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INTERORGANIZATIONAL RELATIONS
IN COMMUNITIES UNDER STRESS

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#### INTERORGANIZATIONAL RELATIONS

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Community emergencies provide an opportunity to observe within a short span of time both the development and the results of interorganizational relations. Recovery from a disaster requires intense activity on the part of many different organizations and brings together many that have had little contact with each other before the event. The disaster not only destroys or weakens the normal system of community decision making, but it also makes urgent the establishment of a new basis for unity.

Organizations are affected by an emergency in different ways. Some suspend operations, releasing their personnel and other resources for the use of disaster organizations. Others remain active but convert to emergency work. Some established organizations, such as the police and hospitals, continue tasks that are part of their normal pre-disaster responsibilities. Others, notably the Red Cross and Civil Defense, are prepared to deal with emergencies but must rapidly expand their staffs and resources to do so. Finally, some entirely new organizations are brought into being by the emergency (Dynes and Quarantelli, 1968a).

Reaction to the disaster thus transforms the social structure of the community. As existing organizations take on new roles, assume heightened importance, or cease operation entirely, and as new ones appear, the normal system of coordination no longer works. Each organization has to adapt itself to a radically changed environment by negotiating a special domain for the emergency. Despite high consensus on goals and the desire to cooperate, some domain conflicts occur.

To find out how communities mobilize to cope with emergencies, the Disaster Research Center of The Ohio State University has conducted field studies of fifty different community crises, mostly natural disasters and civil disturbances. In almost all of these cases the prime research focus has been on organizational functioning, with particular attention given to organizations that are newly created or greatly expanded to cope with the emergency. In order to avoid the complexities of comparing different kinds of community stress situations, we based the present analysis exclusively on our observations of reactions to emergencies that generate a high degree of community consensus.

Relations between organizations in the emergency environment are affected by a number of factors, four of which will be considered here. The first is the legitimacy of each organization's involvement in emergency activities. The second is the existence of established personal contacts between organizations. Third are the bonds that develop between suppliers and clients. Fourth is the emergence of an overall community coordinating body.

A brief summary of events in Anchorage during the 1964 Alaskan earthquake

serves as an example of the crises studied and provides a background for the analysis to follow.

The earthquake that struck Alaska at 5:36 p.m., Friday March 27, 1964, left widespread damage, primarily over the southcentral part where most of the state's population lived. Anchorage was not the only city stricken but it was the largest. Soon after the quake various organizations in and around Anchorage began emergency activity. Not all organizations became involved, however; schools and most businesses were closed down.

Much of the immediately known damage was in the central business section, and the police began to deputize volunteers to help clear the area. Both regular Army and National Guard units that were in training just outside Anchorage readily cooperated, patrolling the perimeter of the city.

The Public Safety Building, which was on the edge of a badly damaged area, became the focal point of activity. Here the police and fire departments shared communication facilities. The mayor and city manager moved in, as did City Civil Defense. Because the City Civil Defense directorship was vacant at the time of the quake, the former director immediately resumed his old post. In addition, since much of his early activity took him out of the building on reconnaissance trips, a friend who had knowledge of and friendships within the other control agencies, maintained the office. Thus interorganizational contact centered on the Public Safety Building. One radio station began broadcasting from a trailer outside the building, while another had a direct line to Civil Defense headquarters.

The earthquake created many new tasks. Vast areas of the city had to be searched, but darkness and ignorance about the extent of the damage complicated the work. Several organizations took part, but none accepted responsibility for systematic search-and-rescue work. Later, three different organizations independently compiled lists of missing persons.

Because no one knew the extent of damage or what others were doing, the mayor called a meeting at 3:00 a.m. to which over 100 persons came. He announced that Civil Defense would coordinate emergency activity. Representatives of organizations already at work gave reports, and a general sharing of information followed each one. The entire group considered requests and needs, made suggestions for resolving difficult problems, and accepted assignments for emergency work.

In later days, personnel from national headquarters came to assist local staff members. One of the more persistent problems facing Civil Defense was the control of unofficial news sources. The staff developed procedures to authenticate news and to distribute official releases rapidly.

By Tuesday city officials were back in City Hall. The downtown area was partially open for business, and the people had access to all but the most severely damaged areas. Then Anchorage turned to the longer range problems of rehabilitation.

## Establishing Emergency Domains

Organizations become involved in emergency activity with different degrees of legitimacy. Possessing legitimacy implies not legality, but being accepted as the appropriate agent for carrying out an activity. Legitimacy affects the way issues of jurisdiction and authority are resolved. In general, whatever is congruent with the existing value system is considered legitimate. Since organizations have to establish their legitimacy, understanding how they do so helps in understanding how the process works in time of disaster.

Organizational goals, means, and leadership all play a part in determining legitimacy. They are important not only in an organization's continuing operation, but also in its public image. In a disaster situation, if the organization's objective accords with the emergency consensus, this contributes to its legitimation. Many organizations suspend operations if they cannot claim to contribute in some way to alleviating disaster conditions.

Since problems of security and control are important, organizations like the police clearly have legitimacy. The community accepts the operation of medical organizations, since medical care is usually necessary. Provision of food, shelter, and clothing by the Salvation Army and Red Cross is considered legitimate. Almost all of the complex groups that become involved do so because their organizational goals are in line with the overall community consensus. Organizations whose activities might be questioned often cover themselves by insisting that they are working in cooperation with a legitimate organization. In this way, they are able to borrow legitimacy from each other. A few groups, however, engage in activities not clearly congruent with the value system.

In normal community life, legitimacy for the most part depends on the use of legal and morally acceptable means to attain either public or private ends. In disaster activity, however, legitimation is based much more on work toward agreed-upon public goals than on the legality of the means employed. Under the pressure of emergency demands an organization can use illegal means without losing its legitimacy. For example, "requisitioning" materials for use in disaster activities would be seen as stealing in the nondisaster context (Dynes and Quarantelli, 1968b).

An organization can also gain legitimacy by the character of its leadership. If its leaders also occupy positions of power and influence in other parts of the community structure its claim to legitimacy is readily validated. Many organizations have a policy of establishing links with other organizations through their leaders. Interorganizational contacts prior to a disaster, then, contribute to the legitimation of the organizations involved in the emergency. Even though the permanent officers of expanding groups contribute to their legitimacy, rapid expansion and the imposition of new leadership tends to reduce it. In addition, the lack of contact with particular organizations in pre-disaster times would cast doubt upon their legitimacy in the disaster context.

The consequences of legitimacy are seen most clearly in the operation of

Civil Defense in disaster activities. In the United States we think of Civil Defense as a resource for wartime, particularly for possible nuclear attacks. We do not anticipate its operation during a natural disaster. Involvement in such circumstances has low priority even among the organization's own goals. Given this definition of its purpose, other organizations either exclude it from the set of organizations they should relate to or see it only as a source of materials. Generally, then, Civil Defense will be ignored in disasters because its operation is not seen as legitimate. It may become successfully involved, however -- as it did in Anchorage -- because its fulltime personnel think that their organization has certain organizational objectives in the disaster situation and feel compelled to act. Trying to impose the legitimacy of an organization on a community leads either to conflict or to the ignoring of such efforts, regardless of how well-meaning they may be.

Another problem with Civil Defense on the local level is that it is usually unable to establish legitimacy by the quality of its leadership. The low evaluation of Civil Defense leadership becomes critical if the local Civil Defense considers itself especially suited for the task of community coordination. Other organizations are extremely reluctant to allow an organization that has little legitimacy in the community -- and even less in a disaster context -- to act as the major determiner of their functioning and legitimacy.

A particular problem of legitimacy occurs in the case of expanding groups that are parts of national organizations, for they have competing loyalties. The extracommunity organization normally and rather continuously provides the goals and values for the local unit. This means that such organizations are confronted with two different, and perhaps conflicting, reference organizations. On the one hand, the local organization's pre- and post-disaster operations are dependent upon the national organization for advice, information, and often material and personnel support. The goals and standardized procedures that characterize the national organization's operation also set the standards for the local chapter. This tends to reduce the autonomy of the local unit. On the other hand, the local unit of a national organization always interacts with other local organizations and takes some standards from them. With these two references, the local group has the organizational equivalent of role conflict in the sense that differing and possibly conflicting demands can be made upon it. Although the group directs its actions toward the local community, it becomes increasingly dependent upon the national organization for materials and personnel.

The Red Cross illustrates this conflict. Some segments of local communities seem to view the performance of the local Red Cross in a negative way (Form and Nosow, 1958). Whether or not the judgment is accurate, being recurrent, it requires some explanation. The Red Cross is both a relief and a rehabilitation agency whose goals are defined by the national organization for local chapters to follow. The goal of disaster relief is consistent with the community definition of the goals in the immediate emergency period. But, rehabilitation requires bureaucratic means which often seem to contrast with the more fluid and flexible procedures used initially. Rehabilitation work leaves more room for differences of opinion on goals and procedures, especially since

some of these are imposed upon the local group by the national. As a result complaints arise in the community. In part, this conflict is a matter of timing and is more acute if the Red Cross moves toward rehabilitation more quickly than do other community organizations.

## Personal Contacts Between Organizations

Individuals who occupy boundary roles between organizations facilitate the exchange of information and resources. Some people have positions within organizations that demand their giving attention to others in different groups. Some hold positions in two or more organizations. Still others provide the link between organizations primarily through their previously established friendships, which come to have special significance during the emergency period.

The first type of boundary personnel, those whose positions demand contact with people in other organizations, are most frequently found among the well-established groups in a community. For example, certain top executives within industrial firms have regular contact with government officials, executives of other organizations, members of trade associations, and officials in the local community. Although the top managerial and public relations people usually have the most contact with other organizations, people at lower levels may also have relationships that become valuable in disaster operations. For example, personnel who procure materials and distribute products may be aware of resources that are necessary for effective disaster activity. Through his occupational contacts, a truck driver may know where to find materials that are needed during disaster operations.

Boundary personnel who possess memberships in two or more organizations often help to bring about coordination within the community. The police chief who is also a member of a Red Cross disaster committee, a Civil Defense operations group, and a municipal administrative council illustrates the type. Assuming that the memberships other than the major occupational position actually involve continued contact with other organizations, such participation gives an individual some knowledge of operational procedures and personnel in other organizations. This knowledge modifies his behavior during the emergency period. Knowing that certain resources exist, he can request them. Knowing that certain persons must be informed, he can attempt to communicate with them.

The third type of boundary personnel, people having extensive friendships rather than holding certain positions, often becomes the means of communication between organizations in an emergency. Certain individuals, especially those who have lived in the community for a long time and who have been active in community affairs, have acquaintances and friends who occupy important positions throughout the community. The difficulty with using these ties as a means of interorganizational contact in the disaster is that the contacts are to persons, not to positions. The recipient of information may not be the one who needs it. He then must transfer the information to those who can use it. This not only diverts attention from his own tasks, but it also interposes a third party in

the communication process with the consequent dangers of distortion. Nevertheless, interorganizational contacts based on previous friendships are valuable. Because organizations seldom regularize contacts enough in disaster periods and because many change their structure creating unfamiliar positions, contacts to persons rather than to positions may be the only ones possible.

# Supplier-Client Relations

The third way that the community can be integrated in an emergency is by chains of contacts between suppliers and clients. Each organization lacks information about the general state of affairs in the community, but it can at least take steps to communicate with units in its own exchange network. As each organization restores contacts with its old suppliers and clients and opens contacts with new ones, it contributes to the development of a web of functional integration. Naturally this process is not without its difficulties under emergency conditions.

Dealing with Supply Scarcities. -- Established groups have connections with suppliers and clients from previous experience. For a specific organization, the disaster creates the possibility, and in some instances the actuality, of a reduction in the capacities of these supply sources. The incapacitation of suppliers may come about because their facilities have been physically disrupted, or because they have suspended operations in the belief that their services are not essential in the emergency. The uncertainty of supply sources requires that each active organization ascertain the status of its suppliers. The attempt of course may be hampered because communications have been disrupted.

Some organizations try to manage scarcities by asserting exclusive jurisdiction over particular segments of disaster activity. If the organization's domain claim is accepted by others, then it can lay claim to the resources necessary to accomplish its tasks. This claiming strategy is especially characteristic of expanding organizations. If a group expands, it may need increased supplies at the same time that the disaster conditions reduce its existing sources. Moreover, the scope of activity of the expanding group lacks the support of tradition and experience that the activities of established groups have. Their claims may conflict with those of other organizations expanding in the same direction and claiming jurisdiction over the same type of disaster activity.

Control of Excess Resources. -- Observers have often commented on the spontaneous generosity of people who give unsolicited aid. A deluge of supplies comes into the disaster area and to groups and agencies assumed to have some connection with disaster relief. Fritz and Mathewson (1957: 22-23), who have studied this phenomenon, suggest that unsolicited supplies: normally arrive in volumes far beyond the actual needs; are comprised largely of unneeded and unusable materials; require the services of many people and facilities that could be used for more essential tasks; often cause conflict among relief agencies or among various segments of the population; materially add to the problem of

congestion in and near the disaster site; and in some cases may disrupt the local economy.

To exercise control over unneeded material is extremely difficult. Some offers of supplies are made in a context that makes refusal almost impossible. The receiver may infer from the tone of the offer that refusal would alienate a donor from providing resources that may be necessary in the future. Or, the donor may notify the receiver that certain materials are on the way, giving him no opportunity to divert them before they converge on the disaster area. Since the outpouring of unwanted supplies creates difficulties for organizations that must deal with it, conflict often emerges when one organization feels that the activities of another have contributed to its problems. The receiver may blame another group for initiating unnecessary requests, and it may try to prevent others from creating more problems. Conflict may arise when an organization, after receiving many donations, finds the demands made upon it by the community are lower than anticipated. It may then attempt to unload its supplies on other organizations that have no use for it either.

Efforts to control the deluge of unneeded resources are often directed toward the mass communication agencies. Radio stations may receive calls from individuals asking where they should donate materials. Perhaps a station might inquire or guess where contributions should go and suggest a recipient organization over the air, without the advice or consent of the group named. For example, a person may call to ask where to donate blood, and the radio station might suggest publicly that the Red Cross or local hospitals would be the appropriate place. Others hearing the direction may infer that blood is needed and that donors should go to the Red Cross or the hospital. Many rush to the recipient organizations, overwhelming them with donors who become indignant at the refusal of their aid. Faced with such indignation, many organizations use time and personnel to accept such "help," even though this diverts attention from more crucial tasks. Because many organizations use the mass media, particularly radio, to help achieve their disaster-oriented goals, a station may get announcements for the public from several different organizations, and some of them may contradict others. This places the station personnel in a dilemma. Although they wish to provide accurate information, the urgency of many of the messages precludes systematic clearance of contradictory information. In the absence of any central source of official information, the broadcasters themselves must immediately choose which messages to announce. Thus, broadcasters, who have no formal responsibility in disaster activities, in effect make policy by their selection. Their attempt to control excess resources often leads to conflict between organizations.

Initiating New Supplier-Client Relations. -- At the same time that their supply sources have been cut off, organizations active in emergency-related operations experience a sizeable increase in the demands placed on them. Many of these demands come from organizations with which there has been little or no previous contact, and communication with them is at first difficult. Even under the pressure of an emergency, certain preliminaries must be attended to before effective communication can take place between organizations. In dealing with a representative of an unfamiliar group, the critical information needed is the person's position in the organization, the legitimacy of that position as well as

of the organization, and the competence of the person who occupies the position. This problem of identification is particularly complex in disaster activities, since expanding organizations by definition create new positions for people with unknown (at least to other organizations) competence. Because of this difficulty, people tend to restrict communication to others within their own organization or to those in similar organizations -- e.g. members of a fire department communicate with those in another fire department.

Since communication is basic to interorganizational relations, the most effective and cooperative relations develop between organizations if they are similar in function and if each has knowledge of the internal structure of the other. With such knowledge, organizations can receive messages and exchange materials in an atmosphere of trust based on experience and predictability. Considering the difficulty of assessing legitimacy and competence, organizations that have had few previous routine contacts avoid communicating with each other, thus hindering coordination.

# Overall Community Organization

Finally, one can view interorganizational relations in the context of overall community organization during the emergency period. In normal times a community has many facets. It is an economic unit. It is a political unit. It is a place where health and welfare resources are available. It is also a place where children move toward adulthood and where families obtain food, shelter, and clothing. As a multipurpose system, one of its problems is to allocate resources to its several purposes.

Coordination before the disaster. -- Resources are usually allocated in the community by what Thompson and Hawkes (1962: 271) have called pluralistic decision processes. Because the groups within a community pursue their separate goals and never agree completely about collective goals for the community, they cannot agree to appoint any official body to decide how resources are to be allocated. By give-and-take, the parts make adjustments to one another and to the larger environment outside the community. A community is in a constant state of allocation and reallocation, integration and reintegration. It never fully achieves an integrated state, for there is always a certain amount of misallocation and maladjustment among the parts.

Yet the community usually maintains remarkable order, in spite of the large number of decision-making units that operate simultaneously. This is because over time resource allocation becomes institutionalized. Community members can share the expectation others have toward them, and action comes to be based on these stable expectations. Among the more important institutionalized patterns that relate to the allocation of resources are property, contract, and authority. Property, which defines the right to use certain resources and to deny that right to others, provides relatively permanent allocations and is one basis for order within the community. Contract provides rules that enable two or more parties to arrange binding expectations toward each other. Authority is a complex of norms that designate certain individuals to control the

activities of others and to allocate resources. In the context of pluralistic decision making, property and contract become the more important institutional patterns that stabilize resource allocation.

Within the community's various organizations which have clearly established goals, decisions are made in a different way. Instead of a pluralistic process, it is much more of a unitary process, with the authority to allocate resources centered in one individual or directorate. As long as the members of the unit recognize the authority of the decision maker, the allocation of resources proceeds as he directs. Many units of the community, even families, base internal decisions on authority; but when they interact with other units in the community, pluralistic decision making is necessary.

A disaster destroys the relative equilibrium that the pluralistic processes have established in the community. Virtually every act lacks precedents and requires a new decision. There are no authorities to appeal to, and there is little time to negotiate agreements. Each actor or group makes its own decisions. Obstacles are met with whatever means are at hand; the sense of urgency about the immediate tasks leaves little time to coordinate activities with others. The normal constraints of property and contract disappear. The irrelevance of certain types of activity at the time causes the authority of particular organizations over individuals to be relaxed, or even withdrawn completely. As a result, groups rush personnel into the impact area and allow them to make resource decisions without normal constraints. The power to decide the allocation of resources falls to a large number of primary groups, each under pressure to act quickly and directly. The whole system, then, becomes fragmented.

The gradual involvement of community organizations stops further fragmentation. As compared with families and other primary groups, these larger groups can mobilize more resources and allocate them according to a broader program. Even though these organizations begin to allocate greater resources, however, gaps still develop and duplication still occurs. Efficient operation of large organizations does not necessarily constitute integrated behavior of the total community. It does mean that the community is moving toward a new social form for handling resource allocation, one that will allow each organization to make its own decisions in the light of knowledge about the activities of others.

Emergency Communication. -- Certain organizations whose usual functions are irrelevant in the crisis seek a place in disaster activity by suggesting that they possess useful resources and abilities. Information needs to be exchanged between them and groups that may have need of their resources. An information center is needed.

Because the community is normally pluralistic, it requires structural modifications for more unified decision making. The sequence of organizational involvement and the cumulative nature of the problems that ensue often create major crises of community control and coordination in the early hours of a widespread emergency. In these circumstances an "operations group" often emerges -- like the group in Anchorage that began to coordinate communications

from the Public Safety Building. A small group of individuals forms an operations center near communications lines and gradually becomes the source for information and requests for aid. As organizations receive requests beyond their capacity and as information about the activities of many organizations becomes available, the operations center widens its scope, taking in representatives from the various organizations, who come to obtain and provide information. That organizational representatives come gives additional legitimacy to the developing "headquarters." The/central group, however, is primarily concerned with minute-to-minute operations and not with the overall problems created by the disaster.

Allocation of Responsibility and Resources. -- A second group, one that can deal with overall problems of coordination and resource allocation, typically emerges in widespread disasters. During the early hours of the emergency period representatives of major groups engaged in disaster-related activities meet, brought together by the need to become informed and to coordinate. As a by-product of the meeting, the group comes to an informal consensus on matters of authority and on a system of community priorities. It may meet periodically during the emergency period, or members may continue to consult each other informally; they act very much like an ad hoc committee designed to settle procedural problems as they arise. In Anchorage, community-wide coordination began with the 3:00 a.m. meeting.

These overall organizations are created largely from parts of the community that are taken out of their normal context and put together again in a different way. Because individual organizations can no longer be autonomous nor play a part in the pluralistic decision making process, they become subordinated to these emerging groups, which allocate resources through an overall plan. The plan grows out of a newly institutionalized pattern of authority for the situation. The authority, legitimized by other organizations (although not always accepted without question), generally has little regard for traditional patterns of property and contract. In normal times many community officials, particularly those in the economic and political realms, traditionally maintain their authority on a legal basis. The disaster undercuts this legal basis and they must either be able to assume extra-legal authority or be willing to accept the authority of others according to the needs of the immediate situation. Often they stand aside and let others devise a program of emergency action. One can argue that emergency events, instead of producing social chaos, create the opportunity for a much more unified decision-making process than is found in normal times.

Return to Normal. -- As recovery proceeds, traditional roles are reestablished and normal relations again come into operation. This forces the emergency control center to make adjustments in the roles and resources allotted to organizations subordinated to them during the emergency. Some groups that have gained prestige by their crucial role in disaster activities attempt to institutionalize their temporary gains. Those organizations that had no part in the activities begin to be pressed by forces inside and outside the community to resume normal operations. With the more crucial problems attended to, the priorities are rearranged and the central organization has to modify decisions

and programs.

As the saliency of the emergency consensus declines, the overall coordinating body loses control and the pluralistic processes begin to operate again. Organizations compete with one another and with the coordinating organizations for resources. Since the coordinating organization still continues, however, the relations between organizations are even more complex than they were in predisaster times. Organizations that have completed their emergency tasks want to return to their normal activities. Just as they submitted to the control of the overall organization at different times, so they withdraw to their normal operations at different times. These staggered adjustments place strains on the coordinating organization. It tries to maintain control because relations are not altogether normal, but normal conditions cannot be restored until emergency controls are ended.

As the immediate threat to the community's primary values recedes, the sense of urgency begins to disappear. Seeking appropriate means to an end and considering alternative ends are once more part of organizational thinking. Longer-term values -- wealth, status, and comfort -- again come to the forefront. As the organizations within the community resume their normal roles, the traditional patterns of property and contract are reestablished, reducing the uncertainty in relations between groups. As competition for resources increases, organizations dispute the allocations made by the coordinating group, and this breaks down its authority. The overall organization begins to disappear and the parts that it once contained find their old places in the community. In this sense, the community has returned to normal.

# Conclusion

By examining interorganizational relations in communities under stress, it is possible to see how a community can, in a relatively short period of time, mobilize its resources to cope with an emergency. While the restructuring of these relations is often seen as chaotic and experienced as traumatic, the end product is an overall community organization capable of a concerted attack on collective problems. In comparison with the normal pluralistic structure, the emergency structure is much more unified by collective goals and controlled by central authorities. These attributes give it an advantage in coping with a limited range of goals encompassed by the emergency consensus, but make it illsuited to serve the diversity of private interests that reappear after the emergency has ended.

#### FOOTNOTE

\* The authors are professors of sociology and co-directors of the Disaster Research Center at The Ohio State University. This study was partly supported by PHS Research Grant Number 5 RO1 MR 15399-02 from the Center for Studies of Mental Health and Social Problems, Applied Research Branch, National Institute of Mental Health.

#### REFERENCES

Dynes, Russell-R.

1969 Organized Behavior in Disaster: Analysis and Conceptualization.
Columbus, Chio: Disaster Research Center, The Chio State University.

Dynes, Russell R. and E. L. Quarantelli.

1968a 'What looting in civil disturbance really means." Trans-action 5 (May): 9-14.

1968b "Group behavior under stress: a required convergence of organizational and collective behavior perspectives." Sociology and Social Research 52 (July): 416-429.

Form, William H. and Sigmund Nosow.

1953 Community in Disaster. New York: Harper and Brothers.

Fritz, Charles E. and J. H. Mathewson.

1957 Convergence Behavior in Disasters: A Problem in Social Control.
Washington, D.C.: National Academy of Sciences-National Research
Council.

Merton, Robert

1957 Social Theory and Social Structure. New York: Free Press of Glencoe. Second revised edition, 1963.

Thompson, James D. and Robert W. Hawkes.

1962 Disaster, Community Organization, and Administrative Process. In George W. Baker and Dwight W. Chapman (eds.), Man and Society in Disaster. New York: Basic Books.