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DIFFERENT TYPES OF ORGANIZATIONS IN DISASTER RESPONSES AND THEIR OPERATIONAL PROBLEMS*

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In this paper we describe the different kinds of organized groups which operate in disasters and analyze the kinds of operational problems they typically encounter. The first part of the paper sets forth a typology of organized behavior in mass emergencies. The changed conditions in disaster contexts and how this affects the activities of groups and organizations are examined in the last part of the paper.

The observations and examples are drawn from the work of the Disaster Research Center (DRC) which, since 1963, has undertaken over 200 field studies of disasters. The specifics of much of this research has been reported elsewhere (see in particular the edited series of articles in Quarantelli and Dynes, 1970; also Dynes, Quarantelli and Kreps, 1972; Proceedings 1972; Dynes, 1974; and Quarantelli and Dynes, 1977). However, this paper essays a general discussion which cuts across a number of the specific studies.

A Typology

Although DRC has recently extended its research interests (for example, Taylor, Ross and Quarantelli, 1976 and Tierney and Taylor, 1977), the initial and still foremost task at the Center is the study of organizational functioning under stress. When we started DRC the task seemed, relatively speaking, simple enough in terms of intent, and we fully realized there would be many difficulties in doing comparative and systematic research. We were going to look for organizations such as police and fire departments, hospitals, civil defense agencies, public utility companies, Red Cross chapters, Salvation Army groups, mass communication outlets, and so forth. Having identified the unit of analysis--the organization--we at DRC were going to study their operations in extreme stress situations.

However, the Center had not conducted too many field studies before we became aware of some difficulties even with the matter of identification. The "organization" that was supposed to be present was sometimes surprisingly difficult to find. On the other hand, there were clear-cut cases of collective endeavor, which did not fit our initial formulation. We will not detail here the history of our problem or the various steps DRC took to cope with the difficulty in its actual field work. Suffice it to say that the reality of data forced some rethinking about the nature of the problem. What could be meant by "organization?"

The core of the problem is that there are, or at least could be, four different kinds of organized responses to community-wide disasters. While there is organization in disaster situations, such organization does not always involve organizations or formal groups as such. There is always organized or collective effort, but not necessarily involving only formalized groups. We came to this conclusion on the basis of two recurrent observations regarding the social behavior that occurs in a large scale emergency. The observations have to do with the nature of the tasks undertaken following a disaster and what groups carry out these tasks. That is, while there are organized efforts to cope with the threat to the community, different kinds of tasks are carried out by different kinds of groups. In the most abstract sense, at the one extreme there are regular tasks undertaken by established groups, and at the other extreme there are non-regular tasks carried out by emergent groups.

However, there is more than a dichotomy involved. In fact, there are two axes--there can be an organized or collective effort to carry out regular or non-regular tasks; also the collective effort can be undertaken by established or emergent groups. This leads to a two-by-two table. Along the top there are tasks--regular or non-regular. Down the side there are groups--established or emergent. Thus, there may be an established group performing a regular or a non-regular task, and an emergent group engaged in a regular or a non-regular task.

	Tasks: Regular	Tasks: Non-Regular
Groups: Established	Type I	Type III
Groups: Emergent	Type II	Type IV

Let us give some concrete body to these types before developing the terms. Type I (an established group carrying out regular tasks) would be exemplified by the official members of a city police force directing traffic after a tornado has struck a community. Type II (an emergent group with regular tasks) would be illustrated by Red Cross volunteers running a shelter after a hurricane. As for Type III (an established group undertaking non-regular tasks), an example would be a home-construction company utilizing its personnel and equipment for digging through debris in the rescue work undertaken after a major explosion. Type IV (an emergent group engaged in non-regular tasks) would be represented by an *ad hoc* group made up of the City Engineer, County civil defense director, the local representative of the State Highway Department, and a Corps of Engineer Colonel, coordinating overall community responses during a flood.

The organized emergency efforts illustrated in these examples clearly range from traditional, complex, formal organizations to temporary, simple, informal groupings. Perhaps all the groups that can be seen working in a disaster will not fit neatly into one of the four categories. Clearly this is an ideal type conceptualization. But we would argue that in a large scale emergency almost all operative groups, that is, social entities whose participants are relatively self-conscious about being members of the groups, can be classified, without too much forcing, into one of the four types.

As for the key terms involved, the following is what we mean. Groups carry out certain tasks, but the tasks may be old, routine, assigned, everyday ones. Or instead of being regular, the tasks may be new, novel, assumed,

or unusual ones for the groups involved. If a police department controls traffic, a fire department fights fires, a radio station transmits news, or a hospital treats injured, we all recognize the regular or traditional nature of the task for the group that is carrying it out. On the other hand, the non-regular or newly created nature of tasks can be seen when we observe a National Guard battalion providing water for citizens, an American Legion Post sheltering homeless evacuees, or nuns from a parochial school sorting and distributing donated clothing at a relief center. In terms of the prior experience of the group, it seems possible to class tasks as either regular or non-regular, as old or new.

It is also possible to distinguish between established and emergent groups. An established group is one in which the members stand in definite kinds of pre-disaster social relationships to one another, especially in their work activities. Such groups may be highly bureaucratic in structure, as in a fire department; or they may be considerably less formal in nature, as in a VFW Post. However, this is not the crucial element. Rather it is an existence as a group prior-to-the-emergency and conscious identification of group membership that are the distinguishing features.

Important to our understanding of established groups is that during a disaster the group members stand roughly in the same work relationships to one another as they stood before any threat to community life. Thus, members of a city public health department or a citizen's band club operating in a disaster normally have had extended and prior-to-the-emergency work relationships with one another. These social ties are maintained as the group engages in traditional or non-regular tasks during the disaster. In a sense, there is a carry over of pre-disaster social bonds related to work activity into the emergency situation.

In contrast, an emergent group, as the term implies, develops or comes into being in the emergency. Such groups may mushroom from some small, pre-disaster cores or they may involve the crystallization of totally new social entities. The crucial feature is that they have no actual pre-emergency existence, at least in the manifest form they assume during the disaster period. An example would be a local Red Cross chapter whose handful of full-time, paid personnel provide the nucleus for large blocs of volunteers who actually undertake most of the group's work. Another example of an even more emergent kind of group are the search and rescue teams that typically spring forth in the immediate post-disaster emergency period. Note that the emergence of the new social entity may be partly planned or may be totally spontaneous, but in both instances the actual groups come into being only during the emergency period.

In such emergent groups, although members may have had some social contacts with one another prior to the disaster, they have not participated as members of the same group. For instance, the membership of a state civil defense group during a disaster may be tremendously inflated by the incorporation of many workers drawn from various state agencies. Some of the personnel may have had informal social relationships with one another prior to the emergency but they have not functioned as common members of the same work group. Consequently, and this is what is important, the

members of the emergent group, as they work at regular or non-regular tasks, have to forge out a new set of social relationships among themselves. That is, a group with personnel and specific tasks has emerged, but few clear-cut social roles or specific norms governing the work behavior of members, one to another or to non-group members, exists.

Even when prior plans have existed to generate the emergent groups, the plans, at best, can only present official guidelines for behavior. The structure of groups, however, consists of more than formal prescriptions of how members in particular positions should act. Emergent groups have to develop these other structural elements.

It should be observed that the key distinctions being made here are not between groups with permanent personnel and those that use volunteers or whether a group expands by plan or by informal convergence of persons. These distinctions, important for other purposes, are less crucial here. Instead, the basic difference being stressed is that between groups which have an actual and functioning existence prior to a disaster and those groups whose very existences are generated by an emergency situation (see Quarantelli, 1970).

Type I Organization

Type I groups typically are those we designate--at least in sociology--as complex organizations with a bureaucratic structure (see Haas and Drabek, 1973). Para-military formal groups, such as police and fire departments, best exemplify these kinds of organizations. However, public utility companies, general hospitals, and many city government departments are, in varying degrees, "birds of the same feather." In pre-disaster situations, these groups have a fairly clear-cut line of authority, specific tasks, designated channels of communication, and explicit decision making roles (for specific studies of these organizations see Brouillette, 1968; Warheit, 1968; Kennedy, Brooks and Vargo, 1969; Quarantelli, 1970; Blanshan, 1975).

Of particular interest is that often these organizations seem to attempt to adhere to major regular activities as much as possible even during a major community emergency. Along some lines, there is relatively little change in the behavior of these organizations. Typical, for instance, is the effort in a disaster to confine their tasks to the tradition. The telephone company tries to concern itself with only phone service and very closely related activities. If, at the height of the emergency, a police or fire department is forced to engage in search and rescue, there is an effort to revert back as quickly as possible to the regular work of maintaining security or fighting fires. Whether intended or not, such restriction of activity has the consequence of helping to prevent disaster demands on Type I groups from outstripping organizational capabilities.

Typical too is that these groups try to depend almost exclusively on their own full-time personnel. A few such organizations may, at the height of an emergency, supplement their work force with volunteers, who are released as quickly as possible. Or, if volunteers continue to be used, they

are shifted to the control of non-Type I groups. For example, in one disaster studied by DRC, the fire department, after initially and literally accumulating a large floor full of volunteers, sent them home or to the local civil defense agency. Sometimes, as in the instance of electric and gas companies, a Type I expansion occurs through borrowing of personnel from similar organizations outside the community, rather than through the incorporation of local volunteers. Such actions would seem to be a function of the required technical skill needed to operate in these kinds of organizations. The flying-in from afar of physicians and nurses to local hospitals would appear to be another illustration of this point. Whatever the reason, Type I organizations attempting to restrict themselves to traditional tasks even in an emergency, tend to use only their own personnel, or almost identical personnel from similar groups elsewhere. It is perhaps of interest in this connection that the master disaster plan of the telephone company visualizes technicians in many positions as interchangeable as material parts, irrespective of the section of the country in which the emergency might happen.

As was said earlier, Type I groups seem to change relatively little during a disaster. Perhaps this should be qualified to say that there appears to be little change in that the permanent (or interchangeable) personnel continue to undertake the regular tasks of the organization. Nevertheless, in an emergency there often are in these groups varying kinds of internal structural rearrangements. Decision making, for example, tends to occur at lower levels in the hierarchy than is normally the case. A number of the DRC in-depth studies have focused particularly on ascertaining such internal organizational changes and the conditions underlying them. We do not have the space here to depict this part of DRC's research (see Dynes, 1975). Let us merely say that whatever the internal changes and conditions responsible for them, they seem to allow these organizations to function in approximately the same way in both the pre-disaster and emergency periods. It is certainly the experience of DRC that Type I organizations do not often undergo great stress. In most cases the demands of a disaster seem as well met as everyday demands. The exceptions appear to be in those instances where the Type I organization attempts to assume non-traditional tasks and in that sense accepts new, rather than merely traditional demands on the group.

A final word on Type I groups that we hope will not be confusing, although it adds to the complexity of what we are discussing. While we have used particular examples of such organizations (e.g., police departments), it does not follow that all specific concrete instances of similar name or activity are necessarily Type I groups. Obviously a one, two or three-officer police force in a small town is hardly a complex organization. In fact, in most cases there is no collective entity. Some police departments are simply not groups, but just a person or two playing particular occupational roles. In other words, one cannot identify a Type I (or for that matter a Type II, III, or IV) group solely by label or by the normal functions of particular persons. Rather, the existence and classification of each specific group is a matter for empirical determination.

Type II Organizations

Type II groups are often, although not exclusively, those known in sociology as voluntary associations. Some examples of these would be typical Red Cross chapters, Salvation Army units, some sheriffs' departments, many local and state civil defense agencies, and a few church welfare auxiliaries (for specific studies of these organizations, see Anderson, 1969; Ross, 1969; Dynes and Quarantelli, 1975; Adams, 1977). These are groups that generally have a small, central, permanent core of workers during non-emergency periods. Furthermore, these groups have certain traditional tasks, but during routine times the tasks are not directly related to existing or current community emergencies. For example, local Salvation Army units in their day-to-day activities frequently house and feed the indigent, conduct religious services, man centers for rehabilitation of alcoholics, provide assistance to unmarried mothers, and so forth.

However, and this is crucial, Type II groups have a latent emergency function; apart from their manifest activities in day-to-day community life, it is clearly expected that these groups will become active in a different, general way in disaster operations. In one sense, they can be seen as social nuclei with stand-by functions, kinds of community mechanisms ready to be activated to deal with anticipated needs in large scale emergencies. Thus, when a disaster occurs, these pre-emergency groups provide the name and the permanent workers--the core of new, emergent groups. In the transformation, two basic changes occur.

The first basic change is that the new group is considerably larger than the old core. Great numbers of persons, not working members of the group in normal times, join in the activities of the permanent staff or cadre. Many of the joiners may be volunteers, as in the case of the expansion of local Red Cross chapters during a disaster. This, however, is not always the case, as can be seen in the instance of some civil defense cores which incorporate, by plan, other governmental personnel at the time of an emergency. Very often the regular, permanent staff becomes but a small fraction of the total number of workers operating under the group label during the disaster. The bulk of the work is actually carried on by the new members. In one disaster systematically studied by DRC, the ratio of informal volunteers to full and part-time professional Red Cross workers was at least 10 to 1, at times almost 20 to 1.

The other major change is that the latent emergency function of the association is activated with a consequent undertaking of traditional although not everyday tasks. In some cases, major everyday activities are temporarily laid aside. Thus, during a natural disaster local civil defense agencies will cease concerning themselves with the enumeration or stockpiling of fallout shelters and Red Cross chapters will suspend their training classes in first-aid, water safety, and home nursing. In the case of other groups, traditional emergency tasks will be given as much attention as traditional routine activities. For example, a Volunteers of America mission will continue to run its home for the aged but it may also participate extensively in disaster relief work because it has done so in the past in that community. A sheriff's department with mobilized auxiliaries may continue to patrol for traffic violators in a rural county, but also assume, as might be legally required, the formal control of the overall emergency response.

Type II groups typically have many problems in a disaster. They are often among the organizations that the DRC has found to undergo the greatest stress in an emergency. There are undoubtedly many reasons for this, but three factors seem to be particularly involved.

First, these groups, unlike Type I groups, change both their overall structure and function at the time of a disaster. Although the name remains the same, it is a new group that emerges with partly "new" personnel carrying out traditional but normally latent tasks. Changes in social arrangements are not easy under the best of circumstances, but these groups have to make the transition under very difficult conditions.

In the course of transformation from routine-oriented groups to emergency-functioning groups, Type II groups may undergo intensive and extensive changes in both internal structure and external relations. This can be observed when many state and some local civil defense units incorporate either state or city governmental workers into their disaster activities. In these cases permanent core personnel occupying pre-disaster positions of moderate supervision over a limited few are often elevated during the emergency to near the top of the governmental hierarchy and with legal authority over many. This change in status can be the occasion for difficulties if incorporated persons or groups are unwilling to accept the fact that they have come under different authority positions during the emergency. This is merely one illustration of the kind of problems that can arise as a result of the structural changes Type II groups undergo.

Furthermore, the carrying out of the emergency functions of Type II groups often necessitates the use of personnel who for various reasons are relatively ineffective. For example, all Type II groups tend to suffer from the fact that most of their temporary members in the expanded groups typically lack skill in performing their newly assumed work roles. This is not surprising. Volunteers or draftees, teenager or housewife, generally lack knowledge and prior training for the disaster-related work they attempt to do. To be sure, some Type II groups such as the Red Cross make major efforts to train at least their official volunteers. Even such training, however, cannot give all the emergent group members the experience of working together. That is, Type II groups have an almost inevitable problem in that their members, including both permanent core and temporary workers, have had no common experience in actually carrying out regular emergency functions.

The second reason for the great stress Type II groups usually undergo in an emergency is that the boundaries of these groups are generally very vague during emergency periods. In fact, persons may be operating in the name of civil defense or the Red Cross, for instance, and actually carrying out latent emergency tasks of such groups, without the knowledge or at least control of the permanent core. We have personally observed in several disaster settings the bewilderment of regular civil defense personnel when they suddenly learned that some subgroup, of which they had not even been aware, was acting in their name. We should inject, incidentally, that in all cases of such behavior of which we are aware no malicious intent ever seemed to have been involved. In fact, in one disaster the local civil defense

discovered several smaller groups taking supplies out of warehouses and stockpiles in the name of civil defense; but, these groups were actually leaving requisition notes to indicate the full legitimacy of the act of breaking in and removing the supplies. This is an extreme case of initial lack of awareness and control by Type II groups of activities carried out in their name. However, it is not rare for the professional workers in a local Red Cross chapter, for example, to have little knowledge about what the mass of both official and unofficial volunteers who associate themselves with the Red Cross in a major disaster are doing for the chapter and in its name.

On the other hand, there sometimes is a tendency for the core of Type II groups to try to extend the boundaries of their groups, to identify as being within them anyone whose work related to their latent emergency functions. Thus, in one disaster studied by DRC, a local civil defense director attempted to label all governmental emergency activity as being performed by civil defense. Yet, clearly many of the officials involved were acting solely in terms of their formal positions in established groups and not as nominal members of civil defense. Almost all working groups try, of course, to obtain credit for their activities in a disaster. But Type II groups are particularly vulnerable to attempts to maximize a claim for reasons we will not examine here. The consequence is a tendency to identify as activities of the group emergency tasks really being carried out by other groups, representative of other groups, or individuals operating on their own.

Another reason for the high incidence of stress for the Type II groups is that the latent but regular emergency functions for these groups are usually quite vague and general. At times, even a formal directive may be no more specific than a charge "to coordinate disaster activities" or "to help disaster victims." This lack of specificity appears to have two consequences. First, unlike Type I organizations, who retrench to regular routine tasks as soon as possible, Type II groups seem vulnerable to going beyond even their usual latent emergency tasks.

Thus, in one disaster DRC studied, the Salvation Army engaged in a massive feeding program, a rather unusual activity for that particular group. Second, the vagueness of emergency tasks may lead several emergent groups to attempt them almost simultaneously. In another disaster studied by DRC, the Red Cross, the local civil defense, and the Salvation Army were all involved in putting together a list of missing persons. Note that in both examples given, the tasks attempted were important and to be anticipated at times of community disaster. These and other cases suggest that perhaps there might be some advantages to the vagueness and generality of latent emergency functions of Type II groups. Perhaps this is a way that communities have evolved to ensure major disaster problems will be met, even though stress is generated for particular groups.

It might strike some of you as odd to talk of the Red Cross or civil defense as emergent groups. However, if you ever had the experience as we at DRC have had of trying to match systematically the structure of such groups, first before and then during an emergency period, you will find the idea not at all unusual. In certain disasters, the only common element

between the groups in the two time periods seems to be that the same label for purposes of identification is being used, but the personnel involved and what they are doing have changed drastically. The group in what we call Time Period One (the pre-disaster period) and the group in Time Period Two (the emergency period) is often different both in degree and in kind. In that context, we believe it is useful to think of a new group emerging, with the old group providng the name as well as the same core or cadre of personnel.

Type III Organizations

Type III groups are probably the most numerous of all in large scale disasters. Sometimes they do not stand out as clearly as other groups because their members frequently work in conjunction or intermixed with Type I or Type II groups. Thus, a citizen's band club may help staff or actually provide the operators for a local civil defense communications network; a church group may assist in staffing and operating a shelter under nominal Red Cross supervision; or a veteran's post may provide auxiliaries to supplement or relieve the State Police in the task of traffic control. Much more rarely, a Type III group may operate independently of other groups, as when a fraternal order sets up its own clothing distribution center.

In such situations the participants are primarily acting on the basis of their pre-disaster group affiliations. These people are, in fact, involved in emergency activities because of their group's formal or informal participation. We are not talking here about isolated persons acting as individual citizens helping out complex organizations or associations, but rather, when participation in emergency activities is part of a group activity. Sometimes this is explicit, as when a church offers the services of all the nuns in a city or a high school releases students from classes to build dikes. Clearly in such cases of quasi-drafting, participation in the emergency community response is the result of pre-disaster group membership.

Because it is vital to understanding the nature of Type III groups, let us partly restate the point just made. When we talk of a Type III group, we refer to a collective entity, not to persons from identifiable groups acting as individual volunteers. For example, Boy Scouts can frequently be found serving as messengers at disaster headquarters. However, in such cases, they are rarely acting as members of a particular Boy Scout troop. Rather, they behave as individual Boy Scouts who happened to volunteer for work with the local civil defense agency and not as members of a functioning, separate group of Boy Scouts. It is different from, say, a building contracting firm using its own personnel and equipment as a unit to remove debris from highways. Our interest in this discussion is focused on the latter kind of phenomena.

What is the selective factor at work creating Type III groups? We at DRC have not yet established what it is, but we would like to offer two impressions. Groups with a normal time "Public service" orientation often seem to become Type III groups. Thus, not all fraternal clubs come to participate in emergency responses to disasters, but primarily those with

everyday general humanitarian goals or those with a history of public service to the community at large. We suppose it might be said that there is some sort of cultural expectation that such groups "do something" at times of disasters. Possibly also, the makeup of the group in normal times might be a factor. Groups whose members have close interpersonal ties with one another seem to be disproportionately represented in the Type III category. This is, while such groups may have a formal structure, they are also characterized by the presence of strong personal social ties among their members.

Obviously not all community groups join in the effort to cope with a major disaster. As Barton (1970) has pointed out, many groups, even of a highly formal sort, cease operations in such a situation. Many business firms and schools, for example, simply close down. They neither attempt to carry on their usual tasks, nor can they shift, as do Type II groups, to latent emergency tasks (for as groups they have no such latent functions).

Type III groups--although they do not have manifest emergency functions--do play a part in responses to natural disasters. Generally, they engage in non-regular tasks. These tasks may be routine or traditional for other groups, but they are new for Type III groups. For example, certain Type II groups regularly shelter disaster victims, but it is an innovation for churches not only to be used as shelters, but to be staffed by members of the congregation.

Type III groups particularly seem to present some problems for the other groups with which they often work. One high official interviewed by DRC field workers once noted that his own association had been immeasurably assisted by the help rendered by literally platoons of nuns who supplemented his own work staff. However, as he somewhat wryly observed, "even ministering angels in white can present a few difficulties." Part of what is involved seems to be that while Type III groups often work in conjunction with Type II and I groups, they do not really come under the effective control of the latter. Type III members frequently remain primarily oriented to their own group affiliation. The potential for disagreement and conflict in this is obvious.

Type IV Groups

Type IV groups are by far the most difficult to discuss. They have no pre-disaster existence and they dissolve when the emergency is over. Usually, although DRC has found exceptions, these generally small and ephemeral groups bear no name. Typically, although here also there are contrary cases, the groups develop no clear-cut structure. Yet they do emerge in large scale disasters, if not in most major community emergencies, and play a crucial part in the collective response (for specific studies of these groups see Parr, 1969; Quarantelli, 1970; Forrest, 1974; and Taylor, 1976).

Before attempting to clarify the nature of these groups, let us note that there are three kinds of disaster conditions that seem to generate them. Sometimes as a result of a potential or actual community emergency,

there is a lack of coordination between the major groups operating in the situation. There also may be no overall control of the various activities going on, or the community may lack information as to the nature of the threat with which it is being confronted. In short, the three key conditions that seem to generate Type IV groups are lack of overall community coordination, control and information. Let us explain further.

Apparently, in all major disasters, usually in the early hours of the emergency period, there occurs a meeting. This meeting typically involves representatives of the major groups as well as informal leaders most active in disaster-related activities. Their coming together seems generated by a "community need" to coordinate, control, and become informed about the diverse, multiple, and frequently overlapping emergency activities being attempted. The nature of the disaster does not seem to be a crucial factor, for DRC has noted such meetings in as highly divergent disasters as explosions, earthquakes, hurricanes and floods.

Important for our purpose is the fact that some sort of a group often emerges out of such a meeting. The participants develop some sort of understanding about their relationship to one another, including the matter of authority, and their overall objectives, including the issue of priorities in courses of actions to be followed. In one sense, such emergent groups are almost ad hoc committees developing their rules of procedure as different problems arise. If thought of in this way, it can be seen why Type IV groups are classified as emergent groups with non-regular tasks.

Let us cite some specific examples. In one disaster studied by DRC there emerged a core goup consisting of the City Engineer, the Planning Director, and the City Building Inspector (plus partial participation by representatives of other groups). Operating out of the Engineer's office, the core members for three days coordinated almost all the emergency responses in a city and county area. The group that emerged had no prior existence, had not been planned for, and engaged in tasks that had not been anticipated in that community.

In still another disaster studied by DRC, five men constituted the emergent group primarily engaged in maintaining overall community control of emergency operations. The city Chief of Police, the civil defense director, the County Coroner, a State Police officer, and the County Sheriff emerged as a new group in that situation. Without any prior planning, and agreeing among themselves that the legal definitions of authority did not have to be strictly adhered to, this group issued orders and controlled the movements of all groups in a very large metropolitan area responding to the disaster.

In some disasters, certain groups emerge that might appear superficially to have a very concrete and delimited task, and, as such, not carry out equivalent activities to the coordination and control functions we have just mentioned. We have in mind the sometime self-labeled "search and rescue teams." These groups are conspicuous in the early stages of a catastrophe, and typically are composed of persons with formal and informal

membership in a vast variety of pre-emergency groupings. In one disaster studied by DRC, the core of a very key emergent group of this kind consisted of a city building inspector, the manager of a bill collection agency, a business agent in a union, and a skilled construction worker.

More important than diverse group composition however, is that from a broader perspective, such groups can be seen as gathering and assessing information about the state of the impacted community. That is, apart from what the group sees itself doing, it is actually providing an information input that is crucial before overall community emergency responses can be fully generated. Prior information about casualties, property losses, and continuing secondary threats is clearly necessary for coordination and control of a collective effort to cope with an emergency. In other words, from the community level, search and rescue efforts really provide an information feedback on how badly the community has been damaged by the disaster. It is of interest in this light to observe that the four man "search and rescue" group mentioned above named themselves at different points during the emergency the "damage control group" and the "disaster control office."

One would have to exercise a tremendous amount of imagination to see such kinds of "search and rescue teams" as anything other than emergent groups. Participants may have and sometimes have had personal links before the disaster, but they have not operated together as a functioning work group. The relationships of the members and the norms governing their behavior evolve as they work together. The activity itself--narrowly seen as searching for victims, or more broadly as an information input to the community--is clearly a new requirement generated by the disaster. Again, it should be clear why Type IV groups are classified as emergent groups with non-regular tasks.

The DRC data barely hint at the number and possible sequence of emergence of different kinds of Type IV groups. There is some indication, however, of shifts in kinds of membership as the immediate emergency passes. For instance, it is as members of Type IV groups that representatives of state and federal agencies sometimes play their greatest part in disasters. That is, generally speaking, extra-community public and governmental organizations seldom send large blocs of their own personnel to a disaster site. Whether it be the Federal Disaster Assistance Administration, the Small Business Administration, the U.S. Public Health Service, or the office of the state governor involved--the number of their representatives on the scene is very small indeed. Most times such persons merely attach themselves to a local Type I group.

However, there are times when representatives of extra-community organizations join together with certain local community officials. Whether formalized or not, together they act almost as an ad hoc committee dealing with longer-run relief and rehabilitation problems in the community. In this sense, such emergent groups could be viewed as being Type IV.

Other researchers have also commented on the emergence of these kinds of groups. Prince (1920) in the first systematic study of community disaster almost half a century ago, noted how a Citizens Relief Committee, helped by outside experts, emerged and took over most of the rehabilitation activities after the Halifax explosion. Barton, in his more recent review of the literature (1970), alludes to a number of other similar cases of both a formal and informal nature. The observations of both Prince and Barton that the emergence of coordinating groups in disasters is not a peculiar feature of American society, is likewise supported by a DRC team, who found an excellent case of a coordinating group at the national level after the 1964 Chilean earthquake.

Interrelationship of the Four Types

We indicated earlier that the presence or absence of all four types of groups might be used as a possible indicator of the magnitude of the disaster that a community is undergoing. Let us quickly add that the remarks that follow are far more speculative than what we said earlier (but see Wenger and Parr, 1969). We cannot help but feel that there is some kind of relationship, direct or indirect, between the types of groups we have discussed and the degree of threat or danger that faces a community. It is the community system we are discussing here, not individuals or even organizations.

We believe it can be said that if only Type I organizations are in operation, there is no community emergency. In a way, Type I organizations represent the first line of defense against community-wide threats. To the extent such organizations alone can cope with the danger, the bulk of the on-going routines of community life can continue. Thus, even simultaneous traffic wrecks or concurrent fires in a metropolitan area can be readily handled by the local police and fire departments, general hospitals and several of the utility companies. No other groups need get involved to maintain normal community activities. If the established organizations with manifest emergency tasks can handle the difficulties, there will be no community-wide problem, and, in this sense, no real disaster in that system.

The indication of at least a minor community disaster is suggested by the presence of Type II groups carrying out latent emergency tasks. For one thing, Type II groups are the second line of defense, or stand-by social mechanisms, available to cope with anticipated community needs in the event of danger. The activation of such groups is an indication that Type I organizations carrying out traditional emergency tasks are unable to cope with the threat to the community. In addition, the moving into action of Type II groups, their emergence as new groups partly disrupts routine community life. If Type II groups operate on any scale, they have to incorporate persons (either volunteers or draftees) who would otherwise be carrying out their everyday roles.

When Type III groups get involved in the activities mentioned, it is an indication that the normal and stand-by social defenses of the community have not been enough to contain the threat. The community has had to

mobilize other groups besides those specifically geared, at either a manifest or latent level, for possible emergencies. In fact, the presence of Type III groups means that an attempt is being made to utilize existing groups for new and unanticipated problems threatening the community. Conversely, Type III groups can become operative in emergency operations only because, whatever the danger, it makes their normal activities irrelevant, unimportant or temporarily expendable under the new circumstances. Looked at in either way, there clearly is substantial disruption of many community-wide routines. At a minimum, community use of Type III groups suggests a disaster of moderate proportions.

The emergence of Type IV groups, however, seems a clear indication that the community is undergoing a major disaster in that it was found necessary to create or develop new groups for new community-wide required tasks. Apparently in certain situations the threat to the community cannot be handled by established groups (even with some of them assuming new tasks), and they must be supplemented by emergent groups with latent emergency tasks. In one sense, if Type IV groups emerge, it can be said that there has not been anticipation of an emergency task and consequently of the necessity of a particular group to carry it out. Somewhat metaphorically, we might say that in a major disaster necessary community tasks seek groups, and Type IV groups emerge to meet that need.

There is one important planning implication in what we have just noted. Perhaps planning ought to be directed towards reducing the necessity for Type IV groups and decreasing the problems of Type II groups. Some of this, incidentally, happens through experience. Although DRC data on this are quite limited, we have observed the following. In one area, a Type IV group involving the same personnel was generated a number of times by a series of recurrent threats and dangers to a community. This group now seems to be evolving into at least a semi-Type II group, that is, an established group with an identity, name, and sets of expectations of how the members will respond in a future emergency. That amount of change in community organization is in process.

Our discussion of the presence or absence of the four types of groups as an indicator of the magnitude of a disaster is clearly an attempt to go beyond identifying a disaster as simply a physical event. For most purposes, physical phenomena such as a tornado funnel, the water in a flood, the shaking land in an earthquake, the wind and water in a hurricane--all these things have limited usefulness for identifying the human and social problems associated with such phenomena. We have suggested defining a disaster for this purpose in terms of the collective responses of a community, believing this will be more productive for our interest in social rather than physical phenomena (see Quarantelli, 1977).

Proceeding in this way we could also ask: Is the magnitude of a disaster correlated with the degree of stress a community is undergoing? Obviously, the answer to this should come from research rather than speculation (see Mileti, Drabek and Haas, 1975 for a discussion of the limitations of disaster research up to the present time; however, see also Wenger,

1977). But leaving that aside, it seems reasonable to suppose that there is some correlation. If stress is thought of as a relative imbalance between demands imposed on a community by a danger and the capabilities the community can muster to cope with the threat, some points would seem to follow. For example, the presence of Type IV groups (emergent groups handling unexpected tasks) certainly suggests that demands must have at least temporarily exceeded capabilities.

In conclusion, the complex organizations and the voluntary associations that operate in disasters (our Type I and II groups) are relatively easy to see and to find. They have a pre- and a post- disaster existence of some kind, a name, relatively identifiable members, and so forth. Consequently, they become the focus of attention both in theoretical research and in practical planning. Our previous remarks are intended to suggest the usefulness of a somewhat wider perspective. That the phenomena is difficult to study and does not lend itself well to control is hardly a valid reason for ignoring it. We would in no way suggest any less attention to Type I and II groups (though our knowledge and planning about them is little enough), but simply urge more attention to Type III and IV groups (where our knowledge and planning is almost non-existent).

We turn now to a discussion of how disasters change the contexts in which the aforementioned groups and organizations must operate. The consequences are, however, different for entities that have a preestablished or old structure and those that have an expanding or new structure.

ORGANIZATIONS WITH PREESTABLISHED OR OLD STRUCTURE

For those organizations that have a predisaster existence, it is important here to see that the disaster event itself creates a radically different context for organizational activity (see Dynes, 1975). In most instances the disaster event will create a sharp increase in demands made on such organizations, but it also creates conditions that produce a drastically changed external environment in which these demands must be met. To understand this new context, let us discuss initially five dimensions that are "new" as a result of the disaster event.

1. Immediately after impact, organizations have to operate under conditions of great uncertainty. They cannot automatically react to increased demands since they have no real knowledge of them. Uncertainty is a constant in every organizational environment. However, a disaster event initially provides only a tentative suggestion as to the scope of its impact. Thus an organization has little knowledge as to the magnitude of its future tasks. In addition to the uncertainty of the nature of the demands, organizations may also experience uncertainty as to the status of their own personnel and material resources as well as to the status of other organizations on which they depend.

2. Organizations have to operate under conditions of urgency. As a result of the uncertainty and the probable increase in the tasks which the organization must accomplish, tasks which nominally could have been scheduled, routinized and delayed have to be reevaluated. Routines that develop out

of the predisaster organizational experience may now become unnecessary luxuries. For example, the procedures for making decisions in an organization may be found unworkable since they are predicated on the presence of and the consultation among specific organizational members. Such optimum conditions for decision making after impact seldom occur, but the frequency of making decisions increases. Many predisaster patterns, of necessity, are eliminated, abrogated or ignored in emergency activity.

3. Organizations have to operate in the context of the emergency consensus. In the new context, tasks that have previously been an integral part of organizational effort are eliminated for the "duration" and other tasks become the central focus. Most community organizations have multiple functions. They are engaged in many different types of tasks in order to achieve diverse ends. Some functions become extremely relevant after disaster; others become irrelevant. For example, handling traffic offenses may be an integral part of the predisaster activity of police departments, but almost always is suspended during the emergency period. It becomes relevant only when such offenses impede the restoration and maintenance of essential community services. This means, then, in such situations that personnel whose normal duties concern these functions have to be "withdrawn" since their activities do not "fit" the priorities of the emergency consensus. These personnel, then, become engaged in activities with a higher priority, but such activities have only limited continuity to the particular predisaster activity of such personnel. Certain organizations cease functioning entirely during the emergency period since they do not have relevant tasks in terms of the emergency consensus. The same is true of certain subunits of organizations. Just as those organizations for which community expectations do not exist for their involvement may seek to become involved (e.g., Type III groups), subunits of Type I organizations may be without their traditional functions and predisaster activities (see Brouillette and Quarantelli, 1971). Shifting these personnel to new tasks necessary in terms of the new consensus may radically change the predisaster patterns within the organization.

4. Organizations lose autonomy in disaster conditions. In predisaster conditions organizations have differing degrees of autonomy, i.e., an ability to control the organizational environment so that significant activities can be internally determined. In a disaster organizations have to operate in a larger community context in which established relationships have to be reworked since they cannot be assumed. The same loss of autonomy is evidenced in the subparts of the organization. The detective bureau of a police department which, previous to the disaster, had a great deal of autonomy, comes back into the organization in the sense that the predisaster understandings which give the bureau a degree of independence are no longer extant (for police in disaster, see Wenger 1970, see also Rosow 1977).

5. The basis for participation within organizations is changed in disaster conditions. Etzioni (1964) has suggested that the reasons why individials follow organizational directives can be explained on the basis of three types of compliance. The first type is based on compliance as a result of coercion--individuals who are participants in prisons and custodial mental hospitals illustrate this. The second type of compliance is utilitarian, in which the person participates because of remuneration--most

workers operate on this basis when paid for their efforts. The third basis is normative, in which participation is a result of the belief that the demands made by the organization are legitimate--this type of compliance is found in religious organizations, universities, voluntary associations as well as certain political organizations. For most of the Type I and III organizations, compliance prior to the disaster in general is utilitarian but, under disaster conditions, the basis of compliance shifts toward the normative. In other words, the members of organizations participate on the basis of accepting the directives of the organization as legitimate. Questions of whether they "have" to do something, or whether they will get paid for doing something are irrelevant, and the involvement of personnel is cast in terms of the necessity of their participation in accomplishing certain tasks.

These five dimensions represent radical shifts in the environmental context for the functioning of organizations during the emergency period. Taking these dimensions and their implications, we will look at organizations attempting to cope with increased demands in the context of uncertainty, urgency, a "new" emergency consensus, loss of autonomy and a changed basis of compliance. We can only briefly suggest the specific implications here. Every organization develops certain patterned ways of carrying out its tasks, ways of communicating within the organization and describable patterns of authority and decision making. It is also useful to think of an organization as complex, consisting of several units, some of which may be more affected than others in the disaster involvement.

In general, a disaster event will have the following consequences for groups with a pre-established structure. Certain aspects of its previous activities will become less important in its disaster functioning. For example, the routines which it has previously developed to accomplish its tasks will be disrupted and traditional lines of communication and authority will be abrogated. Decision making will involve different processes and people than previously. On the other hand, there will be a significant increase in activities which are related to communication and coordination. There will be greater concern for defining the boundaries of the organization. Certain segments of the organization will become more crucial to the functioning of the organization than they were in predisaster functioning. We think it useful to treat such consequences in terms of the dimensions of the "new situation" which the disaster creates. While they will be treated here abstractly and in isolation, in most instances, several of these factors would be involved in effecting change.

UNCERTAINTY

In its predisaster activity, over time an organization develops certain characteristic ways of achieving its tasks. In general, community service organizations have more diffuse organizational goals than do production organizations. When a disaster event occurs, the goals of the organization tend to be relatively vague, either because these are implied and seldom actualized or because it is difficult, in the uncertainty which is created, to know how predisaster activity can be accomplished. (In certain organizations, such as businesses, uncertainty may create doubt whether the

organization can continue in such a drastically altered context). However, most community service organizations are expected to act in some fashion. Organizational members have accepted the notion that the organization should be involved; this is reinforced by the expectations of other community members.

Uncertainty works in two directions: first, it provides the conditions whereby an organization becomes involved; second, it provides the impetus for certain shifts in the predisaster patterns of the organization. In addition to the diffuse "obligations" of the organization to become involved in disaster-related activity, uncertainty produces psychological strain on organization members. In order to overcome this strain, one common response is to "do something." With such motivations, organization members often commit themselves to activities which have little relation to their predisaster activities or to the role which the organization has defined for itself in disaster. Individual commitment to particular activities as a defense for uncertainty then often leads to organizational commitment. If an individual becomes involved, the person may request help from other organization members and from the resources of the organization. Such requests then provide other organization members with "something" to "do" since they feel the same urgency to act. In addition, the involvement of individuals in specific disaster tasks often fosters organizational involvement. Since the individual is a member of the organization, there are certain obligations toward that person. The resources of the organization, not committed, may be diverted in support of the actions of this member. Once committed to a particular line of activity in such a way, an organization may find it difficult to divest itself to the "responsibility" and to concentrate its resources in other directions. Also, such involvement tends to preempt this sphere of disaster activity so that other organizations move in the direction of different unmet community needs.

Uncertainty leads to involvement of organizations in another way. The existing organizations have readily available personnel who possess organizational loyalty and can be mobilized quickly and effectively. Though these resources are ready and waiting, only the organization has knowledge of its task which is based on the reports initially received. If they wait for a clarification of the situation so their role and tasks can be clearly defined, they run the risk of being defined by others as not willing to help. This leads to a rather quick commitment of personnel and resources to tasks which are often outside the scope of their predisaster experience or their anticipated disaster role.

Uncertainty also has implications for the internal structure of the organization. Certain segments of the organization become more crucial than others, and certain processes of the organization receive more emphasis and effort. In general, one might suggest that the operational elements of the organization increase in their importance, while those segments which deal with organizational maintenance and administration recede in their importance. This, in turn, affects the relative status of individuals within the organization. Operational personnel become more important in the total operation of the organization. More specifically, uncertainty demands that greater organizational activity has to

be given to gathering information. Certain personnel will have to become involved in gathering information about the changed environment and of the operational capabilities of the organization. This need for knowing often means that predisaster lines of communication can no longer be followed and new lines, emergent in terms of the specific tasks which have been accepted by the organization, have to be developed. They are not developed by design but by expediency.

The authority patterns and the usual decision making processes tend to be replaced by new ones. Because of the impact of the disaster and the difficulties of mobilization for particular individuals, certain personnel involved in decision making may be absent. In addition, the new problems which are faced by the organization may demand a different type of expertise and a pattern of consultation different from the predisaster problems.

In the early emergency phases, when the implications of the disaster are uncertain, there is a tendency to add personnel, either in the sense of over mobilizing the organization, i.e., calling in all shifts, or by "stockpiling" volunteers who may be useful in activities which the organization might find itself at some later time. This addition of personnel in itself changes the structure of the organization and the patterns of its predisaster activity. Such excess personnel affects certain segments of the organization more than others, but in any case, the presence of added personnel as insurance against the unknowns of the environment in many ways creates a "new" organization.

URGENCY

In addition to the uncertainty of the situation, organization members feel some urgency to accomplish those tasks which are as yet still undefined. This urgency is translated into a greater autonomy on the part of individuals throughout the organization. Individuals take the initiative for actions which, according to predisaster patterns, would require and result in extensive consultation with others. Decision making is short-circuited, not involving those who should be consulted but those who happen to be available. Decisions made in this way are often given sanction later in an "ex post facto" fashion. In other words, members of an organization experience an increase in autonomy. They initiate actions which they normally would not without extensive consultation. This autonomy of action is subsequently supported by those in authority as being appropriate for the occasion.

Urgency also affects certain segments of the organization more than others. Because certain segments become less important, such as administrative and other segments devoted to organizational maintenance, those individuals who have predisaster responsibility involving such tasks will have greater problems in determining their own activities. Stated in another way, the more a segment of an organization deals with routine maintenance tasks or administrative tasks, the more problems it will have in mobilization and in functioning during the disaster operation.

EMERGENCY CONSENSUS

One of the major reasons for shifts in the importance of particular segments of an organization is that such shifts are demanded by the emergency consensus which develops (for a discussion of when and how consensus turns into conflict see Quarantelli and Dynes, 1976). Certain tasks normally performed by an organization become irrelevant in this new context. For example, formal admittance procedures in a hospital may be ignored except as they relate to crucial medical information. In certain ways, this tendency may increase the efficiency and effectiveness of an organization, since those aspects of the behavior within an organization which are irrelevant tend to be dropped and efforts then center on accomplishing the immediately relevant tasks.

The emergent norms from the community consensus also tend to override norms specific to the organization with which they conflict. For example, norms specifying appropriate dress patterns for work are neither enforced nor considered relevant. In general, status distinctions which may have been exceedingly important in the activities of the organization prior to the disaster are relaxed and equalitarian relationships become normative. Scarce goods and symbols which might have been the object of competition become common property. Offices which were sacrosanct now become communal property and organizational resources which were carefully conserved become available for use.

While the overall effect of the emergency consensus is to level status within the organization, the importance of certain tasks within this consensus tends to enhance the status of certain segments of the organization. For example, operational groups within an organization often have lower status than do certain administrative personnel. The disaster event tends to increase their worth, and such segments temporarily achieve status and priority in the organization higher than other groups and as compared to normal times.

Shifting in the "importance" of different segments of an organization tends to modify the existing patterns of coordination among the various departments. A segment which traditionally issues requests to another part of the organization finds itself now becoming an "errand" boy. The same phenomenon is observed in coordination among organizations. Particular organizations which have not been essential in the ongoing community process are found to be crucial during the disaster experience. For example, while normal community coordination may involve informal contacts among certain organizations, offices with a specific coordinating function such as civil defense may be almost ignored prior to a disaster but become exceedingly important during a disaster (see Dynes and Quarantelli, 1977). Prior planning for disaster activities often ignores the importance of certain organizations during disaster operations but judges them from their significance in predisaster relationships. In effect, we are suggesting here that the status of an organization or a particular segment of an organization is determined by the closeness of fit between its disaster-related activities and the emergency consensus which develops within

the community. For many organizations shifting status creates a new operating context. Some lose, others gain status during the emergency period. Within an organization certain segments become more important than others and reflect a pattern quite different from their predisaster relationships. This means that patterns of coordination planned for and actually used among organizations and within specific organizations then become disrupted.

LOST AUTONOMY

The norms of the emergency consensus come into prominence during the emergency period and override the more "private" norms of the particular organization. There is also pressure for any particular organization to show that it is properly concerned with the total needs of the community. By placing itself at the service of the community, an organization opens itself to receive direction from, or at least to having to react to, influences outside the organization. Such influences may vary from specific requests from the city government to reacting to the activities of other organizations. All of this implies a loss of organizational autonomy.

In addition, many organizations which have to coordinate their activity with state, regional or national hierarchy find themselves called upon to inform such levels more frequently of their activity, thereby reducing their autonomy. More likely, such higher levels of the organization may send personnel to help the local group. The presence of extra-community personnel on the local scene means that activity comes under their scrutiny and perhaps adds another level of consultations in decision making. For example, the local telephone company may request additional help, or additional help may be sent without such a request. Such help often involves individuals whose normal position in the larger company is superior to any of the local personnel. The presence of such personnel often evokes changes in the traditional ways of doing things.

Within the organization, greater effort and energy must be spent on activities dealing with coordination. In addition, because of the greater permeability of the organization, it becomes more difficult to define clearly the boundaries of the organization--in particular, which members can act in the name of the organization. Since individual members have greater personal autonomy, these members may commit the organization to activities without the advice and consent of the traditional decision makers.

CHANGED BASIS OF COMPLIANCE

We suggested earlier that the basis of compliance shifts from a utilitarian to a normative orientation during the emergency period. This has several implications. Since the individual becomes "totally" involved with the activity of the organization, the organization, of necessity, becomes totally involved with the members. In other words, concern for the total well-being of the worker is manifest as compared with a rather narrow concern during predisaster operation. Perhaps the best illustration of this would be in the instance where the family of the worker is put under the protection of the organization. This may involve responsibility for

shelter and evacuation during preimpact periods or care for family members whose living arrangements have been destroyed or damaged by the impact of the disaster. Such concern and care for family members does, however, tend to divert organizational resources toward specific individuals to which the organization feels an obligation. In turn, such resources cannot be used in more diffuse community activities.

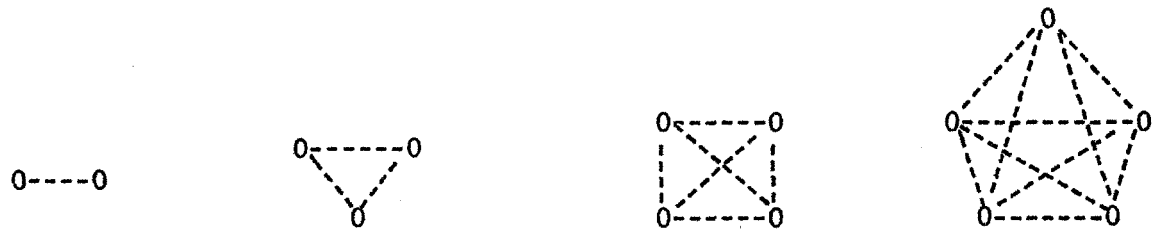
In instances where the organization assumes responsibility for family members, such "benevolence" is often repaid in kind by the family members who volunteer their services and work within the organization. These "family" volunteers then create for the organization the problem of all volunteers (see Dynes and Quarantelli forthcoming). In particular, it necessitates diversion of attention of regular organization members to supervision and instruction of the new personnel. The consequences of this will be seen more clearly in the discussion of the expanding organizations.

ORGANIZATIONS AND GROUPS WITH AN EXPANDING OR NEW STRUCTURE

As we suggested earlier, Type II organizations have a latent emergency function quite apart from their normal day-to-day activities. It is expected that these groups will become active in a different way during the emergency period. Such groups provide the name, a location and a cadre of permanent workers that serve as the basis for operations in a disaster. While Type II groups become involved in a variety of tasks, the common characteristic that we will emphasize here is the expansion of personnel necessary to operate in the disaster context. While this expansion is planned in the sense that it is anticipated, let us suggest that the basic operational problem for such groups is the unanticipated organizational change which occurs with this increase in personnel. A related problem stems from the kinds of changes which are made. Regular personnel move into new and unfamiliar positions within the expanding organization. Other positions are filled with volunteers who have varying degrees of skill and previous connection with the organization. All personnel then are occupying "new" positions and are involved in unfamiliar social relationships.

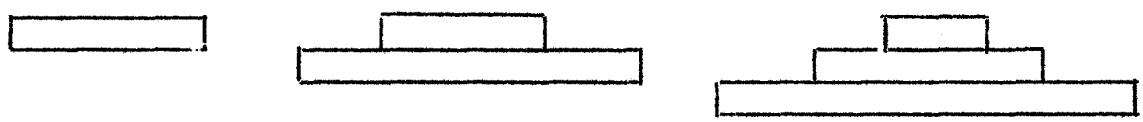
While many organizations grow in nondisaster settings, adaptations to the consequences of growth tend to be gradual. Specific problem areas become apparent and the necessary adaptations are made over time. Most of the organizations that expect to "grow" during disaster operations consider such growth as a necessary condition for the accomplishment of anticipated tasks and have little awareness of the consequences of such expansion for the actual operation of the organization in the emergency period.

Initially, let us discuss some of the sociological consequences of an increase in size of an organization (see Mott, 1965) and then look at these consequences in the context of disaster operation. Possibly the most important effect of increasing size is on the pattern of interaction among the parts of an organization. Stated more formally, as the membership of an organization increases arithmetically, the number of possible channels of interaction increase geometrically. The increase in communication channels is portrayed below. This is based on the sum of all possible combinations--pairs, triples, etc. Also one is added for the possibility of simultaneous interaction of all parts.

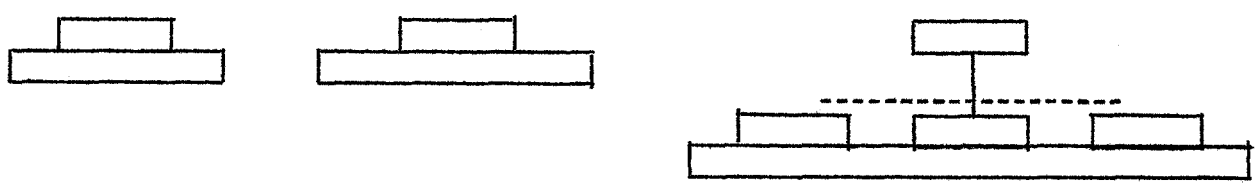


2 persons - 1 relationship	3 persons - 4 relationships	4 persons - 11 relationships	5 persons - 26 relationships

With an increase in size, parts of the organization are differentiated--certain parts do one thing and certain parts do others. In order to coordinate these diversified activities, the parts become arranged into layers of authority. Thus, with an increase in size, there is a tendency to increase the number of levels of authority. This increase in the levels of authority could be portrayed as follows:



In addition, with increasing size, there is a tendency for the ranking systems upon which authority is based to increase. For example, in a small community, a mayor and a small number of personnel under him may "operate" the community. But as a community increases in size, a number of specialists are necessary to become involved in the engineering, financial, tax, personnel, etc., problems of this city. While the mayor may still give orders, such specialists have a considerable influence over the affairs of the city by virtue of their skill and knowledge in these more specialized but necessary areas. This increase in ranking systems can be portrayed as:



While these are only three of the consequences of increase in size, these and others have important ramifications for the operations of an organization which expands. When expansion occurs over a period of time, adaptations are made gradually. With the increase in the channels of

communication, certain ways of communicating become considered appropriate and others inappropriate. In other words, certain norms are developed to specify the appropriate channels of communication. These tend to become formalized, leading to the characteristic formality of large organizations. Too, the coordination necessary for the proliferating parts of the organization is developed. Certain positions are given the responsibility for coordination. In part, this is done by giving certain positions control over other parts of the organization by the power to allocate resources. Over time, the rights and responsibilities become institutionalized into an authority hierarchy. This implies that authority exists in an organization when others in the organization accept the rights and responsibilities of particular positions as being legitimate. Within the same developing authority pattern, accommodation is made for the increase in the types of authority. In more familiar industrial terms, some accommodation is made to the line and staff problems of authority. While it would be overstating the case to suggest that outside the disaster context, organizations which experience growth solve such problems, it is appropriate to suggest that they do develop institutionalized ways of handling them. In most instances this is done by developing rules and more formalized specification of duties and responsibility which become an integral part of the day-to-day operations of the organization. Sudden expansion does not allow time to develop such institutionalized patterns. Nor are these patterns anticipated in the predisaster planning. Expansion is planned in terms of allocation of tasks, with the prime consideration given to more personnel to handle the increasing demands made by the disaster event. The achievement of disaster-created tasks, however, cannot be handled by the simple addition of personnel. Let us look at some of the more specific consequences of these expanding organizations.

1. Accomplishment of Tasks. While earlier we characterized Type II organizations as those which were involved in regular tasks, this was intended to imply that such organizations had latent disaster activities. These activities, however, are not necessarily identical or even similar to the day-to-day responsibilities of organization members. In the first place, in their organizational charter, many of these groups are expected to "assist," "help," "be responsible for" certain disaster-related activities. Both the extent and the limits of these responsibilities are often unclear. For example, if an organization is "supposed to care for survivors," does this mean it is to supply the basic necessities or does its responsibility extend to collecting information about the survivors and to providing such information to others? In this specific instance, it is common for several expanding organizations to begin to collect such information, thus duplicating the activities of the others. In communities without the experience accumulated by repetitive events, "the helping" have few limits. Organizations know they are responsible for doing something but they are not sure of what is included in the "something." In this sense, the anticipated activities of the organization may not be particularly helpful to clarify its actual role.

Too, since the core members of the organization are reassigned to new positions within the expanding structure, the allocation of persons does not mean that they necessarily understand their new roles or are capable

of operating effectively in them. For example, an individual, whose previous position within the organization might have been at the operations level, may be assigned to a position coordinating an influx of volunteers. Even if these sudden responsibilities are clearly understood, this is still no assurance that the person would be effective in such a position. One might suggest that certain individuals may find it difficult to shift too quickly and, in fact, the person's experience in assuming traditional responsibilities might develop a "trained incapacity" to fulfill new ones. This ability to function effectively might also be inhibited if those who have low status within the organization find that their new positions involve supervision of persons holding much higher status within the community. This problem can be important at different status levels within an organization. Form and Nosow (1958: 215) suggest that professionals in organizations using volunteers often find themselves directing volunteers who have higher status in the community.

Plans for expansion, then, usually involve moving regular organizational personnel in new positions with new responsibilities for tasks which may be anticipated but also may be vague. When the plan for expansion is operationalized, regular personnel occupy new roles with unfamiliar and unclear responsibilities and work with others with whom they have had little or no previous contact.

2. Communication. As we suggested earlier, an increase in size increases the channels of communication geometrically. In normal expansion, this problem is usually handled by the specification of appropriate channels of communication. Such appropriate channels are normally specified formally, and the actual means of communication may also be specified. For example, a work group is to report verbally to its supervisor; the supervisor is supposed to report by memo to someone else, etc. In addition, channels of communication often develop informally. The prescribed ways may be replaced or supplemented by widely understood but informal means. In expanding organizations, the formal specification of appropriate channels of communication may be made in planning, but following them requires both knowledge and experience, and the expanding organization has neither. Too, no informal means have developed, since the group has not worked together previously. So, an expanding organization has no channels of communication meaningfully specified either at the formal or informal levels. This means that appropriate intermediate filtering, which protects those in top positions from being flooded with information, is not present.

Openness of communication is also facilitated by the disaster context. The leveling of status tends to open up communications channels that normally would be closed by status inhibitions. A lower level employee, whose normal position within the organization would inhibit one's approach to top personnel, now feels a degree of comraderie with them on the basis of their continuity of experience within the organization. Too, the loss of status symbols, the shifting of personnel to new positions and the influx of new personnel all contribute to a fluid status structure within the organization which accentuates the flow of information along the increased channels of communication (for a general discussion of communications in disasters, see Stallings, 1971).

3. Authority. It was suggested earlier that an increase in size is related to an increase in the levels of authority, necessitated, in part, by the need for control of the newly developed subparts. We can add that, in a disaster context, while more authority levels are needed with expansion, they do not develop easily. In part, they do not develop since prior planning of the expansion usually is concerned with task allocation rather than with the coordinative functions necessary for tasks. The development of authority within an expanding organization is complicated additionally by three other factors. First, there is the intrusion of influence from the community which is irrelevant or even antagonistic to the emergent authority structure of the group. Many expanding organizations anticipate their needs for new personnel and recruits, on a standby basis, those who have emergency-relevant skills. Depending on the nature of the organization, such personnel may possess technical, administrative, medical, public relations, engineering and other skills. While some of the activities these personnel will engage in are related to their predisaster training, their presence within the organization multiplies the types of influence which exist within the organization. This applies even when these persons who possess such influence are not functioning in positions which utilize their particular skills. For example, physicians who find themselves in administrative positions may come to have greater influence on organizational activities than their actual positions within the expanded organization dictates. This may not be due to any overt act on their part, but to the fact that their organizational performance will be evaluated by others, not in terms of the new organizational position but in terms of their more general community status. In the absence of knowledge about the authority of a new position, the more general status of the person will be accepted as a basis of authority. This tends to diffuse the authority pattern, whatever it was.

A second problem of authority is related to the first. Many expanding organizations in most American communities have connections with other segments of their organization on the state, regional and national levels. As a part of predisaster planning, various personnel from other segments of the larger organizations may be dispatched to the local groups as part of its expansion. In the preplanning, such personnel are seen as supplementary and often are supposed to assume positions that are lower in authority than the local person in charge. In other words, they submit themselves to the local authority and do not attempt to impose external authority. However, such personnel, in predisaster and also postdisaster situations, may hold positions in the larger organization that have higher authority than any member of the local cadre.

For example, a state director may temporarily become a member of a local organization and submit to local authority. Even though many of the new personnel would not know nor understand the predisaster position of this state director the permanent cadre would be aware of it and would, in most instances, react to that person in terms of the predisaster pattern of authority relationships. The very presence of the director would necessitate involvement by that individual in crucial decisions and may, in many instances, inhibit the assumption of authority by other permanent cadre members.

A third problem relates to the institutionalization of authority. Influence does not become authority until others accept the legitimacy of the demands of those in particular positions. In other words, the establishment of a new position does not automatically establish a new level of authority. When individuals within an organization accept the notion that the person within the position has the right to order certain things done, authority is established. These conditions are seldom met in an expanding organization because time does not allow this. The lack of experience of working together as a functioning group prior to the disaster event also creates the conditions whereby the authority of the preexisting positions tends to be carried over, either by those within the cadre or by those from other levels of the organization. Those local volunteers who are added for expansion do not have the experience and knowledge of the previous organization so they do not know the previous model of authority. As we have suggested, certain of the volunteers will bring disaster-relevant skills and, in the absence of a clear authority, their personal influence will often be accepted as a basis for authority which may have little relation to the needs for authority within the organization.

The status-leveling consequences of this disaster event also have implications for authority patterns. "Normal" status symbols disappear in the disaster context and the loss of these inhibit the development and institutionalization of authority necessary for the expanded organization. The problems of authority, then, reside in the necessity for more levels to develop within an expanding organization. The institutionalization of authority, however, takes time to develop. In the absence of institutionalization and in the status-leveling context of the emergency period, the preexisting patterns of authority tend to be carried over. These patterns, however, are complicated by the addition of personal influence brought into the organization by various types of volunteers and by the lack of familiarity among those which become involved in the organization. The resulting pattern of authority relationships will seldom follow the preplanning for expansion of the volunteers nor will it necessarily be functional to the tasks created by the disaster agent.

4. Decision Making. In the predisaster functioning of an expanding organization, certain patterns of decision making exist. These may follow the patterns of responsibility and consultation expressed in the formal organization, or informal patterns may have developed with experience over time. Since both the formal structure and the informal relationships change with expansion, such traditional patterns become less appropriate. With expansion, such traditional patterns become less understood among organizational members, particularly among the volunteers. Even the permanent cadre now are shifted into new relationships so they are uncertain of applicability of the predisaster patterns.

In the disaster context, there is an increase in the number and importance of the decisions that have to be made within the organization. The increased necessity for making decisions is further complicated by other factors. Information relevant to the decision making process comes into the organization from a greater number of different points and from a wider variety of sources than is usual. Information received that makes demands on the organization may be suspect in the sense that it comes from unknown

or at least unfamiliar sources. The nature of the information may also have an unbelievable character since it refers to tasks necessitated by the disaster event. Too, the fact that such information is received by unknown members of the organization tends to compound the evaluation process. The openness of communication tends to distort the information since it is channeled through many people.

As a result of these factors, it can be suggested that decision making tends to develop a greater degree of autonomy. That is, decisions have to be made, but the information necessary and the consultative pattern that is normative is not known by those confronted with the need for an immediate decision. Given such circumstances, the tendency is to make decisions on the spot for those who are immediately confronted with this need. Such decisions often commit organizational energies without clear knowledge of organizational resources. Decision making, then, becomes more situational, and decisions are made responding to immediate demands by those who have organizational identity but little organizational responsibility. All of this tends to diffuse the decision making process and results in a lack of coordination among the subparts (for a general discussion of decision making under stress, see Dynes and Quarantelli, 1977).

5. Delineation of Organizational Boundaries. A major problem for an expanding organization is the determination of the organizational boundaries. In most established or even extending organizations, membership in the group is clear. People occupy particular positions within the formal structure and, by virtue of these positions, are able to act in specified ways for the organization. If their actions go beyond the authorization of the organization, there are disciplinary actions available. Expanding groups, however, have little idea of their boundaries. Volunteers have little idea of their responsibilities and organizations have few mechanisms of social control available to discipline their personnel.

Organizational identification on the part of most volunteers is minimal. Their recruitment may be the result of a long-standing connection with the group, but it is often the result of circumstances whereby the person "walks in" and suddenly becomes a member. These volunteers have greater difficulty being integrated into the organization. Form and Nosow (1958: 235) suggest, on the basis of the Flint-Beecher tornado, that "individuals with poorly defined or undefined roles had to improvise so they lost valuable time developing rational responses to the demands of the situation."

In fact, they go on to suggest that, "The help offered by volunteers may be more detrimental than helpful is not properly organized and channeled: it may a) 'overload' existing organizations; b) result in frustration for the volunters since they are defined as unnecessary outsiders when they cannot find a functional position in the disaster system" (1958: 239-240). The motive of the volunteer is to help. With unclear roles often offered, it is diffcult for volunteers to develop organizational identification. Because they are assumed by others to have organizational responsibility, they often make decisions which commit organization resources. In other words, the volunteers are members of an organization but do not know their rights and responsibilities.

The organization, on the other hand, is confronted with an increased number of personnel but has few means of controlling them. There are few policies which govern these workers. The functioning of the organization has to depend, in large part, on the willingness of these workers to continue. Since the availability of such personnel is flexible and may vary tremendously over the emergency period, the development of a comprehensive plan which attempts to maximize energy and minimize fatigue is difficult. Since the activities of many of these volunteers are beyond the scope of observation of the regular members, the ability to define rights and obligations of particular positions is minimal. To do this systematically takes time away from disaster-relevant tasks and would require that time and energy of permanent personnel needed in other tasks be used.

To clarify organizational procedure and to define responsibility would take the time of crucial personnel and would risk alienating the motivated volunteer. The result, however, is that many persons act in the name of the organization with little knowledge of scope and limits of the responsibility and of the procedures which are normative to accomplish the tasks.

While we have been discussing the problems of each of the four types of organizations and groups separately in order to simplify and sharpen the contrasts among them, this should not obscure the fact that the problems which confront specific types of organizations can also be experienced by <u>different parts of the same</u> established organization. Parts of an organization may be differentially affected by operations in the disaster situation. While its preexisting structure is brought into disaster operations, this structure actually may be modified in the organization's activities during the emergency period. Since organizations are characterized by complexity, this means that they have subparts. These subparts, then, may show different responses to the requirements of the disaster event. The direction of adaptation of the subparts tends to follow the pattern of the emergence of the four types of groups. Some subparts of the organization may operate in the disaster context with old tasks and with a structure which is relatively unchanged (Type I). Other sections of the organization may be expanded by the addition of new personnel to cope with the overload of demands made on the organization (Type II). Part of the addition of new personnel may come from within the organization in the sense that the predisaster tasks of particular subparts now may no longer be meaningful and the personnel from these subparts can be utilized in performing new tasks (Type III). Because of the changes within the internal structure of the organization, accentuated by the rearrangements of shifts and the possible loss of key personnel, decision making may be relegated to a new emergent group within the organization (Type IV). (This process is discussed in detail in Brouillette and Quarantelli, 1971).

Illustrating this process, one might look at the operation of a municipal police department under disaster conditions. The communications section may be more likely to continue its predisaster tasks with the same personnel. These personnel possess somewhat specialized skills not easy to reproduce. There are also physical limitations of space and equipment which make expansion difficult. This part of the organization, then, continues operation during the emergency period following the patterns they have developed through working together prior to the disaster event. The patrol

division, however, is expanded by the addition of a number of volunters who assist the regular members in search and rescue, traffic control and security. Each officer may now have ten people to supervize, and the officer in charge of the shift is now operating with a segment of the organization which is ten times larger than it was in its predisaster operation. The detective bureau may suspend its operation during disaster activity, and its personnel, perhaps as a unit, are reassigned to new tasks. Though this bureau has a predisaster existence, it now becomes engaged in new tasks. Because of such shifts within the organization, the predisaster patterns of decision making are less meaningful and a new group of decision makers, perhaps some of whom hold positions without such authority in their predisaster activities, now become involved in this process. In effect, then, the suggestion is made here that subparts of an organization may be affected in similar ways as the elaboration and changes which occur when one views the total organized behavior within a community. Certain groups (or subparts of existing groups) may continue traditional tasks, but other groups or subparts may expand, become involved with new tasks and even emerge to cope with particular problems within the scope of their disaster activity. To the extent that the subparts are modified, they will evidence effects similar to those experienced by total organizations in the same situation of expansion.

A FINAL NOTE

Our discussion has been heavily based on findings from DRC studies of organized responses in disasters in American society. However, some of our other research does suggest important cross-cultural differences in organizational mobilization and activities and interorganizational coordination and decision making at times of mass emergencies (see Taylor, 1977 and McLuckie, 1977). Therefore, the previous discussion, while presenting a generally valid picture of organizations and groups in disasters in the United States, cannot be taken as an across-the-board account of all organized responses in all societies at all times (see also Taylor and Quarantelli, 1976 and Quarantelli, 1976). Only future research in different societies will be able to determine what is genuinely pansocial and what is distinctively American in what we have described and analyzed.

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