DISASTER AND FUNCTIONAL PRIORITIES IN ANCHORAGE, ALASKA

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ABSTRACT

This article is a brief summary of a monograph describing and analyzing human behavior during the five-day post-impact emergency following the great Alaskan earthquake of 1964. Behavior was analyzed in terms of seven community processes: Preservation of life, restoration and maintenance of essential services, social control (maintenance of public order), maintenance of public morale, economic activity, leisure and recreation, emergency welfare activity. Where data were available, extensive chronologies of events were developed to show the pace and sequence of activities. The authors pose the question: What are the important emphases and priorities which emerge in a disaster? Preservation of life as expressed in search-and-rescue, and medical treatment was given immediate and sustained attention. Restoration of utilities and communications received priority attention. A third activity given attention soon after impact was maintenance of public order.

Very striking was the suspension of typical economic activity (manufacture, distribution, sales, finance) and leisure. Activity in both of these areas received little attention until the emergency was under control.

Finally, in a brief epilogue, the contribution of the Alaskan "frontier spirit" is discussed.

A chronology of the various response activities in Anchorage is presented in a final section.
When Anchorage, Alaska was jolted by the earthquake of March 27, 1964 there were some obvious changes in the landscape and buildings. Some changes in the behavior of its residents were also obvious; unusually large numbers of persons congregated in and around several public buildings, patients were evacuated from one hospital to another and children had some unexpected "holidays" from school. But a sociologist who is accustomed to viewing the kaleidoscope of activities in a community in abstract terms might be inclined to wonder whether the changes in human behavior were more apparent than real. Are the emphases and priorities among the various types of activity in a community really altered for a time following a disaster? Does that which is "really important" to the citizens of a city become more obvious when catastrophe has struck?

The authors and three other members of the Disaster Research Center staff arrived in Anchorage shortly after the earthquake and began to collect data concerning these and related questions. In the ensuing months we secured information on the general characteristics of the city and its resources before the disaster; the technical and human "needs" created by the earthquake and extensive data on a wide range of community activities which occurred during the days immediately following March 27, 1964.
This summary article (This is a condensation of a research monograph to be published by the Disaster Research Center tentatively entitled Community Processes in Disaster.) will outline the conceptual framework used in attempting to answer the questions: What are the more critical and central activities (functions) in the life of a community and to what extent do priorities among them change following a large-scale disaster? Seven basic community processes are discussed briefly and a summary of the findings with regard to each are briefly described. Following a statement of the principal implications and conclusions, a chronology of events related to basic processes is presented so that the reader may see the highlights of the Anchorage response.

Community Processes and the Emergency Social System

The first task was to develop a conceptual model of communities which would provide a meaningful framework for analysis of community processes under disaster and non-disaster conditions. A review of the sociological literature on community and on disasters indicated there was little consensus on a precise definition of community. For our purposes it seemed fruitful to look at social communities in terms of ordered processes or functions which are believed by community members to serve important needs. For a community to thrive, provision must be made for these "necessities" on a daily basis at the local level. Without services such as those provided by schools, stores and suppliers of electric power, most modern communities would decline rapidly. Inhabitants would migrate to other areas where these advantages were available. There is, of course, a wide variation among communities in the nature and efficiency of these services.
Two important conditions affect the order and pace of community processes in any concrete situation. The first condition is the natural habitat of the community, viz., its climatic and geophysical environment. Peculiar natural conditions which surround a community limit how, when and where certain activities may occur. The habitat also provides opportunities, that is, the terrain and climatic condition facilitate the development and continuation of certain kinds of activities. As an example of limits and opportunities, it would be difficult to imagine a southern Florida beach culture in northern Greenland. Nor would one expect to find a thriving modern metropolis above 14,000 feet in the Rocky Mountains. Another aspect of the natural habitat is the size and density of the local population. Sheer numbers and the degree of congestion can affect community processes as much as climate and terrain. Finally, local technology (including buildings, streets, industrial and commercial establishments) is an important feature of the community's habitat. Thus the products of human endeavor—insofar as these remain available—become part of the natural environment of the community.

The second condition which affects community processes is less tangible than habitat. Reference is made here to community performance expectations, held collectively by its members—particularly by those in influential positions.

Performance expectations are apparently reflections of what are considered important or valuable goals but they are also restricted by the range of perceived possibilities within the local conditions. For example, an important goal of most communities is the efficient movement of men and materials within the communal habitat. A public transportation system may be regarded
as the most efficient means to this end, but neither public nor private interests are expected to provide such service unless it is considered economically feasible. The nature and general quality of community services provided by schools, the police force, street and highway departments, public entertainment and recreation facilities, waste disposal and health sanitation procedures, etc., all represent an adjustment of valued goals to the realities as perceived possible. Since we are primarily interested in post-disaster activities the dynamics during non-disaster conditions of the adjustment between a goal and that which is considered possible need not concern us.

Natural disasters, however, always come to be regarded as crises when they upset or threaten to curtail a community's performance capability. This occurs in several ways: The disasters are usually accompanied by destruction in the habitat. Where transportation arteries or utilities are impacted, service is disrupted. In addition to disruption of ongoing services, disasters create demands for increased services beyond normal circumstances. Destruction of valuable property, injury and death on a wide scale, exposure of the population to health hazards are seen as requiring community-wide response. If the impact is unanticipated and sudden, as was the case in Anchorage, the most pressing demands are for information concerning the scope and intensity of damage, the immediate threats to life and health and the remaining resources available to cope with community problems. Yet, due to confusion and a breakdown in communications, information is not readily available. Thus disasters create a two-fold problem for a community; an increase in demand for services along with a decrease in performance capabilities. Both aspects require a new adjustment of means-ends relationships.
Normal services may be no longer possible or, where possible, may be suspended while consideration is given to other, more important activities. This re-adjustment directly affects major community processes. Since these processes provide services considered "necessary" and desirable in the long run, for practical reasons post-disaster arrangements are usually considered temporary. For the duration—until community capabilities are restored and emergency demands are met—a new pattern exists. This pattern is sometimes called the emergency social system; it represents a coping response at the community level.

Seven community processes within the emergency social system were investigated during this research. Where sufficient data were available a chronology of activities was developed. A brief description of these processes follows:

1. **Preservation of Life** - Search-and-rescue, medical and public-health activities.

2. **Restoration and Maintenance of "Essential" Services** - Utilities, schools, transportation and communications.

3. **Social Control: Maintenance of Public Order** - Police security and traffic control, policy meetings by various officials, gathering of information and recording of inventories.

4. **Maintenance of Public Morale** - Activities of mass-media personnel, prominent community members and public officials who disseminated information about the earthquake's effects and what was being done—especially where the intent was to build morale.


6. **Leisure and Recreation** - Free-time activities such as club meetings, associations, organized sports and entertainment.

7. **Emergency Welfare Activity** - Activities which provided food, clothing and shelter for persons who needed them.
Summary of Community Activities

What were the priorities that emerged during the frenetic post-impact hours? Unfortunately, the picture was not as clear-cut as we had anticipated. Activity associated with the Preservation of Life began immediately and continued throughout the emergency period. However, the most widespread and sustained effort occurred during the hours between impact and darkness on the first day. After it became dark, activities were primarily focused upon hospitals and organizational headquarters areas. One major exception was the search of the Turnagain area by Mountain Rescue Club members who had congregated near that heavily damaged section.

Medical treatment was organized and administered by staff members at the hospitals. Few volunteers were used except in supportive activities such as carrying messages and cleaning up debris. Search and rescue activities were more diffuse and un-co-ordinated in that a mixture of individuals, volunteer groups and formal organizations were involved. The most-organized effort, on Friday night, occurred before dark at Turnagain where helicopters were used to lift some people out of the slide area. It is interesting to note that concern with search and rescue was not prominent in the activities of city officials during the first three-to-four hours after impact. Both fire and police departments made only unsystematic searches here and there. Damage-assessment teams, organized at the Public Safety Building, were instructed to make systematic searches but locating and extricating disaster victims was only one of their assignments.

Thus, a systematic general search of the damaged areas was not organized until Saturday morning.
Public Health efforts did not begin until Saturday when inoculations were given against typhoid.

When one examines activities associated with the Restoration and Maintenance of "Essential" Services, a more-organized attack is apparent. Power, water, telephone and gas-utility crews were in action within the first hour. A sustained 24-hour-a-day effort was mounted in each of these areas. Again the major work load was carried by the regular crews. This was especially true of city utilities which used little outside help. The gas company, which called in thirty skilled workmen from Seattle and employed a number of local volunteers, was the only exception.

Restoration of utilities at hospitals and at control headquarters was given first priority; next was restoration of service to other utilities. For example, after ascertaining that Providence Hospital had gas service, crewmen were assigned to laying temporary lines which would restore service to the city's electric power plant.

Sanitation services were not given immediate attention. In fact, it was not until Saturday morning that efforts were begun to extricate the sanitation trucks from the partially collapsed building where they had been parked. Emergency sanitation was provided Saturday afternoon with the preparation and distribution of oil drums for human waste.

School buildings were checked within a few hours after impact but it was more than a week later that the first classes were in session again.

Transportation arteries and channels of communication received more immediate attention than sanitation. However, there was no systematic or community-wide effort concerning transportation until Saturday morning when
the Public Works Department began hauling gravel to fill in sunken spots and crevices in the streets. Radio-broadcast media were on the air soon after the impact but each station operated on its own. KFQD and KENI became the main channels of public communication during the emergency period. State Civil Defense, Radio Amateur Communication Emergency Service, State Police cars and "ham"-radio operators not affiliated with RACES all were involved in providing additional channels of communication while normal telephone and Teletype facilities were being restored. These additional channels were allocated primarily to hospitals and emergency control headquarters.

Control efforts got underway immediately after the shaking had subsided. City officials were concerned about security and traffic control and not until arrangements had been made to supplement the normal control and security personnel was attention given to other matters. Control measures were given sustained attention throughout the entire emergency period. Security and traffic problems were neutralized before midnight. Information-inventory, appraisal of damage and monitoring of emergency activities came second in order of attention. The Saturday 3:00 a.m. meeting in the basement of the Public Safety Building marked a definite turning point from a largely un-coordinated and apparently confused response to the beginning of a more integrated endeavor. From that time on, order and control developed so that by Tuesday morning most community functions could again be allocated to the sectors and/or organizations that normally handled them. It should be pointed out that normal utilities services were also effectively restored by Tuesday morning.

Public Morale activity was more mixed and sporadic: It began on Friday
evening after the radio stations returned to the air and continued off and on for some weeks after the emergency. It cannot be said that priority was given to this activity in the sense that it displaced other emergency efforts -rather it seems to have been interwoven with other activities.

Economic activities were almost totally suspended for the duration of the emergency period. Only a few stores were open on Saturday, and only a few restaurants were serving food. Most of the goods and services that were provided over the weekend were donated. By Monday morning some business establishments were open, and during the following two days most of the normal economic activities in the community were resumed.

Leisure and Recreation were definitely given low priority for some time after impact. Under normal circumstances there would have been widespread participation in convivial drinking at bars, bowling, club meetings, etc., but when these free-time pursuits were again available to the community, participation was considerably below normal. The major exception was theater attendance: When the 4th Avenue Theater opened its doors on April 2, it had a full house. Afternoon matinees were well attended. This may have been, in part, a reflection of the fact that the schools were closed for one week after impact.

Organized sports, normally provided through the city's Parks and Recreation Department and the YMCA, were not resumed until more than a month afterward.

Impressions are varied concerning Emergency Welfare activities. Although this area did not receive the immediate and intense attention given to some other concerns, it was marked by early attempts to provide temporary shelter and food: Shelters were available by 8:00 p.m. on Friday; organized mass
feeding began on Saturday morning and continued until Wednesday, April 1. By Saturday evening, 24 hours after impact, few people remained in public shelters. The provision of food remained the chief welfare activity during the next three days.

Implications and Conclusions

Priority or precedence of activity develops in a situation where the availability of men and materiel appears to be insufficient for the tasks at hand. When it is not possible to focus upon all of the important tasks at once, some are given prime attention while others are left until a later time. This statement would seem to assume some rational assessment of the situation which is followed by action predicated upon available information. Actually, choices are rarely so clear-cut in disaster situations and the Anchorage experience was no exception. It was very evident to everyone that the earthquake had produced massive damage; particularly to those who could see the slide areas and to those who were listening to the broadcast stations. But, there were two ambiguities--first, what was not evident was the extensive damage to the community's technological base--because normal communication channels were out of commission, it was difficult for anyone to garner enough information to make an accurate assessment of what remained and what could be restored. A second ambiguity existed in the nature and extent of casualties. Very apparent damage to structures seemed to suggest large numbers of casualties, and yet, no one knew how many there were or in what area they might be found.

The activities of Friday night, the 27th, must be understood in the context of these and other uncertainties. Most of the organizations that
customarily deal with emergencies retained their personnel and equipment and were, therefore, able to mount an attack upon the problems within their pur-
view. In these organizations priority decisions were made more within the framework of organizational tasks and responsibilities rather than on the basis of community-wide needs. Regular tasks rather than new or unusual ones were given attention. For instance, the fire department allocated their re-
sources to ascertain whether there were any fires (the alarm system was in-
operative) and to check on accessibility into areas of potential fire hazards. They engaged in some rescue work but by 8:00 p.m. all units were at their normal stations. Priority for the fire department consisted of maintaining a state of "fire readiness." Having accomplished this goal, no effort was made to take on novel tasks. The situation was the same in the police department, in hospitals, and in utility departments. Each attended to their traditional tasks with available resources and made little effort to assume additional responsibilities. For the most part, they had more work than they could han-
dle. Even the evacuation of Presbyterian Hospital can be understood in the context of organizational task priority. Normal hospital functions were threatened by the absence of utilities and the presence of gas odors. The solution was to evacuate to Providence Hospital where medical activity could be continued. Thus, for those organizations traditionally involved in emer-
gencies, no community priorities except those of normal organizational tasks were evident during the early hours after impact. Our data indicate no occur-
rences of the diversion of an organization, or a major segment thereof, from its own tasks to different ones.

However, some novel tasks needed to be accomplished; among them were
search-and-rescue and inventory of damage in a more general sense. These tasks were undertaken by unorganized, spontaneously emergent groups at the scene of greatest damage and at the Public Safety Building. It is not suggested that emergent groups did all of the early search-and-rescue or inventory work but rather that they worked with and alongside regular organizational personnel. For example, each organization was involved in an inventory of damage to its facilities and services in particular, but this information tended to remain within the organization that gathered it. No established organization or group had the assignment of making a general check of buildings, streets or services on a block-by-block basis. A small group emerged early at the Public Safety Building and began doing this work with volunteers. Other instances occurred when individuals and small groups helped to search damaged structures for victims. Firemen and policemen were doing some checking as they normally do, but their efforts were not very systematic. As noted earlier, the search of the Turnagain slide area by the Mountain Rescue Club members was an exception to these observations.

Having examined the activities in progress during the early hours after impact, one is left with the sense that control was the first concern of many community members—especially public officials. Other activities were in progress simultaneously but the focus was upon supplementing the police force to provide security for property exposed to passers-by and to control collective behavior in such a manner as to minimize the danger of further injury to life or property. The utilities officials gave little attention to this problem but city officials did; so also did the military units nearby and many individuals and small groups. Salvation Army officers, for example, spent the
first half hour or so in helping the police to direct traffic. Numerous other individuals, without being assigned or deputized, assumed responsibility for directing traffic or guarding buildings. Within the police department itself the initial thrust was to gain control by posting traffic monitors and security guards at intersections and at buildings. As mentioned above, policemen did little systematic search-and-rescue work. As soon as the radio stations returned to the air, announcers were asked to instruct drivers and pedestrians to keep away from the damaged areas—a control effort. Thus, while all sorts of other activities were in progress, it seems fairly clear that precedence was given to control during the early hours. This does not mean that other matters were left unattended but rather that this was the biggest problem; the first priority of activity among many others. Considering the amount of convergence upon heavily impacted areas and the continual aftershocks—each one of which could have been the harbinger of another major temblor—it is not surprising that there was rather widespread activity directed toward the removal of persons from the damaged areas and toward attempts to keep them out. Added to this was the apparent structural weakness of many buildings and some continuing ground movement and settling. It was dangerous to be in those areas but hundreds of people were there and needed to be removed and to be kept out.

After control, or as control efforts were initiated, inventory seems to have been given the highest priority. Information-seeking occurred at all levels of the community: By individuals, informal groups, families and formal organizations. No centralized information center emerged or was arranged during the first few hours, but it was not long before the Public Safety Building
had become the place to find out what was going on. Hundreds of persons
crowded into the corridors, especially at the police counter where several
officers, the Damage Assessment group, military liaison and the KENI micro-
phone were located. Much of the activity not associated with control or in-
formation-seeking seemed to be little more than a holding effort to retain
the capability (resources, equipment and personnel) which remained.

In summary, it may be stated that preservation of life, some aspects of
restoration and maintenance of "essential" services (notably utilities and
communications) and social control activities were given priority during the
five-day emergency period following the earthquake. Priorities occurred in
two ways: Chronologically, as what was done first; and valuationally, as
what was considered most important. Indicators of valuational priority were
commitment of community resources; involvement of community members, especial-
ly officials and leaders; and statements made by persons in positions of
responsibility. Very noticeable exceptions to these priorities occurred in
the virtual cessation of normal economic activity and leisure-time pursuits.
At the close of the fifth day most of the community had returned to their
usual patterned ways. Of course, a major task of rebuilding and cleaning up
remained but this was being done by organizations appointed to that task thus
leaving most of the community members free to pursue their own interests.

Epilogue

What of the famous "frontier spirit" of Alaskans? Though hardly meas-
urable by present instruments, many Alaskans believe that the "frontier spir-
it" was an important factor in the rapid recovery of Anchorage. Radio
announcers talked about it, newspaper editorials mentioned it and at every small gathering—especially during the emergency period—one heard references to it. Expressions such as the following were typical. "This is frontier country and we are used to hardship. Even those of us living in town spend our weekends roughing it. We know how to take care of ourselves." One tough old Alaskan who had been around a long time said, "They were magnificent. I used to complain that we were getting soft, that the younger generation just didn't have it, but no more. I'm proud of the way Anchorageites pitched in and did what needed to be done!" Members of out-of-state and federal agencies who came to Anchorage during the early days after the temblor also talked about the "frontier spirit"—the self-reliance of Alaskans.

However, taking the long view and comparing the behavior of Anchorage community citizens with that of residents of other American cities which have been impacted by natural disaster suggests that the so-called frontier spirit of Alaskans is largely a myth. This is not to say that it is not a vital part of their universe of discourse, nor that they don't believe in it. Rather it is a myth in the sense that it had no apparent effect upon behavior beyond the normal impetus produced by disasters. To these observers the behavior of Anchorage citizens was in no way atypical of post-disaster behavior elsewhere. There are several reasons that can be given to support this conclusion.

It is normal for large numbers of persons to work heroically for long periods of time without much food or rest during disasters. A spirit of altruism generally prevails, breaking through previous class and status barriers to provide help to anyone who needs it. People open their homes to evacuees; and give clothing, food and equipment freely to those who are temporarily
dispossessed. A sense of guilt for having been spared may lie behind much of the apparently altruistic behavior. Whatever explanation one may prefer, it is difficult to see an unusual spirit in the Anchorage situation.

Secondly, it is typical during disasters, especially those involving sudden impact, to observe a lot of self-reliant, innovative behavior as men and equipment are diverted to unusual tasks in different ways. Typically, local heroes emerge who exercise leadership at crucial control points; and afterward, they are lauded in the press. Alaskans in Anchorage were also true to type in this respect.

Thirdly, it is normal—after the first emergency problems are under control and aid from outside the community has become available—to see an accelerating shift toward accepting help, even expecting it, almost demanding it. Firms that previously offered supplies, personnel or equipment "free for the duration" now expect to be reimbursed. Individuals remember long hours of overtime work and demand payment. So it goes. Altruism and a communal orientation are quickly dispersed in a plethora of private interests. Again Anchorage was not unusual. Within less than an hour, aid was requested from the military. Throughout the emergency the community depended very heavily on the military for manpower, vehicles, supplies, food, water and sanitation facilities. Nor was the military the only "uncle." State and federal monies were avidly cultivated ("Foreign Aid for Alaska."). Delegations were sent to Washington to lobby for an omnibus bill to deal with local economic woes. It was hoped that Federal Housing Administration mortgages could be forgiven. Federal programs with "easy terms" were sought. Withal, the press kept anxious watch over the process—pointing out the merits of each approach in terms
of what it would do for Anchorage and Alaska.

If "frontier spirit" means self-reliance and aggressive independence it was not more visible in Anchorage than in other disaster-stricken communities. This should not be regarded as a censure. Pointing out that Alaskans are normal human beings—motivated by wants and aspirations similar to those of most Americans—is not a criticism. Their behavior during the height of the emergency period was in the finest American tradition. They can be justly proud of their accomplishments.
As was indicated earlier every community develops institutionalized means (organizations and inter-organizational arrangements) to handle the day-to-day "needs" of its citizens. While these arrangements may be much more effective and efficient in some communities than in others, it seems clear that they are geared to meet the normal requirements. Each organization or type of organization has an area of primary responsibility and at least in many instances secondary responsibilities as well. When a disaster strikes there often follows an "overload" of demands in the area of primary responsibility for an organization and each organization mobilizes to meet the heightened demand level. The secondary responsibilities (e.g., search-and-rescue activity for the fire and police departments), however, may suffer as a consequence. This appears to be particularly true if the activity is typically defined as being the responsibility of more than one organization. In short, those functions which are not perceived to be the primary and sole responsibility of a particular organization will tend to be neglected or denigrated to a lower position of priority even though when viewed from the broader community perspective they may be of critical importance. If such activities as search and rescue, inventory of missing persons, and morale-building activities were clearly known to be one of the primary responsibilities of a particular organization it is more likely that a balanced effort would be made to cope with the unusual as well as the more standard needs of the community.
A second general proposition is suggested by this and other disaster research findings. "Misplaced" concerns based on stereotypes about human behavior following a natural disaster may alter the functional priorities in the community. Under normal conditions if a child is lost or a person is trapped in a building that has collapsed, massive efforts are started immediately to find or rescue the victim. Such actions tend to confirm the notion that human life and health are of the highest priority in our culture. But note what happens following a widespread disaster. The actions taken by community officials, especially the police, suggest that looting is viewed as a very serious potential problem requiring large commitments of personnel resources. Damaged areas are surrounded by law-enforcement officers and assisting military personnel. This suggests that those officials making the decision to guard the damaged area believe that (1) if many persons have access to the area they will engage in looting of unguarded properties, and (2) the property rights of owners are so important that such thefts can not be permitted. Thus, manpower which could be used for systematic search-and-rescue efforts is devoted instead to the "prevention of looting."

This would seem to indicate that during "normal," non-disaster periods the value placed on individual life and health has higher priority than property rights but that the priorities are reversed at least for a time following a disaster. The mobilization for the guarding of damaged areas in Anchorage was reasonably rapid and co-ordinated.
This was clearly not the case for search-and-rescue activity. The use of "excessive" manpower to prevent looting appears to rest on the stereotype that when a natural disaster strikes man's underlying orientation to steal what he can readily get will be manifested. The little research evidence that is available on this matter suggests that this hypothetical tendency is a myth. But a myth that is believed is real in its consequences. If attempted widespread looting is believed to be a near certainty officials will take action to try to prevent it. Stories about looting and efforts to prevent it seem to make "good" news copy. The myth is not likely to disappear soon.