly evidenced by many examples in our data. (2) The police departments have a very broad range of authority and were in many instances being asked to coordinate the functions of other organizations in order to lend them police legitimation. (3) Police departments possess a wide range of communications facilities, including many mobile units. In emergency settings, the need for instantaneous communications is extremely important; hence, police departments had the communications necessary to coordinate and integrate the activities of other organizations. (4) The police departments in both New Orleans and Fairbanks knew where many badly needed emergency resources could be located and as a result of this knowledge they were frequently contacted by other organizations in search of such resources. For these reasons, then, the police departments in New Orleans and Fairbanks experienced a sharp increase in their coordination tasks.
The most significant long-term change which occurred in the New Orleans police department as a result of Hurricane Betsy was their crucial role and involvement in the establishment of a master mutual aid organization for that city. Since this has already been reported at some length above, it will not be reiterated here except to note that the most important change in the interorganizational relationships of the police department in New Orleans was an outgrowth of its coordination functions during the emergency.

The coordination activities of the police departments in the civil disturbances were also crucial, although they did not cover the range of responsibilities handled by the police departments in New Orleans and Fairbanks. The police departments in Los Angeles and Detroit, moreover, were directly involved as organizations in the activities they were endeavoring to coordinate. The dependence of the fire departments and utility organizations on the police departments in the civil disturbances was so direct and complete that these organizations, that is, the fire and utility organizations, could not perform their assigned tasks without extremely close coordination between themselves and the police. Firemen were frequently compelled to leave a fire still burning on numerous occasions in both cities as the result of harassment. Consequently, they tried to get their activities closely coordinated with those of the police to insure a maximum of protection both on the way to fires and throughout their stay at a fire location. The ultimate form this coordination took was the placement of police, (and later in each disturbance, National Guardsmen), on each piece of fire apparatus.
The police departments during the civil disturbances also supplied much important information which was vital to both governmental and other organizational officials as they sought to define the emergency situation and to allocate and integrate organizational tasks and resources. The police departments in these two cities were also very influential, perhaps most influential, in determining how the disturbances should be handled. As a result of this influence they played a major role in determining which organizations were needed and where. Thus, they were exercising important allocation and coordination functions, a fact which can be attested to by noting that the central coordination and control centers in both Los Angeles and Detroit were located at police headquarters.

In addition to being involved crucially in coordinating the activities of local organizations in Los Angeles and Detroit, the police departments in these cities were highly instrumental in coordinating the operations of the extra-local social control agencies which were called upon for assistance. Through the mutual efforts of the various officials involved, each of these agencies were assigned an area of responsibility and allocated the resources and authority by which these responsibilities could be met. This allocation served to avoid interorganizational conflict, as noted earlier. It also, perhaps secondarily, militated against the duplication of efforts and provided for an easier coordination of the organizations involved.

The long-term changes which resulted from this increased coordination during civil disturbances took the form of more specific emergency plans wherein the coordination functions of the police department are
explicitly outlined in the event of future disturbances. As indicated, the state of Michigan passed legislation which also dealt with the coordination responsibilities and prerogatives of the emergency organizations in that state during times of civil disturbance.

The fire departments in New Orleans and Fairbanks experienced an acceleration of their coordination functions but in no way did the importance of their roles approach those of the police. The fire department had liaison personnel in that community's coordination and control center but their activities there were not crucial for other organizations. The fire department in Fairbanks did not have a liaison person at either of the coordination and control centers in that city. The fire department was not in fact, very integrated into that community's emergency system, except in a very general, non-specific way. There were no long-term changes in the interorganizational coordination relationships of the fire department in New Orleans as a result of Hurricane Betsy.

However, the fire departments did experience a number of both short-term and long-term changes in their coordination patterns as a result of the civil disturbances in Los Angeles and Detroit. These departments were so crucially involved that their activities were given a very high priority within the community. As a consequence of these priorities, their activities were closely coordinated with those of the police department, the military organizations and with other fire departments. There were fire personnel at the community's coordination and control centers, and at the police command posts for purposes of facilitating coordination. There were also police liaison personnel at the fire department's emergency operations center in Los Angeles. In both cities there was a great
deal of interorganizational planning and coordination which specifically involved the operations of the police, the military and the fire departments. Methods of dealing with the disturbance and its consequences were discussed by high governmental officials and by the executive chiefs of the police and fire departments. Plans were outlined, followed, revised and followed again as the disturbances fluctuated from day to day. A common element in all of these plans was the development of operational techniques which were designed to coordinate the activities of all the protective organizations functioning in the disturbance. The rather loose coordination which existed between the fire departments, the police departments and neighboring fire and police departments prior to the disturbance became much more conscious, rational and integrated during the civil disturbances.

Following the disturbances in Los Angeles and Detroit, a number of long-term changes were institutionalized whereby the ad hoc changes in the fire department's emergency coordination patterns were formalized. The relationships between the fire departments, police departments and neighboring fire and police departments were re-emphasized, formalized and in some cases legalized in the weeks and months immediately after the disturbances.

The utility organizations

The utility organizations were extensively integrated into their community's responses to the natural disasters which occurred in New Orleans and Fairbanks. Officials from these organizations were present at their community's coordination and control centers and were in constant consultation with governmental and other organizational officials
regarding matters of mutual concern. Through these consultations a priority for utility services was established. The emergency organizations in the community, beginning with the hospitals, were given top priority; private citizens with no disaster responsibilities or skills were given the lowest priorities. In New Orleans, the utilities organizations knew what was expected of them in terms of interorganizational coordination and took steps some hours before the hurricane hit to activate its disaster plans which included the alerting and placement of its interorganizational liaison personnel. The utilities organization in Fairbanks did not have an effective natural disaster plan; neither did they have adequate internal resources to deal with a disaster of the magnitude of the one which developed. As a result, the coordination of their operations and resources were much more haphazard than those of the utilities organizations in New Orleans. Moreover, instead of being the primary agency of rehabilitation, the utilities organization in Fairbanks depended on the Army Corps of Engineers most extensively for the coordination necessary to restore its services to the public at large. There were no significant changes in the utilities in New Orleans as far as their interorganizational coordination is concerned. Although the data on Fairbanks do not permit definite conclusions regarding long-term changes, the data available strongly suggest that a number of changes in the coordination relationships of the utility company in that city would occur. These changes would probably be in the form of more formal disaster plans in which their coordination with the other emergency organizations in the community and with the military on whom they depend, would be explicitly stipulated.
There were only a few occasions when the utilities companies entered the areas being directly affected by a civil disturbance. When they did enter these areas, they did so with the knowledge and protection of the police or military. In this sense, their operations were closely coordinated with those of the social control agencies. Moreover, they did have liaison personnel in the community coordination and control centers and on occasion in the police command posts as well. From these locations, they were kept advised of the damage being done to their installations and in turn were able to convey to police officers information regarding the location and operations of crucial utilities facilities. There were no important formal changes in the coordination patterns of the utilities companies as a result of either of the civil disturbances.

The volunteer-welfare organizations

As the structures and functions of the welfare organizations expanded due to their increased emergency roles in the natural disasters, so did the nature of their inter-organizational coordination with other organizations. In New Orleans and Fairbanks these organizations played a vital role in the feeding, sheltering and public health programs necessitated by the respective disasters. During and immediately following the search and rescue phase in these communities, the welfare organizations were performing emergency services of extreme importance, the sheltering and feeding of large numbers of displaced persons. Since there is a close relationship between search and rescue and sheltering and feeding a great amount of interorganizational coordination was required. For example, as quickly as it became apparent in both New Orleans and Fairbanks that shelters had to be established, Red Cross personnel began to coordinate
their activities with those of the police and fire departments and with other organizations which were providing rescue services. As the crisis in search, rescue and sheltering diminished, the operations of the Salvation Army and Red Cross became more closely coordinated with those of other welfare organizations which were providing long-term family services to those whose homes and/or furnishings had been lost. Thus, the organizations with whom the Salvation Army and Red Cross coordinated their tasks changed as the disaster moved from one stage to another.

In addition to coordinating their tasks with a large number of local organizations, the Salvation Army and Red Cross, through regional and national personnel coordinated their efforts with other units within their own organizations and with other governmental and emergency organizations. In both cities, Salvation Army and Red Cross personnel (especially Red Cross personnel after public law 875 was declared in force), worked closely with personnel from civil defense, military, Office of Emergency Planning, National Defense Transportation Association and other organizational personnel who represented extra-local agencies. Many of the Salvation Army and Red Cross extra-local personnel had worked previously with these same personnel from other regional and national disaster organizations. This common pre-disaster experience greatly facilitated the coordination efforts of both the Salvation Army and the Red Cross in New Orleans and Fairbanks.

There were no long-term changes noted in New Orleans among the welfare organizations studied principally because these organizations had been through a number of previous disasters and had already formally
institutionalized lengthy disaster plans. These plans were followed very closely at the time of Hurricane Betsy and proved to be very adequate.

The functioning of the welfare organizations in Los Angeles and Detroit was so minimal that they never did become organizational integrated into the emergency response of either of these communities. The one exception would be the Salvation Army in Detroit which was operating on a semi-activated basis there. The Salvation Army in Detroit was coordinating its tasks with those of city welfare agencies and to a greater extent with those of an ecumenical emergency group which emerged and which was providing a prominent coordination function for the city's welfare organizations.

There were no large scale, long-term changes in the coordination relationships of the welfare organizations in either Los Angeles or Detroit as a result of the civil disturbances.

Summary

Our findings on interorganizational coordination patterns can be summarized as follows. Following the onset of an emergency the coordination functions of police departments are greatly increased. In the natural disasters studied the scope of coordination handled by the police departments was quite wide and consisted largely of bringing disaster resources to bear on disaster needs. This they did as an interested third party but not primarily as an actual participant. The coordination functions of the police departments in civil disturbances were very intense, quite specific and involved the police departments as one of the parties of active involvement. The long-term changes which occurred were directly related to the most serious problems encountered in each situation.
In New Orleans, a master mutual aid organization was established which was designed to assist police personnel in the location and distribution of needed resources. In Los Angeles and Detroit, the long-term changes in the interorganizational structures of the police departments took the form of comprehensive disaster plans and laws through which the coordination functions of the police were formalized and given legal status.

The coordination of fire department activities into the overall community response in the natural disasters was quite complete. As community organizations which normally function in emergency situations, the fire departments in both New Orleans and Fairbanks became extensively involved in responding to the disasters in these cities. The fire department in New Orleans provided a great many services during the search and rescue period. Then more or less withdrew from actual field involvement and became involved in coordinating the distribution of needed resources to the organizations requiring them. During this coordination stage, their functions were quite like those of the police department. The fire department in Fairbanks became so assimilated into the total emergency response of that community that it all but lost its organizational identity.

There were no significant changes in the long-term coordination functions of the fire department in New Orleans. The fire departments in Los Angeles and Detroit were totally integrated into the emergency response of their communities. The tasks they were performing were extremely crucial and they were being called upon to perform those tasks under extremely difficult conditions. Furthermore, the successful completion of these tasks was so dependent on police protection that the operations of these two organizations became extremely coordinated throughout the emergency
period. The fire department was feeding back vital information to community and organizational officials, who were attempting to coordinate the community's overall response. In this way, they were assisting with coordinating the operations of other organizations in the community. The long-term changes which occurred in terms of fire department coordination were in the form of more detailed emergency plans wherein the relationships between the fire departments and other emergency organizations were formalized and in some instances legalized.

The activities of the utility organizations in natural disasters were closely coordinated with those of other emergency organizations. The services they provide are so crucial to the operations of the other emergency organizations in a community that the rehabilitation of power, telephones, water, and so on, receive special, community wide attention. There were no significant long-term changes in the operations of the utility organizations in New Orleans, chiefly because the utility organizations had been through many similar disasters and had more or less developed a "routine" set of procedures for handling interorganizational coordination. The utilities companies in Los Angeles and Detroit were forced to coordinate their service runs into the disturbance areas with adequate protection from the police departments. Since these runs were few in number, no ongoing serious coordination problems developed between these organizations. There were no important formal changes in the coordination patterns of the utilities companies as a result of either of the civil disturbances.
The welfare organizations became closely integrated into the emergency subsystems in New Orleans and Fairbanks as they expanded their structures and services. They coordinated their services with those of both local and extra-local organizations and as the disaster progressed from one stage to another, the organizations with whom they were in close coordination changed. In the civil disturbances only the Salvation Army in Detroit became very involved. In that city the Salvation Army did coordinate their activities with several other local welfare organizations. There were no long-term structural changes in the coordination patterns of either of the welfare organizations studied in either of the disasters.

In conclusion, in the disasters studied we observed the following phenomenon. Most of the changes which occurred in the patterns of interorganizational coordination were limited to changes of a short-term nature. There were, however, a number of long-term changes observed. These changes, like those long-term changes which occurred in the other dimensions being analyzed, seemed to be related to specific problems encountered by organizations as they endeavored to meet the demands being placed upon them. For example, the police department in New Orleans, because it was charged with the responsibility of providing an overall community coordinating function, sought to establish a master mutual aid organization which would serve them in case of a future emergency. The long-term changes which occurred following the civil disturbances were closely related to the problems the police and fire departments encountered as they
were compelled to coordinate their activities quite closely, not only with one another but with other social control and fire agencies on whom they were dependent.

In addition, the police and fire departments, especially the former, encountered a number of conflict situations which seriously limited their emergency response. As a result of this conflict and confusion, too, certain laws were passed which were designed to mitigate these conflicts in future emergency situations. It seems apparent, then, that long-term changes in the patterns of inter-organizational coordination, and in the other relationships examined as well, were closely related to situations which produced operational problems, confusion and/or conflicts between organizations functioning within a community.

We can, in addition, offer the following more specific conclusions regarding interorganizational coordination following major emergencies.

1. As the number of emergency demands being made on a community increased, the need for interorganizational coordination increased.

2. The more relevant the resources of an organization were for the community's recovery, the greater were community pressures on that organization to coordinate its activities with those of other emergency organizations functioning in the community.

3. As the degree of interdependence between organizations increased, the amount of conscious, planned coordination increased.

4. As the number of local and non-local organizations functioning in a community increased, so did the need for interorganizational coordination.
5. When an organization becomes totally integrated in a general way into the overall response being made to a disaster (as in the case of the fire department in Fairbanks), it loses both its identity and autonomy.

6. Organizations which lose autonomy as the result of their integration into a community's overall disaster response, for example, the police, fire and utility organizations, seek to return to their pre-disaster state as quickly as possible following a disaster. This was much less true for the welfare organizations which seemed reluctant to relinquish their increased status which emerged as a result of their disaster roles.
CHAPTER VII

SUMMARY AND CONCLUSIONS

In the preceding chapters we have discussed: (1) The need for a sociological analysis of emergency-induced interorganizational change, (2) our theoretical concepts, (3) our study design and methodological approach, and (4) the empirical data which indicated that (a) different types of emergencies induce different kinds of interorganizational changes and (b) that different types of organizational structures influence the kinds of interorganizational changes which occur following different types of emergencies. We will in this final chapter summarize our findings as they relate to our major working hypotheses and offer some general conclusions and hypotheses for further research.

The Utility of a Stress Model for Analyzing Interorganizational Change

Our basic theoretical assumption that one of the fundamental causes of emergency-induced interorganizational change is that emergencies place excessive demands on communities and on the problem solving organizations in those communities was sustained. All of the emergencies studied did produce markedly increased demands on the communities within which they occurred and consequently on the community's emergency-relevant organizations. As a result of these increased demands, there
were certain interorganizational changes precipitated in the organizational structures analyzed.31

**Emergency-Induced Interorganizational Change**

When a major emergency strikes a community, it has immediate consequences not only for the individual citizens of that community but for its emergency-relevant organizations as well. The most obvious changes are those which take place in the physical environment. Property is damaged, persons are killed or injured, utility lines are knocked down, and a great many other physical disruptions occur. As the emergency-relevant organizations in the affected community respond to the emergency, they discover that their relationships to other organizations are altered. The familiar patterns which had characterized their interorganizational relationships give way as new, unanticipated and heavy demands are placed on them. Most of these alterations are of a short-term nature and extend only through the period of greatest community stress. There are, however, a number of emergency-induced changes which become structured into the ongoing relationships of the various organizations and for our purposes we have defined these as long-term interorganizational change. In all of the organizations studied in this research, a number of short-term changes occurred. Not all of the organizations studied, however,

31 It is important to note here that we did not utilize all of the dimensions of the stress model outlined in chapter one. For example, we did not consider the quality of the demands made on a community's emergency organizations, although that dimension is of importance in some instances in understanding organizational stress. Nonetheless, the concept of stress as used proved to be a most helpful notion.
experienced long-term changes. It is particularly important to note that when long-term changes did occur they were always precipitated by some serious problem which arose during the period of adaptation. For example, the police department in New Orleans was faced with the all but overwhelming task of coordinating that community's response to Hurricane Betsy. Since this task created a number of problems for the police department, that department was primarily instrumental in the establishment of a master mutual aid system which was designed to facilitate the interorganizational coordination of personnel and equipment in the event of another disaster of similar proportions.

A second significant finding regarding long-term change is related to the type of emergency which induced the change. None of the long-term changes created by the natural disasters involved the enactment of laws. In every instance these long-term changes involved the mutual restructuring of certain relationships but this restructuring was done on a voluntary basis and was non-legal in nature. The vast majority of the long-term changes which occurred following the civil-disturbances, by contrast, involved the passing of state laws and/or local ordinances. The reasons for this seem to be directly related to two factors: (1) the civil disturbances both reflected and/or created a state of severe normative dissensus, and (2) the civil disturbances which occurred in Los Angeles and Detroit were new phenomenon for the cities in which they occurred. Each of these factors can be analyzed further. Both of the civil disturbances involved the violation of many local and state laws as can be attested to by the fact that there were over 10,000 persons arrested in the two cities, 40 percent of whom were arrested for looting. Hundreds of others were arrested
on suspicion of arson, sniping and other related violations. There was, then, a very open, flagrant and willful violation of property laws, and to a lesser degree, of laws concerning the protection of human life. In response to these violations a number of laws were passed which were designed to control crowd behavior. Since the tasks associated with crowd control directly involves the functioning of police and fire departments, there were also a number of laws passed which were designed to protect the personnel and equipment of the police and fire departments as these organizations perform their assigned duties.

The fact that a great deal of legislative activity followed the civil disturbances but not the natural disasters is probably due to the nature of the precipitating agent. In the case of the civil disturbances, governmental officials pressed for the passage of legislative controls in an effort to prevent the recurrence of another disturbance. Legislation, of course, could not in any way prevent a hurricane and could have only an indirect affect on possible flood control. The legislature in Alaska did pass a law by which a disaster fund was established for that state. This fund was to receive its money from a tax levied against all citizens of the state. Then when a major emergency strikes some city or village in Alaska, that community would be eligible for state financial assistance. This law, however, is basically different from the ones which were passed in California and Michigan in that it was designed to ameliorate the effects of a wide range of possible emergencies and not to prevent their occurrence.
This brings us to our second factor, the uniqueness of the disturbance events. Throughout American history there have been a number of wide-spread racial riots, but these were fundamentally different from the civil disturbances studied in one very important detail. The racial riots which have marked this country's past history, such as the one which occurred in Detroit in 1943, involved overt conflict and violence between the races. Such interracial conflict was not a significant part of either of the disturbances studied. To the contrary, there were a number of isolated instances where Caucasians and Negroes were looting in corporate fashion in Detroit. Because the city of Los Angeles was not anticipating a disturbance of the kind that occurred, that city was caught almost totally unprepared in terms of pre-disturbance plans. And although the city of Detroit did have a disturbance plan, it was, for the most part, centered on police control and included practically no provisions for the coordination of organizations functioning within the community. Perhaps more importantly, the Detroit plans did not provide for the integration and coordination of non-local organizations into that city's disturbance response. As a consequence of this unexpectedness and lack of pre-disaster community planning, the emergency organizations in these two cities were compelled to make a great many ad hoc decisions involving such crucial matters as overall authority, leadership, decision making, the allocation of priorities and resources and so on. Since there was

a great deal of indecision, and in some cases, open conflict, as a part of these ad hoc adaptations and because this indecision and conflict seriously limited the functioning of the community's emergency response, the organizations involved (as well as city and state governmental officials), pressed for a specific delineation of disturbance duties and responsibilities. Furthermore, because many of these disturbance duties involved efforts on the part of several different law enforcement and fire departments, efforts were made to succinctly outline the authority possessed by each of these. Thus, the long-term interorganizational changes which followed the civil disturbances were chiefly in the form of laws which were designed to regulate the activities of the protective agencies in the event of a future disturbance. These laws can be viewed as a direct outgrowth of the operational and administrative problems experienced by these organizations, both local and non-local, during the disturbance period. As legal regulations these changes became binding on the police and fire departments and as such were routinely structured into the ongoing life of these organizations.

Emergency Types: Their Differential Aspects and Affects

On A Community's Emergency-Relevant Organizations

Another of our major working hypotheses was that different types of emergencies would create or induce different types of interorganizational change. We can now summarize our findings regarding this

hypothesis. As we do we will focus on the two most distinguishing dimensions of the emergencies selected--dimensions which we feel are the most helpful in explaining the different changes created by each. These dimensions are: (1) the community context within which the various organizations functioned, and (2) the differences in the number and pervasiveness of the demands each type emergency placed on a community and its emergency-relevant organizations.

**Differential community contexts**

On the basis of our analysis, we can conclude that one of the principle reasons that the two types of community emergencies studied produced different types of interorganizational changes is that they occurred in differing community contexts, that is, within the contexts of normative consensus and dissensus. In keeping with the findings of prior disaster research, we discovered that the natural disasters studied tended to produce wide spread consensus among the members of the affected community. This consensus was so strong that it frequently swept away, at least temporarily, long established hostilities and divisions. Following the natural disasters there seemed to be a strong consensus regarding the basic values of the community, especially those associated with life and property. Both in New Orleans and Fairbanks there was a strong consensus manifested by the public at large, a consensus which was reflected in the operations of the emergency organizations in these communities. There was

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in these cities an all-encompassing agreement concerning the saving of lives, the protection of property, both public and private, and a concentrated effort on the part of the community's inhabitants and organizations to restore their common life to its pre-disaster state.

The civil disturbances included in this research both reflected and/or created a basic dissensus within the communities within which they took place. Moreover, the burning, looting and sniping which occurred during these civil disturbances seemed to harden and polarize this pre-disaster dissensus, thus making some eventual accommodation and/or consensus more difficult to achieve. In short, the civil disturbances included in this research seemed to result from a basic alienation of segments of a community's population with the dominant values of that population. Thus, instead of receiving wide-spread support from citizens in the most seriously affected areas of their communities, emergency personnel in Los Angeles and Detroit were harassed as they sought to fulfill their assigned tasks. The restoration of public order was vigorously resisted by certain elements within these communities and was achieved only after local law-enforcement agencies received support from outside police and military personnel. Firemen in both cities were confronted with the task of fighting a large number of incendiary fires at a time when they were relatively unprotected from hostile crowds. While firemen did, from time to time, receive some isolated assistance from persons within the disturbance areas, they, too, had to rely heavily on assistance from extra-local community agencies for needed logistical and operational support. Thus, the overall consensus which provided the context within which the
emergency organizations in New Orleans and Fairbanks operated was significantly absent from the affected sections of Los Angeles and Detroit. One can, in fact, consider the highly manifest dissensus present in Los Angeles and Detroit as one of the precipitants of the disasters which occurred in these communities. Thus, the normative contexts within which the emergency-relevant organizations functioned during each of the emergencies had an extremely profound effect on those organizations and on the changes which occurred in both their intraorganizational and interorganizational structures.

**Differential demands**

The two types of emergencies studied not only existed within differing community contexts, they produced markedly different demands on the emergency organizations functioning in the affected communities. Some of these differential demands can be attributed to the nature of the normative environment within which the emergency-relevant organizations were functioning. Perhaps, more importantly, the natural disasters studied were much more pervasive in their impact than were the civil disturbances. As such they affected both a wider geographic area and a larger proportion of the community's population. The implications of these differences for the organizations included in this research can be summarized as follows.

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35 Although the natural disasters studied presented the communities affected with far more demands than did the civil disturbances, this fact can not be considered indigenous to all similar emergency events. For example, the bombing of Hiroshima was extremely pervasive and affected all of the population living in that city.
The two types of emergencies placed quite different demands on the police and fire departments. The natural disasters imposed demands on these organizations which were quite general and which ranged from search and rescue to traffic control, community coordination and the provision of emergency transportation services. In neither of the natural disasters did the fire departments have any serious fire problems; hence, their duties were quite general in nature. The civil disturbances, however, placed unusually heavy demands on both the police and fire departments. These demands were much more specific in nature than those assumed during the natural disasters. In the civil disturbances the police departments were almost exclusively concerned with social control functions while the fire departments were totally involved in fire suppression activities. Another important difference in the two types of emergencies as far as the police and fire departments were concerned is that these organizations had to request outside assistance during the civil disturbances whereas they did not during the natural disasters. For example, the police departments in both Los Angeles and Detroit received a huge amount of personnel and material assistance from the military services and from other social control agencies. The fire departments in both cities also received considerable assistance from extra-local sources. This assistance included military protection as well as mutual aid from a great many other fire departments.

The utility organizations included in this study also experienced vastly different organizational demands as the result of the various emergencies. The civil disturbances created more emergency related
tasks than those normally experienced by these organizations in non-
emergency environments, but in neither Los Angeles nor Detroit were
these demands beyond their response capabilities. Had their field
personnel not been harassed during the civil disturbances, they
would have been able to handle all of the demands being made in
near normal fashion. The natural disasters, however, did present
the utility organizations in New Orleans and Fairbanks with an
extremely large number of demands, many of which could not be met
immediately. These situations necessitated the assistance of extra-
local organizations. This external assistance came almost exclusively
from other utility organizations or from agencies such as the Army
Corps of Engineers which possessed vital materials and trained
technicians.

The demands placed on the welfare organizations as a result of
these two types of emergencies also varied a great deal. The
civil disturbances placed comparatively few demands on them and in
neither Los Angeles nor Detroit did either the Salvation Army or
Red Cross fully activate their total organizational resources. The
natural disasters, however, did subject both the Salvation Army and
the Red Cross to extremely heavy demands and as a result of these
demands the basic structures of these organizations underwent signifi-
cant changes. One of the principle tasks of the Red Cross in dis-
aster settings is the provision of public shelters. In both New
Orleans and Fairbanks this responsibility was an important part of
the Red Cross operation. Such an operation was not necessitated in
either Los Angeles or Detroit. Another important difference as far
as the welfare organizations were concerned was that of post-emergency
assistance and involvement in long-term recovery operations. In both New Orleans and Fairbanks, the welfare organizations became involved in a lengthy and highly expensive rehabilitation program whereas in Los Angeles and Detroit their post-emergency involvement was quite minimal.

In concluding our discussion of the differential affects that the two emergency types had on the communities studied, it is important to note that these affects resulted not from their differing characteristics but from the fact that each type presented quite different demands on the communities within which they occurred. These demands were unexpected and basically unprepared for and/or they were excessive in nature. These facts, along with the context within which these emergencies occurred, account for most of the differential changes which took place.

The Influence of Organizational Structures

On Interorganizational Change

While the concept of stress has great utility in helping us understand many of the interorganizational changes which occurred following the emergencies studied, it does not explain all of the changes or lack of changes which took place. For example, not all of the organizations which experienced heavy demands underwent the same kinds of interorganizational changes. Moreover, some organizations experienced tremendous short-term changes without experiencing any concomitant long-term changes. The data indicate that these differences can be accounted for, at least in part, on the basis
of the pre-disaster structures possessed by these organizations. The police and fire departments, for example, were able to control the number of demands being made on them during the natural disasters much more effectively than were the welfare organizations. As a consequence, these organizations experienced far less change in these emergencies than did the welfare organizations. The reasons the protective organizations were able to do this arise from two factors which are directly related to their organizational structures. (1) The tasks performed by these organizations require a degree of technicality so that volunteers cannot assume many of these tasks without at least a minimum of training. (2) The tasks performed by the protective organizations are clearly defined by law and tradition so that these organizations can, within limits, control the number of demands being made on them. (3) Perhaps the most important factor which accounts for the different degrees of change experienced by the protective and welfare groups is that they possess entirely different authority structures. The police and fire departments have para-military authority structures and tightly controlled decision making processes. These factors militate strongly against the inclusion of a great many non-regular, non-professional organizational members even during periods of extreme crisis. Hence, in both Los Angeles and Detroit, when it became apparent to the local police departments that they could not contain the disturbances, they called initially upon other police organizations operating at county and state levels. It was not until the situations in each city became
critical that the police departments requested or consented to receive non-police assistance. When non-police aid was requested, it came in the form of military assistance and, as noted earlier, the arrival of these organizations heralded a considerable amount of confusion and conflict. The reasons for this confusion and conflict can be attributed, once again, not so much to the demands being placed on these organizations but rather to the structures possessed by them. The police and military organizations possess similar authority structures, they also operate with a great amount of intraorganizational autonomy. In addition, when they are engaged in field operations they normally possess considerable freedom to function as they desire. In spite of these similar structures, when several of these organizations, each with its own administrative officers, staff and line personnel, authority structures, and so on, came together in a common effort, mutual adjustments frequently created confusion and conflict.

36 This conclusion regarding the organizational structures of the police and military organizations studied is in sharp contrast to the position posited by Form and Nosow who suggest that in disaster settings those organizations with similar structures are able to integrate their mutual activities more effectively than those with dissimilar structures. While this notion proved to be accurate for some of the organizations included in this study, especially the fire and utility organizations, it was not true for the police and military organizations. We are suggesting that similar organizational structures facilitate interorganizational coordination only when the basic administrative and authority patterns of the organizations are not altered. For a fuller explanation of Form and Nosow's position, see: William H Form and Sigmund Nosow, *Community in Disaster* (New York: Harper & Brothers Publishers, 1958), p. 236.
We noted above that while the police and fire departments have quite similar organizational structures, they differ in a number of important ways. Perhaps the most important difference, as far as the disasters studied are concerned, is that the fire departments had a built in interdependence on other fire organizations. Thus, although the fire departments functioning in civil disturbances did experience a number of short-term changes in their interdependence and interorganizational relationships, they did not experience any significant loss in their authority, leadership and decision making prerogatives as a result of the mutual aid received.

The interorganizational relationships of the utility organizations were the least affected of all the organizations analyzed in the process of this study. This fact can be seen as resulting from the basic functional and structural characteristics of these organizations. We indicated previously that the functions provided by these organizations in both non-emergency and emergency settings are quite limited in their range. They perform one and only one principal function in both environments, that of providing utility services to a given area. In no instance in any of the four emergencies studied did the utility organizations engage themselves in any tasks not normally performed by them. Thus, they did not expand the nature of their community functions; as a matter of fact, they actually reduced these functions during the periods of civil disturbance. By not accepting non-regular tasks, these organizations were able to control the demands being made on them, to a large extent.
These organizations were able to do this with impunity from criticism and/or loss of domain for at least two reasons: (1) they were private, or at the most, semi-public organizations being operated in a near private fashion, and (2) there was no public expectation that these organizations would become involved.

A second factor of a structural nature which helps explain why the utility organizations did not undergo any dramatic inter-organizational changes as a result of the emergencies studied can be attributed to the highly technical nature of their field operations. The most crucial tasks performed by these organizations in the immediate recovery and rehabilitation periods are highly technical and require specialized skills. Volunteers could not perform the tasks most needed in the immediate post-emergency period, hence, they were not enlisted. When non-local personnel assistance is acquired by the utility organizations, it comes in the form of technicians who are integrated into the existing personnel and administrative structures of the host organization without any strain on the basic authority or decision making patterns of the organizations involved. In this sense the utility organizations and the fire departments are more nearly alike than are fire and police departments.

In the major emergencies in which they were actively involved, the welfare organizations underwent the most significant interorganizational changes of all the organizations included in this research. There appears to be three primary reasons for this fact. (1) The Salvation Army and Red Cross have very diffuse and pervasive responsibilities during periods of severe community stress. The expectations
the public at large and other organizations have of these welfare organizations during emergencies include, as one Red Cross worker put it, "just about everything that somebody else cannot do or does not want to do." (2) In the natural disasters the Salvation Army and Red Cross could not effectively "filter out" the demands they did not wish to assume. This meant that they frequently had more demands than they could handle. (3) The basic structures of these organizations are such that they must expand to include, (a) many non-local professional personnel and (b) many local non-professional volunteers. Thus, during the natural disasters, these organizations could not control either the number of demands being made on them or the expansion of their basic organizational structures. Moreover, there is a fundamental difference or discontinuity between their emergency and non-emergency functions and structures. These organizations, then, are basically different in each of these environments and as such experienced a great many transitional short-term changes in almost all of their interorganizational relationships. These changes are rarely carried over into their ongoing structures although in the case of the Red Cross the organizational prohibition against performing leadership roles during civil disturbances was altered. This alteration appears to have resulted from two factors. (1) The public at large and the other emergency organizations in the affected communities expected the Red Cross to perform certain welfare tasks. When these expectancies were not fulfilled, a number of public relations and interorganizational dependency problems arose which had to be ameliorated.
(2) When the Red Cross did not perform these expected functions, the public at large and the other emergency organizations in the community were forced to look elsewhere for assistance. This condition can be seen as representing a long-term threat to the emergency role of the Red Cross and as such it forced a redefinition of organizational policy.

We can conclude, then, that the structures possessed by an organization were highly influential in determining the degree and kinds of changes which occurred in their interorganizational relationships following the major community emergencies studied.

**Conclusions-Hypotheses**

In light of these general findings, we can offer the following, more specific conclusions which may serve as hypotheses for further research related to emergency-induced interorganizational change. If viewed as hypotheses each of the following statements would assume that all other things were equal, and this, of course, is never completely the case. One could, however, seek to control for a great many additional factors and in the process arrive at more acceptable generalizations than those offered here. Thus, we offer the following statements not as firmly established scientific laws but rather as tentative conclusions based on the analysis of our data.

1. The amount of stress placed upon a community and its emergency-relevant organizations was closely related to the number, intensity and priority of the demands being made and to the resources possessed by the community and/or its emergency-relevant organizations.
2. The natural disasters studied created more interorganizational change than did the civil disturbances chiefly because they affected wider areas of the community and necessitated greater organizational involvement.

3. When a community emergency was unexpected, it tended to produce greater stress on the community and its emergency-relevant organizations.

4. Differences in the amount and kind of interorganizational change precipitated by the two types of emergencies studied resulted largely from: (a) differential community contexts, that is, normative consensus as contrasted to normative dissensus (b) differential demands as measured in terms of magnitude and pervasiveness and (c) the resources possessed by the community and its emergency-relevant organizations.

5. Communities with prior emergency experience were better able to handle the emergency demands imposed on them than were those communities which lacked previous emergency experience.

6. One of the empirical indicators of community and organizational stress was the amount of extra-local assistance (organizational materials, personnel, information, and so forth), requested by local governmental and organizational officials.

7. As the community emergency created by a disaster moved from one stage to another, for example, from warning to impact, to search and rescue, to recovery and so forth, the interorganizational relationships of the emergency-relevant organizations within a community shifted in keeping with the nature of the demands being made and the resources available.
8. There was a positive relationship between the number of extra-local organizations functioning in a community following a major emergency and the amount of interorganizational conflict.

9. There was a positive relationship between the number of organizations functioning in a community, both local and non-local, and the amount of effort expended in interorganizational integration and coordination.

10. The more severe the stress was on a community and its emergency-relevant organizations, the greater was the amount of interorganizational change in the interdependencies of the organizations involved.

11. As the number of organizations responding to a community emergency increased, the decision making processes became more complex and involved increasingly higher ranking organizational officials.

12. The more crucially involved an organization was in responding to a community emergency, the higher within that organization's administrative structure its interorganizational liaison personnel were.

13. The more crucial an organization's resources were to the recovery of the community, the greater were the pressures on that organization in terms of interorganizational dependencies and the greater were the changes in its pre-emergency dependency relationships.

14. The interorganizational relationships of authority, leadership and decision making are closely related and throughout this
research when there were changes in any one of these relationships there were concomitant changes in the others as well.

15. There was no evidence that any of the organizations included in this study possessed monolithic authority, leadership or decision making prerogatives during the emergencies analyzed. Rather, the possession of these qualities seemed to stem from (a) an organization's pre-emergency status within the affected community, (b) the relevance of an organization's skills and resources and (c) the ability of an organization to adequately perform the tasks assigned it.

16. Those organizations which possessed a highly skilled, technically oriented division of labor experienced fewer inter-organizational changes than did those which possessed either professional personnel structures or volunteer personnel structures.

17. Those organizations which possessed professional personnel structures experienced fewer interorganizational changes than did those which possessed volunteer personnel structures.

18. The more an organization's structures permitted it to "filter out" unwanted demands following an emergency, the fewer interorganizational changes that organization experienced following the emergencies studied.

19. The more an organization becomes totally integrated in a general way into the overall response being made to an emergency, the more it tended to loose its identity and autonomy.
Other conclusions/hypotheses could be posited but most of these were listed in preceding chapters on analysis or are subsumed under the conclusions/hypotheses listed immediately above.

This research was undertaken in response to the need for further knowledge regarding the very complex relationship between community emergencies and interorganizational change. Although we feel there are certain limitations to our findings, they offer, nonetheless a foundation on which other research may be built. Such research should be undertaken for it could make important contributions to three important areas of sociology: the sociology of community; the sociology of complex organizations and the sociology of social change.

In addition to a general foundation on which further research can be built, our findings possess certain practical values for those engaged in emergency planning. By utilizing our research findings as a working base, governmental and organizational officials could build a major emergency plan which would take into account both the processes and problems associated with interorganizational adjustments following community emergencies. Inasmuch as we have examined two distinctly different types of emergency situations, the findings of our research could provide emergency planners with important information relating to the differential aspects and affects of both natural disasters and civil disturbances. If such use can be made of our findings, the efforts which have been expended to secure them will have been worthwhile.
APPENDIX A

ORGANIZATIONAL EMERGENCY RESPONSE

INTERVIEW GUIDE
I should first introduce myself. My name is ___________________________. I am a ___________________ (position) at the Disaster Research Center at The Ohio State University in Columbus, Ohio. We are engaged in a comprehensive study of the working of organizations in disasters. We have studied organizations in a number of foreign and domestic disaster settings such as _________________. One of the practical results of this research should be improved planning and preparedness for disasters.

You should know that your name will in no way be attached (attributed) to any information you give us. No information will be passed directly to anyone in your organization or in __________________________ (city or area). We do not include names in our reports.

We certainly appreciate your cooperation and assistance. Some of the questions I will be asking you will appear a bit repetitious but they are getting at somewhat different organizational dimensions. We will be discussing the things you did, with whom you worked, how decisions were made and so on during the emergency.

Main Points:

1. Who we are and what we are doing.
2. Guarantee anonymity.
3. Prepare respondent for what may appear to him to be repetitious questions.
Interview Schedule

1. How did you first become aware of the disaster?
   a. When was this?
   b. Where were you?
   c. Who was with you?

2. What did you do right after you became aware of (the possibility of) the disaster, say in the first five minutes?
   (IF RELEVANT):
   a. How did you first come in contact with people ______________________ (name of organization)?
   b. Did you contact them or did they contact you?
   c. When was this?
   d. Then, at what time did you start to work?
   e. (NOTE: If there was time lag between this time and first contact with organization): What did you do before you went to work?

3. What did you do during the emergency period, from ________________ to ________________ (insert time span)?
   (NOTE: Have respondent reconstruct major activities performed during time span. Find out what he did, when he did it, and, if necessary for clarity, why he did it. TRY TO OBTAIN AS MANY TIME REFERENTS AS POSSIBLE.)

4. Were there many occasions when you needed things to do a job but couldn't get them?
   (IF RELEVANT):
   a. What were the circumstances?
   b. What did you do?

5. What other problems did you have in doing your work?

6. Who was working with you during this time?
7. Are these the people with whom you normally work?
   (IF NO): With whom do you normally work?

8. Would you describe a "normal" day before the disaster, say, 3 weeks before? (NOTE: if unclear to the respondent: For example, what time did you come to work? What did you do in the course of the day? Just trace through your activity on a typical day.)
   (IF respondent has no "normal" days): Describe what you did last ________________ (name a specific day).

9. How would you compare this normal day to what you did on the first day you worked following the disaster?
   (PROBE for comparative rate, type, total time, thoroughness, perceived seriousness of tasks.)

10. (IF RELEVANT):
    You've told me a number of things you did during the emergency period that you did not mention as part of your normal day. Are these things which you have done frequently before?

11. Do you have any special responsibilities or things that you are supposed to do during an emergency?
    (IF RELEVANT):
    a. What are they?
    b. Are these specified in writing?
    c. How is it that you are familiar with them?

12. Among the tasks that you described in discussing your normal day, which are your official tasks?
    (CLARIFY, if necessary): By official I mean, if someone had been brought in here a month ago to be a __________, what would your boss have told him he was supposed to do?

13. As everyone knows, individuals often do certain things that are not part of their official responsibilities. During normal times, what activities do you perform that are not part of your "official" job?
    a. How did you happen to start doing these things?
    b. Does anyone else do these things?
c. Is this part of anyone's "official" job?

14. There are usually official ways of doing things, but most groups also develop their own ways of doing things on their jobs. What ways of getting the job done (short cuts) have you and the others here worked out on your own?

   a. How did you start doing these things?

15. When things are rushed around here, when you can't do everything, what doesn't get done?

   (CLARIFY order of priority: such as, what "goes" first.)

   a. On the other hand, what must get done?

   b. How is priority determined?

16. Now, turning to something a little different: as you know, people often have particular friends who work at the same place they do. Who are your friends here at ______________ (name organization)?

   a. Where do they/doe she/work? (within the organization).

   b. Do you ever help each other on the job?

   (IF RELEVANT PROBE for circumstances.)

17. Earlier you told me with whom you work on a normal day. Of these, with which one(s) would you prefer working?

   a. Could you tell me why?

   (IF no preference is expressed, construct a hypothetical situation within the context of his tasks, then ask):

   Now with whom would you rather be?

   b. Did you work with any of these people we have been talking about during the emergency period?

   (IF RELEVANT PROBE for circumstances and joint activity.)

18. A while ago, you told me of several things that you did during the emergency. How was it decided that these things should be done? For example, when did you make the decision alone, when with several other people? What kinds of things did your boss decide? Would you describe for me how decisions were made?

   (NOTE: The intent here is to get a clear picture of the decision-making pattern during the emergency period. If necessary, use examples of the tasks he performed. If he reports that others made decisions, PROBE: How do you know this?)
a. Were there any particular problems you encountered in this area (decision making)?

19. How does what happened during the couple of days following the disaster compare with the way decisions were usually made in the organization before then?

(IF RELEVANT):

a. How about your own decision....?

b. How about other decisions ....?

(PROBE for: (i) rate (ii) type (iii) number of persons consulted (iv) perceived seriousness of decisions. If respondent emphasizes only divergences probe for similarities in decision making.)

20. During normal times, what was the official policy regarding how decisions were to be made? We are mainly interested in decisions, yours or others, that affect your work.

21. Were there any plans for changing the way of making decisions during an emergency period?

(IF RELEVANT):

a. What changes were supposed to have occurred in your decision making?

b. What changes were supposed to have occurred in decisions made by others that affect you?

c. How did the way of making decisions during the emergency compare with what the plan called for?

22. In most organizations, you can't get an accurate picture of how decisions are made by looking at a chart of the organization. With regard to those decisions in which you are normally involved, what kinds of decision making would I not anticipate from looking at a chart of this organization?

23. Often people who are natural leaders play a more important part in making decisions than one would expect from their official positions. With regard to decisions that affect your work, who are these persons in your organization?

a. What kinds of decisions does ____________________________ influence or make?
24. In the emergency period, what part did ______________ play in making decisions (refer to those mentioned in 23)?

25. We have talked about decisions that were made regarding certain things that were done during the emergency. Now we'd like to talk about how these decisions were carried out. Who were the persons who gave you instructions during the emergency?
   a. Of these, which ones gave you the largest number of instructions?

   (NOTE: The aim here is to determine who originated the orders. Be sure this is distinguished from who transmitted the orders.)

26. To whom did you give orders or instructions during the emergency?
   a. Of these, to whom did you give the largest number of instructions?

   (NOTE: Distinguish transmitters from originators.)

27. During the emergency did you receive orders from someone other than the person(s) you usually do? (IF SO):
   a. Who was this (were they)?
   b. How did this happen?
   c. Has this ever happened before?

28. Did you give instructions or orders to persons other than those you usually do? (IF RELEVANT):
   a. Who were they?
   b. How did this happen?
   c. Has this ever happened before?

29. In general, were there any problems in the chain of command that affected your work?

30. How would you compare the working of the chain of command during the emergency to the way it works during normal times?
(PROBE FOR: (i) generality and specificity of orders with relation to persons mentioned in 25, (ii) the manner in which orders were given, i.e., brusquely, etc., (iii) frequency of conflicting orders, (iv) perceived seriousness of orders, (v) extent of supervision.)

(NOTE: If response emphasizes only divergences, probe for similarities in the "working" of the chain of command.)

31. Where does your position fit in the normal chain of command?
   a. From whom do you usually receive orders?
   b. To whom do you usually give orders?

32. You have just told me from whom you usually receive and to whom you usually give orders. Of these:
   a. From whom are you officially supposed to receive orders?
   b. To whom are you officially supposed to give orders?
   c. Are there any others from whom you are supposed to receive or to whom you are supposed to give orders? Who are they?

33. Were there any plans for changing the chain of command during the emergency period?
   (IF RELEVANT):
   a. What changes were supposed to have occurred?
   b. How did the chain of command during the emergency compare with that designated in the plan?

34. We have found that day-to-day operations in most organizations vary somewhat from the official chain of command.
   a. Prior to the emergency did you occasionally get orders from someone other than the person who is supposed to give them to you?
   b. Prior to the emergency did you on occasion give orders to someone other than those designated by the chain of command?

35. We know that personalities affect the chain of command. To what extent do personalities affect the lines of authority in this organization?
   (PROBE FOR: (i) effect of friendships and hostilities, (ii) perceived competence.)
36. While carrying out your tasks during the emergency period I assume you communicated with others in the organization.

a. What means (memo, face to face, telephone, radio, meeting, runner, etc.) did you use to communicate with others in the organization?

(PROBE FOR: (i) means most frequently used (ii) changing means over time.)

b. What were the major topics of communication?

c. With whom did you most frequently communicate?

37. What kinds of communication problems did you have during the emergency?

38. How frequently (often) did you need information from someone in your organization, but could not get it?

(IF RELEVANT):

a. What were the circumstances?

b. What did you do?

39. We have been talking about how communications were structured during the emergency period. Now we want to discuss the communication patterns in your organization during a normal day before the ______________________.

a. With whom would you most frequently have had occasion to communicate?

b. What were the major topics of communication?

c. What means were normally employed?

40. How did the emergency period compare with this pattern?

(PROBE: (i) with whom, (ii) major topics, (iii) means.
NOTE: The with whom is most important here.)

(IF RELEVANT):

a. You have mentioned a number of ways in which communications during the emergency differed from normal times. Had any of these things ever happened before?
41. During normal times prior to the emergency what were the official channels or paths that communications were supposed to follow?
   a. From whom were you supposed to receive communications?
   b. To whom were you supposed to send communications?
   c. What means were to be employed?

(NOTE: If necessary refer to some specific task or activity.)

42. Were there any plans for changing the channels and means of communication during the emergency?

(IF RELEVANT):
   a. What were the changes specified in the plan?
   b. How did the over-all pattern of communication during the emergency compare with the plan?

43. In most organizations the official channels and the official means of communication are not always followed. People find ways around the "red tape."
   a. During normal times, what were the most typical ways that this occurred in your organization?

(NOTE: Be sure to get both channels and means.)

44. We know that personalities affect communications. How were the day-to-day communications prior to the emergency influenced by the personalities in this organization?

(PROBE FOR: (i) effect of friendships and hostilities (ii) perceived competence.)

45. When you had a difficult problem or decision to make, to whom in the organization did you go for advice?
   a. Did you have occasion to do this often?

46. As everyone knows, in every organization there are usually a few people who seem to be the first to know what is going on. Prior to the emergency when you wanted to find out what was going on, to whom did you go?
APPENDIX B

INTERORGANIZATIONAL CHANGE

INTERVIEW GUIDES
INTERORGANIZATIONAL CHANGE

INTERVIEW SCHEDULE I

Administrative Heads

1. Would you describe briefly what your organization conceives its primary tasks or goals to be?

2. Would you describe briefly the functioning of your organization during non-emergency periods?

PROBE FOR: AUTHORITY, POWER AND DECISION-MAKING PROCESSES.

3. Do you have a written report which describes your organization's response to the emergency?

   IF A REPORT IS AVAILABLE TRY TO SECURE A COPY; THEN ASK THE RESPONDENT IF HE WOULD LIKE TO ADD ANYTHING TO THE REPORT. THEN GO TO QUESTION 5. IF A REPORT IS NOT AVAILABLE, ASK:

4. Would you describe briefly the response of your organization to the emergency?

5. At any time during the emergency were any of the rules or procedures regulating your organization altered or suspended?

   a. Under what circumstances?

   b. When were they suspended/alterred: When reactivated?

6. How are officials in your organization first made aware of the emergency?

7. How were they kept abreast of events taking place in the impact area?

8. Was the information you were receiving accurate enough for your organization to build its response around it, that is, did it help you appraise the extent of the emergency and the degree to which your organization would be involved?

9. During major emergencies, organizations frequently find it necessary to establish communications and other ties with certain other organizations in the community. I wonder if
you can recall those organizations with whom your organization worked most closely?

10. During major emergencies, many organizations receive assistance from certain organizations located outside the local community. I wonder if you can recall if your organization received assistance from any organization located outside your community? Which ones? When?

11. During the emergency, did you establish a liaison with any other organization in your community by sending personnel to their offices, headquarters or command posts?

   a. If so, which organizations did you contact?
   
   b. When? How long was the liaison established?

12. Is such a liaison established under normal conditions?

13. Do you presently have a liaison with these organizations?

14. During the emergency did other organizations send liaison persons to your headquarters or command posts?

   a. Which ones?

15. At any time prior to the emergency did you or any members of your organization have occasion to meet with personnel from any of the other organizations which later responded to the emergency?

   a. Which ones?
   
   b. Who called these meetings?

16. Following the emergency, did representatives from your organization have occasion to meet with representatives of any other organizations in the community?

   a. Which ones?
   
   b. How often?
   
   c. At whose summons?

17. During the emergency, did you or any other members of your organization attend any specially called meetings at which time the community's response to the disaster was discussed?

   a. Who called the meeting?
   
   b. Who was present, i.e., which organizations were represented?
c. About how many meetings of this nature were held?

18. Were there any differences of opinion expressed openly or privately by any persons in these meetings regarding the deployment of personell or other resources possessed by the organizations in your community?
   a. What were the issues in conflict?
   b. How were these differences settled?

19. Following the emergency did you or any member of your organization attend any specially called meetings to discuss the community's response to the emergency?

20. Did your community have an overall plan to cope with the emergency? (IF NO GO TO NEXT QUESTION, 21)
   a. How was it developed?
   b. Which organizations were involved?
   c. Have these plans been revised since the emergency?
   d. How were these revisions made?

21. Did your community ever discuss such a plan?

22. Has there been a plan created since the emergency?
   a. Under whose direction?
   b. Which organizations were included in the development of these plans?

The following questions are designed to get specific information from the respondents concerning the interorganizational relationships of their organizations before, during and following the emergency. It is hoped they will be able to rank these relationships in 1, 2, 3, etc. order. If they are not, try to get some indication as to those organizations with whom they had the most, much, some or no interaction. In any event, try to secure as much information as possible regarding those organizations with whom their organization interacted (s) prior, during or following the emergency.

Record their responses to the remaining questions on the appropriate tally sheets.
BEGIN THIS FINAL SECTION OF THE INTERVIEW BY SAYING TO THE RESPONDENT:

"This is the final part of the interview and the information I am about to request is of particular interest to us."

THEN HAND HIM CARD A AND CONTINUE WITH THE INTERVIEW.

23. Here is a list of organizations which are most frequently involved in a community's response to a major emergency. I wonder if you can tell me, either from records or from your experience, which of these organizations initiated communications with your organization the most, second most, etc., before, during and following the emergency? I would like for you to rank these in 1, 2, 3, order, if possible.

COMMUNICATIONS INCLUDE TELEPHONE CALLS, RADIO TRANSMISSIONS, LETTERS, MEMOS, RUNNER-DELIVERED MESSAGES, PERSONAL VISITS, ET CETERA.

IMPORTANT: RECORD THE RESPONSES TO QUESTION 23 ON TALLY SHEET IA.

24. With which of these organizations did your organization initiate communications the most, etc. before, during and following the emergency? Would you rank these in 1, 2, 3, order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 24 ON TALLY SHEET IB.

25. From the same list of organizations, I wonder if you can tell me, either from records or from your experience, which of them requested or requests from your organization material assistance in the form of personnel, equipment or facilities before, during and/or following the emergency? Would you please rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 25 ON TALLY SHEET IIA.

26. From which of them do or does your organization request material assistance, in the form of personnel, equipment or facilities? Before, during, and/or following the emergency? Would you please rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 26 ON TALLY SHEET IIB.
27. From the same list, I wonder if you can tell me either from records or from your experience which of these organizations requested(s) from your organization advice, information or other non-material assistance before, during and following the emergency? Would you rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 27 ON TALLY SHEET IIIA.

28. From which of these organizations did your organization request advice, information or other non-material assistance before, during or following the emergency? Would you rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 28 ON TALLY SHEET IIIB.

29. From the same list, I wonder if you would rank in 1, 2, 3, etc. order the organizations in terms of their influence on other organizations in the community; that is, those organizations on whom other organizations depend most for goods and services? Could you do this on the basis of the pre-emergency period, the emergency period and the post-emergency period?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 29 ON TALLY SHEET IVA.

THIS CONCLUDES THE INTERVIEW WITH THE ADMINISTRATIVE OFFICER, THANK HIM FOR HIS COOPERATION AND BE SURE TO SECURE COPIES OF AVAILABLE REPORTS, EMERGENCY PLANS, ET CETERA.
INTERVIEW SCHEDULE II

Operations Officers

1. Would you outline briefly the duties normally associated with your position in this organization?

2. During the emergency, what duties did you perform?

3. Did your organization institute any changes in its normal procedures during the emergency? If so, what were they?

4. Do you recall if during the emergency there was an increased absenteeism among the paid members of your organization?

5. Was this authorized and if so, by whom?

6. At any time during the emergency, did your organization perform any tasks not normally assigned it? (IF YES, ASK THE FOLLOWING QUESTIONS):
   a. What were these?
   b. How was the decision made by which these tasks were included as part of your organization's responsibility?
   c. How long did your organization continue to perform these tasks?
   d. Which organization in the community, if any, normally perform these tasks?

7. Were there any tasks normally performed by your organization which were suspended by your organization during the emergency? (IF YES, ASK):
   a. Which ones?
   b. How was the decision made to discontinue these?
   c. When were they resumed?

8. Does any other organization in the community perform any of the tasks performed by your organization?
   a. If so, which ones?

9. Does your organization work with these organizations at any time? (PROBE HERE FOR PRE-EMERGENCY, EMERGENCY AND POST-EMERGENCY RELATIONSHIPS.)
10. In all communities, one or another organization is assigned certain tasks either by law or tradition. During the emergency, were these legally or traditionally assigned tasks performed by those organizations normally assigned them? If not, why not?

11. Did any of your community organizations have assistance in the performance of their duties?
   a. From other organizations within the community? Which ones?
   b. From organizations outside the community? Which ones?
   c. How were these organizations enlisted for assistance?
   d. Do you know how these cooperative efforts were coordinated?

12. Did any of the organizations in the community perform tasks not normally assigned them? Which organizations? Why did they perform these tasks?

13. Normally does the performance of your organization depend on the cooperation or assistance of other organizations in your community?
   a. Beyond your community?
   b. In what ways?

14. During the emergency did the performance of your organization depend on the cooperation or assistance of any other organizations in your community?
   a. Beyond your community?
   b. In what ways?

15. Following the emergency, what has been your relationship to these organizations?

16. Before, during or following the emergency, were there any problems associated with these interdependent relationships?

17. When operations problems arise within your organization, how are they handled? (PROBE HERE FOR DECISION MAKING AND AUTHORITY PATTERNS.)

THE FOLLOWING QUESTIONS ARE DESIGNED TO GET SPECIFIC INFORMATION FROM THE RESPONDENTS CONCERNING THE INTERORGANIZATIONAL RELATIONSHIPS OF THEIR ORGANIZATIONS BEFORE, DURING, AND FOLLOWING THE EMERGENCY. IT IS HOPED THEY WILL BE ABLE TO RANK THESE RELATIONSHIPS IN 1, 2, 3, ETC. ORDER. IF THEY ARE NOT, TRY TO GET SOME INDICATION AS TO
THOSE ORGANIZATIONS WITH WHOM THEY HAD MOST, MUCH, SOME OR NO INTERACTION. IN ANY EVENT, TRY TO SECURE AS MUCH INFORMATION AS POSSIBLE REGARDING THOSE ORGANIZATIONS WITH WHOM THEIR ORGANIZATION INTERACTED(S) PRIOR, DURING OR FOLLOWING THE EMERGENCY.

RECORD THE RESPONSES TO THE REMAINING QUESTIONS ON THE APPROPRIATE TALLY SHEETS.

BEGIN THIS FINAL SECTION OF THE INTERVIEW BY SAYING TO THE RESPONDENT:

"This is the final part of the interview and the information I am about to request is of particular interest to us."

THEN HAND HIM CARD A AND CONTINUE WITH THE INTERVIEW.

18. Here is a list of organizations which are most frequently involved in a community's response to a major emergency. I wonder if you can tell me, either from records or from your experience, which of these organizations initiated communications with your organization the most, second most, etc. before, during and following the emergency? I would like for you to rank these in 1, 2, 3, etc. order, if possible.

COMMUNICATIONS INCLUDE TELEPHONE CALLS, RADIO TRANSMISSIONS, LETTERS, MEMOS, RUNNER-DELIVERED MESSAGES, PERSONAL VISITS, ETC.

IMPORTANT: RECORD THE RESPONSES TO QUESTION 18 ON TALLY SHEET IA.

19. With which of these organizations did your organization initiate communications the most, second most, etc. before, during and following the emergency? Would you please rank these in 1, 2, 3, order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 19 ON TALLY SHEET IB.

20. From the same list of organizations, I wonder if you can tell me, either from records or from your experience, which of them requested or requests from your organization material assistance in the form of personnel, equipment or facilities before, during and/or following the emergency? Would you please rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 20 ON TALLY SHEET IIA.
21. From which of them did/does your organization request material assistance in the form of personnel, equipment or facilities? Before, during and following the emergency?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 21 ON TALLY SHEET IIB.

22. From the same list, I wonder if you can tell me either from records or from your experience which of these organizations requested(s) from your organization advice, information or other non-material assistance before, during and following the emergency? Would you rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 22 ON TALLY SHEET IIIA.

23. From which of these organizations did your organization request advice, information or other non-material assistance before, during or following the emergency? Would you rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 23 ON TALLY SHEET IIIB.

24. From the same list, I wonder if you would rank in 1, 2, 3, etc. order the organizations in terms of their influence on other organizations in the community; that is, those organizations on whom other organizations depend most for goods and services? Could you do this on the basis of the pre-emergency period, the emergency period and the post-emergency period?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 24 ON TALLY SHEET IVA.

THIS CONCLUDES THE INTERVIEW WITH THE OPERATIONS OFFICER. THANK HIM FOR HIS COOPERATION AND BE SURE TO SECURE COPIES OF AVAILABLE REPORTS, PLANS, ET CETERA.
INTERVIEW SCHEDULE III

Liaison Personnel

1. Would you outline briefly the duties associated with your position in this organization?

2. With what other organizations in the community do you normally meet? Is this a part of your official responsibility?

3. During the emergency, what duties did you perform?

4. Can you recall those organizations in the community with whom you were in contact during the emergency?
   a. What factors made this contact necessary?
   b. Which organizations?
   c. Where did you meet?
   d. Who served as the convener or coordinator at these meetings?

5. During the emergency did any other organization in the community perform any of the tasks your organization performs?
   a. Which organizations?

6. What was the relationship of your organization to these organizations?

7. At any time during the emergency did differences of opinion arise between you and the members of any other organization?
   a. Would you explain or give an example?

8. As a result of your duties as a liaison person do/did situations arise where you find yourself differing with persons in your own organization over matters of policy or procedure?
   a. Would you explain or give an example?

9. As a liaison person representing your organization do you ever find yourself holding different opinions than those held by persons in other organizations?
   a. Would you explain? Give an example?

10. How are policy decisions made in your organization, that is, suppose some basic change in organizational policy needs to
be made, how would it be made?

11. Following the emergency did you or other members of your organization meet with representatives of other organizations for any reason?
   a. What was the nature of these meetings?
   b. How many?
   c. Are these meetings still being held?

12. Frequently major emergencies present coordination problems both within and between organizations. As a result of your cooperative efforts with other organizations did your organization experience any problems in coordination?
   a. What were they?
   b. How were they handled?

13. Were there any groups or organizations which came into being during the emergency which performed the same or similar tasks as those being performed by yours?
   a. Which ones were they?
   b. How were they formed?
   c. Who served as their leaders?
   d. Where did they get their resources?

14. Did you as a liaison person have any occasion to meet with representatives of this (these) groups?
   a. What was the nature of these meetings?

15. As a result of the emergency has your relationship to any of the other organizations in your community been changed? In what ways?

16. During the emergency did you have occasion to meet with representatives of organizations based outside your community? Which organizations?
   a. Following the emergency have you had meetings with representatives of these organizations?

THE FOLLOWING QUESTIONS ARE DESIGNED TO GET SPECIFIC INFORMATION FROM THE RESPONDENTS CONCERNING THE INTERORGANIZATIONAL RELATIONSHIPS OF THEIR ORGANIZATIONS BEFORE, DURING, AND FOLLOWING THE EMERGENCY. IT IS HOPED THEY
WILL BE ABLE TO RANK THESE RELATIONSHIPS IN 1, 2, 3, ETC. ORDER. IF THEY ARE NOT, TRY TO GET SOME INDICATION AS TO THOSE ORGANIZATIONS WITH WHOM THEY HAD THE MOST, MUCH, SOME OR NO INTERACTION. IN ANY EVENT, TRY TO SECURE AS MUCH INFORMATION AS POSSIBLE REGARDING THOSE ORGANIZATIONS WITH WHOM THEIR ORGANIZATION INTERACTED(S) PRIOR, DURING AND/OR FOLLOWING THE EMERGENCY.

RECORD THE RESPONSES TO THE REMAINING QUESTIONS ON THE APPROPRIATE TALLY SHEETS.

BEGIN THIS FINAL SECTION OF THE INTERVIEW BY SAYING TO THE RESPONDENT:

"This is the final part of the interview and the information I am about to request is of particular interest to us."

THEN HAND HIM CARD A AND CONTINUE WITH THE INTERVIEW.

17. Here is a list of organizations which are most frequently involved in a community's response to a major emergency. I wonder if you can tell me, either from records or from your experience, which of these organizations initiated communications with your organization the most, second most, etc. before, during and following the emergency? I would like for you to rank these in 1, 2, 3, etc. order if possible.

COMMUNICATIONS INCLUDE TELEPHONE CALLS, RADIO TRANSMISSIONS, LETTERS, MEMOS, RUNNER-DELIVERED MESSAGES, PERSONAL VISITS, ET CETERA.

IMPORTANT: RECORD THE RESPONSES TO QUESTION 17 ON TALLY SHEET IA.

18. With which of these organizations did your organization initiate communications the most, second most, etc., before, during and following the emergency? Would you rank these in 1, 2, 3, order?

19. From the same list of organizations, I wonder if you can tell me, either from records or from your experience, which of them requested or requests from your organization material assistance in the form of personnel, equipment or facilities before, during and/or following the emergency? Would you rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 19 ON TALLY SHEET IIA.

20. From which of them did/does your organization request material assistance in the form of personnel, equipment or facilities? Before, during and following the emergency?
IMPORTANT: RECORD THE RESPONSES TO QUESTION 20 ON TALLY SHEET IIB.

21. From the same list, I wonder if you can tell me either from records or from your experience which of these organizations requested or requests from your organization advice, information or other non-material assistance before, during and following the emergency? Would you rank these in 1, 2, 3, etc. order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 21 ON TALLY SHEET IIIA.

22. From which of these organizations did your organization request advice, information, or other non-material assistance before, during or following the emergency? Would you rank these in 1, 2, 3, order?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 22 ON TALLY SHEET IIB.

23. From the same list, I wonder if you would rank in 1, 2, 3, order the organizations in terms of their influence on other organizations in the community; that is, those organizations on whom other organizations depend most for goods, services, information, et cetera. Could you do this on the basis of the pre-emergency period, the emergency period and the post-emergency period?

IMPORTANT: RECORD THE RESPONSES TO QUESTION 23 ON TALLY SHEET IVA.

THIS CONCLUDES THE INTERVIEW WITH THE LIAISON PERSON. THANK HIM FOR HIS COOPERATION AND BE SURE TO SECURE COPIES OF AVAILABLE REPORTS, PLANS, ET CETERA.
## TALLY SHEET IA
### RANKING OF COMMUNICATIONS PATTERNS

**Communications Received**

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<tr>
<th>ORGANIZATION</th>
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<th>DURING EMERGENCY</th>
<th>POST-EMERGENCY</th>
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Disaster ____________________  Trip Number ____________________
Informant ____________________  Organization ____________________
Interviewer ____________________  Date ____________________
### TALLY SHEET IB

**RANKING OF COMMUNICATIONS PATTERNS**

**Communications Sent**

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<th>ORGANIZATION</th>
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Disaster ___________________________    Trip Number ___________________________
Informant ___________________________  Organization ___________________________
Interviewer ___________________________ Date ___________________________

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**Tally Sheet IB**

**Ranking of Communications Patterns**

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Disaster ___________________________    Trip Number ___________________________
Informant ___________________________  Organization ___________________________
Interviewer ___________________________ Date ___________________________
## TALLY SHEET IIA

### REQUESTS FOR MATERIAL ASSISTANCE

Requests Received From Other Organizations

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Disaster __________________ Trip Number __________________

Informant __________________ Organization __________________

Interviewer __________________ Date __________________
## TALLY SHEET IIb

**REQUESTS FOR MATERIAL ASSISTANCE**

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# TALLY SHEET IIIb

## Requests for Non-Material Assistance

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Interviewer ___________________________  Date ___________________________
APPENDIX C

HURRICANE BETSY

NEW ORLEANS, LOUISIANA
Socio-Demographic Characteristics

The city of New Orleans was established by the French in the year 1718. Later it passed through a period of Spanish occupancy before becoming a part of the United States as a result of the Louisiana Purchase in 1803. It surpassed Charleston in the year 1820 as the largest city in the south, a position it held until 1950 when it relinquished this role to Houston, Texas. At the time of the Civil War, it was the only city in the south with more than 100,000 population. Today the city of New Orleans is a leading commercial, industrial and financial center.

In a recent year the value of foreign trade handled through New Orleans was second only to that of New York. The 1960 population of New Orleans was 627,525, 37 percent of whom were Negroes. The New Orleans Standard Metropolitan Statistical Area had a 1960 population of 868,480.

The city is situated along a bend in the Mississippi river about 110 miles from the Gulf of Mexico. Unlike many river towns, however, it does not occupy a bluff but rather spreads out on a very low land behind the river levee. The downtown area is listed by the United States Geological Survey as being 3 feet above sea level although several sections within the city limits are actually below sea level. This very low elevation necessitates its protection by a series of canals and levees.

This latter factor is an important one in understanding the flood damage which resulted following Hurricane Betsy. In land area New Orleans rates
as one of the largest cities in the United States. Much of its land is not yet developed for urban uses, however. As late as 1950, 15,000 acres within the city limits were rated as commercial forests.

The rural parts of the metropolitan area have large tracts of marsh-land. This fact presents certain drainage problems which in turn hinders the development of a heavily populated hinterland immediately around New Orleans. The city has, nonetheless, exhibited a markedly stable growth pattern over the last century as a result of its strategic location at the mouth of the Mississippi river valley. 37

The Impact of Hurricane Betsy and its Aftermath on New Orleans, Louisiana, September 9 - October 1, 1965

The dates for Hurricane Betsy as listed by the United States Weather Bureau are August 27 through September 12, 1965. Although these dates include the origin, development and termination of the hurricane, they also include the heavy flooding which occurred in its aftermath. As will be pointed out later, the extensive damage to Orleans and thirty-six other parishes in Louisiana was more the result of flooding than it was

from the high winds of the hurricane. Hurricane Betsy had its origin on August 27, 1965 about 350 miles east of the island of Barbados in the Windward Islands, West Indies. It increased in wind velocity to hurricane intensity while 200 miles northeast of San Juan, Puerto Rico. This occurred in mid-afternoon on August 29 with the first hurricane advisory being broadcast by the United States Weather Bureau in Miami, Florida at 5:00 p.m. On that date the hurricane then proceeded in a northeasterly direction until it reached a stationary position on September 4 in the Atlantic Ocean about 430 miles south of Cape Hatteras, North Carolina. The hurricane then began an unusual southward movement on September 5. It then moved eastward toward Miami, Florida on September 7. The hurricane struck the southern tip of the Florida peninsula late on September 7 with winds up to 105 miles per hour. It lashed the Miami area for about twelve hours. High winds, tidal flooding and beach erosion caused an estimated 150 million dollars damage to Florida's lower east coast.

Hurricane Betsy then moved in a northwesterly direction toward the Louisiana coast. On September 6, Civil Defense personnel in New Orleans began plotting the course of the hurricane and on the following day all of the emergency-relevant organizations in the area began detailed

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38 The United States Weather Bureau lists a hurricane as an atmospheric circulation of winds rotating counter-clockwise in the northern hemisphere and clockwise in the southern hemisphere. A hurricane originates over tropical ocean waters and must have winds over 73 miles an hour. The area of strong winds takes the form of a circle or oval sometimes as much as 500 miles in diameter. Hurricanes usually move toward the west or northwest at 10-15 miles per hour. When the center of the storm approaches 25 to 30 degrees north latitude, direction of motion often changes to northeast with increased speed. (The city of New Orleans is at 29 degrees north latitude.) For a graphic portrayal of Hurricane Betsy's course see Map I on page 184.
planning and preparation in the event the hurricane should strike Louisiana. A hurricane watch was advised for the New Orleans area at 8:00 p.m. on September 8. All of the governmental agencies in the area, along with public utility companies and welfare organizations, were now in the stage of full mobilization. As the storm approached New Orleans, its highest winds were estimated at 150 miles per hour. The eye of storm passed the mouth of the Mississippi River at 9:00 p.m. on September 9. Winds in the New Orleans area reached 125 miles per hour at 11:46 p.m. on September 9. Tides along the Louisiana coast were running between 10 and 12 feet above normal on September 10 at 2:00 a.m. The Mississippi River rose 10 feet at New Orleans as the hurricane passed over that city. After striking Louisiana, the storm moved northward toward Little Rock, Arkansas. As it moved inland, it rapidly lost most of its force, although it spawned a number of tornadoes and dropped 3-5 inch rainfalls as far north as Arkansas and 1-2 inch rainfalls as far north as southern Ohio and western Pennsylvania.

Hurricane Betsy was the most destructive hurricane on record on the Louisiana coast. Although the coastal area was 90 percent evacuated more than seventy people lost their lives. Several communities along the Mississippi River were wiped out by high winds and water. In Louisiana, approximately 1200 homes were destroyed and 150 thousand required repairs as the result of the storm. Losses to crops, industry and commerce in Louisiana were estimated at between one-half and one billion dollars.

The city of New Orleans withstood the high winds of the hurricane quite well although most phone and electrical service was incapacitated on the evening of September 9. The most severe damage done to the community at large, however, stemmed from extensive flooding. This flooding
resulted from the heavy rainfall and from severe tidal surges which
erupted and/or broke several of the large levees protecting the city
of New Orleans. The tidal surge was about 3 feet higher than the highest
of the city's levees so that those levees which were not broken by the
tidal surge were overtopped and made ineffective. As huge walls of water
rushed over, around and through these levees, thousands of persons were
driven from their homes (90 percent of which had received some damage
from the hurricane winds), streets were flooded and made impassable,
public utilities were incapacitated. At daybreak on September 10, 1965,
the area in and around the city of New Orleans appeared as one vast lake
when viewed from the air.

The response of the city of New Orleans was instantaneous as various
agencies began the tedious tasks of recovery. Police, fire personnel
and others who had worked throughout the night, were joined by persons
from every department in city government. Repair crews from the public
utilities began working on high priority projects, such as hospitals, at
5:00 a.m. The coronor's office established a morgue; the Corps of
Engineers assisted with the evacuation of persons who were stranded in
flooded parts of the city, as did military personnel from the local Naval
and Coast Guard stations. The Red Cross, Salvation Army and other welfare
agencies in the area intensified their service to over 100,000 persons
affected by the hurricane and flood. Members of the New Orleans health
department began a systematic inspection of drinking water and sanitation
facilities. It also began a community vaccination program and assisted
in the inspection and administration of numerous Red Cross refugee shel-
ters. The Federal government began a massive program of assistance --
there was a convergence of resources of all kinds, both local and non-local
coming to the assistance of the afflicted city. Local governmental officials, in consultation with the various agencies responding to the emergency, attempted to establish a system of priorities, to allocate resources and authority, and to coordinate the multiplicity of recovery activities.

Hurricane Betsy passed through New Orleans on the night and early morning hours of September 9 and 10. For the next twenty days that city addressed itself primarily to the task of recovery and restoration. While various agencies were able to return to normal more quickly than others, few, if any, had achieved a complete recovery before October 1. This twenty-day period marked perhaps the most demanding period in the life of the city. It can be said that every emergency-relevant organization in New Orleans was hard pressed to meet the demands placed upon it. We can now turn to a brief résumé of the activity of each of the organizations selected for this study.

**New Orleans Police Department**

The New Orleans Police Department was comprised of approximately 1,300 personnel at the time of Hurricane Betsy. Of this number, 1,150 were full-time police professionals and the remaining 125 were civilian employees. Using the total number of professional employees as the ranking criterion, the New Orleans Police Department ranked number 18 in the United States in 1965. The Police Department in New Orleans, like the overwhelming majority of large police departments in the United States, is organized in a highly formal, complex fashion. The chief officer, or superintendent as he is called in New Orleans, is selected personally by the Mayor from within the department. The superintendent in turn selects
his two principal deputies, each of whom supervises a major division of the department. Below the chief and his two deputies all police personnel are selected on the basis of rank, experience and competitive civil service examinations. The authority and decision-making structures are clearly defined at each level, and are of a para-military nature.

The New Orleans Police Department had a disaster plan which was activated following a staff meeting of ranking officers conducted at 7:00 p.m. on Thursday evening, September 9. The department, along with every other emergency-relevant organization in the city, had watched the development and direction of the hurricane as it moved in a northeasterly direction after passing over the southern tip of Florida. As a result of this pre-impact notice, the Police Department was in a state of semi-activation as far as their disaster plan was concerned. At the staff meeting mentioned above, the officers of the department made a great many last minute decisions regarding the deployment of personnel and equipment in the event of a major emergency. Auxiliary generators and communications equipment were given a last minute check and personnel were assigned to supervise their operation and maintenance. Police liaison personnel were assigned to the Civil Defense Emergency Center, the chief coordinating agency in the city. Then the department waited.

The winds of the hurricane began to buffet the New Orleans area severely during the late evening and early morning hours of September 9 and 10. The activities of the Police Department during the twelve-hour period from 8:00 p.m. September 9 to 8:00 a.m. September 10 were marked by two principal tasks, the maintenance of security for persons and property and the warning and rescue of persons affected by the high waters which accompanied the storm. As one reads transcripts of the Police
Department's communications during the emergency, the above police activities are conspicuous. Numerous radio transmissions during the early evening hours dealt with damaged windows in the central commercial districts and with fallen electric lines. Later, as the hurricane reached its fullest intensity, the preservation of human life became more paramount as police cruisers traveled throughout affected areas of the city warning citizens over loud speakers of the impending flooding. Units in the field were sending vital information back to the police communications center which, in turn, transmitted it to the general public by way of the mass media. On countless occasions, police officers rescued persons from stranded automobiles and homes by using first their police cruisers and then large trucks furnished by the Louisiana National Guard.

Another major task of the police department during this 12 hour period was that of traffic control. Thousands of citizens were leaving their residences in search of shelter. Frequently they would arrive at a shelter, find it overcrowded, and then search for another. The traffic problems created by this evacuation became all but insurmountable at times. Traffic became heavily congested, especially at bridge locations, with the result that emergency traffic and vital materials would become bogged down far from their destinations. It was the task of the Police Department to clear these jams.

Following the first twelve hours of the emergency, many of the tasks of the police department changed. The tasks of security and rescue gave way to those of search for missing persons and to those associated with restoration of community services. Approximately one-half of the department's personnel were assigned duties directly associated with community recovery; the other one-half continued to perform those duties more
normally associated with the department's functioning. The entire department went on twelve-hour shifts for a period of ten days following the hurricane and it was nearly three weeks before the department was able to begin operating in near normal fashion. The Police Department's activities during the recovery period were closely identified with the procurement and placement of scarce resources -- with the coordination of need and resource. The department did carry on many functions related to recovery such as those related to the security of property and the search for and identification of missing persons. The chief tasks of recovery, however, fell to other organizations which possessed badly needed material resources. The federal government, following a visit by President Johnson, poured large quantities of supplies into the area. The Corps of Engineers and the Louisiana National Guard, officials of the Coast Guard and Naval Air Station at New Orleans, the Red Cross, the Salvation Army and other charitable organizations provided equipment, food and shelter; drug companies provided medicines, vaccines and other medical supplies; the Office of Emergency Planning and the Small Business Administration began functioning under the provisions of Public Law 875 and a host of private business and industrial concerns made badly needed heavy equipment available. For example, a semi-trailer of ice from Texas was escorted to New Orleans by state and local police officers. In short, there was a tremendous outpouring of effort, personnel and material following the disaster. The Police Department, as noted, did perform many vital functions, especially as a coordinating agency, in the days immediately following the disaster. Many of these tasks were somewhat routine and were carried on with the assistance of other organizations with whom the police had close working relationships. Other tasks were new and unexpected. These
frequently necessitated the establishment of relationships with organizations with whom the police had never worked before. As the result of the Police Department's activities during and following Hurricane Betsy, many changes occurred in its relationships to other organizations. Some of these were short-lived while others became routinized and made part of new disaster plans and emergency operating procedures.

The New Orleans Fire Department

The New Orleans Fire Department at the time of the emergency created by Hurricane Betsy was the 18th largest in the United States. It consisted of approximately 1,100 employees who operated out of 43 fire stations in eight different districts. The department possessed 67 major pieces of equipment including fifty engine-pumpers and 12 hook and ladder trucks. It also operated a number of rescue squads and assisted in fighting major boat fires when they occurred in the port of New Orleans.

The department's two chief officers, the superintendent and the assistant superintendent, are appointed from within the Fire Department by the Mayor of New Orleans. The two deputy chiefs, the eight battalion chiefs and all other fire personnel are appointed on the basis of training, experience and competitive civil service examinations. As in all major fire departments, the authority and decision making patterns are clearly defined and arranged in a paramilitary fashion.

The New Orleans Fire Department activated its natural disaster plan at 4:38 p.m. on Thursday, September 9, when it became apparent that the city of New Orleans would experience the effects of Hurricane Betsy. Under the provisions of this plan, all fire personnel were ordered back to duty so that the department could operate at maximum strength. (A sad
footnote to this recall is that while on duty, seventy-five firemen lost all of their household goods and personal possessions as the result of the winds and flooding.) Upon recall some fire communications personnel were sent to the Civil Defense Emergency Center to serve as liaison persons with other high ranking city officials. Later they served out of the city hall when the emergency center was relocated there.

Throughout the emergency the Fire Department responded to approximately 800 calls for assistance. Most of these calls were related to non-fire situations, since there were only a few, scattered, minor fires throughout a three week period. Firemen on the first night were principally involved in responding to calls for assistance from stranded citizens. Working with police and military personnel and with numerous volunteers, firemen manned boats and large trucks throughout the night of September 9 and the early morning hours of September 10. In the days that followed, fire personnel manned pumper stations for nine days around the clock in an effort to reduce the water levels in affected areas of the city. They also served as drivers responsible for the delivery of foodstuffs, medicines and other needed commodities to Red Cross shelters. For five days following Betsy's onslaught, fire personnel operated their own emergency communications facilities which were then functioning out of the city hall. From this communications center, Fire Department resources were allocated and coordinated with those of countless other emergency organizations.

The Fire Department had a number of their stations flooded and lost several pieces of apparatus as a result of the flood. Almost every piece of fire apparatus was damaged by flying debris or water during the disaster while involved in emergency service.
The New Orleans Fire Department functioned as one of many emergency organizations operating in the city following the hurricane's impact. Their role was important but not particularly crucial in that their resources were of limited value, especially during the recovery and restoration stages. Nonetheless, they were called upon to perform many tasks and in the process to relate to numerous other organizations.

**The Southern Bell Telephone and Telegraph Company**

The Southern Bell System operates as a subsidiary of the American Telephone and Telegraph Company. It operates in nine southern states with regional offices in Atlanta, Georgia. The state offices for Louisiana are in the city of New Orleans and it is from these offices that the state's three divisions and thirteen districts are supervised. The company's major departments include: accounting, marketing, engineering, plant, traffic and commercial. The southern division, of which New Orleans is a part, employees approximately 3,000 persons, 1,400 of whom are responsible for the installation, operation and maintenance of the company's equipment and other physical property and 1,400 of whom work as service and long-distance operators. The remaining 200 persons serve in various administrative and public relations positions.

The telephone company was one of the organizations most seriously affected by Hurricane Betsy. The heavy demands placed upon it grew in part from a general power failure which negated the functioning of television and radio stations as means of mass communications and in part from the need for massive and immediate communications, especially during the period of search and rescue. These increased demands came at a time when the
capabilities of the organization were reduced by serious storm damage.

In the New Orleans area, approximately 211,000 of the company's 419,000 telephone installations were out of service immediately following the storm. Elsewhere in Louisiana, 48 central offices and 48 exchanges were isolated 1,559 of the 6,532 long distance circuits were interrupted, and 382,378 out of 1,250,000 telephones were out of service. Hurricane Betsy presented the Southern Bell System with the most costly disaster in its history. Company officials estimated that total storm losses would approximate 12.5 million dollars, one-third of which occurred within the city of New Orleans.

Most telephone service in the New Orleans area was restored by the weekend of September 19, ten days after the hurricane. The majority of those telephones lines still out of service at that time were inaccessible due to areas of high water.

Officials of the telephone company began initial preparations to deal with the hurricane while it was just starting to form in the Caribbean Sea. These first steps included the taking of a complete inventory of equipment and supplies in case the storm developed into a hurricane and moved into Louisiana. On Monday, September 6, company officials in cooperation with weather bureau officials began to track the hurricane on an hourly basis. By Wednesday, September 8, the company's disaster plans were fully activated and its personnel were holding staff meetings regularly. The organization's natural disaster plan called for a detailed, systematic response to any major storm. For company personnel, preparation for natural disasters was not a new experience. According to one company engineer, the procedures followed during the two days before Hurricane Betsy arrived were the same as those pursued dozens of times.
previously. As a result of this past experience with similar type emergencies, elaborate and specific assignments were made and carried out. Company officials secured emergency supplies, checked all equipment vital to the maintenance and restoration of telephone service such as trucks, generators and fuel and attempted in every practical way to protect the company's facilities from wind and water damage. A priority list had been established so that those organizations most vital to the life of the community could be returned to service as quickly as possible. In addition, liaison relationships were established in an effort to coordinate and integrate the company's response with other emergency organizations in New Orleans. Company maintenance personnel were assigned to the Civil Defense Emergency Center and were responsible for the mechanical performance of the Bell Systems' communications equipment there.

The company began to experience heavy demands on its lines and other equipment immediately after a weather advisory at 2:00 p.m. on Thursday, September 9. Company officials summoned off-duty operators and activated the evening shift early in an effort to increase the departments capabilities. During Thursday, operator-handled calls were 152 percent of normal and direct dialing of both local and long distance calls exceeded the expected capacity of the company's automatic equipment. The overload of dial traffic reached such proportions in some areas on Thursday night that company officials exercised a limited amount of line control whereby non-essential users were cut off from outgoing service. This meant that these users could not place outgoing calls although their equipment was still functioning and could receive incoming messages. Essential users such as the Police and Fire Departments, hospitals and other emergency organizations continued to possess service. When commercial power sources
failed at 9:30 p.m. on Thursday, auxiliary power units were turned on at all 16 central offices.

The activities of the telephone company following the emergency consisted chiefly of these functions: (1) damage assessment, (2) procurement of needed repairmen and equipment; (3) restoration of lines, instruments, and company facilities, and (4) public relations efforts by which the company's subscribers were kept informed of both progress and problems.

Throughout the emergency period, the telephone company sought to maintain a maximum of service to as many essential subscribers as possible, giving as noted, special attention to those organizations and individual subscribers who had a special relevance for the community's recovery.

New Orleans Public Service Incorporated

One of the principal suppliers of electric power to the city of New Orleans is the New Orleans Public Service Incorporated (NOPSI). It is also responsible for providing natural gas and public transit service to the city. The NOPSI is one of four municipal departments which function under the jurisdiction of the New Orleans City Utilities Department which, in turn, is responsible to the Mayor. The organization is arranged into thirteen major departments, each of which has rather clearly defined responsibilities and authority. The executive department of the company exercises coordination and control over all other departments and generally supervises the operations of the entire organization.

The NOPSI began monitoring Hurricane Betsy upon its formation and continued tracking it until it became all but a certainty that the hurricane would strike the city of New Orleans. Several hours before Betsy got to New Orleans, the NOPSI instituted its disaster plans which had been
developed initially in 1947 and which had been updated regularly in the intervening period. Under the provisions of this detailed plan, the organization provided for the procurement of those materials most likely to be needed during the recovery and restoration stages following a hurricane. Among other things, it secured a fairly large number of rental trucks from one of the agencies in New Orleans and housed them in company garages just before the hurricane struck. Personnel were assigned specific disaster-related tasks, efforts were made to secure company property against the storm, liaison personnel were sent to the Civil Defense Emergency Control Center -- then the NOPSI along with the rest of the city braced for the hurricane and its aftermath.

Recovery and restoration began, as far as the NOPSI was concerned, at daylight on Friday, September 10. At that time, survey and reconnaissance crews went into the field to inspect the extent of the damage and to outline what resources would be needed to restore service. The priority lists for restoration which were previously established were put into effect; a reassignment of personnel was made and the company began the task of implementing its disaster plan. It became apparent to organizational officials very early that this was the largest recovery operation ever confronted by the NOPSI. Several of its major transmission lines and hundreds of smaller lines were down. Three of the company's major substations were badly flooded and remained out of service until the water receded. During the peak of the emergency, approximately 168,000 of the company's 186,000 electric subscribers had their service disrupted. Confronted with these tremendous demands company officials requested and received 185 repairmen from electric utilities in several other states.
Through strenuous efforts the vast majority of the company's customers were returned to service by September 21, ten days after the hurricane struck.

As mentioned earlier, the NOPSI is also responsible for providing natural gas and transit services to the city of New Orleans. The natural gas supply to customers was not affected by the winds of Hurricane Betsy but it was affected by the high water which followed in Betsy's wake. The damage to gas mains was not nearly as severe as it was to overhead electric lines and as a result gas service was restored almost immediately after the flood waters subsided. The transit division of NOPSI was totally out of service for the first fifteen hours on Friday, September 10. By 6:00 p.m. on Friday, however, approximately 30 percent of the transit lines were in operation again. The company had restored 95 percent of its transit service by 6:00 p.m. on Monday, September 13 and on the following day the last two lines were put back in service.

One unexpected demand for bus service during the disaster period came from the local Civil Defense office. The NOPSI received a communication from that office at 6:30 p.m. on Thursday, September 9 at which time Civil Defense officials requested that the NOPSI provide buses for the evacuation and transportation of refugees from one shelter to another. This request was granted and as a result, during the eight day period following the onset of the disaster, 157 buses were in service for 648 hours. An estimated 25,000 persons were transported by NOPSI operated buses during this time.
There was, at the time of Hurricane Betsy, three different subdivisions of the Salvation Army functioning in the city of New Orleans. These were: the New Orleans City Command, the Louisiana Division Command Headquarters and the Salvation Army Men's Social Rehabilitation Center. Each of these subdivisions is highly autonomous under normal circumstances and each possesses its own staff and assigned functions. The regional headquarters of the Salvation Army, to which each of these subdivisions are ultimately related, are located in Atlanta, Georgia.

The Division Command Headquarters is staffed by eight persons and is primarily responsible for the coordination of Salvation Army services and finances throughout its jurisdiction. The New Orleans City Command has on an average of twelve staff persons working at a given time. (This number does not include wives who hold the same rank as their husbands and who may occasionally perform tasks normally performed by their husbands.) There are, in addition, approximately forty-five lay persons who serve on the local command's board of directors. This board assists in conceptualizing, financing and implementing the local command's charitable and religious work. The Men's Social Rehabilitation Center has four staff persons who direct the work of the men in their unit. Those being rehabilitated drive trucks, rebuild and refinish furniture and work in retail stores operated by the Salvation Army.

The City Command became the central functioning unit of the Salvation Army during the emergency created by Hurricane Betsy. This was due in large measure to the fact that the city commander was the Salvation Army's disaster commander for the New Orleans area. Moreover, by virtue
of his position in New Orleans, he had extensive contacts with a large number of other organizations, many of which also served vital functions during the disaster. The members of the Division Command and Men's Rehabilitation Center became involved in response to Betsy through their relationships to the City Command. Hence, they served important functions during the emergency but more or less through the framework of the City Command.

Representatives of the Salvation Army's City Command first became involved in responding to Hurricane Betsy when they attended a meeting called by the Mayor of New Orleans on Wednesday, September 8. At this meeting, the general tasks of each of the city's major emergency organizations were outlined and in all instances their disaster plans were activated.

Early on September 9, the New Orleans City Command began to acquire food stuffs and other supplies which is believed might be needed in the event Betsy hit the New Orleans area. In addition, it began to disseminate information through radio and television announcements regarding its services to the general public and how these could be acquired, if needed. Command officials also received permission to mount a flashing red light on one of their vehicles in case it was needed for emergency transportation. This permission was secured from the New Orleans Police Department. Later on September 9, at a meeting held in the Civil Defense's Emergency Center, Salvation Army officials reported that all of their local and regional personnel were on standby notice. Divisional commanders in Georgia, Alabama, Arkansas, Mississippi and Texas were contacted and asked to have their personnel and vehicles alerted for possible use in the New Orleans area. After this meeting at the Civil Defense
center, the city commander notified his own staff that Salvation Army mobile units were enroute from Galveston, Houston and Little Rock. When the hurricane appeared imminent, the city commander went to the Civil Defense Emergency Center to act as his organization's chief liaison officer. This was at about 7:20 p.m. on September 9.

The first service rendered by the Salvation Army occurred late on the night of September 9 when some of its personnel delivered doughnuts and coffee to city employees of the sewer and water board. This service was requested by city officials located at the emergency control center. Throughout the remainder of the disaster period, the Salvation Army continued to serve huge quantities of food. During one twelve hour period, Salvation Army personnel and volunteers made 17,000 sandwiches for distribution to flood victims and rehabilitation workers. The Salvation Army also provided large quantities of food and clothing to flood victims in the weeks following the onset of the disaster. A total of eighteen Salvation Army mobile canteens arrived in New Orleans from other cities on Saturday, September 11. Upon their arrival in the city, they were escorted by police units to previously designated areas. Two days later, special water purification equipment was provided by the Salvation Army and made available to flooded areas within New Orleans. The period of rehabilitation between September 15 and October 10 was one of constant but declining Salvation Army involvement. During this period, the emphasis was upon supplying food, clothing, cleaning equipment and other vital necessities to persons as they returned to their homes. These supplies were distributed in part by Police Department personnel. On October 15 clothing and food box distribution came to end as the Salvation Army all but phased out the last of its emergency services.
Hurricane Betsy provided the entire Salvation Army with one of the largest operations in its history. During the disaster period the organization provided the services of hundreds of Salvation Army personnel. In addition, it solicited and received support from thousands of volunteers who assisted in making over 100,000 sandwiches, thousands of gallons of coffee and who aided in the collection and distribution of huge amounts of clothing, household furnishings and other items essential to the restoration of private residences.

Throughout the emergency period the New Orleans Salvation Army City Command performed a myriad of functions as it sought to extend social welfare assistance to flood victims and to assist rehabilitation workers. It performed these functions with a vastly enlarged professional cadre of Salvation Army personnel along with assistance from thousands of volunteers. Because of the magnitude of the demands being made on the organization, and because of the enlargement of its staff, both professional and volunteer the organizational structures of the City Command of the Salvation Army underwent significant changes.

The New Orleans Red Cross

The New Orleans chapter of the American Red Cross consisted of 33 professional staff persons and an estimated 700 trained volunteers at the time of Hurricane Betsy in 1965. Like other emergency oriented and relevant organizations in New Orleans, the local Red Cross staff had been watching the development and movement of the hurricane from its very beginning. The regional and national offices of the American Red Cross began dispatching disaster trained personnel throughout those areas most likely to be affected by a severe hurricane. The states of Texas, Louisiana,
Mississippi, Alabama and Florida had national Red Cross persons located strategically throughout them in anticipation of Betsy's destructive winds and water. Altogether more than 700 national staff persons from 300 different states became involved in the Red Cross' response to the disaster. A large number of these persons were working out of the temporary office established by the National Red Cross in New Orleans.

The New Orleans chapter began to activate its volunteer staff when the hurricane moved into the Gulf of Mexico on Wednesday, September 8. Directed and assisted by professional staff persons, these volunteers began to move emergency supplies into all of the previously selected Red Cross shelters. Red Cross officials in New Orleans attended a meeting called by the mayor at 4:00 p.m. on Thursday, September 9. At this meeting, the problems associated with possible evacuation and sheltering were discussed and it was decided that the Red Cross would open fourteen shelters in the city at 5:00 p.m. that day. The first evacuees began to arrive at 9:00 p.m.

These shelters were operating under the joint direction and staffing of Civil Defense and Red Cross personnel. When they were opened, it was anticipated that they would be used for a day or two, as protection from the wind, and then be closed. As the serious flooding developed, it became apparent that the then existing shelters would be inadequate for a long-term shelter program which appeared inevitable. This fact, coupled with the need for a large shelter program throughout southern Louisiana, led local Civil Defense and Red Cross officials to appeal to state and national agencies for support. In response, the Louisiana Adjutant General's Office which has administrative control over both the National Guard and the state Civil Defense organization, became involved in the
shelter program, as did the national organization of the American Red Cross. On Sunday, September 12, the first persons were moved from temporary shelters to more permanent ones in and around New Orleans. Most of the new shelters made use of military facilities. The largest number of refugees, approximately 10,000, were being cared for at the New Orleans naval station. The last persons were not transferred from temporary shelters until Wednesday, September 15. Due to this long transfer period, there was a time when shelter officials (which now included regular army, National Guard, Civil Defense and Red Cross personnel), were forced to maintain two separate and concurrent shelter operations during the weekend following the hurricane.

The shelter phase of the Red Cross' operation which involved nearly 30,000 persons was followed by the first rehabilitation phase. In order to get persons back into their homes as quickly as possible, the Red Cross, both local and national, established seven registration centers at which flood and storm victims could register for emergency assistance. This phase lasted for approximately three weeks during which time several thousand families were assisted with material support and guidance. Again, during this operation the Red Cross used thousands of volunteers who assisted in the operation.

The third phase of the Red Cross' activities also depended on a large corps of volunteer social case workers. Specially trained case workers went throughout the city in an effort to evaluate requests for material assistance. This second rehabilitation phase was much more systematically operated than the first one. The volunteer case workers were, for the most part, professionally trained persons who were assigned temporarily to the Red Cross by other welfare agencies in the city. These workers, assisted
by local and national Red Cross personnel, attempted to carefully evaluate the needs and resources of clients and to assist them accordingly. This approach was much slower, and as indicated, much more systematic than the first rehabilitation phase when every possible effort was being made to reduce the shelter population by enabling persons to return to their homes as practically possible.

The Hurricane Betsy operations of the American Red Cross, as administered by its national, regional and local organizations, was one of the largest and most costly in its history. The Red Cross was responsible for a shelter population of approximately 30,000 persons -- 20,000 of whom were in the New Orleans area. Red Cross nurses treated more than 11,000 injuries and altogether the organization assisted in the mobilization of approximately 15,000 volunteers in the New Orleans area alone. The Red Cross expended approximately 7 million dollars in direct assistance to Betsy's victims.

Summary

Hurricane Betsy was one of the most devastating disasters to ever strike the southeastern region of the United States. Through advanced warning and continuous tracking techniques, the loss of human life did not approach that of previous major hurricanes. (In September of 1928 a hurricane killed approximately 4,000 persons in the West Indies and parts of southern Florida. Two years later over 2,000 persons were killed by a tornado that struck San Domingo.) Although the loss of life was kept to a minimum, as noted previously, property damage was very high -- perhaps as much as one billion dollars.
The city of New Orleans was the hardest hit of any major city during Betsy's vagaries through the south Atlantic and Gulf of Mexico. As a result of this Hurricane's destructive winds and damaging waters, the emergency organizations in New Orleans, in spite of their prior experiences and preparations, were hard pressed to meet all of the demands placed upon them. As previously indicated, a number of these organizations (and the city and state as well), had to appeal to non-local agencies for logistical and material support. In the process of responding to these heavy demands and as a result of expanding and/or altering their organizational structures in an effort to increase their capabilities, these organizations experienced a number of both short-term and long-term changes in their structured relationships. The most significant of these changes were noted in previous Chapters and need not be noted again.
HURRICANE Betsy Track
Aug. 27 – Sept. 12, 1965
APPENDIX D

THE WATTS DISTURBANCE

LOS ANGELES, CALIFORNIA
THE WATTS DISTURBANCE

LOS ANGELES, CALIFORNIA

Socio-Demographic Characteristics

The Los Angeles – Long Beach Standard Metropolitan Statistical Area includes parts of both Los Angeles and Orange counties, California. At the time of the 1960 census, the area had a population of 6,742,696 and a total acreage of 4,842 square miles. Los Angeles county had a population of 6,038,771; 2,479,015 of whom lived within the city limits of Los Angeles. In addition to the city of Los Angeles, there were 87 additional political subdivisions in the county in 1960. These had a total population of 3,559,765. Twenty-three of these subdivisions with a total population of 2,479,015 are contiguous to the city of Los Angeles. The longest of these is Long Beach with a population of 344,168. Thus, the Watts disturbance occurred in the center of a densely populated area involving many small and large municipalities.

Of course, by 1965 many of the population figures cited above had changed. Many of the municipalities surrounding Los Angeles had population increases. Moreover, the population composition of the city of Los Angeles, which had been changing significantly for at least two decades, had an accelerated in-migration of Negroes primarily from the southern United States.  

and southwestern parts of the United States. The summary report of the
governor's commission on the Watts disturbance indicates that while the
population of Los Angeles county had trebled between 1940-1965, the Ne­
gro population increased almost ten-fold during the same period, from
75,000 in 1940 to 650,000 in 1965. About one-half of this Negro popu­
lation lived in the southcentral part of the city, and especially in
the Watts district directly south of the central business district of
Los Angeles.

The estimated population of the disturbance area as of April 1,
1965 represented approximately 12 percent of the 2,731,000 people in the
city of Los Angeles as of that date. Concurrently, the average number
of persons per occupied dwelling unit in the area was 4.1 compared with
an overall city average of 2.9.

Unlike many urban ghettos, the Watts area is characterized by many
single family and two story, garden-type apartment houses. There are a
number of public housing projects in the southern part of Watts, al­
though few, if any, of these could be classified as high-rise types. The
streets in the area are quite wide; mercantile establishments tend to be
rather small and privately owned. The area has a wide diversity of man­
ufacturing facilities ranging from small job shops to vast industrial
complexes covering serveral acres.

Popularly known as the McConé Report it is entitled Violence in
the City -- An End or a Beginning? (Los Angeles: Governor's Commis­
sion on the Los Angeles Riots, 1965). A sharp criticism of the Report,
including the accuracy of some of its factual data is presented by one
of the consultants of the Commission in Robert Blauner, "Whitewash Over
Watts," Trans-Action, 3 (March/April, 1966), 3-9, 54.
While many of the physical characteristics of the Watts area do not fit the classical ghetto patterns of the eastern United States, its social characteristics do. Arrest records, public welfare case loads, juvenile delinquency and unemployment rates, and so on, are all disproportionately high in the Watts area. Through the fiscal year of 1964-65, about 20 percent of all fires occurring in the city of Los Angeles were within the approximate 32 square miles of the disturbance area. During this same period, one out of every three false alarms, 30 percent of all incendiary and suspicious fires, 37 percent of all juvenile fires, and 18 percent of all burn cases occurred within this area of the city. 41

The Los Angeles Civil Disturbance --
August 11 -- August 17, 1965

The data used in the compilation of the following chronology are from the official reports of many organizations including police, fire, utilities, public welfare, governmental agencies, and so on. The aforementioned McCone report and a number of newspaper accounts were also utilized. 42

Wednesday, August 11, 1965

The Watts Disturbance began on Wednesday, August 11, 1965 when an officer of the California Highway Patrol arrested a Negro citizen of

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41 Fire data are from Harold Greenwood, The South-Central Los Angeles Riot Fires (Los Angeles: Los Angeles City Fire Department, 1965), pp. 4-5.

42 In addition to the McCone Report two popularized accounts of the disturbance are given in Jerry Cohen and William Murphy, Burn, Baby, Burn (New York: Dutton, 1966); and, Robert Conot, Rivers of Blood, Years of Darkness (New York, Bantam Books, Inc., 1967).
southcentral Los Angeles on suspicion of drunken driving. During the arrest, the accused, along with his brother who had been a passenger in the car, and his mother who was summoned to the scene, allegedly resisted the arresting officers. In short order, a number of Negro citizens, estimated at more than 1,000 persons, gathered at the scene of the arrest which was adjacent to the Watts area. Following a series of incidents between the police and the spectators, the onlookers became overtly hostile and at 7:40 p.m. stoned the last police car to leave the location. The gathering thereupon did not disperse entirely; instead, small groups emerged from it and ranged up and down the streets of the area, although they did not move more than a few blocks from the scene of the arrest. Between 8:15 p.m. and 1:00 a.m., roving groups stoned automobiles, pulled motorists from their cars and beat them. A police command post set up in the area was menaced but not attacked. Up to midnight no unusual fire related activities occurred.

Thursday, August 12, 1965

However, fire units called into the area were harassed by hostile bands on two occasions during the early morning hours of Thursday morning. The first such incident occurred at 12:41 a.m., the second at 5:36 a.m. In each case fire apparatus was bombarded with missiles and debris as they responded to an auto fire and another routine call in the area.

On Thursday afternoon a meeting of the Los Angeles County Human Relations Commission was held in an auditorium, eleven blocks from the scene of initial arrest. It brought together a great many representatives
of neighborhood groups and other Negro leaders to discuss the problem of the maintenance of law and order. During the course of the meeting, however, the tone and conduct of the meeting shifted to a discussion of the grievances felt by the Negro.

That evening, between 6:45 and 7:15 p.m., spectators gathered at the scene of the trouble of the night before. In less than an hour a crowd formed that supposedly numbered 1,000 persons. Firemen starting to come into the area at 8:52 p.m. to fight fires in overturned cars were shot at and bombarded with rocks. Around ten o'clock a pumper had to be temporarily abandoned under a barrage of missiles and random gunfire. At 10:46 p.m. the first structural fire (i.e., in a building) occurred. At this locality police had to hold back hostile crowds as firemen fought the blaze.

**Friday, August 13, 1965**

Shortly before midnight, the perimeter of the disturbance area expanded as the crowd members moved into several surrounding streets. After midnight, several other large structural fires were set. Five hundred police officers were summoned to the area and by using various crowd control techniques, including fender-to-fender sweeps by police cars, they were able to restore a semblance of order by 4:00 a.m. Shortly after 5:00 a.m., officers were removed from emergency perimeter control since the situation seemed to be under control.

The tranquility was short-lived, however, and by 8:00 a.m. a large number of persons gathered again in the commercial section of Watts. By mid-morning they were spreading into previously untouched localities. General looting in the Watts and adjacent commercial areas became widespread.
At 10:50 a.m., the chief of police made a formal request for National Guard assistance. Inasmuch as the Governor was out of the country, the Lieutenant Governor was the ranking executive officer in the state. He ordered the National Guard mobilized at 3:35 p.m. and signed the official proclamation at 5:00 p.m. Although there were 1,336 troops assembled by 6:00 p.m., for various reasons none were deployed until after 10:00 p.m.

During Friday afternoon, there began a seemingly deliberate burning of certain kinds of businesses. Fires and looting spread. By late afternoon, disturbances were being reported as far as 60 blocks north of the original trouble spot. As arson increased, it spilled eastward into county territory and southward into the city of Compton. Due to a lack of adequate police protection, fire units had to be withdrawn from several locations until the police could gain some degree of control over hostile crowds.

Friday night found the disturbance at its worst. The first death occurred at approximately 6:30 p.m.--when a Negro bystander was killed in an exchange of gunfire between police and some unknown persons. Looting reached its peak. Blaze after blaze broke out. At 1:00 a.m. on Saturday morning, there were over 100 engine companies and 26 ladder trucks of the Los Angeles Fire Department fighting fires in the area. While the incidence of new fires declined somewhat in the southern sector of the riot area, on Friday night, this was more than counterbalanced by an increase in the number of incendiary fires in the north.
Saturday, August 14, 1965

By early Saturday morning, police units reinforced by members of the National Guard moved en masse along the streets in an effort to control activities and to enable the Fire Department to fight the many unattended fires. By 3:00 a.m. on Saturday morning, 3,356 Guardsmen were on duty. (The full commitment of the National Guard was reached by 2:00 p.m. Monday when 13,393 troops were in the area.) The maximum commitment of the Los Angeles Police Department was 934 officers, while the maximum for the sheriff's office was 719.

In spite of increased law enforcement and National Guard personnel, the area was not under control at any time during the late hours of Friday night and the early hours of Saturday morning. Throughout Saturday the looting and burning continued in spite of strenuous efforts to control it. Because of the seriousness of the situation, the Lieutenant Governor imposed a curfew on 46.5 square mile zone, 32.5 square miles of which was in the city limits of Los Angeles and covered all of the Watts area. The curfew, which went into effect at 8:00 p.m., made it a crime for unauthorized persons to be on the streets after this hour. Since almost all other organizations had suspended operations in the disturbance area, the only formal groups active in the curfew zone were the police, military and fire services.

The curfew had its effects. Saturday night was relatively calm although a block of stores was burned on one of the main thoroughfares in the Watts area. At that particular location, fire units had to abandon their efforts three separate times because of sniper fire. A gun battle ensued between law enforcement officers, the National Guard and
the snipers, marking the last major disturbance in the area. After that time, police and military domination of the curfew area was virtually complete except for isolated incidents.

Events after Saturday

The Governor returned on Saturday night and on Sunday afternoon toured the area which had become quiet. By Tuesday the situation had returned to near normalcy and the curfew which had been imposed on the disturbance area was lifted. The last 250 National Guardsmen were not removed, however, until August 28, seventeen days after the original arrest had triggered the disturbance.

Consequence of the Disturbance

There were 34 persons killed as a result of the disturbance. Of this number 31 were Negroes shot by the police or the military. In addition, 1,032 persons were injured. Of this latter number, 90 were Los Angeles policemen, 10 were National Guardsmen and 136 were firemen. A total of 32 firemen were injured directly at the hands of hostile crowds. Four firemen received gunshot wounds. There were an additional 22 persons from other governmental agencies and 773 civilians injured. One hundred and fourteen of these injuries resulted from gunshot wounds. A total of 3,438 persons were arrested during the disturbance.

Overall property losses were estimated by the McCone Committee at about forty million dollars. More than 600 buildings were burned and/or looted. Of this number, more than 200 were totally destroyed by fire. Although fire department officials regarded all of the fires as being incendiary in origin, only 27 arson arrests were made and only 10 arson complaints were filed.
The various fires ignited by the rioters were not randomly set. For example, no residences were deliberately burned. Evidence seems to indicate that certain types of business occupancies were much more apt to be burned than others. For example, there were forty-two food or supermarkets, thirty-two liquor stores, twenty-five furniture stores and twenty-three clothing stores burned and/or looted. Conversely, certain other types of business establishments such as gasoline service stations and automobile dealers were left practically untouched. Likewise, industrial complexes covering acres of ground were undisturbed.

Fire department apparatus suffered considerable damage. A total of 104 apparatus underwent either body or mechanical damage, including 4 set afire by Molotov cocktails. Equipment likewise was strained by extensive and continuous use. For example, one engine company placed a wagon battery into operations seven times on one shift; another crew on the same company used this heavy steam appliance an additional five times. Nearly half a million feet or 92.3 miles of hose lines were laid.

During the rioting between early Thursday morning, August 12, and the lifting of the curfew on Tuesday afternoon, August 17, between 2,000 and 3,000 fire alarms were received. One thousand of these occurred between 7:00 a.m. on Friday and 7:00 a.m. on Saturday. A great number of these were false alarms, but nevertheless required some response.

The Los Angeles Police Department also experienced considerable damage to its equipment. For example, a total of 178 police vehicles were damaged in varying degrees. In addition, all of the utilities in the area were disrupted. Power and telephone lines were down, gas lines ruptured, and traffic signals destroyed. Many streets were made all but
unpassable as the result of debris -- the public works department was unable to enter the area to clear them. Businesses were either burned or closed. Thus, the Watts disturbance was of such a magnitude that it produced serious disruptions throughout the affected areas and at the same time created markedly increased demands for many of the emergency oriented organizations in the Los Angeles area. We now turn to a brief resume of the activity of each of the organizations selected for this study.

The Los Angeles Police Department

The Los Angeles Police Department, like most big city police departments, is a large, highly complex organization. At the time of the disturbance, the department consisted of approximately 6,000 police personnel organized into 7 major and 32 minor administrative subdivisions. The department operates under the supervision of a board of commissioners through the chief of the department and 7 deputy chiefs. These chief officers form the general staff of the department and together they are responsible for recommending and implementing most of the procedures which govern police activity in the city. Each of the deputy chiefs are responsible for one of the 7 major divisions of the department. These 7 divisions are further subdivided into 4 staff and 7 line levels supervised by personnel ranging in rank from inspector to lieutenant. The entire department is so arranged as to have closely assigned areas of responsibility and authority. At the time of the disturbance the Los Angeles Police Department was a highly organized, closely
supervised bureaucratic organization. It possessed a para-military authority structure with clearly delineated lines of authority.

By contemporary standards, the department can be considered as one of the largest, most efficiently organized and administered police departments in the United States. Some idea of the department's size and complexity can be derived from the following statistical information. During 1964, one year before the Watts disturbance, the Los Angeles Police Department investigated over 268,000 crimes, issued nearly two million traffic citations, received approximately two million phone calls requesting service, transmitted over five million radio messages and traveled over thirty million miles in providing police assistance. The total budget of the Police Department in 1964, including salaries, new equipment and administrative expenses, totaled slightly more than fifty-five million dollars.43

The nature of Watts disturbance necessitated the immediate and continuing involvement of the Los Angeles Police Department. As in other major civil disturbances, where social control is of prime importance, the Police Department in Los Angeles was the pivotal organization around which the city built its immediate emergency response. Some idea of the Police Department's involvement can be gathered from the following summary.

Wednesday, August 11, 1965

The Los Angeles Police Department became involved in the disturbance at 7:18 p.m. on Wednesday, August 11, 1965 -- just eighteen minutes after

43 Most of the above information came from the Annual Report: The Los Angeles Police Department, 1964. The remaining information came from other police department documents.
the precipitating incident occurred, i.e., the arrest of a Negro citizen for drunken drinking. By 8:45 p.m. a police staging area was established. Efforts were made by police to establish a perimeter at approximately 9:00 p.m. but they possessed insufficient personnel to secure the area. At approximately 11:45 a large number of Negro citizens attacked the police command post with stones and other missiles and forced the police to move temporarily their command facility to a neighboring police station. There was a serious deterioration of the situation at this time.

Thursday, August 12, 1965

During the early morning hours of August 12 the initial disturbance area was marked with fluctuating periods of unrest and calm. The first large-scale looting took place at approximately 2:00 a.m. From this hour until daybreak there appeared to be an uneasy quiet settle over the area. Following these early disturbances, there were seventeen police officers treated for injuries at a local hospital. One was stabbed as he attempted to disperse a small crowd which had gathered in the area. By late afternoon it became apparent to the chief of the department that additional assistance might be needed to control the crowds which were growing in number and size. At 4:52 p.m. the chief notified National Guard officials that their resources would probably be required. At 6:00 p.m. the Police Department began to "borrow" manpower from other divisions within the department in an effort to increase the number of officers available for disturbance duty. At 7:30 the department's emergency control center was activated. By mid-night on Thursday looting,
burning, and shooting began to spread to areas beyond those initially affected. Police officials reported that "thousands" of "rioters" forced police personnel to withdraw from the affected areas.

**Friday, August 13**

There were approximately 600 police personnel on duty in the disturbance area at 1:00 a.m. on Friday morning. Of this number 247 were from the Los Angeles Police Department. The remainder were from the County Sherriff's Office and the State Highway Patrol. Major looting and fires became general by mid-morning when persons of both sexes and all ages, (about 3,000 in number), began to strip and burn one of the principal commercial sections of the Watts area. The chief of the police department, upon authorization by the Mayor, formally requested National Guard assistance at 10:50 a.m. A complete reorganization of the Police Department occurred at 1:00 p.m. in an effort to obtain a maximum of manpower. During the afternoon and evening hours of Friday, August 13, the looting and burning reached its peak. Two thousand guardsmen arrived in the disturbance area at 9:00 p.m. and began to assist police units in "sweeps" of the most congested streets. These "sweeps" were designed to force crowds off the streets and into their homes. The first death occurred at 7:00 p.m. when a bystander was killed during an exchange of gunfire between police and "rioters". By midnight two additional persons involved in burglarizing were shot and killed.

**Saturday, August 14**

While looting and burning began to taper off early on Saturday morning, August 14, sniping increased. Gun battles between police,
National Guardsmen, and alleged snipers became more frequent as a result eleven citizens were killed by gun fire between midnight and 7:00 a.m. Seven more persons were shot and killed during the remainder of the day. By 3:30 p.m. police and National Guard personnel were beginning to gain some control of the disturbance area. As a result of this control they were able to establish four tactical areas and to maintain sufficient guards at forty-one major intersections in and around the disturbance areas. These tactical operations succeeded in establishing a manageable perimeter within which the disturbance could be contained and quelled. As Saturday, August 14, ended, there were over 1,000 police personnel (500 were Los Angeles city policemen), and approximately 13,000 National Guardsmen on duty in the disturbance area. These forces were becoming increasingly effective in enforcing the curfew which went into effect for the first time 8:00 p.m. on Saturday.

**Sunday, August 15**

Throughout Sunday the disturbance continued to abate although fires, looting and sniping began to occur outside the curfew area. This prompted the Governor to extend the curfew area to include a large portion of the city. On Sunday three citizens were killed by police and National Guard personnel. The maximum number of police on duty on Sunday was 1,016, of whom 493 were members of the Los Angeles Police Department. There were approximately 13,000 guardsmen on duty throughout the disturbance areas on Sunday -- their maximum official number reached 13,393 at 2:00 p.m. the following day.
Monday, August 16

On Monday most of the disturbance activity consisted of isolated sniping and occasional fire bombings. The Los Angeles Police Department's personnel commitment was reduced to 271. Three persons were killed by police and Guard personnel.

Tuesday, August 17

The situation was quickly returning to one of normalcy on Tuesday. Police and National Guard contingents were being reduced, the curfew was lifted, bus service into Watts was restored and the area was being flooded with sightseers. Police personnel, already fatigued by long hours on duty were compelled to handle this heavy convergence of traffic.

Events after Tuesday

Police personnel remained stationed throughout the disturbance areas in decreasing numbers until August 20 at which time the department's emergency control center was deactivated and its command post closed. The department ended 12 hour shifts on Monday, August 23 and returned to near normal operating procedures. The last units of the National Guard were removed on Wednesday, August 28, and at this time, the Los Angeles Police Department assumed exclusive control of the city once again.

The information on which this summary is based was obtained from several documents supplied by the Los Angeles Police Department. Two of the most helpful reports were entitled: "Riot Capsule" and "Riot Statistics."
The Los Angeles Fire department was the third largest one in the United States at the time of the 1965 Watts disturbance, being surpassed by only New York and Chicago in terms of personnel and equipment. The 3,835 persons in the department were organized into seven major bureaus. These seven bureaus were further divided into five sections and sixty-eight sub-sections. The largest of the bureaus was the one responsible for fire suppression. It contained over 3,400 personnel, maintained 109 stations and over 200 pieces of fire apparatus. The department was manned throughout by professional fire personnel whose offices were arranged in a clearly defined, hierarchical pattern. The department possessed a para-military authority structure with a sharply delineated chain of command ranging from the chief engineer at the top to recruit firemen at the bottom. At the command level, in addition to the chief, the department had 7 deputy chiefs, one for each of the major bureaus. Together, these chief officers, along with the board of fire commissioners, were responsible for formulating the policies which governed the fire department's operations. In addition to these chief officers, the department had approximately 75 battalion chiefs, 500 captains, 627 engineers and 2,024 firemen. At the time of the disturbance, the Los Angeles Fire Department possessed the highest rating possible as evaluated by the National Board of Fire Underwriters.

The Watts disturbance resulted in extensive property losses in several areas of south-central Los Angeles. The vast majority of these losses were either directly or indirectly related to the many fires which were ignited by arsonists. As previously noted, there were over 200
buildings totally destroyed and approximately 400 others damaged by these wide-spread fires. Since the primary responsibility for fire protection in the city of Los Angeles is vested in the Fire Department, one can readily understand the department's heavy involvement in responding to the Watts disturbance. The following summary is intended to illustrate only the most salient aspects of the Fire Department's response to the Watts fires.

Wednesday, August 11

The Los Angeles Police Department notified the Fire Department's communication center early in the evening of August 11 that a minor disturbance was in progress and that Fire Department personnel ought to proceed with caution when moving into the disturbance area. No calls for fire service reached the Fire Department's communications center on Wednesday evening.

Thursday, August 12

The Fire Departments' first response into the disturbance area came at 12:41 a.m. on August 12. Fire units were summoned to an automobile fire near the scene of the precipitating event which had occurred some five hours earlier. As firemen extinguished the car fire (a television news service vehicle), they were bombarded with flying rocks, bricks and other debris. Later, at 5:36 a.m., fire units were stoned once again as they returned to their quarters following a routine run into

45 For an exhaustive analysis of the Los Angeles fire department and its activities during the disturbance see: George I. Warheit, and Enrico L. Quarentelli Let It Burn: A Case Study of the Los Angeles Fire Department During the Watts Disturbance (Columbus, Ohio, The Disaster Research Center - The Ohio State University, 1968).
the Watts area. After these two initial incidents the scene became quiet once again. At a meeting of the chief officers and commissioners of the department on Thursday morning it was decided that the disturbance would not develop further. However, on Thursday evening between 8:00 p.m. and midnight, fire personnel were attacked and apparatus damaged on three different occasions as they responded to alarms in southcentral Los Angeles. Requests for police protection were made by the chief of the department but he was told that the Police Department was being besieged with calls and could not guarantee adequate protection at all fires. It was at this time departmental officials decided to respond to fires in the disturbance area in groups or task forces so as to increase their overall strength at a fire and to offer some degree of mutual protection from citizen harassment. The first building fire (a large food market), occurred at 10:45 p.m. on Thursday night. It was also about this time that fire personnel were no longer being dispatched to automobile or small structural fires in the Watts area since fire personnel were more urgently needed for larger fires, a number of which were now burning. Late on Thursday night the chief of the department established a forward command post in a fire station on the southern perimeter of the disturbance area. He also ordered two other stations closed and their men and equipment relocated for safety purposes.

Friday, August 13

Once again there was very little fire activity between 3:00 a.m. and 10:00 a.m. on Friday morning. Shortly after 1:00 p.m., however, the fires began again with greater frequency and magnitude than ever before. By 5:00 p.m. there were more than 30 engine companies working
in the disturbance areas. The chief of the department sent a liaison officer, an arson investigator, to the police emergency control center at dusk on Friday, August 13. This officer's task was to expedite the transferral of information between these two organization, both of which were extremely busy at the time. At 8:00 p.m. there were so many fires burning and so much apparatus involved that 40 of the department's 109 stations were completely void of men and apparatus. A recall of off-duty personnel was made at this time and an additional 20 pieces of reserve apparatus activated. A second recall was made at 11:00 p.m. on Friday night so that every piece of fire apparatus was fully manned and ready for service. In spite of these additional resources, the fire department was not able to respond immediately to all fires in the disturbance areas.

Saturday, August 14

The height of the fire activity was reached at 2:00 a.m. on Saturday morning, August 14. At that time there were approximately 40 major fires burning in southcentral Los Angeles and an additional 125-150 minor fires in automobiles, previously burned buildings and rubbish piles. The department had approximately 130 pieces of apparatus and hundreds of personnel on duty in Watts at that hour. Then as the number of National Guardsmen increased, some control of the area was secured and the number of new fires being ignited diminished.

At 10:00 a.m. the chief of the department attended a meeting at which time the Mayor, the chief of police, representatives of the National Guard and other officials were present. At this meeting a master plan was decided upon and task assignments were made accordingly.
Immediately following the meeting, a condition of "local peril" was declared by the Mayor. This declaration, under California law, made mutual aid mandatory on the part of all fire departments in the region. Although the Los Angeles Fire Department had received a minimum amount of mutual aid on Friday night and early Saturday morning, it was of a volunteer nature. Now, it became mandatory upon request. A third recall of fire personnel was made at 2:00 p.m. on Saturday with the men scheduled to report for duty at 8:00 p.m. This recall was designed to keep the reserve apparatus and the split companies fully manned throughout Saturday night and Sunday morning.

On Saturday night the number of new fires ignited showed a sharp decrease although there was an increasing incidence of sniping reported.

Sunday, August 15

About 2:30 a.m. on Sunday morning, the chief of the Fire Department requested from National Guard officials enough guardsmen to provide each piece of apparatus with two escorts. National Guard officials were not able to comply with the request at that time although they did so by mid-afternoon. In the meantime, the Police Department was able to send forty-one officers to the Fire Department's command post at about 2:50 a.m. from where they were dispatched by fire officials as needed. Although there were far more fires on Sunday evening than on a normal Sunday evening in August, they did not reach the magnitude of the two previous nights. With the changing of shifts at 7:00 a.m. on Monday morning, August 16, the Fire Department was returning to near normalcy.
Events after Sunday, August 15

Many of the fire companies which had been operating at command posts and other stations began to return to their own quarters with the changing of shifts at 7:00 a.m. on Sunday morning. By Monday morning at 7:00 a.m. all but a few companies were in their own stations. On subsequent days, the firemen were engaged primarily in dealing with rekindles. They also began to return to normal fire fighting procedures, paying more attention to overhauling, salvage, and so on, than they had been able to in the previous days.

During the course of the disturbance, the major hindrance to the performance of the Fire Department's expected duties came from crowd harassment, and concomitantly, from inadequate protection. On more than 200 separate occasions fire personnel were subjected to sniping, heavy missiles and molotov cocktails. There were 32 firemen injured by rioters, and 104 injured during fire fighting operations. Approximately 185 pieces of fire apparatus were damaged ranging from broken windshields to bullet holes. These damages required 1900 man hours of shop labor to repair. The total cost to the department as a result of the disturbance was placed at approximately 68,000 dollars.

One can gather, even from this cursory description something of the changes which occurred in the intra and interorganizational structures of the Los Angeles fire department as it responded to the Watts disturbance.

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The information on which the above summary is based is largely from extensive interview data gathered by DRC staff members following the disturbance and from the official records of the Los Angeles Fire Department.
Los Angeles Municipal Power and Water Company

Electric power and water for the Los Angeles area are provided by a city owned and operated utilities company. The organization is governed by a five member commission appointed by the Mayor and confirmed by the city council. The general manager of the company is in a civil-service exempt position although the city charter stipulates that he must be a professional engineer. The other administrative positions in the organization are civil service appointments. The organizational structures of the company are extremely complex and contain a wide range of both staff and line positions. Each of the major divisions of the organization, that is, power and water, is supervised by a chief engineer who holds the rank of assistant manager. These two sections operate semi-autonomously although their operations are coordinated and integrated at the top echelons of the organization.

The power division of the organization was more adversely affected and more involved in emergency activities during the disturbance than its counterpart. All told it lost approximately 55,000 dollars worth of equipment most of it in the form of poles, transformers and conductors. The organization also experienced extensive damage to four of its commercial branch offices through fire and/or looting.

Power service personnel were withdrawn from the disturbance area on Thursday evening, August 12 and except for one extreme emergency situation, where a 34,500 volt power line was done, company service personnel remained out of all sections considered dangerous by the police. The restoration of power began on Tuesday, August 17 and was completed in approximately one week.
Officials of the company remained in constant contact with the Police Department and had a liaison person in the police control center during the disturbance. It was from this official that the organization was keeping abreast of events as they developed and it was from information provided by this liaison that company policy was being established.

The water division's primary emergency tasks were related to the maintenance of sufficient pressure as firemen pumped hundreds of thousands of gallons of water through its hoses. This task was not an especially difficult one for the water division since about 80 percent of the city's water mains, including the ones in the Watts area, are pressurized by gravity and not pumping stations. The water division did not suffer any significant damage to its facilities and the restoration of service was not a difficult problem.

Company officials noted that the only serious operational problem encountered by the organization stemmed from the harassment of service personnel. Had this interference not been created by hostile crowds, service personnel could have handled all demands on a more or less routine basis. They indicated further that the company's personnel and material resources were extremely great, and that they had previously handled many emergencies of equal or greater magnitude than the Watts disturbance without undue stress.

The Power and Water Company in Los Angeles has, even under normal circumstances, a close working relationship with other city agencies including the Police, Fire and Public Works departments. They have direct line telephones to these organizations and are capable of
maintaining communications with the Fire Department through two-way radio facilities. These relationships and the lines of communications which emanate from them were more in evidence during the emergency period but the events associated with the disturbance did not produce any significant changes in these relationships.

The Los Angeles Telephone Company

Telephone service in the Los Angeles area is provided by the Pacific Telephone Company, a part of the giant Bell System and a subsidiary of the American Telephone and Telegraph Company. It is a private business organization but as a public utility it is controlled to some degree by governmental regulations. The structure of the organization is extremely complex, is technically oriented at the operations level and altogether possesses a vast amount of resources, both personnel and material. At the time of the Watts disturbance, there were three major operating divisions of the company in the Los Angeles area.

The telephone company in Los Angeles had extremely close working relationships with the other utilities in the area, especially the power and water company and with the Police and Fire Departments. During the emergency, the telephone company sent liaison personnel to the police control center and in addition had service personnel stationed at the police command post in the disturbance area. The activities of the company were somewhat limited throughout the disturbance although it did provide the Police and Fire Departments and the National Guard with additional telephone and other necessary communications equipment.
Telephone company officials were notified initially of the disturbance on Thursday evening by police officials who indicated that a series of incidents had occurred and that telephone personnel should use caution upon entering the Watts area. As the disturbance worsened on Thursday night, it was decided that telephone service technicians would not enter the area unless there was an extreme crisis and never without police protection. Company officials also removed approximately 110 of their trucks from the general area in order to prevent damage to them.

The Watts disturbance did not present the telephone company with any excessive demands and with the exception of potential harassment which prevented the restoration of telephone service, the organization functioned about as usual. The two largest problems confronted by company officials were (1) providing adequate protection for those personnel working in the various offices in and around the disturbance; and (2) handling an increased load of calls. The first of these problems was solved by providing overnight facilities for operators and other personnel working in their central offices, the second by exercising limited amounts of line use control mechanisms. At no time did the company experience any degree of organizational stress since its resources, both personnel and material, far exceeded the demands being made on it.

The Salvation Army

The southern California Divisional headquarters of the Salvation Army are located in the city of Los Angeles. There was, in addition, a City Command functioning there at the time of the Watts disturbance.
Together, these subdivisions of the Salvation Army made a somewhat limited response to the emergency created by the disturbance.

The first disturbance related activity of the Salvation Army occurred on Sunday evening, August 15 when the organization's divisional commander and disaster coordinator were contacted by state officials and asked to distribute food in the Watts area. These Salvation Army officials agreed to perform this function and immediately began to purchase the necessary foodstuffs. At 7:00 a.m. the next morning, several Salvation Army trucks were escorted to a school site in the disturbance area where a distribution station was set up. The Salvation Army personnel in charge enlisted the assistance of approximately twenty-five local residents and together they distributed foodstuffs to the area's resident's for two and one-half days. The same evening the Salvation Army began providing canteen service for National Guardsmen who were patrolling the streets at that time. This service was continued until the last units of the Guard were removed. Following the disturbance, the Salvation Army's Family Service Department provided emergency relief and counselling in cooperation with the city's Bureau of Public Assistance.

The Salvation Army had a liaison person on duty in the police command center beginning on Sunday evening, August 15. Through this contact, the organization was kept aware of what was going on and was able to keep in touch with its field operations when necessary. The organization did not become seriously involved at any time during or after the Watts disturbance. It did, as indicated, provide certain tasks but these did not elicit a full fledged organizational response.
One of the principle reasons for this was that the total number of welfare demands was rather small and secondly, the welfare agencies of the city, county and state governments were actively engaged in dealing with many of the demands as they arose.

Los Angeles Red Cross

The local chapter of the American Red Cross in Los Angeles is one of the largest in the United States. At the time of Watts' disturbance, it possessed approximately 300 professional staff personnel plus hundreds of trained volunteers. Its primary on-going programs at that time consisted of providing blood for 220 hospitals, teaching first aid and water safety classes, conducting community service programs, aiding the dependents of military personnel, cooperating with other welfare organizations, and assisting persons affected by individual and family crises. Because of this wide range of activities, the Red Cross chapter in Los Angeles under normal circumstances had close working relationships with literally dozens of other organizations, both public and private. Chief among these working relationships are those maintained between the Red Cross and other disaster relevant organizations in southern California.

The Los Angeles Red Cross chapter did not, however, become heavily involved during or immediately following the Watts disturbance. It did provide some minimal assistance to a small number of displaced families and did provide some liaison functions but for the most part the organization did not play a major role in Los Angeles' response to the emergency.
This lack of organizational involvement can be accounted for in terms of these factors. First, the number of families affected by the disturbance was quite small, (unlike Detroit where approximately 5000 persons were left without adequate shelter). In addition, the scope of the disaster was rather limited. Thus, although a number of emergency organizations were undergoing severe stress, the operation of many other organizations, such as those associated with welfare services, were capable of dealing with the demands being made. Red Cross involvement was not crucial. Finally, and perhaps most importantly the stated policies of the National Red Cross strongly recommend that local chapters not become involved in labor disputes, strikes, riots, civil disturbances and so on. While provisions are made for possible Red Cross involvement upon the invitation of local governmental officials, local chapter officials are urged not to take leadership roles in responding to a disturbance and if involved to withdraw their operations as quickly as possible. Essentially, it was for these reasons that neither the local chapter nor the national Red Cross became involved in responding to the Watts disturbance. This lack of involvement caused local Red Cross officials some embarrassment and prompted a public information program following the disturbance wherein the Red Cross' position was made known to other agencies and to the citizenry at large.

Summary

The impact that the Watts disturbance had on the city of Los Angeles was rather limited in terms of the amount of community and organizational stress it produced. Although the Police and Fire Departments
did undergo a significant degree of stress, the other emergency-relevant organizations in the city were not taxed as far as their capabilities were concerned. The nature of the disturbance posed a number of serious problems at the top echelons of government but these were basically administrative, that is, political decisions, and not operational ones, per se.

The degree of community and organizational stress was minimal for three basic reasons. First, the proportion of the city's area and population affected was quite small. Unlike a severe hurricane or flood which affects all or nearly all of a city's population and emergency relevant organizations, the Watts disturbance directly affected less than one-tenth of the city's geographic area and population. The second factor related to the absence of stress is that of the community's vast resources. The city of Los Angeles, at the time of the Watts disturbance, possessed tremendous emergency-relevant resources, moreover, Los Angeles county, many of the municipalities around Los Angeles, and the state of California also have vast resources at their disposal and on a number of occasions assisted the city during the disturbance period. Finally, the emergency-relevant organizations in Los Angeles and throughout southern California had responded to a number of large natural disasters before Watts and had developed not only resources to cope with a disaster situation but possessed skilled and experienced personnel capable of dealing with extreme emergencies.

We can conclude, therefore, that the community system (and the majority of the emergency-relevant organizations in that system), did
not experience a great amount of stress. There was, however, some stress experienced and as a result some interorganizational changes did occur.
THE DETROIT CIVIL DISTURBANCE
DETROIT, MICHIGAN

Socio-Demographic Characteristics

The Bureau of the Census enumerated the 1960 population of the Detroit Standard Metropolitan Statistical Area at 3,762,360. Of this number 1,670,144 persons were living within the city limits of Detroit. At the time of the 1960 census the city encompassed an area of 140 square miles. The city of Detroit and the Detroit Standard Metropolitan Statistical Area were listed as the fifth largest in the United States by the same census. Between 1960-1965 the Detroit metropolitan area grew to an estimated, 3,987,000 — an increase of approximately 225,000 during the five year period. The city of Detroit, on the other hand, has continued to lose population since 1950. The decade between 1950-1960 was a period when the city experienced a net decrease of 179,424 persons. Between 1960-1965, the city of Detroit lost an estimated additional population of about 80,000.

While the city of Detroit has continued to experience a net population decrease over the last 25 years, the percentage of the population listed as Negro has grown markedly. In 1950, 16 percent of the population was listed as Negro. Ten years later it was listed at 29 percent and in 1967 at 38 percent. The Negro population of Detroit in 1967 was listed at approximately 600,000. The Detroit Board of Education reported
in 1967 that approximately 171,000 of the city's 300,000 school children were Negro. This figure represented 57 percent of the total.

The Detroit Civil Disturbance

The Detroit civil disturbance began on Sunday morning, July 23, 1967. During this ten day period, 43 persons lost their lives of whom 33 were Negro and 10 were white. Seventeen of this number were listed as looters. In addition to the 43 deaths, there were 657 persons injured seriously enough to come to the attention of medical authorities. There were 6,528 persons arrested during the disturbance, 2,663 of whom were charged with looting and 26 of whom were charged with sniping. Of the total number arrested, 4,881 or 74.8 percent were later prosecuted. Estimates of damages resulting from over 600 fires was originally set at about 500 million dollars but these early figures were revised sharply downward as more precise information became available. Approved insurance claims, which represent a fairly accurate appraisal of fire losses, totalled 84 million dollars as of August 17, 1967. The Greater Detroit Board of Commerce, in a report released ten days after the end of the disturbance, estimated that the loss of retail sales from July 24 through July 28 would reach about 170 million dollars and that loss of income would exceed fifty million more. They further reported that interstate commerce came to a virtual

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The above demographic data are from the United States Department of Commerce, Bureau of the Census and from estimates of public planning officials, educators and others in Detroit. The estimated Negro population for 1967 was computed by the Bureau of the Census on the basis of the change in relative proportions of Negro births and deaths between 1960-1967.
standstill during the emergency. Actual dollar losses from this dis-
ruption of trade are very difficult to determine but the Board suggested
that the losses were of considerable magnitude.

The most important events associated with the disturbance, for our-
purposes at least, can be arranged in the following chronological sequence. We will consider most prominently those events which directly affected the organizations included in this research.

Sunday, July 23, 1967

3:00 a.m. — The Police Department's crowd control squad was dis-
missed. This left 193 policemen patrolling the streets, 44 of whom were
from the 10th precinct, the area in which the precipitating event took
place.

3:45 a.m. — At this hour an illicit drinking establishment in one
of Detroit's Negro sections was raided by police officers. The officers
had anticipated that about two dozen persons would be in the establish-
ment. They discovered and arrested eighty-two persons instead. Since
the number present and arrested far exceeded their expectations, additional
police vehicles had to be summoned in order to transport those arrested
to jail. As this took some time, a crowd of about 200 onlookers gathered
and as the last of the prisoners were being taken from the scene at 5:00
a.m., a bottle was thrown through the rear window of a police cruiser.

48 The above data are from a wide variety of sources including the
Report of the National Advisory Commission on Civil Disorders (New York:
Bantam Books, Inc., 1968), pp. 84-108. Other data are from the official
reports of several city agencies including the police and fire departments.
5:20 a.m. -- The police commissioner was notified by police communications officers. He in turn immediately called the Mayor of the city.

6:00 a.m. -- The executive chief of the Fire Department was awakened and notified of the possibility of a civil disturbance. He reported to the central communications office of the Fire Department to assess the possibility of wide-spread fires. Fire personnel changed shifts as usual at 7:00 a.m. but were told to avoid the area of the disturbance.

6:15 a.m. -- The ranking on-duty officer of the Police Department ordered an immediate mobilization of the day platoon for all west side precincts. The police dispatcher assigning runs noted that as 10th precinct personnel arrived they were given tasks. There were more requests for police assistance in the 10th precinct at this time than there were in cars and personnel available.

7:00 a.m. -- The State Police and Wayne County Sherriff's Office were notified of the disturbance. All units of the Detroit Police Department were mobilized.

7:10 a.m. -- The Michigan National Guard was mobilized.

7:30-9:00 a.m. -- All Detroit police units were mobilized. The Federal Bureau of Investigation, the Department of Public Works and several other agencies likely to become involved were notified during this period.

11:00 a.m. -- The police department reported that the initial incident was under control.

1:30 p.m. -- The Police Department reported that the situation was again out of control. Five extra alarm fires were reported as burning simultaneously in spite of strenuous efforts to contain them. Harassment of fire personnel was reported as increasing at this time. The normal
operating procedures of the Fire Department began to give way in the face of heavy demands.

2:00 p.m. -- The Mayor met with community leaders at police headquarters at which time he requested 200 state policemen for duty in the city of Detroit. It was between 2:00 - 3:00 p.m. on Sunday afternoon that the Red Cross, Salvation Army, the Michigan Bell Telephone Company and the Public Power Company became aware of the growing crisis.

3:05 p.m. -- There were 360 state policemen assembled in an armory staging area preparing for assignments.

4:20 p.m. -- The National Guard was committed by state officials for duty in the city of Detroit.

4:30 p.m. -- All off-duty fire personnel were recalled to active duty. Many firemen were on duty for 60 consecutive hours following this recall without substantial rest or off-duty time.

5:25 p.m. -- The first National Guardsmen arrived at assigned command posts and were briefed on duties, procedures and on other matters related to the disturbance.

6:00 p.m. -- It was at approximately this hour that fire officials informed state and local governmental officials that they could not handle a worsening situation. Shortly thereafter the Governor authorized the calling of all neighboring fire departments for service in Detroit. The first of 41 departmental responses to the request for mutual aid assistance occurred at 8:45 p.m.

7:00 p.m. -- The first National Guard troops arrived on streets in the disturbance area at about 7:00 p.m.

7:45 p.m. -- The mayor declared a curfew in effect which was designed
to keep all but authorized persons off the streets between the hours of 9:00 p.m. and 5:50 a.m.

9:07 p.m. -- The first sniper fire was reported at this time.

11:45 p.m. -- The Governor of Michigan declared that, "a state of public emergency exists in Hamtramck, Highland Park and Detroit."

Monday, July 24, 1967

2:00 a.m. -- Approximately 800 state policemen and 1,200 National Guardsmen were assisting the Detroit police at this time.

11:50 a.m. -- The President of the United States authorized the sending of federal troops to an air base near Detroit. The first troops arrived approximately four hours later.

Throughout the day fire, police and other agencies were confronted with extremely heavy demands. The fire Department responded to 617 alarms on Monday, July 24. The Police Department's communications units handled 2,861 riot oriented messages during the course of the day -- almost 50 percent more than on any other day during the disturbance. The welfare agencies began to feed and clothe victims of the disturbance in increasing numbers on Monday. The public utilities agencies confined their activities to top priorities and to service restoration on the periphery of the disturbance area. The telephone company had extremely heavy demands placed on their local and long distance facilities.

11:20 p.m. -- The President authorized the commitment of federal troops and nationalized the Michigan National Guard. There were about 5,000 National Guardsmen on duty in Detroit at this time.
Tuesday, July 25

4:00 p.m. -- A total of 2,700 federal troops had assumed duties in one of the disturbance areas by this time. These troops remained on duty until Saturday, July 29.

Throughout most of Tuesday the disturbance situation fluctuated from hour to hour although the number of persons on the streets both during the daylight and night hours was greatly reduced. The Fire Department responded to a total of 319 alarms, 296 less than the day before. The Police Department's activities were also lessened. An indication of this tapering off of disturbance activities is reflected in the fact that police communications handled 1,267 fewer disturbance oriented radio messages than on the previous day. The public utilities were still concentrating their restoration activities to sections adjacent to the disturbance area. On a few occasions they did enter the disturbance area with escorts to restore service in high priority situations. They also sent escorted personnel on reconnaissaince trips to evaluate damaged facilities and estimate needed replacements. The welfare agencies were functioning fully to provide food, shelter, drugs and other needed commodities for affected persons. They were providing information regarding the welfare of citizens and military personnel in Detroit.

There were 444 incidents involving social control forces between 7:00-11:00 p.m. on Tuesday. Most of these were associated with reports of sniping.

Wednesday, July 26

On Wednesday the disturbance was being forcefully and effectively controlled. This is reflected in the activities of the emergency
organizations operating in the city. Although there were a total of 534 incidents (255 of them between 8:30 - 11:00 p.m.), the number of alarms to which the Fire Department responded declined to 177. The number of Police Department radio transmissions dealing with the disturbance also declined to 1,231. The utility companies were responding to more calls for service than usual although they were still not going into disturbance areas unescorted. Food and other price controlling legislation passed by Detroit's Common Council went into effect on Wednesday in an effort to inhibit profiteering.

Thursday, July 27

Most of the disturbance had subsided. Fire responses were slightly lower than on a "normal" day in July. The police, National Guard and federal troops were still patrolling in the disturbance areas but with far fewer incidents than on previous days. One of the public utilities had 500 teams in disturbance areas restoring service. All service was restored, at least on a temporary basis by Friday at 6:00 p.m.

Friday, July 28 - Tuesday, August 1

Fire alarms were again below normal for a July day - the department responded to only 94. Police activities necessitated only 616 disturbance oriented radio messages (contrasted with 2,861 on Monday), and utilities were being restored to near normal. On Saturday, July 29 the federal troops were removed and on Tuesday, August 1, the curfew which had been imposed on Sunday evening, July 23 was lifted and the National Guard was moved out.
During this period welfare agencies began to function in a more orderly, customary fashion. Normal operating procedures were being instituted and some ad hoc welfare groups which emerged during the crisis began to phase out their activities.

The three month period following the civil disturbance was marked by strenuous efforts on the part of all the public and private agencies in the city and state affected by the disturbance. A vast amount of study and resulting documentation was produced. This included inquiries into the causes of the disturbance, recommendations to prevent a recurrence of another such event and a host of emergency plans on both organizational and interorganizational levels. The city departments most affected by the disturbance had requested authorization to purchase over 3.5 million dollars worth of new equipment as of November 1, 1967. Although some of these requests included the replacement of equipment lost during the disturbance (the Fire Department estimated that they lost 100 thousand dollars worth of equipment, for example), most of the requests were for newer, more sophisticated weapons and apparatus. These same agencies requested authorization to expand their staffs as well. All in all, the civil disturbance which occurred in Detroit during July and August of 1967 had a most disrupting and lasting effect on that community and on the emergency organizations which function within it. Now we will consider briefly the responses of the various organizations selected for this study.

The Detroit Police Department

The Detroit Police Department, like many local police departments throughout the United States, was the primary governmental unit at the
community level responsible for the maintenance of law and order. As such, it had no choice but to become totally involved in the community's response to the disturbance. As one attempts to understand the department's activities during the disturbance, it is useful to keep these three factors in mind: (1) the department was functioning in a conflict situation and was the object of much crowd harassment, (2) many other organizations were dependent on the Police Department during the emergency and these organizations were placing increased demands on the police, and (3) the Police Department did not have adequate material and personnel resources to cope with a disturbance of the magnitude of the one which developed. Each of these factors will be examined briefly at this time.

One of the most important facts which must be considered when one seeks to understand the functioning of the Police Department in Detroit is that police personnel were charged not only with the responsibility for controlling the disturbance, they were in a real sense one of the targets of the disturbance. This fact was demonstrated by the great amount of hostility which was directed at police personnel and equipment. Whether such feelings are justified is of no particular consequence for

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49 On the basis of 1,200 interviews conducted by field researchers for the Presidential Commission on Civil Disorders soon after the disturbance, the commission concluded that grievances against the police outweighed all other reasons given for racial unrest. Another research effort cited by the commission was one conducted by the Urban League of Detroit. Following the disturbance, 437 Negroes from the affected areas of the city were asked which of 23 grievances had "a great deal," "something," or "nothing" to do with the riot. The grievance which received the most responses of, "a great deal" was police brutality. For a fuller discussion of grievances against police see: Report of the National Advisory Commission on Civil Disorders, op. cit., pp. 143-200.
our purposes. It is significant to note, however, that regardless of the validity of these feelings, they did exist and they did prompt hostile acts toward the police department. Moreover, these acts had a profound influence on the activities of the department during the disturbance. Thus, the conflict context within which the Police Department functioned placed unusual and excessive demands on their resources.

In addition to these demands the Police Department was receiving an unusually large number of requests for assistance from other organizations in the city. The Fire Department, the Public Works department, the public utilities and other organizations were requesting police protection for their field personnel. When the police could not honor these requests, the functioning of these other organizations was hampered and frequently discontinued. In the case of the Fire Department, inadequate police protection meant withdrawal from the scene of a fire and the possibility of a major conflagration with attending losses in buildings and business inventories. Public utility organizations were placing demands on the Police Department in the form of requests for the protection of vital installations, and so on. Thus, in addition to operating within the context of community conflict and accompanying harassment, the Police Department was experiencing unusually heavy demands from other organizations in the community -- organizations responsible for maintenance of important community functions. As such, these demands were of a high priority and could not be summarily disregarded.

The Police Department, like other organizations, was staffed and equipped to deal with problems of a given magnitude. Their resources in no way were sufficient to cope with the demands being placed upon them.
As a result of this imbalance between legitimate demands and organizational capabilities, the Police Department was forced to improvise, and adapt its operations in an effort to fulfill its assigned functions as adequately as possible. Some of the most important of these adaptations are as follows.

1. The Police Department began notifying the highest ranking officers in the organization (and in the city as well), at the very outset of the disturbance. This served to alert those most likely to be involved in top-level decision making.

2. The department established several command posts throughout the city including a master operations center at the headquarters building. This action facilitated the department's internal decision making processes and at the same time it enhanced inter-organizational liaison at both the administrative and operational levels.

3. The department activated its entire 4,500 man department in an effort to maximize its capability.

4. The department assigned top priority to disturbance oriented incidents.

5. The department requested and received assistance from other agencies including the county and state police, the National Guard and federal troops. These additional personnel and material resources expanded the department's capability, reduced the stress placed upon it and enabled it to more adequately fulfill its functions.
The department adopted a number of other minor ad hoc procedures but these were relatively inconsequential and need not be amplified here. Before considering the activities of the Fire Department and other organizations included in this study it is important to note again that the Police Department was the pivotal organization around which the community endeavored to meet the demands placed upon it by the emergency.

The Detroit Fire Department

The Detroit Fire Department, like the Police Department, was extremely involved in the community's response to the emergency. The activities and adjustments made by the Fire Department, again, like those of the Police Department, can be understood most clearly by viewing them in terms of these three conditions: (1) the department functioned in the context of community conflict and as a result was subjected to harassment from large numbers of citizens; (2) the department was confronted with unusually heavy fire demands as the result of widespread arson, and (3) the department had limited resources with which to meet these unprecedented demands.

Since we have already discussed the functioning of community organizations in conflict environments, further elaboration of the basic notions need not be discussed here. It is significant to note, however, that the Fire Department was seriously hampered in its efforts to combat and control the spread of fires. This harassment began early in the morning on the first day of the disturbance with verbal abuse being directed at fire personnel who had responded to a fire in the disturbance area. Later in the same day, firemen were driven from the scene of a fire by rock-and-bottle throwing crowds of citizens. On the second and third day of the
disturbance, fire personnel were subjected to periodic sniper fire, the full extent of which is difficult to determine. During the course of the disturbance, firemen were forced to withdraw from the scene of fires on 283 different occasions as the result of hostile acts on the part of citizens. This withdrawal increased, of course, the total number of buildings damaged or destroyed.

The period of the civil disturbance did not mark the first opposition experienced by fire personnel. In the four year period which preceded the civil disturbance, fire officers reported a total of 150 incidents ranging from verbal abuse to sniping. Never before, however, had the department undergone such intensive opposition. As a consequence of these hostile acts, the Fire Department was confronted with serious command and operational decisions. The seriousness of the effect of these acts was intensified by the absence of police protection. Had such protection been available, the fire demands placed upon the Fire Department could have been handled in a much more routine manner. Without adequate protection, however, the demands placed on the department far exceeded its response capability.

For the first 22 days of July, 1967, the Detroit Fire Department averaged 125 fire responses per day. During the week of the disturbance, the department responded to a total of 1,617 alarms. The response breakdown is as follows:

<table>
<thead>
<tr>
<th>Day</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday, July 23</td>
<td>209</td>
</tr>
<tr>
<td>Monday, July 24</td>
<td>617</td>
</tr>
<tr>
<td>Tuesday, July 25</td>
<td>319</td>
</tr>
<tr>
<td>Wednesday, July 26</td>
<td>177</td>
</tr>
<tr>
<td>Thursday, July 27</td>
<td>105</td>
</tr>
<tr>
<td>Friday, July 28</td>
<td>94</td>
</tr>
<tr>
<td>Saturday, July 29</td>
<td>96</td>
</tr>
</tbody>
</table>
One can note from the above summary that the period between Sunday, July 23 and Wednesday, July 26 marked the heaviest organizational involvement.

There were approximately 700 structures damaged or destroyed as the result of arson during the disturbance. Of this number, approximately one-third were residences. Most of these were located above or adjacent to business establishments and were inadvertently affected. A large number of residences were burned on Sunday and Monday when firemen were forced from the disturbance areas at a time when winds were gusting to 25 miles per hour.

Thus, the demands placed on the Fire Department came from two primary sources, aggressive acts directed against fire personnel and widespread arson. In the face of these heavy and unusual demands, the Fire Department had but limited organizational resources. As a result of this imbalance between demands and capabilities, the Fire Department was compelled to adapt new fire fighting techniques and methods of operation. Finally in the face of great demands of a high priority nature, it co-opted additional resources in an effort to expand its response capabilities. Some of the most important adaptations and co-optations are as follows:

1. The department began recalling off-duty personnel at 4:30 on Sunday afternoon in an attempt to man all reserve apparatus and to increase the company strength of all units operating in the field.

2. The department sought to facilitate its decision-making processes by involving the department's chief administrative officers in field operations and communications. This enabled operations and
communications personnel to consult directly with the executive officers of the department on matters relating to improvisations in fire fighting techniques, and so on. It also provided the chief officers with an on the scene appraisal of present and possible future demands.

3. The department established a direct liaison with police, military governmental utilities and other officials. This liaison served to facilitate requests for assistance, it enhanced the exchange of relevant information, and it provided for a source of legitimation from the chief executive officers of state and city government.

4. The department obtained mutual aid assistance from forty-one other fire departments throughout Michigan. One fire department came from Windsor, Canada to assist as well.

5. The Fire Department abandoned many of its traditional fire fighting techniques, especially those which necessitated the commitment of personnel and material resources over a period of hours. This innovation tended to free departmental resources much sooner than under normal conditions.

6. The department suspended many of its routine maintenance and training functions.

7. The department centralized its resources at three command posts in or adjacent to the areas of the disturbance. This permitted an immediate and collective response -- it also permitted a more orderly rotation of personnel and equipment and it reduced the load placed on an extremely busy communications system.
8. Since the Fire Department could not respond to fires in the disturbance area without undue harassment, it sought protection for its personnel by securing policemen and National Guardsmen. These officers and guardsmen would accompany firemen to the scene of a fire and would hold back citizens attempting to interfere with fire department operations. This protection increased greatly the effectiveness of the department's fire suppression activities.

There were many other adaptations initiated by the Fire Department during the emergency but these were of a minor nature or can be subsumed under one of the adaptations listed above.

The Public Utilities

Unlike the Police and Fire Departments, the public utility organizations in Detroit experienced little, if any organizational stress in terms of excessive demands. At no time did the demands placed on these organizations exceed their response capabilities. There were, of course, increased demands for additional services such as the installation of telephones in the various command posts established throughout the city but generally these demands did not tax the organizations involved. One utilities official stated that the actual loss of service as the result of the disturbance was far less than that created by a severe summer storm. These organizations were hindered in the process of restoration by hostile citizens and, as a result, service personnel remained out of disturbance areas except in cases involving high priority. When high
priority services were required, service personnel were escorted by police or military units in order to provide maximum security.

The utility organizations began systematic reconnaissance of the disturbance areas on Tuesday and Wednesday in an effort to obtain first hand information regarding the extent of damage to their installations. These same organizations had several hundred service personnel in the affected areas on Thursday and as previously indicated all service was restored, at least on a temporary basis, by Friday evening.

The utility organizations included in this study became aware of the disturbance on Sunday morning, July 23, at about 9:00 a.m. Each of these organizations followed rather similar response patterns. They established their own command posts, initiated liaison with police, fire and other city departments, recalled certain personnel and instituted a number of adaptive procedures by which they could maintain their services on a near normal basis. As already indicated, they experienced more demands for service of one kind or another than usual. The principal problem confronting them, however, came not from demands on organizational resources but from their inability to perform expected tasks as a result of crowd harassment. Once public order was restored, they were quickly able to complete these tasks and return to a state of normalcy.

The Salvation Army

The Salvation Army became involved in the community's response to the disturbance at approximately 3:00 p.m. on Sunday afternoon, July 23. It was at this time they received a request for canteen service by firemen at the scene of a large conflagration. Earlier in the day the Salvation Army had been notified by fire officials that a major disturbance
was possible and that canteen service might be requested. On Monday morning organizational officials began to mobilize their material and personnel resources. Soon they had six fully equipped and staffed canteens in operation feeding law enforcement officers and others involved in the community's emergency response. As the situation developed the Salvation Army began to receive huge quantities of clothing, some foodstuffs and many volunteers. Liaison relationships were established with police, fire, National Guard, federal troop command posts, city agencies and a great many public and private welfare agencies. During the emergency organizational officials endeavored to coordinate their functions with other welfare agencies and to assist in the development of a unified response. This effort was largely successful and the Salvation Army began to perform quite efficiently the duties assigned it. It experienced no organizational stress in that it received more material and personnel assistance than it could possibly utilize. These surplus resources were reallocated and directed to other welfare agencies in the city and it is significant to note in passing that there were dozens of these agencies functioning throughout and following the disturbance. This convergence of resources plus the large number of public and private welfare organizations functioning in the city enabled the Salvation Army to provide its expected services in more or less routine fashion.

The American Red Cross

The role of the Detroit chapter of the American Red Cross during the civil disturbance was one marked by considerable ambiguity growing from the nature of the disturbance. On the one hand, the community was
making demands on the resources of the Detroit Red Cross, while on the other, the chapter's officials were restrained in their ability to respond as the result of organizational policy. As already noted, some months before the disturbance, a memorandum was received from the Detroit chapter's regional office which suggested the conditions under which they might respond to a major civil disturbance. The memorandum suggested that local chapters could and should respond to relieve the suffering which resulted from a disturbance, upon request of local authorities. It further suggested that arrangements should be made to terminate any and all emergency services as quickly as possible and further that local chapters could and should respond to relieve the suffering which resulted from a disturbance, upon request of local authorities. It further suggested that arrangements should be made to terminate any and all emergency services as quickly as possible and further that local chapters should not become involved during the rehabilitation phase. The Detroit chapter did perform some services during the emergency but as one official stated, "We would have been much more committed had this been a natural disaster.... Being a civil disturbance we did not go all out because our action could have been interpreted as taking the full leadership. We participated instead as a cooperating agency."

The activities of the Detroit Red Cross can be summarized as follows:

1. Early during the emergency they established a number of shelters at the request of one of the city's official agencies. During the emergency, approximately 10,000 individuals were provided with food by the Red Cross and other participating agencies working out of these shelters.
2. The Red Cross collected about 3,000 pints of blood for use in the treatment of victims. Approximately 600 pints were actually utilized.

3. Over 100 volunteer nurses, technicians and other medical personnel served in the name of the Red Cross in shelters, hospitals and blood bank.

4. The Red Cross handled approximately 1,000 health and welfare inquiries during the disturbance period.

5. The Red Cross acted as the requisitioning agent for surplus commodity foods from the United States Department of Agriculture. About 186 tons of foodstuff were distributed through personnel provided by the Detroit Board of Education.

6. Approximately 600 calls from persons offering assistance in one form or another were channeled through the Red Cross to other community agencies.

7. Recreational and counseling services were provided for National Guard and federal troops during and following the disturbance. In addition to these services, the Red Cross provided a few liaison functions for other organizations working in the city. It also served a minimal coordinating function between local, regional and national agencies. These services, while significant, did not pose serious problems for the Red Cross, since its own personnel and material were committed somewhat sparingly.
Summary

The Detroit civil disturbance posed a large number of problems for that city. The normal patterns of business, transportation, communications, and so on were dramatically disrupted. The free and unregulated passage of persons throughout the metropolitan area was temporarily suspended not only by the disturbance itself but by the imposition of a city-wide curfew. The disturbance, moreover, affected the ongoing life of most of the organizations functioning in the city, especially those related to social control, fire suppression and public welfare. While the magnitude and pervasiveness of the disturbance did not reach the proportions normally associated with a major natural disaster, it did disrupt the life of the community and left deep scars on the community's physical and social landscape.
The state of Alaska is at present a vast, sparsely inhabited wilderness. While its land area of 571,000 square miles is almost 20 percent as large as the territory of the former forty-eight states, its 1960 population density was only about four persons per 10 square miles. This density is about 1/150 of that of the rest of the nation. About 80 percent of the state's population is white with most of the other 20 percent being divided by three native groups: Eskimo, Indian and Aleut. Negroes and orientals combined represent less than 5 percent of the state's total population.

The city of Fairbanks, at the time of the 1960 census, was second in size only to the city of Anchorage, some 400 miles to the south. The 1960 population of Fairbanks was listed by the census bureau at 13,311. The Fairbanks Chamber of Commerce listed the city's 1967 population at 17,800. The greater Fairbanks service area was listed at 45,000 in 1967 by the same organization. The city is located in the Tanana Valley and serves chiefly as a supply, service and shopping center for Alaska's vast inland territory. Highways connect Fairbanks to the cities of Valdez, Anchorage and a number of other smaller communities. It also serves as the northern most terminus of the Alaska railroad and possesses an international airport. There are a large number of defense installations in the Fairbanks area. Eielson Air Force Base and Fort Wainwright are the two largest of these in terms of the number of personnel on duty.
The economy of Fairbanks is heavily oriented to service-type industries with services to military installations, their personnel and families ranking as the chief source of income for the city. To a lesser degree, services are provided for a number of smaller federal and state agencies. The total labor force, which is predominantly masculine, especially in the summer, varies from approximately 16,000 in the summer to 12,000 in the winter. The University of Alaska with a student body of approximately 2,500 is also a major source of revenue for the city and area.

Fairbanks, like the remainder of the interior of Alaska, is largely a semi-arid region with an average annual precipitation of approximately 12.5 inches. Its temperatures vary quite markedly with normal highs during the summer ranging between 55-62 degrees above zero Fahrenheit. Between November and March, the average high temperature is approximately 5 degrees below zero Fahrenheit. In 1966, the highest temperature was 85 degrees and occurred in June; the lowest temperature was minus 53 degrees and occurred in December. The total precipitation for Fairbanks during 1966 was 7.5 inches, somewhat below its normal amount.

The Chena river flows through the heart of Fairbanks and joins the Tanana just beyond the city limits. It was water from these two rivers which caused the vast majority of flooding during August of 1967.

The city of Fairbanks has a number of rather unique characteristics which set it apart from other American communities of comparable size. In addition to being only 130 miles south of the Arctic Circle, the city is unique in that it serves as the major service center for a vast area of Alaska's interior. It is the only city of over 2,000 persons in an area which encompasses over 394,000 square miles. The only other city of significant size in the entire state is Anchorage and it is 400 miles away. Moreover, most of the state of Alaska is separated from the lower forty-eight states by almost 2,000 miles of relatively uninhabited and undeveloped wilderness. This intense isolation coupled with an extremely hostile, physical environment presents formidable problems for the Fairbanks community, even under optimal conditions.

Fairbanks, in spite of its isolation and environment, relies heavily on extra-community ties, even for its daily, ongoing life. It produces, for example, few, if any, of the vital resources, foodstuffs and fibre necessary for its maintenance. Its greatest dependence is on the federal government; for in addition to supplying an economic base through its defense establishments in the area, the United States government owns, operates or subsidizes heavily the Alaska railroad, the Alaska Communication System, the Fairbanks International Airport, the highway system which ties Fairbanks to the rest of the state and so on. This dependence was especially acute following the devastating floods which affected the city of Fairbanks and much of the entire Tanana Valley in August of 1967.

The city of Fairbanks has a Council-Manager form of government which operates under a Home Rule Charter adopted in 1960. There is a six-member City Council, of which two are elected each year. The Mayor and the
council appoint the city manager, who, in turn, selects the police chief, the director of public works and the director of finance. The city attorney and city clerk are appointed by the council. The City Health Department is operated jointly with the State Department of Health and Welfare.

Having completed this brief overview of the most salient socio-demographic characteristics of the city of Fairbanks, we now turn to a discussion of the 1967 flood and to the activities of those organizations selected for this study.

The Fairbanks Flood: August 12-20, 1967

The Tanana river valley and flood plain of which Fairbanks is a part had a history of flooding prior to the 1967 disaster. However, in the past, flooding had always occurred in the spring as the result of melting snows and had always been limited in terms of its magnitude. Only the flood which occurred in 1937 had ever posed a threat to large segments of the city's population. This past history helps account for the fact that the majority of the community's population was not unduly concerned by the rising waters of the Chena and Tanana rivers following one of the wettest Julys in history. Then, with the rivers already high in their banks and with the ground already saturated, the Tanana flood plain received 2.47 inches of rain in a twenty-hour period extending over August 11-12. This 2.47 rainfall, which represented 2.20 inches more than is normal for the entire month of August, was followed by two days of intermittent rain.

On Saturday, August 12, city officials in Fairbanks requested a Chena river water flow reading and projection from weather bureau and
Army Corps of Engineers personnel. This request resulted from unofficial reports that the Tanana and Chena rivers were approaching flood stage and from knowledge of the fact that the water table in the entire Tanana river valley was fast approaching complete saturation. The first advisory from the weather bureau was made available at 3:40 p.m. on Monday, August 14. This report indicated that the Chena river would crest at 15.5 feet, 3.2 feet above flood stage, at midnight on Monday. However, by 8:00 p.m. on August 14, the river had reached a depth of 16 feet. At midnight on Monday, the depth was 17.1 feet and finally at 10:00 a.m. on Tuesday, August 15, the Chena river crested at 18.9 feet, 6.6 feet above flood stage.

The Chena river which winds through the city of Fairbanks caused most of the flooding in the city proper. The Tanana river, into which the Chena flows, had also overflowed its banks and was pouring huge amounts of water onto the flood plains around the outskirts of the city of Fairbanks and neighboring villages. The Chena river crest remained at approximately 18.6 feet throughout much of Tuesday, August 15. By mid-morning on Wednesday, August 16, however, the river crest had dropped about 8 inches, in spite of the fact that a light drizzle continued to fall. On subsequent days, the waters in both the Tanana and Chena continued to recede quite gradually. Finally, on Saturday, August 19 the Tanana returned to its banks and on the next day the Chena fell below flood stage for the first time in nearly a week.

As the brown, silt-laden water receded, it left behind a tremendous amount of damage. Estimates made by the Corps of Engineers and others placed property losses at between 180-200 million dollars. Losses of a more indirect economic nature, such as those accruing from lost wages
and business revenues remained all but impossible to estimate. Business officials agreed at the time of the flood that such losses were extremely high and that unless Fairbanks became the recipient of major state and federal assistance, its economic life would be stagnated and its long-term development impeded. Although there were thousands of persons displaced from their homes as the result of high waters, the death toll remained extremely low. An unofficial count made following the flood indicated that probably only nine persons lost their lives in the entire Tanana flood plain. This figure was kept low as the result of strenuous search and rescue efforts on the part of city agencies, private citizens and military personnel who were aided in their efforts by using amphibious, military equipment and helicopters.

The first major action taken by public officials in Fairbanks in response to the rising waters of the Chena was the evacuation of the city's only hospital. This occurred at 10:00 a.m. on Monday, August 14, approximately one hour before the Chena river reached flood stage. By 10:25 a.m. about fifty persons from areas around Fairbanks had been removed from their homes as the result of high waters. Also on Monday morning a number of National Guard troops who had been assisting residents of the village of Nenana, some 50 miles to the southwest, moved into Fairbanks to assist in sandbagging and pumping operations. At the same time military aircraft were flying thousands of sandbags and heavy pumping equipment into Fairbanks in an effort to contain the rapidly rising water. By mid-afternoon on Monday, all military helicopters at Eielson Air Force Base were flying rescue missions as unsuspecting persons were forced from their homes. Private citizens also began to assist in rescue operations as they manned large, flat bottomed river boats.
As the number of refugees increased, a number of schools were opened and designated as official shelters. At one time the University of Alaska, located on high ground about 5 miles from Fairbanks, was providing housing and food for approximately 7,000 persons. Before the emergency ended, there were approximately 15,000 refugees from the flood, 5,000 of whom were airlifted to Anchorage and other parts of the United States.

The major problems which confronted city officials during the week of August 14-20 can be summarized as follows.

1. There was a steady stream of refugees throughout the entire emergency period. Persons were requesting evacuation as late as Thursday evening, August 17. In addition to establishing and operating official shelters, city and state officials were receiving requests for food, water, drugs and medical service from a number of unofficial shelters (some of which contained as many as 250 persons) and from a few private citizens who chose to remain in their homes. These demands became so severe that city and state officials decided that persons in make-shift shelters containing less than 100 persons would not receive emergency supplies. Individual citizens and families were compelled in some instances to move to officially designated shelter locations.

2. On the first day of the flood telephone facilities for the entire area were severely damaged and rendered inoperable. There were only three long distance lines intact. These were being operated by the Alaska Communication System, a system owned by the federal government and operated by the United States Air Force. Throughout the emergency and immediate recovery period these lines were reserved for high
priority calls. On Thursday, August 17, temporary, make-shift telephone communications were established by linking a number of the most important emergency organizations together. This system was cumbersome and limited in its capacity. For the most part, therefore, communications between organizations depended on emergency radio transmissions. This lack of instant, reliable telephone communications greatly hindered the emergency response of all organizations functioning in the area.

3. The flooding was so severe that most streets in the area were impassable. Boats, amphibious vehicles and helicopters thus became the most widely used means of transportation. Large army trucks equipped with snorkel devices were used in some areas but they were limited in number and could not traverse all of the streets in the city. All highways leading into the city were closed and the Alaska railroad was washed out. For several days, the only access to the city was by air but because there were several hundred refugees stranded there, only emergency flights were being received and dispatched. The city of Fairbanks was all but totally isolated as far as surface transportation was concerned.

4. The magnitude of the flood was so great that the city of Fairbanks lacked sufficient personnel and material resources to cope with it. As a result, city officials sought outside assistance from the state and national governments. Almost immediately there was a tremendous convergence of both skilled persons and needed materials. On Thursday, August 17, the city was declared a disaster area by the President of the United States. This automatically made Fairbanks eligible for federal assistance through the provisions of Public
Law 875. Before this declaration was made, however, the United States government was supplying huge amounts of material assistance and skilled personnel in an effort to bolster local efforts. Sandbags, pumps, foodstuffs, generators, fuel, communications equipment, water purifying systems, drugs and skilled personnel were being flown into Fairbanks by military aircraft. The local military installations were also providing men and equipment.

The Governor of Alaska flew into Fairbanks on Tuesday, August 15 to personally supervise the state's assistance program to Fairbanks. National Guardsmen, state police, Civil Defense and other state officials arrived to add their assistance.

There were, in addition to these governmental agencies, a number of private organizations which responded to Fairbanks' call for assistance. Most notable among these were the American National Red Cross and Salvation Army. Thus, the city of Fairbanks received a tremendous amount of support from non-local resources without which the very survival of the city and its recovery would have been in question.

5. Perhaps the most serious logistical problem confronted by officials in Fairbanks was that of coordinating the efforts of all the organizations functioning in the city. The convergence of numerous non-local officials and organizations coupled with the increased activity of local emergency organizations placed heavy demands on already seriously weakened communications and transportation facilities. As a result, the establishment of priorities and the allocation of resources presented continuous problems for officials in the city. Moreover, problems of authority and leadership arose constantly as a result of the overlapping of governmental and organizational structures.
Growing out of these and other flood related problems, the emergency organizations in Fairbanks were confronted with exceedingly heavy demands. We now turn to a brief discussion of those demands and their impact on the organizations selected for this study.

**Fairbanks Police Department**

The Fairbanks Police Department operates in similar fashion to most departments of its size in the United States. The chief of the department is appointed by the Mayor and is directly responsible to him and to the city council. In addition to the chief, the department had nineteen patrolmen, one investigator, two detectives and one assistant chief at the time of the flood. The department was operating with three-fourths of its authorized staff in August, 1967. The chain of command operates in a straight line from the chief down through the various ranks.

The activities of the Fairbanks Police Department during the emergency period can be summarized as follows.

**Traffic control and safety**

It became apparent to police officials very early on the morning of Monday, August 14 that they would be confronted with far more duties than normal. This recognition prompted the chief of the department to recall all off-duty officers at 7:00 a.m. The entire Fairbanks Police Department returned to duty almost immediately and remained at police headquarters until August 20. During the early hours of the emergency, as the water was rising and overflowing its banks, and then again on Thursday, Friday and Saturday, August 17, 18 and 19, the police were extremely busy in handling traffic problems related to the flood. On Monday it became necessary to barricade certain streets and bridges as
they became unsafe for traffic. Frequently, persons had to be removed from stranded autos to places of refuge. Their cars were either left in the streets or, when possible, towed to parking lots or side streets. As the waters subsided the convergence of sightseers and other traffic created serious traffic problems for an extremely fatigued police department.

Rescue and evacuation

Beginning late on Monday and continuing throughout Wednesday the Police Department was extremely busy in evacuating persons from residences, hotels and in one instance, the local hospital. As noted earlier, thousands of persons were forced from their homes by the flood. During the early stages of the emergency, the Police Department was largely responsible for evacuating those in danger to places of public shelter. The tasks associated with these evacuations were made most difficult for at least three reasons. (1) The streets of the city were impassable because of high water and moreover, all Police Department vehicles had been disabled by the flood by Monday evening, August 14. (2) On Monday evening all telephone communications were disrupted which placed an extremely heavy burden on police emergency radio facilities. This burden resulted in considerable confusion and frequent delays. (3) The demands for police assistance far exceeded the department's personal and material resources. Consequently, the Police Department had to rely initially on volunteers and then later on military and state police assistance as it attempted to perform its expected duties.

Security measures

Throughout the emergency, the police were requested to provide security for abandoned sections of the city and in addition to provide
a minimum of security at several of the public shelters. Reports of
looting persisted during the emergency and although there were a few
instances where looting did actually occur, most police responses to areas
of reported looting turned out to be unnecessary. In any event, police
officials felt it imperative to investigate all reports of looting; and
as a result, several officers were kept busy responding to incidents
where looting was reported.

As a part of its campaign to suppress the possibility of wide-spread
looting, the police in conjunction with city officials established a
curfew area and initiated identification procedures. Only authorized
persons were permitted in certain areas of the city for approximately
three days and four nights following the onset of the flood. The police
also had the responsibility of enforcing temporary restrictions against
the sale of alcoholic beverages and in addition attempted to control the
sale of needed foodstuffs and other vital commodities. As the flood
waters receded and surface transportation became available for increas-
ing numbers of persons, police patrols were intensified in the central
business district and in isolated areas of the city. Again, this was
done largely to guard against the possibility of looting.

Coordination

Perhaps the most vital function performed by the Fairbanks Police
Department during the disaster was that of coordinating the community's
responses to the emergency. As far as coordination is concerned, police
functioning can be divided into two more or less discrete time periods,
the period before and the period after non-local assistance began to
arrive in the city. For the first few days, the Fairbanks Police Depart-
ment not only received hundreds of requests for services, it provided
these services by using its own personnel and resources and by utilizing assistance from both military groups and civilian volunteers. As outside assistance in the form of personnel and material resources began to pour into Fairbanks, the role of the police was altered somewhat. Police officials were still receiving many requests for services but unlike the previous period, it no longer responded as a department to all of these requests. Rather, police officials would transfer these requests to other agencies, to the Alaska Office of Civil Defense, the governor's staff, the Red Cross and so on. As a consequence of these transfers, police officers increasingly limited their tasks to those more normally associated with their department.

The police worked with a large number of other organizations during the disaster and immediate post-disaster period. Many of the organizations with whom they worked were other city agencies such as the Municipal Utilities System, the Fire Department and the Public Works Administration. As the emergency's magnitude became known, a large number of governmental and private organizations converged on the city of Fairbanks. It then became necessary for the police to establish working relationships with these organizations and in the process to develop some interorganizational structures by which these relationships could be used most efficiently for community recovery.

The Fairbanks Fire Department

The Fairbanks Fire Department is quite similar to many other small-town fire departments throughout the United States. Like most fire departments in cities of less than 15,000 persons, the department possessed rather limited resources with which to respond to a major emergency.
The department, at the time of the flood, consisted of thirty-four professional firemen, four pieces of fire apparatus, two ambulances and one boat. The department maintained only one fire station and possessed quite limited communications facilities.

The organizational structures of the Fairbanks Fire Department included a chief, appointed by the Mayor, one assistant chief, one fire marshal, three captains and twenty-eight firemen for a total of thirty-four fire personnel. These various positions were arranged in a hierarchical fashion with a para-military authority structure.

The emergency created by the serious flooding in the Fairbanks area presented the fire officials with a large number of highly unusual demands. As the result of these demands it was necessary for the fire department to make a number of procedural adaptations on both an organizational and interorganizational level.

The duties of most fire departments can be covered by the phrase, "the protection of life and property." The overwhelming majority of the Fairbanks Fire Department's activities during the flood centered on saving lives, i.e., on search and rescue. The department received notification of only five fires during the period of August 14-20, 1967 and was able to respond to only two of these since the streets were not open to vehicle traffic. The largest of these fires was in a warehouse and because it was inaccessible to fire personnel, the building burned to the water line with a total property loss of 250,000 dollars. The other fires were in smaller buildings and although these structures were seriously damaged, the total property loss was rather low. The threat of a serious conflagration was present, however, throughout the emergency period.
Fire personnel became involved in search-and-rescue operations at 6:00 a.m. on Monday, August 14 and became so busy that a recall of all off-duty personnel was made by mid-afternoon of the same day. The department's one station began to receive such serious flooding on Monday that all apparatus was moved from that location to a gasoline service station outside the high water area. From this point fire personnel were available to respond to fires in areas still accessible by motor vehicle. The remaining personnel manned river boats which were being dispatched by fire officers from the department's central station.

Firemen worked closely with the police officers in these search-and-rescue operations and for the most part performed services quite like those the police were handling. The one major exception being that the Fire Department did not engage in community wide coordinating functions. After most search-and-rescue work had been completed, Fire Department personnel performed a large number of duties ranging from the delivery of messages to the transporting of the sick and injured. The department returned to near normal operations with the morning shift on Monday, August 21.

The Fire Department was not confronted with a great many fires or fire-related problems apart from those already alluded to. It did, however, experience a number of serious problems as it became intensely involved in the community's response to the disaster. In the process of this involvement, it discovered that its principal tools were rendered inoperable by the flooded streets. As a result of this loss, coupled with the loss of all telephone communications, the department had to rely on a number of organizations and citizen volunteers for boats, fuel, radio equipment and other needed materials as it sought to fulfill
its accepted responsibilities. Moreover, it had to coordinate its activities with those of other organizations functioning in the city. Many of these other organizations were local ones with whom the Fire Department had established pre-disaster relationships -- many others were non-local organizations with whom the Fire Department had no pre-disaster relationships. Thus, the Fire Department was faced with the responsibility of performing a great many vital tasks at a time when it lacked adequate personnel and material resources. At the same time it had to coordinate its activities with a great many local and non-local organizations without adequate communications facilities or sufficient interorganizational liaison. As a result of these disaster-induced demands and the adaptations made as the result of them, a number of changes occurred in the interorganizational relationships of the Fairbanks Fire Department.

The Fairbanks Municipal Utilities System

Since all of the public utilities in the city of Fairbanks operated within the framework of one organization, we will discuss the response of the entire utilities system to the serious flooding of August, 1967.

The Municipal Utilities System is owned by the city of Fairbanks and operated through a five-man board elected by the general public. The board is directly responsible to the City Council but for all practical purposes the utilities system operates as a separate business organization and possesses a great deal of autonomy. For example, the board alone employs the general manager of the system. Moreover, the board is empowered to make expenditures of up to 500,000 dollars
without City Council approval and in most ways conducts its own affairs. The only major constraint placed upon the utilities system by the council is one associated with the establishment of rates. In this case, all changes in rates must be approved by the City Council before they can become effective.

The utilities system in Fairbanks provides four basic services which are: electricity, telephone, water and steam. Each of these divisions is managed by a superintendent and by operations supervisors. Altogether, there are five major levels within the organization ranging from the general manager down through the superintendents and supervisors to the foremen and service personnel. At the time of the flood there were approximately 100 employees in the organization.

The system's power plant produced about 30 million kilowatt hours of electricity in 1966. It had approximately 11,000 telephone installations in service in 1967. The long-distance facilities throughout Alaska are owned by the federal government and operated by the United States Air Force. As a result of this, there are of necessity extremely close working relationships between the utilities system in Fairbanks and the Air Force. The water division of the utilities system was providing service to approximately 1,800 customers in Fairbanks at the time of the flood. In addition to these services, the utilities system was providing steam-heat facilities for approximately 200 customers in 1967, most of them in the downtown area.

The electric system was the least affected of all the utilities in operation at the time of the flood. This was due in large measure to the fact that almost all of the electric lines and transformers were
located above ground. The two most serious threats to the operation of the electric utility came from: (1) the lack of adequate coal supplies since part of their coal storage was inundated and inaccessible and (2) the Fairbanks system was providing power for areas not normally serviced by them, and this was creating the possibility of a power overload and outage. It was estimated that 95 percent of all the system's customers had electric power throughout the emergency period.

The telephone system, by contrast, was almost totally incapacitated as the result of the flooding on Monday evening, August 14. And, although there was a very limited emergency telephone system constructed during the actual flooding, its capability was extremely small and its operation was limited to those organizations considered most vital to the community. The telephone utility had approximately 2,500 of its installations back in service by Monday, August 21 but many of its largest subscribers in downtown Fairbanks were still out of service two and one-half months after the flood. This long delay was occasioned primarily by the decision to rebuild the entire downtown section of the system rather than restore the badly damaged existing one.

The water utility experienced heavy damage throughout its 35 miles of distribution mains. As streets and basements gave way as the result of heavy water pressure they frequently ruptured the water mains around them. There was as the result of this damage the possibility of contamination from sewer-laden flood waters and from other foreign substances. To counteract the possibility of pollution, water utility personnel doubled the amount of chlorine in the water and increased the line pressure to keep contaminants from entering broken mains. The water supply
was kept safe for human consumption in this manner, although conflicting reports concerning water contamination during the early stages of the flood caused some confusion.

The steam lines which serviced customers in downtown Fairbanks were seriously damaged and out of operation for approximately one month following the flood. During this period the weather was not below freezing, except occasionally at night, and the system was not damaged at any point by cold temperatures.

The total damage to the utilities system in Fairbanks was estimated to run into the hundreds of thousands of dollars. There was, in addition to the damaged lines, buildings and equipment, mentioned above, a great loss of service vehicles and repair equipment. All of the organization's telephone-service trucks along with most of their electric-service vehicles were damaged, destroyed or made temporarily inoperable by the flood.

There was little the utilities system in Fairbanks could do to restore service to its customers until the waters receded and needed equipment could be flown in. As the city began to restore its badly damaged utilities, it depended on a great many other organizations for support. Most notable of these was the Army Corps of Engineers who through the Office of Emergency Planning was assuming the major burdens of restoration.

Fairbanks Salvation Army

At the time of the disaster, the local unit of the Salvation Army consisted of four full time personnel, a local governing board of volunteers plus the regular members of the local corps unit. The officer in charge of the Alaskan Command and his supporting staff are located in
Anchorage from where they attempt to coordinate the activities of their organization throughout all of Alaska. There are, on an average, about twenty-five full-time Salvation Army staff persons on duty in Alaska under normal circumstances. When heavy demands of a crisis nature occur, the organization expands its strength by bringing in additional professional staff and by recruiting volunteers. This is essentially what occurred as the Salvation Army responded to the Fairbanks flood.

Salvation Army staff persons began responding to the flood in Fairbanks on Monday, August 14 when one of the staff persons present at the local headquarters received a call from the Civil Defense director of Fairbanks asking that the Salvation Army find shelter for approximately fifty persons as quickly as possible. These refugees were brought to the basement of the Salvation Army's church in Fairbanks but as the day progressed, and the flooding worsened, these persons joined several hundred others at one of the local shelters. On Monday evening the Salvation Army's Alaskan command headquarters in Anchorage began to mobilize and by Tuesday, August 15 additional Salvation Army officials were in Fairbanks assisting with the establishment of a field office at the University of Alaska. This office began functioning the following day and began to distribute food, clothing and medicine to persons in areas adjacent to the city of Fairbanks -- areas which were not flooded but which depended on Fairbanks for food and other essential commodities. Before the week was over, the Salvation Army had 13 professional staff persons in Fairbanks directing the organization's efforts and supervising the work of approximately 300 volunteers.

The work of the Salvation Army continued unabated during the recovery period. Once the water subsided, the organization reopened its
headquarters in downtown Fairbanks and continued to distribute food, clothing, and other items required as families returned to their homes from the various shelters. A mobile canteen was activated and from it sandwiches and coffee were distributed to persons throughout the Fairbanks area. The number of extra staff personnel was gradually reduced and completely phased out within a month after the flood.

While the Salvation Army was performing a wide variety of emergency services in Fairbanks, the command headquarters added approximately fifteen more professional staff persons and thirty employees to its logistical support base in Anchorage. Separate collection and distribution depots, a coordination center and a mobile canteen were activated. The purpose of these added facilities were two-fold. First, the command headquarters was receiving large quantities of clothing and other donations for the flood victims in Fairbanks. The organization was also purchasing large amounts of food, drugs and other commodities for its Fairbanks operations. The Alaskan command headquarters of the Salvation Army sent approximately thirty tons of clothing and seven tons of food to its Fairbanks operation in a two-week period of time. These supplies were being flown from Anchorage to Fairbanks on Air National Guard planes where they were placed in a temporary warehouse at the airport then picked up and distributed by staff personnel and volunteers.

The second purpose for which these facilities in Anchorage were opened was that of serving the refugees who were arriving from Fairbanks and furthermore to assist the families in Anchorage who were receiving and caring for them. There were several hundred persons temporarily placed in homes in Anchorage and in an effort to ease the burden these
refugees placed on the family budgets of their hosts, the Salvation Army was supplying foodstuffs, clothing, toilet articles and so on.

There were approximately 250 volunteers working in the Anchorage facilities in addition to professional staff and paid employees. Part of the volunteer contingent consisted of citizen band radio club members who were handling nearly all of the communications needs. Another significant group of volunteers consisted of truck drivers who were employed by the natural gas company in Anchorage. Through an agreement reached between Salvation Army and gas company officials it was arranged for the company's drivers to pick up clothing and other donations as a part of their regular service runs in Anchorage. All told, the Anchorage unit of the Salvation Army received approximately 2,500 donations of food, clothing, and other materials.

Before the emergency and recovery periods were over, the Salvation Army, through its operations in Fairbanks, collected and distributed approximately ten tons of food, medicine, and other items needed by persons forced from their homes by the flood. They also provided approximately forty tons of clothing and hundreds of pieces of used furniture and other household items. The total cash expenditures of the Salvation Army directly related to its flood operations was approximately 100,000 dollars.

The Fairbanks Red Cross

The local chapter of the Fairbanks Red Cross consisted of a number of volunteers who functioned on a semi-formal basis without the assistance of any full time, professional personnel. There were a limited number of professional Red Cross staff members in Alaska at
the outset of the Fairbanks flood but these persons were principally assigned to military bases. Thus, at the beginning of its operations, the Red Cross had practically no local structures or staff with which to function.

The Red Cross became initially involved in its disaster activities at 5:00 a.m. on Monday morning, August 14 when the local volunteer secretary was contacted by the city's Civil Defense director and asked to open at least one shelter to receive refugees from areas around Fairbanks who were then being forced from their homes. The secretary went immediately to one of the local schools and along with one other volunteer, began to order necessary supplies and to perform those duties required preparatory to opening the school for refugees. Later on Monday, the Red Cross' state disaster officer arrived in Fairbanks from Anchorage and established a temporary field headquarters at the Fairbanks city building. The flooding reached serious proportions on Monday afternoon and at the request of Civil Defense authorities two additional shelters were opened. Since the local Red Cross chapter was not sufficiently equipped to provide adequate shelter supervision, a number of school officials and other public officials assumed supervisory duties during the first several days of the flood. These supervisors were recruited by the Red Cross disaster officer who had assumed command of his organization's response upon his arrival from Fairbanks. By Monday evening four more Red Cross officials had arrived in Fairbanks and four others were in Anchorage on a stand-by basis, waiting to be called, if needed. As the flood continued, the primary task of the Red Cross was to provide food and other emergency materials to the
area's shelter population which totaled approximately 15,000 persons, most of whom were in the Fairbanks community.

There were six officially designated shelters in operation during the flood. These were manned for the first five days by local, non-Red Cross personnel. Then, as it was feasible, Red Cross staff persons assumed more and more of these shelter duties. In addition to these six official shelters, there were approximately twenty-five other shelters in operation, some of them with scores of refugees in them. These unofficial shelters were chiefly in high buildings in the downtown area of Fairbanks although a number were in smaller motels and other business establishments. These shelters were serviced by a large number of volunteers who assisted in the distribution of Red Cross supplied materials. One shelter was in a little village some 60 miles away. Red Cross aid was flown there by military helicopters.

The Red Cross also assumed responsibility for providing foodstuffs, medicines, and so on to a small number of persons who decided to stay in their homes for one reason or another. Although these residents were encouraged to leave their homes for shelters some refused or were unable to do so. In any event the Red Cross was providing these persons with needed commodities.

One of the chief problems confronted by the Red Cross during the first week of the emergency was the lack of adequate communications. Another was the unavailability of sufficient quantities of foodstuffs, at least from local sources. Near the end of the flood, however, a great convergence of food, clothing, medicines and other needed supplies began to arrive in Fairbanks. The problem then changed from one of acquisition
to one of distribution. Once the water subsided and the streets were opened to traffic, communications were greatly facilitated since officials could go from place to place assessing needs, allocating resources and transmitting information. It was at this point that the Red Cross began its most vigorous programs. A great many additional Red Cross staff persons, approximately 150 altogether, were brought to Fairbanks. These professionals, assisted by a large number of case workers from state and local welfare agencies and citizen volunteers, began a systematic and massive assistance program. In the three month period following the flood, the Red Cross counselled thousands of persons, materially aided over 4,000 families and expended over one and three-quarters million dollars on direct disaster relief.

The problems confronted by the Red Cross during its response to the Fairbanks flood in many instances were problems being confronted by all of the emergency organizations operating in the city. Communications presented a problem for all organizations -- so did transportation. Moreover, the lack of a strong, adequately staffed local chapter presented the national organization with some problems early in the emergency. The overall structure of the Red Cross is so flexible, however, that these problems were effectively overcome and did not seriously affect the organization's total disaster response.

The Red Cross operated out of the community's major control center for the first five days of the emergency. During this period, it had many occasions to relate with a large number of other organizations. Some of these organizations and their personnel were well known to the Red Cross personnel present. Others were not. Some interorganizational
relationships which existed between the Red Cross and other emergency organizations present were so well established that little role and domain definition was necessary. With other organizations, the role and services of the Red Cross were not clearly understood and this necessitated the establishment of some mutual understanding before a division of labor could be agreed upon.

Summary

The Fairbanks flood of August 1967 was one of the most serious disasters ever studied by the Disaster Research Center at The Ohio State University. The reasons for this seriousness can be attributed in part to these factors.

1. The intensity, duration and pervasiveness of the flood was unexpected and to a very large degree unprepared for by all of the emergency organizations in the city. Similarly, the citizens of Fairbanks were not adequately forewarned and as a result were not prepared for the seriousness of the flood.

2. Virtually every family was effected to some degree by the flood waters and as indicated above a large percentage of the population was forced into emergency shelters.

3. The city of Fairbanks was virtually isolated from its external environment in that it possessed but limited transportation and communications ties with the outside during the most serious stages of the flood.

4. The community of Fairbanks could not solve all of the demands being made upon it in that the city and its problem solving, emergency-oriented organizations lacked the personnel and material resources to cope
with a disaster of such serious proportions. The performance of all organizations operating in the city was impeded by a lack of surface transportation and communications facilities.

5. The convergence of assistance from extra-community sources was hindered by the geographic isolation of the Fairbanks community. Most material and personnel resources were being flown to Fairbanks from points thousands of miles away. This great distance tended to extend the city's recovery period.

6. There was a lack of overall coordination and integration due largely to the fact that there was a large number of non-local organizations operating within the city during the flood and recovery period. This lack of coordination tended to hamper the effectiveness of the overall response to the disaster.

As the result of these and other related factors, the Fairbanks community and its major organizations were under severe stress. The local organizations were forced to alter their normal modes of procedure, to extend their boundaries and to increase their dependence on other organizations, many of which were external to the immediate community system. As the result of these adaptations, a number of changes were precipitated in their interorganizational structures.
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