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LOCAL EMERGENCY MANAGEMENT AGENCIES: RESEARCH FINDINGS ON THEIR PROGRESS AND PROBLEMS IN THE LAST TWO DECADES*

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I would like to set the stage for my remarks by giving a quotation from Harry Truman, the President of the United States at the end of World War 2 until 1952. Truman once wrote, "Some questions cannot be answered, but they can all be decided." His point, of course, is that in the political world decisions have to be made even though it may be impossible to provide intelligent answers to the questions which should be asked about such decisions.

Now the world of emergency management is partly in the political world. As such, frequently decisions have to be made about a variety of matters such as the structure and functions of local emergency management agencies, about preparing for disasters, and about managing disasters. Whether the questions associated with such decisions have been answered or not, the decisions have to be made.

But the world of emergency management is not totally in the political arena. Decisions can partly be reached as a result of the answers that can be given to questions that can be asked about the operation of local emergency management agencies, about disaster preparedness and management.

The answers involved can come from different sources--training guides, educational courses, personal experience, etc., but one major possible source of information is scientific research. While scientific study cannot provide complete answers to all problems, such study can provide fairly reliable answers to some problems.

My intent here today is to summarize some answers provided by scientific research to questions which would be involved in decisions in organizing local emergency management offices and the preparedness and response they can undertake of community disasters.

The Situation 20 Years Ago

More than 20 years ago, the US Office of Civil Defense (OCD), the federal agency at that time concerned with mass emergencies, asked the Disaster Research Center (DRC) this question: What does American society have at the local community level, at the city, town and county level, by way of arrangements for preparing and responding to potential and actual disaster situations, whether created by natural or technological agents? Put in other words, what was the status of local planning and managing of large scale emergencies? OCD had certain impressions and suspicions, but almost no direct and systematic evidence at that time.

So, they commissioned our research in the late 1960s. We did a series of studies at the local community level of both planning and response to disasters. The Center looked at a wide range of emergency relevant groups--police and fire departments, the Red Cross and the Salvation Army, hospitals and the mass media, and other disaster relevant groups, as well as civil defense offices. Besides looking at key organizations, we also looked at such emergency-time matters as the warning process, evacuation problems, interorganizational coordination, and many other disaster relevant tasks and activities such as generally preparing for and managing disasters.

Out of this very large scale and systematic examination of local planning and managing for large scale emergencies, I want to discuss here only our findings about the local civil defense organization, and civil defense was the name most of them carried at that time (the late 60s early 70s). Now, since I do not want to get into details of these twenty year old studies, let me indicate the three most general research findings DRC derived from dozens of field studies of local civil defense offices and out of dozens of field studies of actual community disasters.

First, we found tremendous variation in the structure and functions of the local civil defense offices. For example, some were completely autonomous groups, others were integral parts of other organizations in the governmental structure. Some reported directly to the mayor or city manager's office; others were buried at third or fourth levels of authority in unimportant agencies. Some of the civil defense groups only had a wartime mission; others had only natural disaster concerns. Some even had tasks with respect to civil disorders (remember we are talking about the early 1970s, just when the ghetto and campus riots were dying out in American society). Some of the civil defense offices seemed almost exclusively to engage in planning, whereas others primarily came alive at time of community crisis.

In short, there was tremendous heterogeneity in the structure and functions of local civil defense offices. Knowing that there was such an office in the local government gave you practically no clue as to where it was located in the governmental structure, who it was responsible to, what its major mission was, what tasks it undertook, when and how it operated at times of community emergencies. Diversity and variety were the hallmarks of the local civil defense office in the early 1970s.

Although we did not present our observation as a negative research result, our finding was rather disturbing to some officials in the federal civil defense agency. They had been pushing for standardization of local civil defense offices. According to them, the structure and functions of such offices should take only one form. Our research told them that there was no one homogenous entity out there at the local level.

There were also two specific findings in connection with the structure and functions of local civil defense offices that they also did not like. Thus, we reported that civil defense offices usually had little or no legitimacy among other community emergency groups and were often not taken seriously in either planning or response in community emergencies. We also said our study showed that many local civil defense agencies themselves gave very low creditability to their wartime mission and that the more viable offices were those with a strong interest and involvement in natural disaster situations. One important implication of that observation was that if local agencies were to be improved, priority ought to be given to natural disaster concerns and this might spill over to the wartime situation. I will always remember giving a briefing at the Pentagon where federal CD was then located, and being told by the then CD director that priority was for the wartime mission. My response was to state that our research results dealt with reality and not policy. If the federal agency wanted to improve local wartime planning, they needed to start with the existing community interest in peacetime disasters. One purpose of research is to report social reality rather than ideology.

This implication about the value of an all hazard approach (before it became a slogan) was strongly reinforced by our second major research finding. This was the observation that disaster planning was very poor. There were communities here and there which were exceptions, where planning was systematic and well organized, but the overall picture was fairly dismal. Whatever the structure and function of the local civil defense office, it was usually weak on both the facility and the organization side. For example, it was relatively rare to find an EOC in place 15-20 years ago. Often there were no written disaster plans. By any criteria that could be used, disaster preparedness planning at the community level as it was organized around the civil defense office was very poor. (As an aside, where it was organized around some other agency, such as the police department, it also tended to be very poor).

Thus, it was not surprising that our third major general finding was that the response of local civil defense offices in disasters was typically problem plagued. Although many such offices, in principle or by planning, were supposed to do the "coordination" of the community response, they seldom had a role, much less being the major coordinator in the emergency response. In the best of disaster situations, the local civil defense office tended to gather information and help in the obtaining of resources. But even these activities were problem plagued, as was the decision-making it might entail.

So, the overall picture about 15 years ago was rather clear. There were a hodge podge of local civil defense offices around but they varied tremendously in structure and function and had little legitimacy or even saliency. There was little meaningful disaster preparedness undertaken by these groups. When actual disasters occurred, the response of the civil defense organization was riddled with problems and generally did not involve much coordination of anything.

Rare exceptions could be found. Here and there a well structured and functioning respected local office existed. In exceptional cases, disaster planning was extensive. Occasionally, a good response occurred in a major community disaster. But these exceptions only highlighted the dismal overall and general picture.

However, from the 1960s into the 1980s, it could be argued that the picture had probably changed. For instance, it might be said that for many reasons, FEMA (and its immediate predecessor agencies) made major efforts to improve and to encourage the development of local planning and response. At the local level, and again for a variety of reasons, it could be hypothesized that there were factors operative making for the improving of local planning and response (the reasons ranged from changes in the public's view of what it expected by way of governmental protection to changes in the qualifications and motivations of local emergency organization directors). Thus, it could be argued that by 1980 the local picture should have changed.

The Current Situation

At any rate, starting about 1980, FEMA asked the DRC in one sense to replicate the earlier studies, to find out what was the status at the present time of local planning and managing of major community disasters. This research has now been going on for four years. Again we have studied a variety of local organizations. We are now finishing up our studies of local police and fire departments. In early 1988, we start researching hospitals and emergency medical services. But earlier in 1983 through 1985, we studied what we called LEMAs, the local emergency management agencies. To a considerable extent, we replicated our earlier work on local civil defense offices, but now called LEMAs. Again we have looked at dozens of such groups in dozens of disasters. In part, we wanted to see what had happened, what changes in LEMAs had occurred in the last two decades.

I now want to summarize our more recent findings and to indicate some of their implications. In actual fact, I think our latest research findings have important policy implications at the national level as we did our study of 15-20 years ago for an all hazard approach, but our discussion today will primarily be in terms of local community level implications and consequences.

If we compare our earlier research findings with DRC's latest research results, what can we say? Let me make some general statements and then go back and talk about the details.

First, there is still tremendous diversity for the most part in the structure and function of the local emergency management office or LEMA. There is a good reason for this. The diversity reflects local community conditions and this is a reality of life that cannot be changed by the imposition of an artificial model from above. However, some arrangements of structure and function are better than others. One important implication of this is that, while there is no single standardized model which is feasible and best for all communities, some types of local offices appear to be better than other types in planning for and managing disasters.

Second, when measured against what existed in the past, there has been a very noticeable increase in the disaster preparedness activities undertaken by local emergency management agencies. However, the improvement has not been across-the-board and, except in the best settings, is still far from any ideal. However, the planning process which makes for better disaster preparedness is now fairly clear. An implication of this is that improvement can be obtained by the right kind of planning and not just planning. In fact, in some cases preparedness planning may be so bad that it could be worse in terms of consequences than the absence of any planning whatsoever.

Our third general finding, at first glance, seems almost contradictory. It is that the generally better disaster preparedness has not and does not automatically turn into a better disaster response. At the present time, the management of actual disasters by local emergency management agencies appears to be as plagued by the same kinds of problems that could be seen 20 years ago. However, there are reasons why better disaster preparedness does not translate easily into better disaster management. They mostly have to do with the difference between the strategy and tactics of dealing with disaster. An implication of this is that better disaster responses will be obtained if more attention were paid to managing questions and issues than preparedness questions and issues.

Good disaster preparedness is necessary but not a sufficient condition for good management of a disaster.

Let me go back now and talk about each of these three general findings in more detail.

Take the first point about the continuation of the great variety in the structure and functions of the local emergency office.

It is easy enough to document the heterogeneity; e.g.:

in <u>names</u>: division of emergency assistance and preparedness, office of civil defense, emergency preparedness group, bureau of civil emergency, emergency management agency, civil defense and preparedness bureau, disaster emergency services;

in <u>structural location</u> (apart from city, county, city and county): in the Department of Streets and Sanitation, within Division of Public Safety, staff within Mayor's Office, unit in Chief Administrative Office of the County, part of the Fire Department, completely independent city and/or county agency;

in <u>mission</u>: only natural disasters, all hazards (sudden natural/technological disasters), to those involved in 911 systems, counter-terrorism activities, homeless and poverty programs. Some have only wartime orientation, some only peacetime, most are mixed;

in <u>task responsibilities</u>: most focused only on emergency/disaster preparedness and response, but some also on mitigation and recovery tasks. A few involved in land use planning, building codes, regulation of hazardous material, temporary housing, victim counseling, redevelopment loans, warning systems, planning for evacuation, damage assessment and control, search and rescue, etc.;

in <u>funding</u>: varying mixtures of city/county/township, state and federal to only local funding. Some have very sparse budgets, a few have all the money they need to varying emphases and/or combinations for different tasks and missions;

in <u>major role</u>: different degrees of emphasis on coordination, planning, resource provider, information gatherer, monitor of risks, etc. With respect to others--an isolated entity, head of small cluster, part of interorganizational core, a lead agency, to being part of a conflictive set.

Thus, as in the 1960s, the LEMAs in the 1980s still exhibit the wide range of diversity in structure and function. (As an aside, perhaps there is more diversity, heterogeneity, now than was true of the local civil defense office of the 1960s).

There are certain other common elements continued from the past--e.g., small size of most LEMAs (over half dozen staff members is unusual), control of some facilities such as an EOC and certain other kinds of equiment, existence of a charter or organizational statement about the group.

There have also been some changes, although they are more in perceptions and attitudes then in structure/function. The diversity is there and while the following is far from universal, whatever organization exists by way of structure and function, it is:

(a) more salient than in the past (as viewed by other emergency organizations, although at times they do not know much more than its existence);

(b) somewhat more legitimate (to other groups) than in the past, especially if the LEMA has done something in an actual disaster; and,

(c) in many localities nuclear war planning (crisis relocation, for instance) is very damaging to public credibility and legitimacy. There is a mixed public reaction to agency involvement in planning for evacuation of nuclear plant accident planning.

Thus, how LEMAs are internally structured and positioned, what domains and responsibilities they claim, how they relate to and are viewed by other emergency-relevant organizations, what tasks they visualize and resources they control, and how they plan to carry out their tasks, etc., can and do vary substantially.

This heterogeniety of LEMAs in not accidental; neither is it the result of ineptness or incompetence among emergency manager personnel, nor is it the result of the deliberate plotting of other community groups to keep LEMAs unimportant. The diversity seen reflects both local history and local variation in community life. In other words, the LEMAs mirror the varied past and current conditions that are at play in any American community. The varying LEMAs are the natural products of natural factors, usually operating through political forces. As such, they are rooted in the local context.

One major implication of this observation is that it would be all but impossible to impose one standardized model of LEMAs—in many localities this would result in an artificial entity with no local roots. Any effort to impose one standardized model from above by federal or state entities is also doomed to failure; the end result would not be a natural outcome and would not be seen as a local group (our earlier study of local civil defense offices often found they were not seen as local agencies--they were seen as outside imposed).

However, while this localism is a part of local political reality and should be recognized as such, it does not follow that the existing local emergency management arrangement is necessarily the only option available, or even the best one possible. Whatever the status quo is, while it will be reflective of certain conditions which lead to it, does not preclude the emergence and establishment of other kinds of social arrangements. If the status quo or whatever exists were always accepted as the natural outcome of natural forces, we would still be living under kings, we would still have slavery, etc.

The implications of these comments is that in the diversity of structure and function of LEMAs, perhaps there are some models which are better than others in preparing for and responding to disasters. Actually we do not need to totally speculate about this, DRC produced a report for FEMA in 1987 which addressed this problem.

The Eight Types

Again, without getting involved in details, what did we do and what did we find? Put very simply, we looked at a great number of LEMAs covering the full range of diversity we talked about earlier. We asked if we could develop a typology covering all these LEMAs, and eventually came up with eight types of LEMAs.

How did we develop the types? We did so by looking at three dimensions:

First, was the LEMA autonomous or integrated? That is, was it essentially independent or part of a larger unit?

Second, was the planning activities of the LEMA narrow or broad? That is, e.g., was the LEMA preparing for only a few or limited category of emergencies (for instance, only convential/nuclear war, or only natural disasters), or was it planning for a very wide range of crisis generating factors? Or, again in terms of narrow and broad, e.g., was planning focused only on preparedness planning, only on written plans, only on their own activities versus on every phase of emergency activities, on the planning process, on linking their planning with others.

Third, was the response activity in actual community emergencies extensive or non-extensive? Extensive meant that the response involved:

1. Communication which results in correct information collection and distribution
2. A fully functioning EOC
3. Appropriate procurement and distribution of human and material resources
4. Proper task delegation and coordination
5. A legitimated authority structure
6. Integrated and coordinated relationship with outside private, state and federal organizations
7. Cooperative relationships with mass media organizations
8. Response activities based upon real, not mythical, needs

Non-extensive, of course, meant the absence of these features in the response.

What we were trying to do was to evaluate which organizational arrangements of a LEMA were more productive of a good response.

We came up with eight types.

Type 1	Traditional LEMO
2	Bypassed LEMA
3	Emergent LEMA
4	Established LEMA
5	Embedded LEMA
6	Bypassed CEMA

7 Emergent CEMA
8 Established CEMA

Or, in a more graphic depiction, we have the following typology:

TYPOLOGY OF LOCAL EMERGENCY MANAGEMENT AGENCIES (LEMAs)

		STRUCTURE			
	PLANNING ACTIVITIES	Autonomous		Integrated	
		Narrow	Broad	Narrow	Broad
RESPONSE ACTIVITIES	Non-extensive	Type 1	Type 2	Type 5	Type 6
	Extensive	Type 3	Type 4	Type 7	Type 8

Type 1 = Traditional LEMO, Local Emergency Management Office
Type 2 = Bypassed LEMA, Local Emergency Management Agency
Type 3 = Emergent LEMA, Local Emergency Management Agency
Type 4 = Established LEMA, Local Emergency Management Agency
Type 5 = Embedded CEMO, Community Emergency Management Office
Type 6 = Bypassed CEMA, Community Emergency Management Arrangement
Type 7 = Emergent CEMA, Community Emergency Management Arrangement
Type 8 = Established CEMA, Community Emergency Management Arrangement

We do not have time to discuss these types in detail. Let us just say that we concluded the following: Type 1 and Type 5 are the weakest arrangements; Type 4 and Type 8 are the strongest arrangements generally. Perhaps we can talk about why during the question period.

Overall, it appears that structural position is less curcial than broadness of planning activities. In turn, extensiveness of response activities, or the managing of the disaster, is more important than the preparedness planning, provided the appropriate measures are taken. We will return to this matter later when talking of response in disasters.

We want to stress three additional points.

(1) Whatever the existing LEMA structure and function, it does reflect one working out of local political realities. This means, among other things, an effort to change to a different arrangement will require a sustained conscious effort; it just simply will not occur by itself. As such, anyone interested has to evaluate if the cost and effort involved is worth it. Change can be brought about--that's not the issue. It's whether a positive balance of cost-outcome is there. Clearly this is something best judged by local people.

(2) If any organizational change is to occur, there has to be intelligent leadership using the right means (strategy and tactics). There has to be a reaching out and the providing of something of value to significant other local groups. More specifically, as Drabek has found in his research, LEMAs will be more successful if they build constituencies, establish coalitions, set and control agendas, act in an entreprenurial manner, provide organizational intelligence, develop good mass media relationships, use outside experts, among other matters. Put another way, effective LEMAs are those that are proactive rather than just reactive,

those that take an interorganizational rather than just an intraorganizational perspective, those that fill voids rather than just overlapping activities with others, and those that are continuous rather than just episodic in their actions.

(3) Finally, the goal and objective must always be kept in mind. Essentially, it is to produce better performance by LEMAs at times of disasters. It is not to have a detailed plan, a particular organizational structure, a variety of preparedness measures and facilities, close ties with other community groups, etc.--these are all subordinate to the basic end of a better management of a disaster when it occurs. As such, there may be different ways of achieving this, just as often there are alternative roads that can be used to reach a particular place or location.

As another researcher has written:

> Structural standardization should not be equated with quality. Regional, state, local community differences preclude a singular design. Effectiveness in performance, legitimacy, and public acceptance are the deserved outcomes, not structural standardization. (Drabek, 1985)

Let us turn now to our second general finding. This is that, as a whole, there is considerable better disaster preparedness planning in the 1980s than in the 1960s. There is no question about that. For example, it is rare to find a LEMA today that does not have an EOC, a disaster plan, responsibility of some kind in the natural disaster warning process for the community--all features usually absent in the civil defense offices of the 1960s. As we wrote in our report to FEMA:

> Both quantitatively and qualitatively there have been changes in the last decade. The typical LEMA undertakes more planning than the local civil defense office of the past and, at least in relative terms, the planning can probably be said to be better in the sense of being more systematic and realistic.

Certainly, measured against the past, the disaster preparedness planning of LEMAs has improved substantially. This is not unimportant. It is a good talking point in trying to convince others that something can be done; and, to a degree, something has been accomplished if there is e.g., a designated EOC.

However, the improvement has <u>not</u> been across-the-board. There is some evidence in our research, that it is the better emergency management agencies which seem to have most improved this preparedness (almost akin to the saying that the rich have gotten richer and the poor poorer). My personal gut feeling is that in smaller size communities, semi-rural areas, there has been relatively little change in the two decades we are talking about. In fact, we might suspect, as more costly technology is used, such as computers, the gap between the poorly prepared and the better prepared will get wider. If so, there are some fundamental policy issues here which ought to be addressed, probably at the national level.

But, apart from that, even when matters are considerably better than in the past, it does not follow that they are necessarily good when measured against ideal standards. E.g., that there is something designated as an EOC does not mean that it is a good EOC facility. That there are available a set of telephones or radios may not be very important if not much thought has been given to who will use them at both ends and what should be communicated. In fact, that illustrates the research observation that improvements in hardware in the general sense of facilities equipment, supplies and other material resources have often not been accompanied by the necessary planning for organizational use of such hardware.

(At an anecdotal level—I was once given a tour of an EOC and was very impressed in two ways—the different kinds of radios, telephones, the two mobile communication vans, the computer with a resource databank inventory, the computer display screen, and so on—were all very impressive. But, equally impressive was that it was clear that the LEMA director had given little thought to which organizational representatives were going to be present at the time of an emergency, what they were going to communicate, and why. The soft use of the hardware had been given little thought.)

Actually, an emphasis on technology reflects the strong feeling in many potential crisis areas that better technology will prevent a problem in the first place—the situation which existed pre-Three Mile Island and pre-Chernobyl in the nuclear area, and pre-Bhopal in the chemical area. This is the mistaken notion that there can be technological solutions to human and social problems (a la the idea that condoms will take care of the AIDS epidemic). Good technology, of course, is both crucial and important in the preparing for and the managing of disasters, but it should not be asked to do what it cannot do—solve problems of a group, human or organizational nature. Problems that are rooted in the social require social solutions.

Apart from that inclination to judge improvement in terms of hardware, another reason that disaster preparedness planning is not as good as it should be, is that many LEMAs tend to focus too heavily on the production of a disaster plan.

You might ask what is wrong with that? Well, for one, there is a tendency to assume that much has been accomplished when a written document called a disaster plan has been produced. Let us leave aside the fact that many disaster plans are terrible—they are often incredibly detailed, making them automatically useless for most possible users. The plans often make wrong assumptions about the problems and non-problems which disasters will bring (e.g., often giving much attention to what usually are non-problems, such as planning heavy security for an area or the planned massive use of public shelters while ignoring or underplaying real problems which will arise like having a pass system which will work or assigning who has responsibility for declaring the emergency is over, or how missing persons or victim lists will be handled—three matters handled very poorly in the majority of disasters the Center has studied). Disaster plans quickly get out of date and are often not updated. I would estimate that in the disasters we study at the Center, where we collect all the community and organizational disaster plans, about half of them turn out not to have been updated in the last four-five years since they were developed.

But, as I said, let us leave aside all these inherent and, unfortunately, typical flaws and weaknesses of written disaster plans. More important is that a focus on written plans is the wrong focus. The production of written documents may be necessary for bureaucratic reasons, something concrete that can be pointed to and counted.

But one should always remember the primary goal of emergency planning—it is to facilitate and allow the most effective and efficient management possible of a disaster when it occurs. That's the end goal; at the very best, a written plan is a means to an end. Too often it becomes the end in itself.

One way to avoid this is to follow what research over a 20-year period has indicated. The focus of LEMAs or any organization interested in preparing well for disasters should be on the planning <u>process</u>, of which only one possible outcome is the production of a written plan.

To think of planning as a process suggests that it is never a finished task. The notion of process suggests a continual updating. The notion of a planning process broadens out one's conception of what ought to be done in disaster preparedness.

Thus, what is involved is more than a change in word from plan to process. A focus on the planning process implies that preparedness planning includes such matters as:

- convening meetings for the purpose of sharing information;
- holding disaster drills, rehersals, and simulations;
- developing techniques for training, knowledge transfer, and assessments;
- formulating memoranda of understanding and mutual aid agreements;
- obtaining, positioning and maintaining relevant material resources;
- undertaking public educational activities;
- establishing informal links between involved groups;
- thinking and communicating about future dangers and hazards;
- drawing up organizational disaster plans and integrating them with overall community mass emergency plans;
- conducting hazards and risk analyses; and
- updating continually that which becomes obsolete.

In research studies, it is noticeable that LEMAs that do well in disasters are those that approach disaster preparedness from a process rather than product point of view. Unfortunately, as I shall soon try to indicate, even the very best of planning for a disaster may not lead to the good managing of that disaster. Good disaster preparedness is a necessary, but not a sufficient, condition for good disaster management.

Another weakness in the disaster planning of LEMAs is that too often it fails to take an overall community perspective on the process. It is of no use for an organization to plan well for itself or a handful of other organizations when potential or actual disasters precipitate a community mass assault on the problem. (Research by ourself and other researchers have, in fact, consistently reported that local emergency personnel are often surprised at the number and diversity of responders, both from within and outside the community, which converge on the disaster site—the larger the disaster, the more the converging groups and their variety.)

This organizational mass assault would create problems even if planned for, but, unfortunately, there tends to be fragmentation of local disaster preparedness planning. There frequently are three different clusters who sometimes have little contact with one another. One of the clusters is around what has been called the social control sector. This planning is undertaken by representatives of local government and usually involves emergency management, police, fire, public safety and sometimes public works involvement.

Another cluster is around what might be called the medical and social service sectors. Hospitals, emergency medical groups, and a variety of social service agencies often engage in planning for victim services. (In recent years the planning for emergency medical services, if it is linked to fire departments, sometimes pulls the two clusters together but more often than not, there is a planning gap between the two.) Our field research keeps running across localities where there has been separate planning for evacuation and on-site command posts by the two sectors—communities where there is no gap find this difficult to believe, but police-fire departments, emergency management agencies-police departments, fire department-hospitals, etc., conflicts do exist and are not bridged by planning.

In recent years, increasingly, emergency planning is also being undertaken by institutions and organizations from the private sector—the nuclear plant and the chemical plant industries being obvious cases. In one community the Center recently studied, we had four clusters—those around the LEMA, those around the emergency medical service system, those around the nuclear plant in the area, and those around the chemical complex in the area—planning which had been done rather independent of each other.

To be sure, fragmentation of local disaster preparedness planning cannot be blamed on the local emergency management agency. But too often LEMAs passively allow these other clusters of planning to occur and make no attempt to bring about any integration. (To give an anecdote, in the last several years we were asked to look at the responses in localities where nuclear plant evacuation plans were in place during an emergency—if IEMS or all-hazard approach was in place, no such special studies would be needed. The point is that overall general community preparedness planning is needed).

To summarize our second general theme. There has been improvement in the disaster preparedness of LEMAs. It has not been across-the-board. There is a technological bias in planning. Too much emphasis placed on written plans, not enough on planning. A more integrated and less fragmented approach is needed.

We come now to our third general research finding, that the managing and response of LEMAs in actual disasters is as problem-plagued now as was that of the local civil defense offices of the 1960s. While it cannot be said there has been no improvement and while some occasional well managed disasters do appear, the general picture is that many of the same difficulties and problems which existed in the past appear also in the 1980s. This would appear somewhat paradoxical given as we said that LEMA disaster preparedness planning is much better now than when it was undertaken by local civil defense offices. The better planning has not gotten translated into better managing on the whole.

One reason for this, as we have already pointed out, is that while the preparedness planning is better than what existed in the past, it is still not very good. Thus, we noted that while a written disaster plan is probably better than not having one, a plan is only one possible component and not necessarily the most important of what is involved in good disaster preparedness. So, poor planning can only result in poor managing.

However, research has shown that the issue is far more complicated than just the point we have mentioned. Let me discuss three major mistakes that will result in poor managing of disasters. <u>One</u> is to attempt to deal with a disaster as if it were only a larger everyday emergency. Disasters are not only quantitatively, but also qualitatively, different from smaller emergencies. Disasters differ in kind, as well as degree, from everyday emergencies.

On a daily basis, almost all organizations learn to deal with minor emergencies. For some organizations, as, for example, the public utilities, fire and police departments, hospitals, railroads and airlines, and parts of the chemical industry, such responses to accidents are a normal part of their everyday activities. Often these organizations have highly skilled personnel who have become quite adept at dealing with minor crises. Unfortunately, to paraphrase some police officers, this often leads to the belief that a disaster is merely a very large-scale traffic accident. A nation-wide study of acute chemical disasters was conducted by DRC. Results of interviews with chemical industry personnel showed that it was their belief that preparedness planning for acute toxic releases, chemical explosions, and other such mishaps was no more than an extension of everyday corporate health and safety measures. In another study of the delivery of emergency medical services (EMS) in large mass casualty situations, results of interviews with EMS personnel showed that it was their belief that special preparedness planning was unnecessary because the provision of EMS in disasters was but an extension of EMS in daily operations, the only difference being one of degree.

These and similar views, often strongly voiced, are simply wrong. In a disaster there is a difference of kind, not just degree, compared to what goes on in an accident or minor emergency. A disaster involves not just more, but something which is qualitatively different. This has to be considered when planning for disasters, training for disasters, operating under disastrous conditions, and evaluating group or organizational activity during such crises. An accident cannot be perceived as a little disaster, nor can a disaster be viewed as a big accident!

This is not merely a distinction that has come out of social science research. Some organizations and communities also recognize that such differences exist and have developed standard operating procedures (SOPs) to cope with crisis situations. For example, in most localities, public utility companies in this country carefully distinguish between: (1) accidents or emergencies (e.g., everyday, localized breakdowns which can be handled by local resources and personnel); and, (2) disasters and catastrophes (e.g., statistically rarer events which require external aid because local resources cannot cope with the acute demands). Many public utility companies typically recognize a "qualitative difference" between emergencies and disasters. Anyone having the responsibility of planning for or responding to such phenomena should also recognize and accept this fact that such differences do exist.

The following four examples illustrate major differences between disasters and minor emergencies:

1. During disasters, organizations are forced into more and different kinds of interactions with other groups. The greater the number of contacts among organizations, the more new relationships with other groups or organizations will be established. For example, businesses may be required to interact with social service agencies for the first time during crisis periods. In addition, local private groups may be required to coordinate their activities with remote and/or unfamiliar governmental bureaucracies. The converse is also true; however, often prior to the disaster, neither knew of the others existence.

Conversely, during periods of normalcy, new relationships between organizations often develop very slowly. There is seldom a need to suddenly and concurrently establish linkages with multiple groups having local, State, and regional, and/or national components. During a disaster, however, there is little time available to adjust, for example, to the blurring of interorganizational boundaries, or the informal sharing or pooling of personnel, tasks, and equipment—common features of major disasters, but not minor emergencies. Complicating such situations of greater interdependence is the number of new groups with varying functions, capabilities and expectations that will be involved. Even a relatively moderate size disaster will force dozens of unfamiliar local and extra-local organizations to work together on unfamiliar or new tasks that are a part of the community response network. In short, disasters call for more and different organizational relationships.

2. During disasters, organizations will lose some of their autonomy (e.g., direct control over their own functioning). In our society, when a community's ability to function normally is seriously threatened, security and protection from life-threatening situations usually becomes the responsibility of civil authorities. The mayor, the police chief, the head of the local disaster agency, or some other official, can declare a "state of disaster" and initiate measures to control disaster-related activities in a given locality. Although there are many stories to the contrary, it should be noted that martial law or rule has "never" been declared in American disasters and is extremely unlikely to ever be imposed. Civil control over the military is maintained even during disasters.

As a direct result of the loss of organizational autonomy, daily activities which are taken for granted become problematical during a disaster. The freedom of mobility within the community, as, for example, entering or leaving one's property, may be restricted by police barricades or an evacuation order. During disasters involving chemicals, site control may actually be vested in an outside agency such as a State or regional hazardous materials response team, or a Federal agency such as the Environmental Protection Agency. Additionally, corporations or other authorities will often intervene during disasters and assume responsibilities, make decisions, or set policies which normally would be the sole prerogative of the local plant, office, or operation. In short, organizations can have their autonomy preempted in disasters in a way which will not occur during minor emergencies.

3. Performance standards for organizations may change drastically during disasters. What is appropriate during periods of normalcy or minor emergencies often becomes less relevant during crisis periods.

For example, standard operation procedures for fire service professionals require a swift response to emergencies involving structural fires. These procedures are followed by both public or private fire service organizations on a daily basis. However, firefighters respond quite differently to fire-related emergencies involving unidentified chemical substances or materials whose properties are not thoroughly understood. Often, delaying the response until the situation is clarified is the standard daily operating procedure under such circumstances.

Using daily performance criteria as a basis for determining the type(s) or response(s) required to control chemical incidents, some fire departments often turn minor chemical incidents into major chemical disasters. Similarly, EMS professionals have adopted standard operating procedures that emphasize quick response time and swift delivery of patients to hospitals. However, when handling large numbers of casualties, such routine operations are preempted by special procedures, as, for example, the triaging of victims and the judicious transportation of injured persons to area hospitals to avoid overcrowding of emergency rooms and other risks associated with delays in emergency medical care due to overloading of hospital staff and substandard medical care.

Thus, performance criteria used during daily routine operations yield to the adoption of disaster performance criteria during crisis periods. As is the case when fire professionals are faced with crisis situations under conditions of uncertainty, EMS systems that use daily performance criteria as a basis for determining the actions that should be taken during crisis situations have resulted in inadequate and inappropriate responses to mass casualty incidents. Under the pressure of increased disaster-related demands, emphasis on speed of response and "snatch and run" procedures are not appropriate response strategies. In summary, disasters call for different types of organizational performance than do minor emergencies.

4. An emergency is often managed by an organization (public or private) having responsibility or authority to effectuate an emergency response to deal with the situation, or is managed by local organizations such as the police and/or fire department. Under emergency conditions, the crossing of boundaries among public and private sector organizations is seldom required. However, during disasters, a more cohesive relationship among public and private sector organizations is required. Thus, a disaster requires the mobilization of public community resources and often requires the preempting of some private rights by public rights. For example, unrestricted entry onto private property, which is normally very limited on a daily basis, is permitted under disastrous conditions. Also, under disastrous conditions, the destruction of selected private property for the good of the larger community (e.g., the construction of levees) is permissible without negative consequences.

Although legally questionable, the requisitioning of private goods and/or equipment for the public good is an acceptable practice during major disasters. Such actions are not necessarily restricted to the public requisitioning of private goods. It is to be noted that essential personnel and resources from the private sector are often freely offered for the public good at the height of a disaster. Under disastrous conditions, there may be, in fact, private expectations and demands for goods and services from the public sector which would not otherwise occur during periods of normalcy. Thus, boundaries between public and private goods and services become blurred during disasters.

To summarize, during disasters, organizations are often faced with a whole new set of circumstances with which they must cope. As previously discussed, organizations may have to: (1) quickly relate to more and different groups and other organizations; (2) adjust to losing a part of their autonomy; (3) apply different performance standards; and, (4) operate within a closer public and private sector interface.

For these and other reasons, it is ill-advised for organizations to use daily performance criteria to meet the demands of disastrous situations. To function efficiently and effectively, organizations must be knowledgeable about the social environment within which they must operate during crisis situations. Furthermore, organizations must recognize that during crisis situations the environment changes quickly and drastically and that their disaster preparedness planning and response strategies must give consideration to this important fact.

Still another problem in organizational managing of disasters is what some researchers have called the "command and control model" that some officials either consciously or non-consciously assume.

There is a strong tendency to assume that disaster planning can borrow much from military situations and settings. Thus, it is often visualized that the best model for disaster organizational preparedness and response is what has been called a command-and-control model. This is the notion taken from the military area that a top down, rigidly controlled, and highly structured social organization model ought to be developed for disaster purposes.

Let us leave aside the fact that the command and control model is more fiction than fact even in the military area. It is not the way armies, navies or airforces actually operate, especially in conflict situations, stereotypes and group mythologies to the contrary. Direct studies in the disaster area not only have shown that command and control models seldom are organizationally viable, but more important, would be poor models for disaster planning even if they could be implemented in the real world.

In general, the command and control model assumes that disasters create a tremendous discontinuity with everyday life which lowers the effectiveness of individual behavior and reduces the capacities of the social organizations involved. Given this, planning is centered on the development of mechanisms to control supposedly widespread maladaptive individual behavior (personal panic and dependency), and on the creation of ad hoc structures to replace the supposedly disrupted and non-functioning social organizations in the disaster area. Planning efforts are thus directed at the creation of strong authority to overcome the supposedly social disintegrating effects created by the disaster agent.

In general, planning in this mistaken model is oriented towards creating new norms for individuals undertaking emergency behaviors. For example, spontaneous behavior is frequently seen as inappropriate or as manifesting irrational actions on the part of panicing individuals; but real evacuation is something to be ordered by authorities who are the only ones capable of making rational decisions for others. In this model, plans often make extensive provisions for mass shelters for evacuees on the assumption that individuals and other units, such as families, will be incapable of coping or remedying such crises. Thus, it is assumed new structures are needed to replace the old ones, which will have become demoralized or ineffective. This kind of planning is also frequently preoccupied with the development of a centralized communication and information system which can evaluate information and create official and thus correct messages which are to be communicated only through formal and official channels. For the collective good, it is thought decision making has to be centralized with the decisions communicated to induce the compliance of the affected populations.

This kind of planning effort, partly consciously and partly non-consciously, is oriented around creating an artificial and authoritarian structure to replace natural and spontaneous behavior and structure. The natural spontaneous response is viewed as incapable of being effective in the stress conditions created by a disaster event. In effect, formal plans are created which are thought to be more rational than any informal response, and to which disaster victims are to adjust.

However, the research evidence points in a different direction. We have already indicated that in disasters there is less discontinuity with everyday life than is frequently supposed. Also, rather than exhibiting irrational and abnormal behavior, disaster victims maintain, as much as possible, their traditional activities and their usual occupational and family responsibilities. Most organizations in disasters tend to operate as well as they do on an everyday basis--it is extremely rare for them to become non-functional, even in the worst of disasters.

Thus, in good disaster planning, rather than attempting to centralize authority, it is more appropriate to develop an emergent coordination model. The fact that disasters have implications for many different segments of social life and the community, each with their own pre-existing patterns of authority and each with the necessity for simultaneous action and autonomous decision-making, indicates it is impossible to create a centralized authority system. The centralization of authority is usually predicated on the image of disintegration of social life. The evidence of viability of behavior and the adaptability of traditional structures suggests that the exercise of authority is more of a problem in the minds of planners than a problem of life under disaster conditions.

Good disaster planning will focus on organizational coordination and the development of communication rather than the creation of authority. For this, a certain degree of emergence at the macro level might be necessary. But even this macro level organizational emergence can be partly planned, although we do not have the time here to discuss in detail this very interesting disaster phenomena.

Let us just say that another reason for the lack of good linkage between current disaster planning and the emergency response of LEMAs may be the failure to take into account the "emergent" quality or nature of much of the response. In the final report to FEMA on the work completed just prior to this study on emergent behavior at the emergency time periods of disasters, we wrote that:

> Emergent phenomena, that is, new social arrangements and activities are a pervasive feature of organized responses to disasters, although the manifestation may range from minor behaviors to major groups. As such, disaster planners and operational personnel should take the appearance of the phenomena for granted and incorporate the probability of its presence into their thinking and action. (Quarantelli, 1984)

Unfortunately, far fram taking the position suggested in the last sentence, most LEMAs tend to look upon emergent behaviors and groups as something "bad" and to be prevented by planning. As was written about local officials in the just cited report:

> There is a tendency for them to think that because they have not planned for or are not controlling some phenomena in a disaster situation, that it cannot be good. This is seldom the case. In many situations, whether it is emergence on the part of individuals or organizations, the new behavior or groups may represent the most effective and efficient way of coping with problems. This is not to say that emergence always represents the best solution, but emergence does represent an effort to solve problems. In this connection, planners and responders should consider under what circumstances and for what purposes they might actually want to facilitate certain kinds of emergences. (Quarantelli, 1984)

In our experience, while some LEMAs recognize the possibility of emergence in emergency responses, they tend to see that as a problem rather than opportunity. Yet if improvisation is usually present in organizational responses to emergencies, perhaps disaster preparedness planning should build in and allow for improvisation or emergence. It does not seem useful to plan, to conduct exercises or otherwise carry out preparedness measures as if there were only certain standardized ways to do such matters if there is prior acceptance of the probability and usefulness of emergence in the disaster response. If there is going to be emergence in response to disasters, a degree of emergence should be incorporated into disaster preparedness itself. Put in other words, if LEMAs are going to have to improvise in some of their responses, they should also plan and practice improvisation in preparedness activities.

The ideas expressed are consistent with some organizational researchers completely outside of the disaster area who have recently been talking about such notions as "loose coupling" and the need to find more effective models for intra- and inter-organizational relations than presented by traditional bureaucratic models (see, e.g., Weick, 1976). An underlying theme appears to be that the more effective organizations are those groups which encourage improvisation and multiple alternative ways for dealing with problems.

Finally, planning is not managing. There are principles of crisis or disaster management that are different from the principles of disaster planning. That planning is not management should be recognized, but studies of disaster have demonstrated that there is sometimes a failure to distinguish between the two processes or activities, with consequent negative results.

Perhaps if we draw a parallel we can make our last point even more distinct. The military draws a distinction between strategy and tactic—in fact, they teach and try to implement the differences between the two.

Strategy, in general, has reference to the overall approach to a problem or objective. But there are always situational factors or other contingencies which require particular adjustments to attain a specific goal if the overall objective is to be attained.

This is the area of tactics. In somewhat parallel terms, good disaster planning involves the general strategies to be followed in preparing for a sudden community emergency. Good crisis or disaster management involves using particular tactics to handle the specific situational contingencies which are present or arise during the course of a disaster.

Clearly, it is usually impossible ahead of time to spell out in detail the particular tactics which have to be used because, almost by definition, they will be relatively specific to the actual situation encountered. Good disaster management, to a considerable extent, is the application of tactics which are relevant to the situational contingencies of a given disaster.

However, just as the military finds it possible to teach tactical principles as well as strategical principles, disaster researchers can point to some of the tactical considerations which are involved in effective and efficient disaster management.

As we have already said, the crisis management of disasters does not follow automatically from disaster planning. Research has shown that successful disaster management is primarily a function of the activities of emergency organizations. In particular, there are management problems with respect to the communication process, the exercise of authority, and the development of coordination. There are at least five different areas of difficulties in the communication process, namely in intra-organizational; between organizations; from organizations to the public; from the public to organizations; and, with systems of organizations behaviors. Exercise of authority difficulties stem from loss of higher echelon personnel because of overwork; conflict over authority regarding new disaster tasks; clashes over organizational domains between established and emergent groups; and surfacing of organizational jurisdictional differences. Coordination difficulties come from lack of consensus among organizations concerning the meaning of coordination; strained coordination between organizations working on common but new disaster related tasks; and, difficulties in achieving overall coordination in a community disaster of any magnitude. Prior planning can limit these management difficulties, but not all of them.

Concluding Remarks

Let us draw a few brief conclusions and implications from what we have said.

1. The variety in structure and functions of LEMAs reflects generally local political reality. However, some types of LEMA organizations and arrangements are probably better for planning and responding to disasters than others. To move in such a direction requires effort; whether such an effort is warranted has to be judged by local people in a specific local setting.

2. The disaster preparedness planning of LEMAs has improved considerably over what it was two decades ago. Nevertheless, the planning is generally far from being ideal. We indicated a number of dimensions along which the preparedness planning process could be improved.

3. LEMA responses in disasters continue to be as problem-plagued as they were in the past. Part of this stems from a failure to recognize that planning deals with strategic questions, whereas managing has to address tactical issues; thus, the lack of a full correlation between preparedness and response. Also, it is necessary to accept that community disasters are qualitatively, as well as quantitatively, different from everyday accidents or minor emergencies.

4. Changes can be instituted, but they will not automatically occur. There has to be initiative and leadership such as by community officials, as yourself. Knowledge of the realities of LEMAs, preparedness planning, and disaster managing such as we have presented, can be powerful weapons for those who are interested.

What is the likelihood you and others such as yourself will do anything? Another series of studies I have not mentioned has looked at emergency management <u>personnel</u> rather than emergency management agencies. This research, including some DRC has done, has found that again, when a comparison is made with the 1960s, the staff personnel in the 1980s are more interested and motivated, generally better educated and more professional than the local civil defense directors of the past (granted that there are exceptions in both directions). If this body of research is valid, you will at least <u>consider</u> what I have said about the research findings on LEMAs.

If so, I have suceeded in my goal. You may, as President Truman said, find that some of the answers may not answer all your questions. But, as he said, if you want to, you can still go ahead and make decisions.