SOME PRELIMINARY OBSERVATION ON THE RESPONSES OF COMMUNITY ORGANIZATIONS INVOLVED IN THE EMERGENCY PERIOD OF THE ALASKAN EARTHQUAKE

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Most of the following remarks are based upon impressions garnered in the course of field observations and interviews. Such tentative propositions and generalizations as are set forth may therefore have to be modified, qualified or revised in the light of more systematic analyses of recorded interviews and other data. In short, this is a highly provisional and preliminary working paper.
The Disaster Research Center was established at Ohio State University last year. Its basic function is to study the operations of organizations under stress, particularly their problems and responses in emergencies. Much of the research is conducted by field teams sent to disaster scenes as quickly as possible after a community catastrophe.

The Disaster Research Center is interested in both intra- and inter-organizational structures and functions in stress situations. We are concerned with such organizational characteristics and processes as speed and flexibility in response, adaptability and maneuverability, self sufficiency and autonomy, span and systems of control, etc. More specifically, our research is focused on:

Inter-organizational Problems
1. Problems involved in the articulation of organizational structure and operations with comprehensive and overall programs of emergency rescue, control and relief.
2. Circumstances affecting ability of organizations to cooperate, support, or collaborate with other organizations.
3. Sources of organizational capacities to serve as nuclei for expanded emergency operations in community disasters.

Intra-organizational Problems
1. Problems involved in the recruitment, motivation, training and retention of organizational personnel likely to be involved in stress situations.
2. Factors and conditions that will maintain organizational continuity and viability under crisis conditions.
3. Sources of internal organizational vulnerability and strength in disaster operations.

Findings on such matters are intended to provide guidance and guidelines to all planners and administrators concerned with effective emergency operations of organizations in crisis situations, of a peacetime or a wartime nature.
Since its inception, the Disaster Research Center (DRC) has undertaken seven field trips. The events covered have been: the dam burst in Baldwin Hills, Los Angeles, a chemical plant explosion in Attleboro, Massachusetts, Hurricane Cindy in Texas, the Nursing Home fire in Fitchville, Ohio, the Vaiont Dam flood in northern Italy, the Indianapolis Coliseum explosion, and floods in the Cincinnati area. However, these initial field operations according to plan were used primarily for training purposes and pilot studies. More systematic studies based in part on the experiences in and findings from these preliminary research efforts were visualized as commencing sometime in the spring of this year.

The Alaskan earthquake of Friday, March 27, 1964, therefore, occurred just as DRC was in the process of moving to more systematic and quantitative kinds of field and analytical procedures. The magnitude of the disaster, however, precluded waiting upon the development of a more advanced research design. The earthquake ranked very high on all the standard criteria used by the DRC to evaluate whether it should or should not study a given community disaster. The immediate research opportunities offered by this event could not be sacrificed, even though a pre-planned and systematic design that would result in qualitatively better findings was not yet ready. We say this to indicate our awareness of certain limits to the initial DRC operations in Alaska.

The earthquake occurred late at night Columbus time. DRC staff members first heard of the disaster at 8:07 a.m. Saturday. Reports indicated a
disaster of major magnitude. However, we have learned that initial accounts of disasters usually exaggerate their proportions and that mass media reports must be treated with considerable caution and skepticism. In this particular situation, too, there were stories of seismic wave damage along the Pacific Coast of the U.S., and the evacuation of hundreds of thousands of persons from coastal areas in Hawaii. Thus, we had to decide whether and where to send our team members. After consulting OCD officials in Washington, we decided to field a team in Alaska since that seemed to be the area most heavily affected.

As a result of the earlier training missions, the DRC staff was prepared for quick movement, and two fully equipped team members enplaned for Fairbanks, Alaska less than three hours after learning of the disaster. The three principal investigators followed on another plane later that evening. This decision was taken after further assessment of the available information clearly indicated that the DRC should concentrate as much of its field staff as it could in one place at one time. Both DRC groups were originally told that it would be impossible to land at Anchorage, which reports indicated was the most heavily hit urban community. However, both teams were able to make a change enroute and they landed at Anchorage, although not at the commercial International Airport which had been damaged, but at the Elmendorf Air Force Base. The first DRC group arrived in Anchorage at 9:30 p.m., Saturday, a little less than 28 hours after the quake. The other DRC group arrived twelve hours later.
From a research viewpoint, there are both advantages and disadvantages in getting to a disaster area rapidly, particularly in a crisis of the magnitude prevailing in Alaska. Some of the responding organizations are literally just starting to set up operations; e.g., the Pacific area office of the Red Cross had just opened its field headquarters in Anchorage when the DRC team arrived. More important, organizational personnel are extremely busy since there has not been enough time to deal with all emergencies. Offices must be organized, people recruited, tasks delineated, etc. Under such hectic circumstances systematic interviews are clearly out of the question although few officials object to answering questions while "on the run". Thus, early entry to organizations such as we had in Alaska may be conceived as a disadvantage for it is not conducive to certain kinds of field operations.

On the other hand, early entry is an important advantage in that it permits a field worker to observe directly what develops and what goes on, and makes him less dependent on what participants may later report of their activities. No one in Alaska objected to our researchers blending into the background and systematically observing people and events in organizational contexts. In fact, many officials were quite helpful in providing good vantage points for observations and calling attention to where important activities were occurring. It was thus possible for the DRC team to watch as cooperation and conflict developed, and to record decisions made, problems solved, etc. At a later time period, even through very intensive and systematic interviewing, we would not have been able to obtain such fine details in any reconstruction of the events made by our respondents.
In addition, early entry into organizations under stress makes field workers well known to organizational personnel. Cooperation is maximized. Later in the week, when DRC moved on to more systematic interviewing, team members obtained entry to and frankness of response from organizational personnel, which would not have been possible if earlier contact had not been made.

The DRC team limited its field operations to the Anchorage area in which nearly 84,000 people, about 1/3 of the total population of the state, reside. However, since the State CD headquarters is located in Anchorage, we were able to obtain a broader picture than that of just local community organizations responding to the disaster. Insofar as State CD was attempting to coordinate relief activity and to gather information on damage to such outlying areas as Seward, Kodiak and Valdez, we obtained an overall view of emergency organizational responses in most of the affected areas of Alaska. However, our heaviest research effort was directed toward organizations in the Anchorage area, as indicated by the fact that 50 out of our 65 interviews were with organizational personnel from that city. (We also acquired considerable kinds of additional data including voluminous tape recorded observations, a number of organizational logs, minutes of meetings, taped and hand written messages, etc.)

Observations were made of and interviews were conducted with personnel in the following organizations:

The Anchorage Civil Defense
The Anchorage Police Department
The Anchorage Fire Department
Almost all Anchorage Utilities (e.g., telephone, water and electric companies)
Many of the mass media in Anchorage (e.g., radio stations and newspapers)
Two of the most affected hospitals
Different military units (i.e., the regular Army and the National Guard)
Key informal groups (e.g., search and rescue teams, a disaster control group, etc.)
The State CD (including various state agencies)

In this report, the greatest attention is given to the operation of organizations in the Anchorage area. Secondary attention is paid to activities elsewhere and at the state level. In addition, our remarks are focused on organizational activity in the immediate emergency period, the two or three days after the earthquake. Very few observations are made regarding actions of organizations after that time. Subsequent DRC reports will treat the activities of non-local organizations in the emergency period, and analyze organizational activity past the third day.

III

An understanding of local organizational responses to the disaster during the emergency period requires some background knowledge of the nature and extent of the damage to the city of Anchorage. As a preface, it should be noted that casualties were extremely few, given the magnitude of the disaster. Only seven persons were killed in Anchorage. Less than 50 individuals were seriously enough injured to warrant medical treatment. However, it must be remembered that for a number of hours after the quake, no one actually knew even in gross figures how many people had been killed and injured.
Surface damage was heavily concentrated in two major areas, one of which was the very center of the downtown business district. Situated within this area of about three blocks by ten blocks were the City Hall, the Federal Building, the local Red Cross chapter, the office of the City Engineer, most of the major banks, and many of the leading commercial and business firms. Later damage evaluation established that at least 157 non-residential buildings alone were seriously damaged or destroyed just in this part of the city.

The other most heavily damaged area was Turnagain, a residential section containing the most expensive homes in Anchorage. In this upper class district at least 77 homes were totally destroyed and 360 damaged. In addition, crevasses were opened up, making movement either on foot or by car very difficult.

Surface damage was not confined to these two areas alone, but elsewhere it was more scattered or not as visible. For example, in a side section of the city one of the two senior high schools was completely wrecked. Buildings which on the outside appeared little affected, often sustained substantial structural damage. This was true in the instance of most of the high-rise apartments in the city which had to be subsequently condemned.

The Anchorage Public Safety Building escaped any serious damage. Located at the edge of the severely damaged business district, it housed both the police and fire department headquarters, and a standby command post for the local CD in its basement. The fact that this building was virtually undamaged was very important in the overall response of the community to the disaster.
Far more extensive than the surface damage was the destruction not readily apparent, "beneath the surface." There was a complete power failure, partly as a result of the downing of wires, and partly as a result of the shutting off of the two master turbines because of a disruption of the gas supply. This contributed to the failure of most other utilities: it disrupted the telephone system, put the five radio and two TV stations as well as the two newspaper presses out of commission and in general, disturbed all the power-based services on which an urbanized area continuously depends. Moreover, all the water drained out of the distribution pipes and the sewage system was 75% destroyed. Only 20% of the city continued to receive natural gas, the chief source of heat in Anchorage.

Finally, it should be noted that since the earthquake started at 5:36 p.m. there normally would have been about thirty minutes of daylight left. However, it was snowing at that time. This reduced visibility and made the roads, a number of them relatively impassable because of crevasses and debris, rather slippery. Later estimates indicated that nearly 15 miles of streets and highways within the city limits were damaged in some way.

IV

The following observations are about organizational activities rather than organizations as such. Later DRC reports will discuss specific organizations. We have grouped our observations in terms of certain organizational problems: (1) communication (2) coordination (3) authority (4) facilities and resources and (5) personnel.
1. COMMUNICATION

A. INITIAL INFORMATION ABOUT THE EXTENSIVENESS OF THE DAMAGE WAS SEVERELY HAMPERED BY THE LACK OF COMMUNICATION FROM THE IMPACTED AREAS.

For a considerable time after the earthquake, no one possessed verified information about the total extent of the damage. The local police attempted by visual observations to make an initial assessment of the damage in the downtown area. A number of patrolmen accompanied by teams of volunteers checked particular streets and made house to house and building to building inspections. Just as the police were beginning to realize the extensiveness of the damage in the downtown area, reports came in that the Turnagain area had also been severely damaged. Unverified stories likewise circulated about damage to other neighborhoods. Because of lack of direct communication with any section of the city, officials found it difficult to arrive at any quick assessment of the overall damage.

B. EARLY COMMUNICATION DEPENDED HEAVILY UPON RADIO AND MESSENGERS.

All phones became inoperative with the earthquake. Although the telephone company started to restore service within minutes, it was exceedingly erratic and incomplete. A call might go through immediately, two hours later, or never. Calls between exchanges as compared to calls within exchanges were generally impossible to make. Because of this, extensive use was made of radio communication. Municipal cars and trucks with two-way radios, police cars, and mobile ham radio units were utilized at key localities (e.g., at the State CD, the Public Safety Building, the hospitals, etc.). To
supplement such radio contacts, as well as because they were more readily available, runners were used very extensively by most organizations.

C. NO COMMUNICATION CENTER DEVELOPED TO STORE THE SPECIFIC INFORMATION COLLECTED BY DIFFERENT INDIVIDUALS AND GROUPS.

Many people in the course of their activities gathered specific kinds of information, but such knowledge was not systematically channeled to any one collection point. After midnight, of the night of the earthquake, the whole communication problem became so critical that the Mayor and the City Manager called a meeting of organizational personnel to try to collect and coordinate this information. This meeting at 3:00 a.m. resulted in a temporary exchange of information. However, there was no attempt to develop specific provisions for a centralized feedback of information gathered after the meeting. A communication center was not really established until the local CD became fully operative.

D. WHEN INFORMATION WAS FED INTO AN ORGANIZATION, IT TENDED TO STAY AT THE ORGANIZATIONAL LEVEL AT WHICH IT ENTERED, AND NOT BE COMMUNICATED TO OTHERS IN THE ORGANIZATION.

Information generally came into specific organizations by way of communication with a person in a particular unit. Such information was seldom relayed up or down in the organization. For instance, in the early hours of the emergency much information which came into the local CD office tended to remain the "property of" the staff member or volunteer who happened to answer the phone, or who first spoke to persons coming into the office.
E. ORGANIZATIONS DID NOT RECORD THEIR COMMUNICATIONS.

Few records were kept of organizational communications. Information tended to stay "in the head" of the official initially receiving the information. This was true even in the instance of highly organized and structured groups such as some of the military units assisting in Anchorage. Several days after the earthquake, attempts were made to reconstruct earlier decisions and activities, but these records, being recollections of specific individuals, were sketchy and incomplete.

2. COORDINATION

A. INITIALLY THERE WAS NO ATTEMPT BY THE VARIOUS EMERGENCY ORGANIZATIONS TO COORDINATE THEIR ACTIVITIES.

Organizations tended to work on their own. The police saw their responsibility as that of maintaining security and traffic control. The fire department tried to restrict their activities so that they could remain in a continuing state of fire readiness. While both organizations did some light rescue work, they avoided commitment to any activities beyond the scope of their normal operations. Organizations with definite responsibilities for specific kinds of services, attempted to limit themselves to these activities. This mode of operation was especially characteristic of the telephone and electric companies. Thus, emergency organizations that confined themselves to their normal tasks, perceived little necessity to coordinate their activities with those of other organizations during the immediate post-impact period.

B. MAJOR EMERGENCY TASKS WERE DUPLICATED BECAUSE OF THE ABSENCE OF ANY INITIAL COORDINATION.
The earthquake created certain tasks not normally the function of any organization. Attempts by different organizations to assume these tasks led to considerable duplication of effort along at least three different lines. Official and unofficial organizations overlapped in doing search and rescue work (e.g., some areas were intensively searched numerous times while others were barely scrutinized). It was unclear which organization should handle messages of inquiry as to the safety of people in the area; as a result, several organizations such as the Red Cross, Salvation Army, local CD, and the mass media attempted to carry out this task. The centralization of a list of missing persons was only gradually accomplished because at least three different organizations initially attempted to deal with this problem.

C. THE CENTRALIZATION OF ACTIVITY GENERATED BY A RAPID ORGANIZATIONAL RESPONSE, MINIMIZED THE NEED FOR COORDINATION IN A FEW INSTANCES.

This generalization applies most clearly to the medical sector of the community. All of the hospitals in the community were partly incapacitated to the extent that they lacked utilities. Providence Hospital, however, very quickly shifted over to emergency power and thus became the focus of medical care and services. Medical supplies and personnel converged on the hospital and most everyone seemed to assume that any medical problem should be referred there. As a consequence of centralization of this emergency activity, little need arose for coordination of medical care.

D. EMERGENCY CIVIL GOVERNMENT ACTIVITIES WERE CARRIED OUT, BUT IN THE EARLY STAGES THE LOCAL ACTIVITIES AT LEAST, WERE NEVER EXPLICITLY DEFINED AS CD FUNCTIONS NOR FORMALLY COORDINATED BY CD OFFICIALS.
The staff of the Anchorage CD at the time of the earthquake consisted of one secretary. The former director had resigned March 15th. He, however, came to the Public Safety Building after the earthquake and reasserted his duties after withdrawing his resignation. He apparently "chaired" the 3:00 a.m. meeting. The Mayor opened the meeting, but had representatives of other organizations make their reports to the local CD director.

Nevertheless, in the emergency period, the function of CD was never fully explicit. Thus, the various agencies of the city government carried out their usual as well as emergency tasks, but there is little evidence that they explicitly saw such actions as CD activities, or that these activities were, in fact, formally coordinated by local CD officials. Most heads of city departments, for instance, coordinated their activities with the City Manager and only had limited contact with the local CD when they needed certain equipment or supplies. Only in the later stages of the emergency period did CD begin to play a more important role in the overall coordination process among official organizations at the local level.

At the state level, however, the situation was rather different. The declaration of a state of disaster by the Governor placed state officials under the coordination and control of the State CD director. At the state level, CD was the overall coordinating agency almost from the beginning of the crisis.

E. DURING THE LATER STAGES OF THE EMERGENCY PERIOD, LOCAL ORGANIZATIONS BEGAN TO COORDINATE THEIR ACTIVITIES WITH OTHERS.

Starting on Saturday, organizations began to develop tentative cooperative arrangements. Several things stood out in this development. There was no
overall coordination; rather, most of the coordination was of one organization with another organization. The police department, local CD, and the Salvation Army, for instance, established different liaison arrangements with the military groups operating in the city.

The development of organizational coordination proceeded informally. Frequently a member of an organization would appoint himself as an unofficial liaison man with another organization. One reporter informally acting in this way for a radio station, established a close link between his organization and CD. Coordinating relationships were seldom formally designated as such.

Coordination started to develop somewhat earlier among official and formal organizations, than it did between these formal organizations and the unofficial groups that had emerged. In fact, some of the unofficial groups appeared to have dissolved before they were linked with or incorporated into existing organizations. When emergent groups persisted into the later stages of the emergency period, they did establish some form of liaison with pre-disaster organizations. Thus late on Saturday, one of the unofficial search and rescue groups came to an informal understanding with the fire department on how the two groups were going to coordinate their activities.

F. THE COORDINATION THAT INITIALLY DEVELOPED GREW OUT OF PRE-EXISTING FRIENDSHIPS RATHER THAN PRE-ARRANGED PLANS.

There were no pre-disaster plans for coordinating the activities of different organizations. Initial attempts at coordination often came about because a particular person knew someone in another organization and began to depend on him for information and assistance. What developed was a
spontaneous by-product of friendships and acquaintanceships: e.g., the fire captain who became the unofficial liaison with local CD had previously known its director in a situation not directly relevant to the emergency. This previous contact provided the basis for the coordination between the two organizations which later developed.

G. LOCAL CD EVENTUALLY EMERGED AS THE COORDINATION CENTER OF ACTIVITIES NOT PRE-EMPTED BY OTHER EMERGENCY ORGANIZATIONS.

Since most existing emergency organizations tried to restrict their activity to traditional operations, numerous new disaster generated tasks remained to be done. As mentioned above (see II B) pre-disaster organizations such as the Salvation Army and the mass media attempted to handle some of these tasks. However, a number of unofficial groups also emerged rather spontaneously to do these jobs (e.g., the aforementioned search and rescue groups, several damage assessment groups, etc.). These emergent groups, more so than the official organizations, eventually became the responsibility of CD. The local CD in the last phases of the emergency period, took over the overall coordination of these unofficial groups with their non-routine tasks.

H. ORGANIZATIONS WITH SPECIALIZED TASKS AND THE RESOURCES REQUIRED FOR THESE TASKS DID NOT ATTEMPT TO COORDINATE THEIR ACTIVITIES WITH OTHERS.

Certain organizations knew they had distinctive problems to solve. They had the resources for the job; they did not need to borrow equipment and personnel from others. Such organizations saw little necessity to coordinate and they worked at their tasks independently of other groups. The best
example of this type would be the telephone company. It conducted a large scale emergency operation to repair damaged switchboards and lines, accomplishing this task relatively rapidly while coordinating very little with other organizations in the local community. In fact, the first major contact of the telephone company with other organizations did not occur until the 3:00 a.m. meeting.

3. AUTHORITY

A. AUTHORITY PROBLEMS WERE INTER-ORGANIZATIONAL AND NOT INTRA-ORGANIZATIONAL.

Authority within organizations with clear lines of command, such as the fire or police departments, maintained stability in the emergency phase. There were no innovations in these authority patterns. In fact, in all organizations with formal leaders, these leaders maintained internal control throughout the crisis.

However, there were areas of ambiguity regarding which organization had responsibility when different groups cooperated with one another. The nature of the formal relationship between CD and the local government as represented by the Mayor and the City Manager was not altogether clear (at least as the relationship was visualized on the scene in the immediate post-impact period). There also seemed to be some confusion over the degree of responsibility of different organizations engaging in similar non-routine tasks (e.g., which group had the authority to requisition emergency supplies, to issue official announcements, etc.).
B. CIVILIAN AUTHORITY REMAINED SUPREME

At no time was martial law declared. The participation of the military was at the request of local governmental authorities. Operations of the Army and the National Guard were carefully delimited so that their scope did not extend beyond that desired by civilian authorities. Passage through the areas guarded by the military always remained under the control of the local police.

There were rumors that martial law had been declared. These probably stemmed from the visible participation of armed soldiers guarding the damaged area. Local officials never even considered requesting martial law.

C. UNOFFICIAL GROUPS ASSUMED AUTHORITY WHICH WENT UNCHALLENGED.

Many of the emergent groups assumed authority very early in the emergency period. People saw them operating in various capacities and simply assumed they had authority. Since these unofficial organizations were not challenged, they did, in fact, have authority.

In several instances, such groups needing certain supplies or equipment broke into warehouses, took what they needed, and left signed notes saying that CD had "requisitioned" the materials. These acts were not necessarily illegal. However, the authority of such unofficial groups to act in the name of CD was certainly very unclear, since local CD was not operational in the very immediate post-impact period.

D. VISIBLE SYMBOLS WERE TAKEN AS INDICATORS OF AUTHORITY.

During the emergency phase, arm bands and hard hats were interpreted as carrying the weight of authority. Some of the arm bands were official CD
arm bands "liberated" from a stockpile by an unidentified individual; others, lettered with various designations, were the product of ingenuity. In one instance, bed sheets from the city jail were torn into strips, lettered 'police', and distributed to most of the early volunteers who checked the damage in the downtown area. Such bands became symbols of at least "informal" deputies and allowed those wearing them to obtain entry and exit in areas where security precautions had been taken.

4. FACILITIES AND RESOURCES

A. NO LOCAL ORGANIZATION HAD EXPLICIT PLANS FOR NATURAL DISASTERS.

At the time of the Cuban Crisis, fire and police personnel informally agreed that they should automatically report to their headquarters whenever a need for their presence seemed apparent. This understanding did guide the immediate response of many off-duty policemen and firemen right after the earthquake. However, apart from this implicit understanding among the members of these two city departments, there were no other plans for special organizational activity during any kind of major peacetime crisis. Certain utilities, particularly the telephone company, did have standby procedures for routine emergencies, but not for large scale natural disasters. The local CD plan for wartime was neither complete nor well-known.

B. STATE CD ADAPTED ITS WARTIME PLAN TO FIT THE NATURAL DISASTER.

At the state level there was a CD master plan for wartime situations. When the earthquake occurred this plan was adapted without major difficulties, to the existing situation. State agencies functioned in those areas of
responsibility to which they were assigned in the wartime plan. There were enough personnel available for implementing assignments because most of the state agencies had regional offices in Anchorage. In addition, when the Governor came to the city shortly after noon on Saturday, he brought with him staff members from many of the state agencies normally located at the capital in Juneau.

C. **CD STOCKPILES OF EQUIPMENT AND SUPPLIES WERE USEFUL DURING THE EMERGENCY PHASE.**

Many people were aware of CD stockpiles. In the post-impact period therefore, groups requiring supplies of different kinds knew where to go to obtain them. Widespread use was made of stored generators, for instance. However, not all materials obtained from the stockpiles were used. For example, the emergency hospital was delivered to Providence Hospital but since Providence never filled to capacity, not all of the supplies were utilized. The beds and mattresses, although unpacked, were not needed.

At the state level, Seward had been designated as one of the wartime evacuation points for Anchorage and a large amount of supplies was stored there. Since Seward was one of the most heavily affected areas and had a great number of homeless persons, these supplies—particularly the food and bedding—were very heavily utilized.

D. **THE MILITARY PROVIDED MANY NEEDED RESOURCES.**

The proximity of Anchorage to Elmendorf Air Force Base and to Fort Richardson provided a vast materiel pool upon which to draw. Many supplies, such as 25 electrical generators, tens of thousands of C rations, 21 miles of
wire, and thousands of gallons of fuel, were furnished during the emergency. The military support was particularly crucial in making specialized kinds of equipment available (e.g., in Anchorage alone 52 immersion heaters, 31 water trailers, and 11 latrine boxes were provided).

E. CERTAIN TYPES OF EQUIPMENT COMMON TO ALASKA, BUT NORMALLY NOT AS READILY AVAILABLE ELSEWHERE, WERE OF VALUE DURING THE EMERGENCY.

The climate and terrain in Alaska necessitate certain kinds of heavy construction equipment which proved to be of great value in the emergency. Two-way radios, also because of the extensive distances in the state, are numerous and widely distributed. Such radios were utilized very effectively with the breakdown of other types of communication. The wide availability of numerous small planes likewise facilitated the movement of emergency equipment and personnel all over the state. In a sense, the amelioration of certain inhospitable features of Alaska required specialized equipment which proved invaluable in helping the state cope with its crisis.

F. THE ABSENCE OF SOME TYPICAL DISASTER CONSEQUENCES PLACED MINIMAL DEMANDS UPON TWO KEY EMERGENCY ORGANIZATIONS.

There were few casualties or fires in Anchorage. This substantially reduced the emergency demands upon the hospitals and the fire department.

The facilities of the hospitals were never really strained even though there were several evacuations which sent patients to Providence Hospital. Presbyterian Hospital and later St. Mary's, a nursing home, were evacuated. Each of these hospitals held from 20 to 30 patients, most of which were sent to Providence Hospital. In addition, when the Elmendorf Air Force Base
Hospital was evacuated, they sent several of their post-operative surgery patients to Providence. In spite of this convergence of patients, Providence never had more than 123 patients. Their bed capacity was listed as 155. With additional medical personnel coming to Providence from the evacuated hospitals and with the supplies obtained from the CD stockpiles, there was no shortage of the necessary medical services.

The night after the earthquake, there were no major fires; the department had one call—a telephone pole on fire. The next day, there were a few minor fires caused by a combination of chemicals spilled from broken containers in school storerooms. If major fires had occurred in the city immediately after the earthquake, the fire department would have had great difficulty controlling them since the only water available for fire fighting purposes was the 1100 gallons in its own tank trucks. Additional water tankers eventually provided by the Army, were not available in the city for more than five and one-half hours after the quake.

G. LACK OF PHYSICAL SPACE FOR HEADQUARTERS HAMPERED THE ACTIVITIES OF SOME ORGANIZATIONS.

Some key emergency organizations had physically inadequate headquarters that seriously interfered with the carrying out of organizational functions.

The State CD office in a deteriorating barracks building, roughly 18 by 40 feet, was without heat, light, water and toilet facilities for some time after the earthquake. Its normal complement of four persons was rapidly increased in the immediate post-impact period by numerous volunteers. During the first 24 to 48 hours after the earthquake, there were usually
150 to 200 persons milling around and through the building. Trailers were eventually placed adjacent to the office. These served for emergency activities, but the non-expandable nature of the building served to inhibit the entire operation.

The local CD, likewise, had inadequate quarters. The spacious emergency control center in the basement of the Public Safety Building could not be used for the first three days since all of the fluorescent lighting was shattered in the quake. The CD operations were therefore located upstairs in one of the small offices normally used by the deputy fire chief. When there were more than a dozen persons in the room, physical movement was almost impossible. The cramped and noisy quarters, in fact, aborted an attempt to install a two-way radio connected with a fleet of taxicabs strategically placed around the Anchorage area.

H. LACK OF FACILITIES IN HEADQUARTERS HINDERED THE OPERATIONS OF MOST ORGANIZATIONS THAT EXPANDED RAPIDLY.

Very few of the organizations that had to expand rapidly in the emergency period had enough standard office supplies and/or equipment. Local CD for several days had no mimeographing facilities of its own. For about four days, this organization had to operate with but one regular phone (and one direct field line to State CD which had been installed by the Army). At one point, even blank paper for writing messages was at a premium.

The local Red Cross chapter office was in the damaged downtown area so that the files and other supplies were unavailable. A large room in the local YMCA was obtained when the new Red Cross office was established;
this room held 50 to 60 regular and volunteer workers. However, in the
first week after the disaster, only one phone was installed. The Red Cross
workers would on occasion use the phone of the church across the street,
and at other times operable phones in residences.

5. PERSONNEL

A. THERE WAS NO OVERALL SHORTAGE OF PERSONNEL.

For a variety of reasons, there was never any manpower shortage in
Anchorage after the earthquake.

Because of the few casualties, all non-voluntary organizations were able
to mobilize their full complements. Not a single key person was lost as a
result of the disaster. Only one health organization was handicapped in its
mobilization by the illness of one of its top officials.

All organizations had as many volunteers as they could use. The numer-
ous volunteers were available because of the low casualty rates, the rela-
tively large sections of the city which did not suffer major damage, and the
fact that the disaster occurred at the start of the weekend. Particular or-
ganizations such as the Red Cross and Salvation Army of course drew upon
their standby but non-regular personnel.

Apart from volunteers, was the large pool of manpower available from
the military bases at Elmendorf and at Fort Richardson. The men at these
bases provided a reservoir of personnel which was never extended to capacity.
In Anchorage, the Army alone provided an average of 411 men daily in the
first week for security duty, for water distribution and mass feeding opera-
tions, and for communication activities.
B. VOLUNTEERS AND OTHER PERSONNEL CONVERGED ON "VISIBLE" BUILDINGS.

Three buildings were the main foci of personal convergence in the emergency period. These were the Public Safety Building, the State CD office, and Providence Hospital. All were familiar to most residents of Anchorage. They were the headquarters of certain key emergency organizations. Perhaps most important of all, in the hours after the earthquake, these were undamaged structures with emergency electric power. Their "lights" shining in the surrounding darkness served as a focus toward which people moved. Once these buildings became major centers of emergency response, the very presence of large numbers of people milling around served to draw others to the scene.

C. MOST ORGANIZATIONS HAD NO PLAN TO UTILIZE VOLUNTEERS.

Few organizations knew what to do with volunteers; none of the official groups had plans indicating how they could be used. The fire department, in the immediate emergency period, literally "stocked" dozens of volunteers in a large upstairs room in the Public Safety Building, before deciding it had no idea how to use them. A number of organizations found their operations hampered by volunteers milling around in rooms and corridors waiting to be utilized. Even 48 hours after the quake, simple passage through the Public Safety Building was slowed considerably by the hundreds of persons, many of them volunteers, who stood and walked about the building.

Some organizations had potential use for many volunteers. However, the lack of plans for their use forced operational heads of those organizations to spend considerable time on solving the problem of organizing the
volunteers who had converged. This took responsible officials away from other equally important problems, and made for less all around efficiency in organizational operations.

D. INITIALLY, LITTLE ATTENTION WAS GIVEN TO THE QUALITY OF PERSONNEL WHO VOLUNTEERED.

Organizations were indiscriminate in their initial use of volunteers utilizing anyone who presented himself. Some of the volunteers employed in the unofficial teams making early damage assessment and search efforts were denizens of the Skid Row section of Anchorage. Others of the volunteers who were sent on rescue and security missions into the buildings of the downtown area were, as the police themselves later noted, persons with criminal records. While it is presently impossible to judge the efficiency of the emergency efforts of such kinds of volunteers, certain potential problems did not arise. There was, for instance, very little looting and pilfering in a situation where many stores and offices were wide open so that anyone passing by could enter.

Not all of the early volunteers proved equal to the tasks assigned them by organizations. Fire department personnel complained that some of the volunteers initially sent out as messengers to other places in the city, never accomplished their mission, garbled their messages, or failed to return to report what they had done. Local CD likewise found that some of the volunteers it initially used were unable to perform requested tasks, such as clerical work, very adequately.

E. MANY ORGANIZATIONAL PERSONNEL EXPERIENCED ROLE CONFLICT.
Many of the on-duty organizational personnel experienced conflict between their organizational responsibilities and their obligations to their families. The initial uncertainty about the extent of the damage and the breakdown of phone service, led a considerable number of on-duty personnel to make a quick personal on-the-spot check of the safety of their families before proceeding with organizational tasks. Few if any persons actually abandoned an ongoing organizational responsibility, but many took advantage of whatever opportunity arose to go and check on their families. For instance, instead of driving directly to the designated destination, on-duty personnel would take detours so that their routes would be along the streets on which their homes were located. Lower echelon personnel in organizations seemed to resolve their conflict in the direction of checking on the welfare of their family before proceeding with organizational tasks, more frequently than did those officials higher in the organization. A few top officials remained unaware of the safety of their families until hours after the earthquake.

F. ROLE CONFLICTS WERE SOMEWHAT MINIMIZED BY THE TIMING OF THE DISASTER.

Off-duty organizational personnel experienced much less role conflict. The earthquake occurred at the end of the working day as many men were returning home, or already had reached their homes. Schools and movie theaters were closed because of Good Friday and all the younger family members were consequently likely to be at home. In addition, the hour was the usual one for family members to be assembled for the evening meal. Family members with organizational responsibilities could therefore report
back to their organizations or offer to help with the knowledge that their families were safe.

G. SOME ORGANIZATIONS WERE PARTLY IMMOBILIZED BY OVERLAPPING MEMBERSHIP.

It is frequently assumed that liaison problems among community organizations can be minimized by having personnel from related organizations represented in key positions in other organizations. Such multiple memberships might not create problems if the organizations were never simultaneously mobilized. However, some sort of choice is forced if there is simultaneous mobilization and a person has memberships in several groups and is expected to perform different roles in different organizations. This is what happened in at least one instance in Anchorage. One important group was relatively immobilized since four of its key people had other responsibilities which could not be ignored. One member had governmental obligations, two others had military obligations, and another had hospital duties. Since the organization was a voluntary one, it "lost" most of its key officials to these other organizations.

H. IN MANY OF THE EMERGENT ORGANIZATIONS THE FATIGUE FACTOR REDUCED THE EFFICIENCY OF THEIR PERSONNEL.

During the emergency period, all organizations operated intensively around the clock. Such a work schedule required considerable manpower. Traditional emergency organizations solved the problem by manipulating their standard work shifts. In both the police and fire departments, all men were initially mobilized, but at 11:00 p.m., half of the force was sent home to rest and told to report back at 7:00 a.m. for a 12 hour shift. The military organizations, in a similar fashion, were able to maintain "fresh" manpower.
at all times. Hospitals, likewise, had no problems on this score.

In most other organizations, there were neither plans nor the right kind of substitute personnel for emergency work shifts. Plans were not available nor developed to minimize the effects of fatigue especially on key personnel. Furthermore, key officials by working around the clock became indispensable sources of information. Since few records were systematically kept, two men alone, for instance, had full knowledge about the various relationships and activities of the local CD. It would have been impossible to replace such personnel without a marked impairment in organizational operations. In some organizations it also became a mark of status to have been on duty without sleep for several days. Yet the fatigue of the personnel was clearly not conducive to the best decision-making or planning.

V

A second field trip will be taken to the Anchorage area to gather additional information on the activities of the city authorities, the school system and the local utilities in the emergency period. Time limitations precluded intensive coverage of these organizations on the first field trip.

Subsequent field trips will be taken to collect additional data for an intensified analysis of the Anchorage and Alaskan State Civil Defense organizations as well as the mass media. This will allow us to make a more careful delineation of the inter-agency relationships which existed during the emergency phase. Also, information will be obtained that will indicate changes in structure which have occurred as a result of an organization's involvement in the emergency phase.
The materials gathered during the various field trips will be analyzed in an overall technical report on organizational responses during the emergency phase after the earthquake. Additional technical reports may also be produced on other aspects of the disaster, especially the long-run consequences of the earthquake on emergency plans of organizations. These technical reports will be in addition to the specialized reports mentioned earlier.