Additionally, due to the lack of a broad perspective, it is not always possible to derive meaningful lessons from personal experiences. For example, rather than recognizing a perceived absence of panic as a general human tendency, often it is attributed to one's own unique stable qualities or the sterling (but exceptional) characteristics of the impacted population. Finally, it is never easy for organizational officials to make an impartial evaluation of the actions of their own group. Too often, after-action reports are post hoc defenses or justifications of what the agency did rather than a candid assessment of either the problems encountered or the mistakes made.

A direct personal or organizational disaster experience is less useful for disaster planning purposes than is often recognized. Before such experiences can be utilized, they must be seriously analyzed and their limitations explicitly stated. It is, therefore, possible for some officials within emergency management organizations to be involved in several disasters yet demonstrate by their actions that they learned very little. In essence, the events to which they refer are not conducive for deriving general principles. Just as military "war stories" contribute nothing to military planning strategy, disaster "war stories" are seldom useful in developing preparedness planning strategies.

The most adequate knowledge base for planning purposes is grounded in as wide a range of as many disasters as possible, involves a systematic and objective examination of what occurs, and attempts to draw general principles and theoretical models from the information available. This is what scientific research in the disaster area attempts. Until the last few decades, disaster planners could justifiably say there were very few social scientific studies that could be used. This excuse is no longer legitimate. There now exists a body of social scientific knowledge very applicable to disaster planning, a point to which we now turn.

9. Use the best social science knowledge possible and not myths and misconceptions.

Planning for disasters can be no better than the knowledge base from which it is derived and/or the assumptions made about individual and organizational behavior during such crises. Too many officials in emergency management organizations who accept planning in principle do not, or cannot, recognize the fact that they do not approach it using the best possible knowledge base or correct assumptions. As such, disaster planning is often based solely or primarily on common sense notions. But many popular views incorporate myths about human behavior under extreme stress.

This would pose no problem if the common sense notions and assumptions made about disaster time were valid. However, social science studies in the last decade have seriously questioned widespread and common expectations about disasters. In fact, such research has consistently shown that many popular views about disaster behavior are inaccurate (Wenger, James and Faupel 1985). For example, studies have found that because the image of victim-dependency is so widespread, considerable organizational effort is expended on planning mass shelters. But they will not be used (except under exceptional circumstances of a catastrophic nature) since victims typically seek and are given sheltering assistance by friends and relatives. Obviously, any preparedness activity that is based on incorrect assumptions about anticipated behavior during disasters is not good planning.

Especially to be noted are widespread misconceptions about the likelihood of panic, social disorder and passivity. Common sense notions and the research evidence vary considerably on all three

(1) There often are expectations of panic, but what occurs is rather reasonable behavior For some reason, perhaps because of the mass communications system emphasis on the theme, many officials and others think that when people are faced with great threat or danger they will panic. This panic supposedly manifests itself in hysterical breakdowns or wild flights. Presumably, people cannot be depended upon to react intelligently and non-selfishly in situations of great personal danger.

Studies have consistently shown that this is simply not the case. People as a whole do not panic. Actual instances of hysterical breakdowns and wild flights are extremely rare, and are usually of no practical or operational importance if they occur. In fact, instead of flight away from the danger site, there is much more likely to be convergence on an impacted area. Instead of collapse into hysterical breakdowns, people actively move to do what they think has to be done in the crisis. Disaster victims are usually quite frightened, but that does not mean they will act selfishly or impulsively. They do not become unreasoning animals, but instead they show more rationality under stress than they do normally, if by rationality is meant conscious weighing of alternative courses of action in a situation. We do not do much conscious weighing of alternatives in performing our daily routine behaviors

(2) There also frequently are expectations of disorder, but what appears is a great deal of prosocial instead of antisocial behavior. To inexperienced officials and journalists, disasters are apparently seen as offering opportunities for the surfacing of antisocial behavior It is speculated that deviant behavior will emerge and that dazed victims in the disaster area become easy targets for looting and other forms of criminal activity Next to the supposed "panic" problem is the supposed "looting" problem. The imagery is that as Mr. Hyde will take over from Dr. Jekyll crime rates will rise and exploitative behavior will spread

This too is an incorrect view according to the research undertaken. Many stories of looting will circulate, but actual instances will be rare and if they occur will be done by outsiders rather than the impacted population itself. Far more items will be freely donated and given away than could conceivably be looted. In actuality, prosocial rather than antisocial behavior is a dominant characteristic of the emergency time of a disaster. Crime rates will usually drop. Exploitative behavior is only likely to be seen in relatively rare instances of profiteering after the immediate emergency period is over. If disasters unleash anything, it is not the criminal in us, but the altruistic.

(3) There also may be expectations among planners of dependency by survivors, but what develops instead is considerable self and small-group initiative. There is a tendency in disaster planning to assume that disasters leave large numbers of people dazed, shocked, and unable to cope with the new realities of the community crisis The assumption is that victims are so disoriented and demoralized that they will need outsiders to do the most elementary tasks for them, such as being fed, housed, and clothed. If the previously discussed expectation of disorder is based on a Dr. Jekyll and Mr. Hyde view of human beings, the expectation of dependency is based on a Big Brother image. If Big Brother does not step in, nothing, it is assumed, will happen.

Researchers have also found that this expectation too is quite false. Those who experience disasters are not immobilized by even the most catastrophic of events. They are neither devoid of initiative nor passively expectant that others will take care of them and their needs. Usually, before the full impact is over, search and rescue efforts are initiated by neighbors, and the injured are brought to hospitals. Shelter is actively sought and offered by kin and friends. .n fact, the evidence is substantial and consistent that far from even seeking, and much less depending upon, formal relief and welfare organizations, these are among the last sources that the vast majority of victims will turn to for help In a disaster, self- and kin-help and mutual informal initiative and assistance will dominate.

Thus, if planning assumes panic, disorder and passivity as the dominant behavioral features that will appear at the height of a disaster impact, an incorrect starting point will have been taken. Good preparedness planning instead works with the idea that those impacted by community disasters will generally be calm, orderly, and able to take initiatives

Unfortunately, just as there are mythologies about human behavior in disasters, there are also misconceptions about organizational behavior For example, there is the belief that communication problems stem mostly from technological failures, that there is considerable breakdown of authority, or that coordination can be brought about by centralizing control. These too are mistaken notions. We do not have the time and space in this paper to elaborate on these and other misconceptions about organizational behaviors in disasters; they are later partly discussed under management problems and are detailed elsewhere in the literature (see earlier references). But the important point is that beliefs in mythologies about organizations in disastrous occasions are as undermining of good planning as incorrect assumptions about human behavior under great stress.

As someone else wrote long ago, more damage is done by what people incorrectly believe to be true, than by lack of knowledge per se. Unfortunately, in the disaster area false beliefs about human and social aspects abound among emergency planners and emergency officials. To the extent that is the situation, their disaster planning will tend to be poor.

10. Recognize that crisis time disaster planning and disaster managing are separate processes.

We would be amiss if we stopped our discussion at this point because it might imply that if the previous nine criteria were all met, we would then have good preparedness planning and good managing of community disasters. Unfortunately this is not and cannot be the case There are some major differences between the preparing for and the managing of a disaster. The principles of disaster preparedness planning are different from the principles of emergency time crisis management They are not simply two sides of the same coin

The distinction perhaps can be understood by drawing a parallel to the distinction made in the military area between strategy and tactics. In general, strategy has reference to the overall approach to a major problem or basic objective But there are always specific situational contingencies or factors that have to be taken into account in particular circumstances. This the military considers the province of tactics. Thus, if we think in parallel terms, we can equate good disaster preparedness planning with the best strategy that could be followed in readying a community for a sudden disaster,

while good managing involves the best tactics that could be used to handle particular contingencies in the emergency time of a specific disaster

Generally it is impossible to indicate ahead of time the specific tactics that will have to be used in an actual crises, since almost by definition, they will be relatively specific to the actual emergency that develops. However, just as the military finds it possible to discuss tactical principles, disaster researchers can point to some of the tactical considerations that are involved in efficient and effective disaster management. Since we have written on this matter in detail elsewhere, here we will only mention some fundamental points.

DISASTER MANAGING

For reasons not altogether clear to us, it is not always explicitly recognized or acknowledged that the planning and the managing of community disasters are two different processes. Perhaps it is because many of the same community officials are often involved in both activities. Yet along certain lines the difference would seem fairly obvious. Researchers, for example, usually recognize that planning a study is different from managing a project carrying out that research. On the other hand, it is only very recently that the Federal Emergency Management Agency **(FEMA)** in the United States started to emphasize performance rather than planning criteria in its evaluation of local emergency management agencies. Apparently the difference is not that obvious to all.

That problem aside, good managing of community disasters can primarily be evaluated in terms of certain research derived criteria. Much of the relevant literature on the topic is more implicit than explicit, but nevertheless is fairly extensive. Collectively it indicates that the management is good if the following ten criteria, which are sequentially related to one another, are all met. It should be noted too that whereas much planning can be generally evaluated ahead of time, a specific judgement on managing mostly can be made only after a disaster impact Nevertheless, knowledge of what constitutes good management can be helpful even to operational officials in the middle of a disaster crisis, and of course after the occasion is over can be used to make changes for future disasters.

Good disaster managing must:

1 Recognize correctly the difference between agent and response generated needs and demands.

It has long been a premise in the **DRC** research literature that there are always two different kinds of needs or demands that have to be addressed in responding to a disaster (Dynes, Quarantelli and Kreps 1981 with the first edition published in 1972). There are the needs that result directly from the disaster agent involved. Then there are also the demands that result from the response itself of organizations to the crisis. Put another way, there are problems created by the disaster itself, and there are problems generated by the organized effort to respond to the disaster.

The former, agent generated demands, derive from the particular disaster agent: for example, a flood

can create a preimpact preparedness need for sandbags to protect against high waters, or potential exposure to radiation may create a demand for medical examinations of possible victims. Agent generated needs will vary considerably depending upon the disaster impact and the specific nature of the agent (although as discussed below in criteria #2 the demands may nevertheless be met by the carrying out of certain generic functions) On the other hand, response generated demands, are common to all disasters This is so because they are produced by the very effort of responding organizations to manage a community disaster. The crisis time of a disastrous occasion inevitably leads to a "mass assault" by organizations responding to the occasion (Barton 1970). This necessitates effective mobilization of personnel and resources, proper task delegation and division of labor, adequate information flow, a considerate exercise of decision making, and above all successful efforts at coordination of all that is going on (these are all discussed below as criteria #3-7). These demands exist in all disasters and are somewhat independent of any particular disaster agent.

Good disaster management recognizes differences between agent and response generated needs and demands. The former, because they are more specific to the disaster agent involved requires a more tactical or situational contingency approach, and a response to them can only be planned for ahead of impact up to a certain point The latter, response generated demands, can be approached in a more strategical and ahead of time planned way. While understanding what is involved cannot alter the appearance of the two kinds of demands, it can allow better planning, a better operational response, and better learning from a disaster In fact, a failure to recognize the two processes as being different, can be taken as an indication of poor disaster management. If there is mostly a focus on the effects of a disaster agent, this misses the point that even more important problems can and do arise in managing the response. For instance, to the extent there are mental health problems they result mostly from response rather than agent generated demands (Quarantelli 1985a)

2. Carry out generic functions in an adequate way.

Although different disasters can vary widely in their impacts and effects, with some of them directly linked to the agent involved, it is still possible to visualize common functions that have to be carried out in the management of such occasions. Put another way, the specific needs or demands can be rather different in separate occasions, but certain response patterns or functions will nevertheless still have to be carried out in each case. For example, in one specific earthquake or hurricane there may be tens of thousands of homeless to shelter where in another there may be only a handful. Nevertheless, it is extremely rare for any significant community disaster not to create some need for the housing of the homeless (Quarantelli 1984a).

Thus, although the specifics both in terms of needs and responses will vary from disaster to disaster, some researchers have argued--correctly in our view--that there are functions that are common or generic in all disasters. That is, certain activities in a general sense will have to be undertaken, although the need or demand for them will vary in each case Perry, for instance, has written:

> Generic functions are actions or activities that may be useful in various disaster events. Evacuation, for example, may be needed in floods, hurricanes, volcanic eruptions, nuclear power plant accidents, or

> hazardous materials incidents. Generic functions are developed and planned in the pre-impact phase, although some decisions will have to be adapted to situational demands (italics added) (1991, 218)

He then goes on to discuss six generic functions--warnings, evacuation, sheltering, emergency medical care, search and rescue, and protection of property. It would be the rather rare disaster in which there was the absence of any of these activities (although warnings could not occur in very suddenly occurring disasters such as most earthquakes and many toxic chemical explosions). There are possibly other actions that might be added such as assessing the damage or restoring essential public services (see the discussion in Kreps 1991: 41-42), but few researchers would dispute there are certain generic functions and at least the six mentioned.

Now, given their generic nature, an evaluation should always be possible regarding the carrying out of the functions, especially their adequacy. As examples of important questions that could be asked are the following: Was the need for the function recognized early? Was the function carried out without too many problems? Were the recipients (i.e., the disaster victims) satisfied with the function provided? If the answer for all is yes, it is likely that there was at least an adequate management of generic functions.

3. Mobilize personnel and resources in an effective manner.

In most disasters there is not an absence or lack of necessary personnel or resources. The number and kinds of people that could be useful at the crisis time of disastrous occasions are generally available, both in terms of spatial or temporal proximity Similarly, except occasionally for the need of some very specialized equipment, the materials and things that could most appropriately be used in the situation, are typically in, around or near the disaster site. In fact, in every disaster, sooner or later, more or less, even if there had been no planning, the personnel and resources needed to deal with the crisis, appear on the scene (although in truly catastrophic occasions the assistance will often come from outside the stricken community).

Of course, there can be the overabundance of something that is not needed For example, a problem that frequently surfaces has to do with presence and use of many individual volunteers. Many well motivated volunteers with a wide variety of skills are not necessarily a good resource in a disastrous occasion. In fact, without very good prior planning of who will use volunteers, where they will be sent, how they will be supervised, when they will be used, and so on--the sheer presence of masses of individual volunteers will simply create another disaster management problem. Often, vitally needed regular staff members of organizations will have to be used to attempt some ad hoc planning and/or training for some hurriedly designed tasks. Consequently, individual volunteers often hinder rather than help in the mobilization of organizations.

So good disaster management does not involve the mobilization per se of personnel and resources--that will happen anyway. Rather it is their effective mobilization. Effectiveness essentially means that there has been a desired production of an intended result, this evaluation differing from that of efficiency where the results are obtained in the best way. For example, an evacuation may get a

population out of an endangered area and be effective, but may not be very efficient in terms of the use of unnecessary resources, the time consumed, or the problems generated. It is possible to judge effectiveness in a variety of ways including the following Were the needed personnel and resources identified well in the crisis? Were they located quickly and brought to bear correctly? Were they appropriate for the crisis time problems? Positive answers to such questions would suggest there had been not only a mobilization of needed personnel and resources, but an effective one

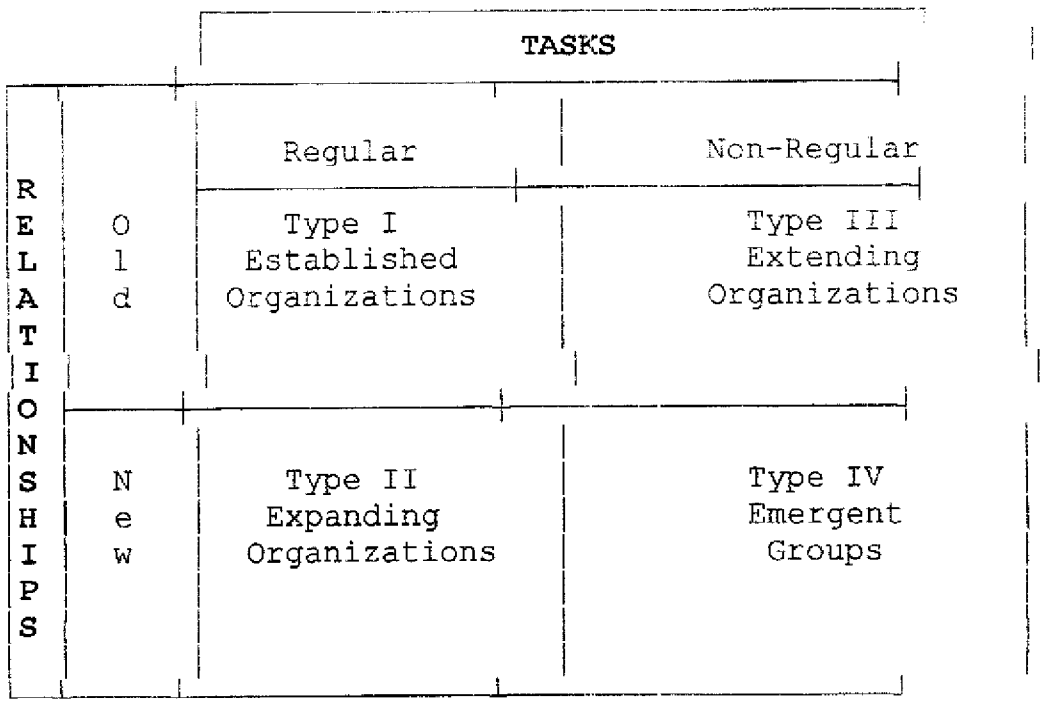
4. Involve proper task delegation and division of labor.

One of the major consequences of any disaster is the creation of many old and new tasks that community organizations have to address. Persons are killed and injured Houses and other buildings are damaged or destroyed Survivors have to be evacuated, then housed and fed. Utilities have to be restored. Fires sometime have to be put out. Roads have to be repaired. The list can be quite long. However, immediately after impact and early in the crisis time period, the nature of the required tasks and the scope of organizational involvement are usually unknown, unclear and/or confused. In spite of this uncertainty, there is nonetheless a great urgency to act which has several consequences for organizational activities.

A number of the tasks are typically undertaken by specific organizations since they are part of that group's preimpact understanding of responsibility (e.g. fire departments fight fires). But even that can be complicated because of the convergence of many organizations from outside of the impacted community. For example, in one disaster studied by **DRC** a total of 68 different fire departments appeared on the scene. Equally as important, there are tasks that are not the normal preimpact responsibility of anyone, such as very large scale search and rescue, handling of mass casualties, establishing who should be on missing persons lists, instituting and using a pass system to prevent entry into certain damaged areas, finding and taking care of many abandoned pets, etc As will be discussed later, many of these tasks are assumed by new or emergent groups.

Another common response for organizations is to initiate activities to immediate and visible problems, which may not be part of their subsequent responsibility. Another response is to mobilize added resources, including personnel, in anticipation of increased tasks Such actions change the pattern of tasks; modify previously established patterns of decision-making, authority relationship, and information flow channels; and create new organizational boundaries. Besides creating internal changes, the scope of the tasks and the uncertainty of them leads organizations to become involved with other organization with which they have been previously unfamiliar (see Quarantelli 1985b; for other aspects, see Dynes, Quarantelli and Kreps 1981, 41-43).

In fact, all groups that appear in a community crisis can be classified as being one of four possible types. These are indicated in the following typology.



The four possibilities shown are derived from considering the fact that some community organizations have tasks within the crisis period that are essentially the same as those they undertake during routine or preimpact times. Others groups, however, have basically new tasks. In addition, some organizations maintain a similar set of internal social relationship from the every day to the disaster occasion, while others develop a completely new set of relationships. A cross classification of these dimensions of tasks and relationships provides the typology provided above (for more details see Quarantelli 1967).

All of the above shows the complexity of the division of labor and task delegation that will arise in any disaster of any magnitude. Clearly good disaster management is that which involves proper task management and division of labor. Proper in this context means that all necessary tasks are carried out relatively quickly and with few problems, and that there is some division of labor among the responding organizations. The latter, among other things, implies that it is recognized that there will be Type IV groups who will be undertaking necessary tasks, and that there will be Type II and Type III organizations operating as well as established ones using their regular social structure to carry out old tasks (e.g., police departments directing traffic and maintaining security in the community). A response that tries to involve only established organizations is a clear indication that there has been poor disaster management

5. Allow the adequate processing of information.

In both the prescriptive and research literature on disaster management, it is often said that there are "communication" problems at the crisis time of disasters. Such a formulation, however puts an

emphasis on communication technology, the means used rather than what is communicated. Thus, for example, there are statements made that "more radios" are or were needed But research shows that most problems stem from what is communicated rather than how communication occurs. In most cases, information flow problems do not arise from equipment scarcity, damaged facilities, or other forms of destruction that result in rendering the communication technology inoperable. They stem more from problems in the process of communication itself, the information flow per se.

Necessarily there are multi streams of information flow during the crisis time period of a disaster There is the information flow.

within every responding organization;
between organizations;
from citizens to organizations; and
from organizations to citizens.

These information flow can all become problematical in disastrous occasions.

Let us just illustrate just from intraorganizational information flow. Under everyday conditions, the system is designed to process and exchange predetermined types and quantities of information. However, during a disaster, the number of staff using the system may increase greatly. This can be created by internal staffing changes undertaken by the organization to meet the demands of the crisis occasion. For example, double shifts may be used or volunteers may be incorporated into the work force. Often too the existing system cannot accommodate the volume of information required by system users When the extra demands upon the internal system exceed its capability, this results in "overload", the net result of which brings about system failure or in the loss and delay of information to, from, and among staff members. Likewise, in normal times the flow goes through certain channels, usually following the organizational chain-of-command pattern. Thus, user information needs, conditions under which information is to be exchanged, and the information flow from the top to the bottom and vice versa, are relatively clearly defined and structured. However, during a disaster the channeling of information in the organization becomes more complex. For example, it is usual for: (a) several individuals to occupy a work position previously held only by one person; (2) officials to assume non-routine tasks; and/or (3) officials to be reassigned to work in temporary emergency positions within the organization. These and other factors can lead to the creation of situations where the normal channels of information flow are insufficient to insure that all relevant information will reach those group members who should be informed of group activities. There are similar problematical aspects in interorganizational, citizen to organization and organization to citizen information flow (see e g., Drabek 1985; Quarantelli 1985b).

Given all this, it is possible to evaluate the adequacy of information flow in a disaster. If organizations and/or citizens did not get the information they needed, clearly the disaster managing was not as it should have been. Of course there can be adequate information in any of the four streams mentioned above, so each must be judged independent of one another

6. Permit the proper exercise of decision making.

Disasters require that there be proper decision making. Now many assumed problems in this area rarely appear at times of disasters. For example, very seldom does the usual chain-of-command and lines-of-authority break down during a crisis period. Similarly, contrary to much mythology about the matter, officials in responsible positions will not abandon or fail to carry out their work roles because they give greater priority to their family responsibilities (Rogers 1986). Likewise, there rarely is any challenging of which group has authority to carry out traditional tasks (e.g., there are seldom disputes about who should fight fires, repair telephones, perform major surgical operations, etc.)

On the other hand, decision making is very likely to be affected in a negative way by certain typical happenings in the crisis time period of disaster occasions. Four common problems are:

(1) loss of higher echelon personnel because of overwork;
(2) conflict over responsibility regarding new disaster tasks;
(3) clashes over organizational domains between established and emergent groups; and
(4) surfacing of organizational jurisdictional differences.

The first problem stems from the strong tendency by key officials to continue to work too long in a crisis. But personnel remaining on the job around-the-clock will eventually collapse from exhaustion or become inefficient in their decision making. More importantly, when such officials are eventually succeeded by others, their successors will lack the information necessary for appropriate decision making in part because crucial data will not have been formally recorded. Proper decision making requires relevant knowledge. Officials with the appropriate information will not always be physically capable of working beyond a certain point. If such officials occupy key decision making positions, the disaster response capability of the organization can be seriously impaired.

Determining who has the organizational authority to make decisions for the performance of new disaster related task can be another major problem. When there are such new tasks to be performed, questions almost inevitably arise about which organizations should make determinations about them. For example, the responsibility for deciding and performing large scale search and rescue or mass burial of the dead is not normally the everyday pattern of established organizations. This sometimes leads to no decisions or poor decision making.

Decision making problems surrounding the performance of traditional tasks sometime arise between established organizations and outside or emergent groups. For example, for the most part "area security" is considered a traditional local police function. Conflicts can arise if nonlocal police or military personnel move into a disaster area and also attempt to provide security. Such actions are often viewed by the local police as an attempt to usurp their authority. This issue is sometimes manifested in disputes over who has the right to make decisions about the issuance of passes allowing entry into a restricted area. The situation is even more complex when the competing organization is an extra-community group or an emergent group. For example, nonlocal relief or welfare agencies may provide services during a community disaster. Though they may be exercising their mandated

function in providing such services, such agencies are often viewed as intruders into the domain of local agencies. If the outsider relief group is undertaking the same disaster tasks, there are likely to be questions about its legitimacy, authority and decision making.

Also, community disasters frequently cut across jurisdictional boundaries of local organizations This creates a great potential for conflicts. During non-crisis periods, vague, unclear or overlapping authority and responsibility can often be ignored. During disasters this is frequently not the case. Since disaster situations sometime require decisive decisions, unresolved jurisdictional issues often surface at the height of an emergency period.

One aspect of good disaster management is proper decision making. Another is that the problems indicated above are avoided. It is such matters that are important in evaluating a response rather than whether the decisions are made by those in formally designated positions of authority

7. Focus on the development of overall coordination.

In the face of the convergence of multiple groups, a variety of tasks as well as new ones, massive but erratic information flow, and sometime irresolute or incorrect decision making, the question is often asked: who is in charge? Those who ask this assume that it is a significant question and that good disaster management requires a clear-cut answer that a particular organization is controlling the situation. However, the research evidence seriously challenges whether the question is even a meaningful one for disastrous occasions, that somehow one official or agency should be in charge. In fact, studies (Dynes 1993) show that it is impossible to impose such control and that even if it were possible, it still would not be the best response model to follow.

Control is not coordination. Emergency oriented organizations that operate with a "command and control" model of how a disaster response should be handled are particularly vulnerable to equating the two. Drawing from an inappropriate military model, the incorrect assumption is made that an integration of the overall community response can best be made by imposing an authoritarian and centralized structure on the crisis situation. The spread of the Incident Command System (**ICS**) as a model to be used for managing disasters is a contemporary manifestation of the thinking that such occasions must be "controlled." Yet research shows that the **ICS** is not a good way of trying to manage the situation, despite its recent faddish adoption among certain American emergency organizations (Wenger, Quarantelli and Dynes 1990).

The development of organizational coordination is problem plagued if there is not good management. Very few organizations do not agree in principle that coordination is needed during disasters However, the term "coordination" is neither self explanatory nor a matter of much consensus. Along some lines, there are groups who view coordination at best as informing other groups about what they will be doing. Along another line, some organizations see coordination as the centralization of decision making in a particular agency or among a few key officials, usually involving themselves. Others see coordination, correctly in our view, as mutually agreed upon cooperation on how to deal with particular tasks. Given such diverse views, it is to be expected that even when a formal

preimpact accord to "coordinate" a response exists, there often surfaces mutual accusations that one or both parties have failed to honor the agreement

There are also problems in coordinating social entities from the public and private sectors. Government and private groups usually have different interests, tasks and goals. For example, public agencies, by law and by tradition, have to consider a disaster occasion and the demands it creates from the perspective of the larger community. Private sector organizations necessarily have a much narrower perspective, assessing their involvement primarily as they see the occasion generally impinging on their operation and profitability and have much less flexibility in using their personnel and resources than do government agencies.

Finally, coordination is also difficult between organizations working on common but new tasks. Even local agencies accustomed to working together, such as police and fire departments, may encounter difficulties when they suddenly try to integrate their activities to accomplish novel disaster tasks, such as the handling of mass casualties. While police and fire agencies may be accustomed to recovering a few bodies resulting from traffic accidents or fires, a large number of dead bodies resulting from a major disaster, will pose coordination problems. It is partly the newness of many disaster tasks that create strained relationships among organizations who may have previously worked together in harmony. Also, in daily operations there can be a gradual development, frequently on a trial and error basis, of a cooperative working relationship between two groups concerned with achieving a common goal. Such leisurely developments of cooperative relationships are an impossibility given the immediate demands during the crisis phase of a community disaster.

Many other issues in disaster management that we discussed earlier are crucially dependent on how key officials handle the overall problem of integrating organizational and community responses to a disaster. A good start is by emphasizing cooperation rather than control or insisting that "someone should be in charge " The three specific problem areas in coordination we have mentioned can only partly be dealt with by preimpact planning. Much will depend not only on the exercise of tact and sensitivity by the key officials involved, but a willingness to de-emphasize organizational claims of leadership and territorial demands by partly stressing actions necessary for the greater community good. Appeals to larger symbols and humanitarian concerns can move people and groups to cooperate especially at the height of a major community disaster. Good disaster management can be judged on the kinds of efforts made at coordination and the relative absence of the problems mentioned

8. Blend emergent aspects with established ones.

Any disaster, even of moderate magnitude, will be marked by the presence of emergent phenomena, sometimes of groups, sometimes of behaviors, or both. For example, there will be emergent groups that engage in search and rescue, do damage assessment, handle the dead, distribute relief supplies, and present the grievances of survivors about housing and rebuilding (Drabek 1986: 132-149). Thus, Aguirre and his colleagues (1993) found that the search and rescue in a gasoline explosion, while influenced by informal preimpact social links and ties, was essentially undertaken by emergent groups. New, temporary behaviors even occur in some very traditional organizations such as police

departments and churches (Quarantelli 1983b) Thus, while there are many unresearched questions about the origins, intrinsic nature, boundaries, careers, cross-societal differences and types of emergence (see Drabek 1987), the phenomena especially at the crisis time of disasters, is ubiquitous.

However, such improvisations frequently bother many in the disaster management area, since basically they are in bureaucratic organizations. Yet:

> Any seeking to improve the quality of emergency management, especially those aspects relevant to the response phase, must recognize the limited applicability of the elements an assumptions derived from the bureaucratic model. While it remains a powerful instrument for accomplishing tasks characterized by repetition and uniformity, continued efforts to use for disaster . . . has reduced the response capability of many . . . communities. It has only been through recent documentations of numerous emergent systems that this conclusion has been accepted by small numbers of emergency management practitioners. Efforts are underway to construct models reflective of the qualities that define this managerial problem (Drabek 1987: 290).

But even if the research knowledge is limited, the problem cannot be avoided in actual disasters. This is consistent with the frequently expressed view in the disaster literature that if something needs to be done especially at the height of a crisis, people and organizations will attempt to do something. If they cannot do it with their traditional or usual ways of doing things, an effort will be made to develop new ways. Thus, if a police department cannot handle the problem in the way they usually do, the organization will organize itself, to do in a different way (e.g., calling in all shifts, mobilizing reserves, deputizing civilians, etc). Also, if non routine problems develop, an effort will be made to deal with them Thus, if a stricken neighborhood finds itself with the possibility that many injured may be trapped under debris, the citizens around will informally organize themselves into teams to engage in a very non routine task, the search and rescue of victims. These kinds of efforts, whether by organizations and/or citizens, may not be very efficient, but there will be an effort.

Emergent phenomena, that is, new social arrangements and activities, are a pervasive feature of responses to disasters, although the manifestation may range from minor behaviors to major groups. As such, disaster managers should take the appearance of the phenomena for granted and incorporate the probability of its occurrence into their thinking and acting. Just assuming it will occur is helpful for research has consistently shown that one of the most disturbing aspects for emergency responders in disasters is the appearance of phenomena that they had not anticipated in their planning. It is impossible to foresee everything, but there is no-good reason for not anticipating the very probable, such as the appearance of emergence.

Of course it is particularly important not to assume automatically that emergent phenomena is necessarily dysfunctional, bad, or otherwise inappropriate for the crisis occasion There is a strong tendency among disaster managers to think that because they have not planned for or are not

controlling some phenomena, that it cannot be good This is seldom the case Often, the new behavior or group may represent the most effective way of coping with a problem. This is not to say that emergence always represents the best solution, but emergence does represent an effort to solve problems, and at worst is usually somewhat effective.

Actually, planners and responders might consider what circumstances and for what purposes they might actually want to facilitate certain kinds of emergence A case in point is the use of individual volunteers, which we have already noted are usually more of a problem than a help. Volunteering does represent emergent behavior by individuals But it could be appropriate to try to facilitate emergent volunteering by groups (e g., social clubs, neighborhood civic associations, religious groups, etc) The advantage would be that the members of such groups would be operating with known others with whom they share certain norms and values (Dynes and Quarantelli 1980). As such, the disaster managers could deal with the already existing "leaders" of such groups and let them lead the members

Our overall point, is that there will be emergence in disasters. Therefore, such behavior ought to be blended in the best way possible with relevant other activities. If this is done, the disaster management in the situation will probably be good for the reasons indicated.

9. Provide the mass communication system with appropriate information.

One of the prominent features of modern societies is that they have complex mass communication systems with multiple mass media outlets A very strong case could be made that developed societies, those that are highly industrialized and urbanized, could not exist without the information provided by such systems. But for our purposes, the importance of modern mass communication systems is that they the perception of any community disaster including its effects and what is needed to cope with the occasion, is increasingly dependent on what that system provides In many respects the view that everyone, including emergency managers, have of a disaster is more and more the "reality" as presented on television, radio and in the newspaper. What citizens know about a disaster, its effects and problems, is very heavily dependent on the distributed content of the mass media outlets.

As such, good disaster management encourages the development of patterns of relationships that are acceptable and beneficial to the responding organizations, the mass media groups, and citizens in general. An indicator of such a relationship is a cooperative pattern of interaction between organizational and community officials and media representatives. An additional indication is that citizens believe they are receiving and being given by the local mass communication system, a relatively accurate picture of what is happening Furthermore, where these relationships are good, the members of the press are satisfied with the amount of quality of information that is given to them by officials who in turn want to disseminate certain disaster relevant information. Of course, since it is their responsibility, the initial gathering of data on what has and is occurring, is dependent on mangers of the different responding emergency related organizations. If they do not provide relevant information, the mass media can be depended upon to disseminate, not intentionally but nonetheless, news that will often not be accurate and informative.