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HELPING BEHAVIOR IN LARGE SCALE DISASTERS:
A SOCIAL ORGANIZATIONAL APPROACH

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Disasters are a significant and persistent theme in the mass media in every society. Newspapers give them banner headlines. Radio presents on-the-spot reports. Television uses them to set the tone for the evening news. Movies use them as a basis for plots to feature well-known stars. The reasons for the media preoccupation are perhaps not as clear as the image they present. The image usually focuses on the suddenness of human need, followed by the struggle to mobilize assistance. There is a duality to the image - one part focuses on damage, loss, tragedy and destruction while the other part focuses on heroism, optimism, healing, recovery, altruism and rebuilding. Because of this duality, disasters can become a collective projective test, providing an ambiguous form into which members of the society project their own meanings. Some only see tragedy; others see altruism. Some only see loss; others see opportunity. Some only see the end of aspirations; others see the beginnings of hope and change. Some see the need to help; others see the helping which is needed.

In addition to the projective possibilities which disaster situations offer, they also provide the opportunity for examining types of behavior variously labelled helping, altruistic or voluntary. There is a research tradition on disasters which can be utilized for both empirical observations and ways of conceptualizing such behavior. Most studies of helping behavior in other contexts focus on individuals, looking at ways in which they exhibit such behavior in a wide variety of situations. Such studies are usually concerned with the incidence and prevalence of helping behavior. Differential rates of involvement are often explained by traditional demographic variables, situational factors and by personality-motivational factors. In examining helping behavior in disasters, however, we have chosen to view such behavior in social organizational terms. It is assumed here that since behavior is guided by norms and occurs within the context of certain social relationships, helping behavior in disaster situations is no different than any other behavior.

Some Preliminary Considerations

It is necessary to provide some initial comments about disasters so that the context surrounding the helping behavior under discussion can be identified. The interest here is on disaster as a social, rather than just a physical, occurrence. Since the term disaster has many different connotations it needs to be delimited. Here we will be primarily concerned with those events which are caused by "natural" agents which occur relatively suddenly and which create rather diffuse damage impact. We are interested here in "consensus-type" disasters (as opposed to "conflict-type," such as civil disturbances) and in disasters which occur within the context of American society. Perhaps the prototype would be an earthquake or tornado which strikes a community and produces extensive damage, thus creating a situation wherein helping behavior is both possible and necessary.

More sociologically, a disaster is an event, located in time and space, which produces the conditions whereby the continuity of structure and processes of social units becomes problematic. Disaster agents may differ as to their cause, frequency, controllability, speed of onset,

length of forewarning, duration, scope of impact and destructive potential (Dynes, 1970). Some of these characteristics have consequences for the types of tasks which are created and also affect the ability of the social unit to respond to the tasks.

Disasters can be seen to have a time dimension. Their sequence starts from warning, to threat, to impact, to damage assessment, to rescue, to immediate remedy, to initial recovery and finally to longer-term rehabilitation. Some tasks are more critical at certain periods and the need for particular types of helping action is more critical at some periods than others. We will concentrate here on the middle time phases from impact through the initial recovery.

Disaster impact can also be seen represented in space as a series of concentric circles. At the center is the total impact zone which comprises the area of primary destruction to property, life, resources and organization. Immediately surrounding it is the fringe impact area, where partial damage exists. Surrounding this is the filter zone, through which resources going to the impact area have to pass. The exterior circles consist of the space where community aid is organized, and immediately beyond that is an area which is characterized by organized regional assistance. This spatial pattern provides clues to the differential behavior of populations which have different kinds and degrees of involvement with impact.

While disasters as an event in time and space provide a useful context in which to study helping behavior, an initial caution should be provided here. Popular images of disasters usually suggest that disasters create dramatic need for all forms of assistance. This "need" is seen to stem from overwhelming losses and destruction that result in conditions where the few survivors are overwhelmed until outside help is obtained. This image persists as long as there is a failure to accurately relate losses to resources. It is characteristic to overestimate the impact, e.g., the losses, and to underestimate the resources which are still available within a community after impact. The overestimation of impact is due to the common lack of social mechanisms to quickly inventory sudden changes in community structure, the tendency to become preoccupied with immediate problems and to assume that these are widespread, as well as a tendency to imagine the worst possible consequences in the absence of contrary knowledge. The underestimation of resources stems from the obviousness of loss and the taken-for-granted status of customary resources.

As an illustration, initial estimates of casualties might be 200. If 50 are initially receiving medical attention, it is assumed there must be "more." Of course, even 50 casualties might be "many," but if the event is in a community of half a million, this means that there are 499,950 non-casualties. In another case, 500 damaged houses make considerable debris, but in a community with 10,000 houses still standing plus many other public and private structures still available, this hardly constitutes "total" destruction.

The usual overestimate of impact and the underestimation of still available resources is important in this context since it is usually

assumed that disaster losses automatically create manpower shortages which makes extensive helping behavior essential if the organized community is to survive. An optimum loss situation seldom, if ever, has occurred. A much more frequent problem is the fact that so much manpower is usually available for disaster tasks that it is difficult to utilize it effectively to cope with the tasks. It is this that makes disasters interesting from the viewpoint of understanding helping behavior. This suggests, for example, that, prior to impact, organized communities utilize their manpower very inefficiently in their day-to-day activities. It also implies that communities can, when needed, mobilize tremendous manpower reserves in relatively short periods of time. This, in turn, suggests that there is an extensive reserve of "helping behavior" among individuals and that traditional social structural arrangements can be modified quickly to channel such behavior toward new activities. It is along these paths that our examination will proceed in exploring the research literature. Several initial comments about this research tradition and the disaster literature are necessary.

The Research Tradition and the Disaster Literature

While disasters are often written about, they are less frequently studied. In addition to the immense popular literature based on anecdotes there is, fortunately, a considerable body of social scientific work on which to base our examination. The beginnings of the social scientific interest in disaster can perhaps be attributed to Samuel Prince's study (1920) of the Halifax explosion in the early 1920's. During the 30's and 40's, there was very little work done. After World War II, concern for the consequences of nuclear attack provided some impetus to studies of disaster. In the 1950's, studies at Johns Hopkins University, Michigan State University, University of Texas, University of Oklahoma and at the National Opinion Research Corporation connected with the University of Chicago provided an initial base. In the late 1950's a Disaster Research Group was formed in the National Academy of Sciences - National Research Council. Initially a clearinghouse, this group conducted its own research program with a number of valuable contributions. This group ceased to exist in the early 1960's and in 1963, the Disaster Research Center (DRC) at The Ohio State University came into existence. DRC has focused primarily on organizational response to disaster. Because of its continuity of operations and its extensive field experience, DRC became the predominant research center on social aspects of natural disasters in the world. However, there have been other research programs, notably at the University of Colorado in the U.S., and other centers have developed in France, England and Japan. This research tradition which has developed covers a variety of types of disaster events as well as a diverse research focus. Useful summaries of some of the materials exist in books by Barton (1970) and Dynes (1970). A more comprehensive guide to the range of studies in disaster will be published by the Disaster Research Center. We have used this social scientific literature as the base for our discussion here along with our own observations during the emergency period which have been acquired from field work in a variety of disaster situations.

Helping Behavior in the Context of an Emergency Response

It is difficult to separate our helping behavior, even conceptually, in the response which communities make to disaster impact. This is because helping behavior is so completely intertwined with the total response. In fact, one might view the total community response as an emergent system of helping behavior. We will try to separate it out here by restricting the meaning of "helping behavior" to actions which have as their purpose improving the status of disaster victims and which are not performed as a part of a normal occupational role in an every day social organizational context.

It might be useful here to provide a description of a typical pattern of emergency behavior so that the context of helping behavior can be understood. We are assuming here a sudden impact with extensive, diffuse damage in a middle-sized city. Even if warning has been possible, when impact occurs, its actual dimensions and the nature of its damage are unknown. The initial activities are concerned with developing information as to what happened along with the initial response to the more obvious consequences. In the impact zone, there is rather immediate search and rescue initiated by those who are already in the zone who have minimal injuries. Outside of the total impact area, there is the beginning of convergence of manpower and materials. Emergency organizations have received the initial notification that something has "happened" and begin to inventory and mobilize their resources. Maintaining access to the total impact zone becomes the focus of attention of a number of efforts. Some individuals engage in debris clearance while security forces establish traffic and perimeter control around the impact area. Attention is given to the damage which has occurred to utilities, and efforts are made to restore these services, particularly those that will be needed for emergency operations. After the more immediate consequences of impact are recognized and acted upon, attention shifts to the longer term consequences of impact. If considerable damage has occurred to residential housing, there is activity on every level -- victims, neighbors, agency officials, etc., to provide some type of shelter and feeding operations for those displaced. After some type of initial accommodation is made for the more immediate needs of the victim population, then there is time to direct attention toward the more long-range problems of recovery.

At every stage, the activity going on is an amalgam of individual responses, responses on the part of small groups, such as families, search and rescue groups, debris clearance crews as well as action on the part of emergency organizations within the community, such as police departments and hospitals. Taken together, all of these responses compose an emergency system. Since helping behavior on the part of individuals is so closely tied to other more organized activities within the community, it is essential to see this behavior in a social organizational context.

Studies of Helping Behavior in Disaster

As a basis for this social organizational approach, there exist several studies of disaster situations which provide empirical information concerning certain aspects of helping behavior. Each of the studies cited below were based on random samples of the population in the impact zone and the surrounding areas. Each of the studies were based on situations of massive impact so that they represented rather optimum conditions for extensive helping activity. The studies involve a tornado in White County, Arkansas in 1952, a tornado in Xenia, Ohio in 1974, a flood in Wilkes-Barre, Pennsylvania in 1972, and a tornado in Lubbock, Texas in 1970.

In a tornado in White County, Arkansas (1952), 27 percent of those who were in the impact area had engaged in rescue work (Marks, et al., 1954). In fact, about half the men in the impact area engaged in rescue work. Those who did engage in rescue activity tended to work with others, primarily strangers and/or acquaintances, rather than working with kin or close friends. Their rescue activity was directed toward strangers and/or acquaintances rather than toward kin or close friends. In contrast to the rather extensive involvement in rescue by those in the impact area, only 10 percent of the impact households had one or more members who participated in formal relief activities, while 26 percent of the non-impact households were so engaged. Since the tornado affected a series of small towns rather severely, a nearby town which was relatively untouched became a "medical" headquarters for the area. While virtually none of the impact population donated labor or other assistance to this effort, 13 percent of the non-impact population did. Within the community where the "medical complex" was located, 26 percent of the adult community did engage in some form of aid or offer to aid -- six percent had job related skills, such as former nurses, and 20 percent were volunteers. Most of the volunteers put in from one to six hours of work, most at the time of greatest need.

There is another aspect of helping behavior expressed in terms of providing shelter for victims which are displaced from their housing because of disaster impact. In Xenia, Ohio (DRC, 1974), with massive damage to housing because of a tornado, 34 percent of the population provided shelter for persons the first evening. Of those who provided shelter, 56 percent provided for relatives, 47 percent sheltered friends while 12 percent sheltered acquaintances. (Several families sheltered both friends and relatives, etc.) The need for shelter was massive since 47.5 percent of the families had to leave their houses overnight as a result of the tornado. Some who left, however, did not necessarily have damage to their own homes, but evacuated because of loss of utilities, etc. Of those who did leave, almost 75 percent went to relatives' homes and 19 percent went to friends' homes. About five percent went to motels, less than three percent went to "public" shelters, and two percent to the homes of acquaintances. (Again, members of certain families may have been in more than one location.) These figures indicate the massive amount of help given informally in such situations. It is important to note that most of the shelter was given to relatives and friends rather than to persons not known previous to the disaster. It is also important to note the almost complete lack of dependence on public shelters. In the absence of close friends and relatives, those needing shelter chose motels rather than public shelters.

Much of the helping activity subsequent to impact is channelled through formal organizational channels. Extensive rainfall as an aftermath of Tropical Storm Agnes in 1972 created a massive flood which moved down the Wyoming Valley and flooded Wilkes-Barre, Pennsylvania (DRC, 1971). While there were few casualties, there was extensive damage to housing and to other property. In a random sample of the area a year later, it was found that about 24 percent of the population had been involved in some type of volunteer work for various organizations within the community -- 15.5 percent were unpaid volunteers while 7.2 percent were paid volunteers. The paid volunteers were primarily utilized in federal and state governmental programs which emerged in the recovery period. The unpaid volunteers were found most frequently in local governmental organizations, such as civil defense, in voluntary organizations, such as Red Cross and Salvation Army, and in religious organizations, such as individual church organizations and interfaith groups. In 4.5 percent of the households, there were multiple volunteers and these households supplied almost 20 percent of all volunteers.

One final citation comes from a study made in Lubbock, Texas subsequent to a tornado which struck the city in 1970 (Nelson, 1971, 1973). In a probability sample of adult male residents made early in 1971, four types of emergency helping behavior were examined: donation of disaster relief funds, provision of disaster relief goods, performance of disaster relief services (i.e., services not related to regular occupational duties), and volunteering to perform disaster services (i.e., many people volunteered but were not needed to help). Table 1 indicates the frequencies of these types of activity among Lubbock males. Two thirds provided goods; less than half provided funds and a third provided some type of disaster services. It should be noted that these are "cumulative" percentages and there is no differentiation as to when these services occurred or whether they were episodic or continuous. Two other items of interest were included in Table 1. It was found that individuals who were characterized by high rates of pre-disaster helping activity also showed high rates of disaster helping activity. In addition, those respondents who lived within the impact area showed a negative correlation with most disaster related activities, except furnishing disaster services. This suggests that those persons in the impact area are very directly involved with immediate post-impact helping activity while those outside the area become involved in later, more formalized types of activity, many of them being channelled through conventional forms of social organization in the community.

Studies based on probability samples of individuals or households can provide information concerning rates of helping behavior and make possible the establishing of statistical relationships with other variables. Such studies, however, tend to "summarize" and "average" many types of behavior which have quite different origins and meanings. By focusing on rates of individual behavior, one is tempted to look for psychological explanations for behavior which may be explained more adequately in other ways. It would seem more useful to utilize a social organizational vantage point to understand helping behavior than to use a social psychological one.

TABLE 1

Individuals Engaged in Various Disaster-Related Activities: Lubbock Tornado

Activity	Percent Engaged in Activity		Correlation with Residents in Impact Area ^a
	Total Sample	High Pre-disaster Helping Activity	
Providing Disaster Goods	66.0 (N=520)	88.2 (N=17)	-.604
Donating Disaster Funds	46.9 (N=525)	64.7 (N=17)	-.411
Furnishing Disaster Services ^b	33.1 (N=515)	62.5 (N=16)	.214
Volunteering to Provide Disaster Services ^c	15.2 (N=494)	50.0 (N=16)	-.278

a. Gamma

b. Not job related services

c. Individuals had volunteered but not used

Source: Nelson: 1971, 1973

A Social Organizational View of Helping Behavior in Disaster

A social organizational view suggests that behavior is best explained as being guided by norms embedded in roles. This is true for usual "pre-disaster" behavior and it is equally true for behavior in disaster situations. Disaster impact does not modify the "causes" of behavior. What disaster impact does is to create a series of tasks with which the conventional social organization of the community must cope. Some of these tasks are already familiar but differ only in their urgency and frequency. Every community deals with a few casualties daily but not with as many at one time as disaster impact may produce. Some tasks are "new," having never been presented previously in quite the same way. Most pre-disaster injuries are "obvious" and do not have to be the object of a "search and rescue."

In coping with these overloads and new tasks, the primary resource which a community has is the pre-disaster social organization. Helping behavior has to be channelled through this social organization and not left to the unsystematic efforts of individuals. The community has four options open to it in attempting to cope with new problems.

1. The community can supplement those pre-disaster patterns of social organization which would customarily have the responsibility to deal with the problems if they had occurred in a pre-disaster context. In other words, since hospital organization handles "routine" casualties, with supplementation, it can handle an "unanticipated" overload.

2. The community can redirect pre-disaster patterns of social organization which would customarily have marginal relevance to disaster-created problems. Since many aspects of pre-disaster community structure lose their saliency and utility, they can be utilized as resources in an emergency social system.

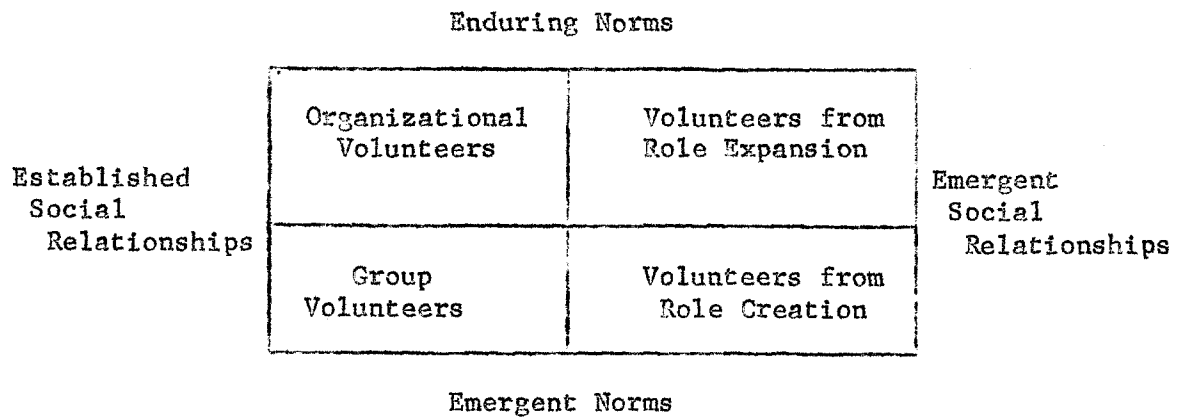
3. The community can utilize individuals who have already internalized pre-disaster norms to extend helping behavior into the disaster situation. This helping behavior is mediated through conventional relationships as well as through ad hoc roles which expand the manpower resources of emergency organizations.

4. The community may have to create new roles to cope with tasks which have no pre-disaster equivalents or for critical tasks for which existing social organization cannot be adapted in time.

The four forms of adaptation on the part of the community are the main avenues through which helping behavior is channelized during the emergency period. The helping behavior, of course, becomes manifest through individual "volunteers." These volunteers can be illustrated by the following typology which is based on field observations of helping behavior in a wide variety of disaster situations. The typology (see Figure I) looks at those who are engaged in helping behavior in terms of (1) whether their behavior is guided by norms which are emergent or whether the norms have endured from the pre-disaster situation and (2) whether the helping behavior occurs within the context of pre-disaster social relationships or whether it occurs in the context of emergent social relationships. Using the variables of norms and social

FIGURE I

Types of Volunteering in Disasters



relationships, a cross-classification yields four different types of helping activity. For convenience here, we will use the vocabulary of volunteers to describe these types of helping action. The four types are: (1) Organizational Volunteers, (2) Group Volunteers, (3) Volunteers from Role Expansion and (4) Volunteers from Role Emergence.

1. Organizational Volunteers These individuals express their helping behavior through conventional social organization. They have had pre-disaster contact with some organization that has emergency responsibility in its charter. With this responsibility, the organization has developed plans which call for the addition of personnel to meet overload tasks. As such, these organizations have a "latent" emergency structure which is activated when emergencies occur. The helping behavior is mediated through this latent emergency structure which has, in its pre-planning, already specified the roles and relationships which will be necessary. When such a plan is activated, those who have positions in the emergency organization are notified by a call-up system or may report to assist, simply by their recognition of the presence of conditions on which the plan is based.

Such a system of channelizing helping behavior is characteristic of most traditional emergency organizations, such as police departments, fire departments, public works departments, hospitals, etc. For example, a police department may have an auxiliary police unit that is activated under certain conditions. The norms which will guide the helping behavior already exist within the pre-disaster organizational structure and this is supplemented by changes which are anticipated for the emergency operations. In addition to the existing normative structure, the organizational volunteer is placed in a context of pre-planned social relationships. Using the previous example, the volunteer fits into a rank structure within the auxiliary unit. In addition, the relations of the auxiliary unit to the regular departmental authority structure has already been established.

With this type, the organizational volunteer, both the normative structure and the social relationships either exist from the pre-disaster structure or are anticipated through emergency planning. Most emergency organizations channelize helping behavior in this fashion. Local civil defense organizations, local Red Cross chapters, Salvation Army Units, Mennonite Disaster Service Units and many others develop these emergency structures which allow the smooth transition of matching manpower needs to increased tasks.

2. Group Volunteers The group volunteer is a member of some pre-disaster group or organization which has no specific emergency related functions in its charter. Such groups, however, may be concerned broadly with "community service" and so when a disaster event occurs within the community context, they seek out disaster related activities which are seen as a logical extension of their previous service orientation. In this instance, the organizational member does not volunteer; the organization does. The member's involvement in helping is the extension of membership in the group or organization. The behavior, then, follows pre-disaster patterns of social relationship while new norms emerge which focus the activity of the group on new disaster related tasks.

Examples would be the mobilization of a scout troop by the scout-master to act as messengers for an emergency operations center, the utilization of a church building for a shelter which is staffed with church members, the assumption of responsibility for feeding disaster workers by a Veterans of Foreign War Post, or the opening of a parochial school for a shelter where the parent-teacher organization becomes the shelter staff. In all of these instances, considerable manpower reserves can be mobilized quickly since they are based on previous social relationships. These reserves can be channelled toward overload tasks created by the disaster agent or can be directed toward emergent tasks. Of course, in addition to manpower, such groups and organizations have at their command many other types of resources -- buildings, supplies, money, information, etc.

It is important to re-emphasize that the previous two types of volunteers represent inputs of helping behavior into the emergency social system which follow the lines of already established social relationships. These are not "spontaneous," "random" acts of generosity on the part of isolated, discrete individuals but they are extensions of anticipated roles or a by-product of the evolution and re-direction of other types of pre-disaster relationships. While it is difficult to make a quantitative assessment, it is likely that these two types constitute the major portion of helping behavior in disaster situations. The Lubbock and the Wilkes-Barre studies cited earlier suggest that perhaps over a quarter of the non-impact population may become involved in such types of helping behavior in extensive disaster situations. The Lubbock data and other studies also suggest that many more persons "volunteer" than are actually needed.

The other two types have less of an organizational base but these types are also built on existing patterns of pre-disaster social organization.

3. Volunteers from Role Expansion This type of volunteer does not have the same group or organizational locus that the previous two types had. In general, this type takes elements which are already present in one of their pre-disaster roles and expands it into the disaster situation. This can happen in several different types of roles. Perhaps most obvious are occupational roles. For example, a physician in private practice may go to the local hospital to offer assistance and expertise for emergency medical care. The physician may not be a member of the hospital staff but he is joined there by nurses and other medical personnel who are not a part of the regular hospital staff. All of these individuals have some occupational skills as a result of occupying certain roles, either currently or sometime in the past. If they have no current organizational connections, they seek out an organizational location for the enactment of these role skills. Even the psychiatrist may be assigned to some non-demanding surgical task. While the example used here is medical, the same process would apply to engineers, security personnel, pharmacists, cooks, truckers, drivers, etc. In each instance, roles which they were capable of enacting became relevant and they sought out the opportunity to utilize their skills. From the organization's viewpoint, these are "walk-ons" since they have not had previous organizational connections. Thus, they create some difficulty in fitting into the patterns of social relationships since the addition of new roles requires an adaptation on the part of the organization. In

the NORC study, six percent of the population of the community where the medical complex developed had such job-related skills and volunteered them to the emergency medical effort.

It is useful to extend the same type of analysis of helping behavior not just to formal and occupational roles, but also to more informal roles as they exist in the community. These would include such roles as relative, friend and even to the more abstract role of community member. Each of these roles carry with it certain obligations which are activated by disaster impact. The obligations may be as diffuse as a generalized one to help others in need. It is certain that those who provide shelter see this as a diffuse obligation to relatives and close friends. The Xenia study quoted earlier suggests that those who offered shelter offer it to relatives and to friends. In turn, those who sought shelter went to those accommodations which were provided by friends and relatives. A very small percentage utilized either public forms of shelter or forms which were supplied by acquaintances. For those who sought out motels, this probably was a clear choice between several alternatives rather than an indication of the lack of other social ties.

It is also possible to interpret certain types of helping behavior as the extension of a more abstract role of community members with certain "citizenship" obligations. One of the consequences of disaster impact is the heightened morale which emerges out of the widespread involvement with disaster tasks. Pride develops in the ability of the community to cope and this provides the occasion for the reaffirmation of community obligations. There are always individuals who lack social ties, either to organization or groups that have become involved, or those who lack occupational roles which might be of relevance to disaster activity, or those who lack the empathetic involvement of helping relatives and friends. It is likely that these individuals have considerable difficulty in "entering" the helping system and often are restricted to more impersonal forms of helping, such as giving blood, providing certain types of relief goods or funds, or other forms of help which actually are inputs into other social systems.

In all of these instances, the normative obligations are already present, at least in a latent sense, in existing role obligations. These role obligations are then extended into the disaster situation as the basis for helping action. Much of this action has little organizational consequence since it follows interpersonal ties or it takes the form of impersonal donations of disaster assistance. If the role expansion comes from an occupational role, however, the helping action does force adaptation, since it changes social relationships by adding roles to an existing structure. Since these additions were not anticipated, the social relationships are emergent.

4. Volunteers from Role Creation This type is most rare and does not constitute a large part of the total helping behavior in a disaster situation. The emphasis here is on the "creation" of new roles as a result of the emergence of new norms and new social relationships. In many ways, however, this type is somewhat difficult to distinguish from the previous type since most new elements are composed of parts of the old. Perhaps the clearest example might come from the development of search and rescue teams or debris-clearance teams. These are

aggregates of people who may come together because of situational factors and accept some disaster task. In the course of accomplishing this task, they develop a division of labor and a certain esprit de corps. For example, individuals in the impact area may join together to search for those who are injured. Those who do may be workmates, neighbors, or friends who then are joined by other individuals or small groups. In their search activity, they develop certain procedures and may develop some role specialization, e.g., certain individuals assume particular tasks. In one situation known to the authors, four persons who were drinking at a bar when an earthquake occurred acquired maps and for the next several hours developed a "damage assessment team." In this brief time, they accumulated information which was essential to subsequent emergency activity. None of the individuals had pre-disaster or role responsibilities which would have directed their activity along these lines. To a large extent, they created new roles of "damage assessors." Similarly, Zurcher (1963) has described how a debris clearance crew emerged subsequent to a tornado in Topeka, Kansas. This crew, primarily composed of individuals with little previous experience in construction, operated for several days and developed such social cohesion that they found it difficult to disband when they worked themselves out of a job.

Possibly the most unique case of the creation of new roles is found in a study by Fritz (1958) of the emergence of a shelter operation as the result of 300 people being stranded by a snowstorm at a highway restaurant on the Pennsylvania Turnpike in 1958. In this instance, a large, rather heterogeneous group of strangers was isolated for 24 to 36 hours in overcrowded quarters with limited facilities. In this incident, a number of cars were immobilized during the night along the turnpike. In the morning, many of the travelers made their way to the restaurant. Early that afternoon, they began to organize themselves for their indefinite stay. Those who had been stranded were somewhat of a cross section of a population -- physicians, nurses, ministers, truck drivers, college students, servicemen, a rock and roll group. They were composed of all ages. There were 40 children under 12, including seven infants. Starting with the pre-existing restaurant organization, a more extensive organization emerged to deal with the special problems of the shelter situation. A division of labor developed based mostly on skills related to occupation or associated with age and sex. Few of the activities dealt with the problems of sheer physical survival but were directed toward physical comfort, activity, emotional support, information, privacy and special consideration for dependent persons. The organization was quite effective and the variety of persons present appeared to have had sufficient skills and knowledge to deal quite adequately with the problems that they faced. About noon the following day, the road became open again and people started leaving. Almost all left within a few hours. None of them would have been likely to find themselves in a similar situation at any future time within their life span.

The Consequences of Helping Behavior for the Emergency Social System

In our discussion of the types of volunteers, we have pointed out how it is channelized into various forms of social organization within

the community. Obviously such inputs have organizational consequences. These inputs lead to different types of organizational adaptations which are represented in Figure II. These four types are existing organization, extending organization, expanding organization and emergent groups.

1. Existing Organization These organizations have the greatest continuity with their pre-disaster status. The helping behavior which they utilize is pre-planned and the new social relationships are anticipated. The mobilization of those who will help can be systematic since they will use primarily organizational volunteers.

2. Extending Organization These organizations also have significant continuity to their pre-disaster status. While their helping behavior is unplanned and perhaps even unanticipated, the fact that the group or organization enters the emergency system as a unit minimizes problems of incorporation. Mobilization can be systematic and from the base of previous social relationships, these groups can direct their activities toward new disaster-related tasks.

3. Expanding Organization They are generally, but not exclusively, voluntary associations which have a latent emergency function which is quite apart from their manifest activity in day-to-day community life. When a disaster occurs, these pre-emergency groups provide the name and the regular employees as the core of the newly expanded groups. These groups may have organizational volunteers but they also become the focus of the volunteers from role expansion. In one disaster studied by DRC, the ratio of volunteers to full and part time professional Red Cross workers was at least ten to one and at times 20 to one. These organizations usually have the most difficulty in disaster operations since they cannot "mobilize" in the sense of the other two types. They have to depend on "unsystematic" expansion. With the expansion, these organizations have to change both their structure and function. In addition, since they have latent disaster responsibility, their actual expanded operations create real problems of coordination with the existing emergency organizations.

4. Emergent Groups These groups are totally emergent in the disaster situation. They tend to be of a rather ephemeral structure, often without a name. They emerge in situations where obvious needs develop which do not become the immediate focus of attention of some existing organized effort. In one sense, they fill gaps in the emergency social system. For example, they emerge in situations where people are isolated from established emergency groups, such as in the isolation created by the snowstorm cited earlier. They also emerge in situations which "demand" immediate search and rescue, immediate debris clearance or immediate damage assessment. Such emergent groups fill in the "cracks" in the emergency social system. What is surprising is how small and how infrequent these cracks are.

FIGURE II

Types of Social Organization in the Emergency Social System

Established Social Relationships		Emergent Social Relationships	
		Emergent Norms	
Existing Emergency Organizations		Expanding Latent Emergency Organizations	
Extending Organizations		Emergent Groups	
		Emergent Norms	

SUMMARY

We have argued that the primary mechanisms which channel helping behavior into the emergency social system subsequent to disaster impact are social organizational. Based upon a review of the relevant disaster literature, four forms of adaptations are identified which are commonly utilized to deal with the tasks created by disaster. The first of these is planned adaptations of pre-disaster patterns which bring organizational volunteers into emergency organizations. A second adaptation is the supplementation provided by extending organizations into the emergency system which, in effect, provides group volunteers. The third is the utilization, in new organizational form, of role behavior which is relevant to the disaster tasks. This provides volunteers by role expansion. The fourth involves the creation and organization of new roles to deal with tasks which are new or overlooked by other forms of organization. These become volunteers by role creation. These inputs of helping behavior are mediated through the various organizational components of the emergency social system -- existing organizations, extending organizations, expanding organizations and emergent groups. Through these mechanisms, communities are able to utilize their resources to meet the problems which emerge from disaster impact. In almost all instances, these resources are sufficient without drawing on helping behavior from outside the community. The ability of communities to utilize their potential resources in this fashion suggests that pre-disaster community organization is very inefficient.

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