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COMMUNITY CRISES: A COMPARISON  
OF THE CHARACTERISTICS AND  
CONSEQUENCES OF DISASTERS AND RIOTS\*

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\*Written version of an oral presentation under the title of "Multiple Consequences of Community Crises and Disaster" made at the Disaster Management Third National Conference 1992 held at Hamilton, Ontario, Canada on October 21, 1992.

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## Introduction

As requested, we will summarize the major social science research findings on the behavioral effects or consequences of community crises. However, to talk intelligently about the consequences of "something", it is first necessary to indicate what the referent of the "something" is. In this particular case therefore we need to specify what could be meant by the term "community crises." (The term "disaster", for example, has been used in different ways by the earlier speakers).

That will be the focus of the first of four major themes in our remarks. That is, we will initially indicate what we mean by community crises and then briefly distinguish two different major types of such crises. Thus, a distinction will be made between consensus type crises, namely disasters and catastrophes, and conflict type ones such as riots and civil disturbances. There are both similarities and differences in the characteristics of the two types that have to be taken into account in planning and managing such situations at the community level.

Second, we shall then note that crisis effects manifest themselves behaviorally at different social levels, primarily for our purposes at the individual, organizational and community level. In addition, these consequences in the longer run or the recovery phase will be discussed as well as those in the short run or emergency time or impact phase (the behavior of people, groups and communities are the effects in the short run). Good planning and managing of crises must take into account all the multiple outcomes and their changes through time.

Third, we will then particularly single out the operations and reporting of the mass media outlets during crises. The reason for this special attention to the mass communication system is that the image of a crisis that most people have is that which is presented particularly by the electronic media: radio and television. This heavy dependence on journalistic news reports is as true of community officials responsible for planning and managing crises as well as anyone else.

Fourth and last, we shall conclude by indicating that future community crises will along some lines not be identical with those we face today. This is important to note because crisis planners and managers tend to take the last such occasion in which they have had experience as the basis for future actions. However, we need to plan for managing crisis occasions that will be different in significant ways from those we have faced in the past.

While particular studies are cited for some of our observations, most of our conclusions are drawn from general summaries of the literature (e.g., Quarantelli, 1984b, 1988a and b; Miller, 1985; Drabek, 1986; Dynes, De Marchi and Pelanda, 1987; Kreps, 1989; Auf

der Heide, 1989). We should note that there are only a few studies which directly compare behaviors in and effects from disasters and from riots (among these are Warheit, 1968 and Weller, 1972, 1974).

### 1. Crises: Similarities and Differences

Now all crises by definition share in common three interrelated characteristics: there is a threat of some kind, it is relatively unexpected, and there is an urgency or a need to act.

Let us elaborate a bit on these characteristics (for a more extended discussion see Rosenthal, Charles and 'T Hart, 1989).

In a crisis, there is a danger or hazard of some kind. In many instances this will involve a perceived threat to life and/or property. At the very least, something which is valued by endangered persons is considered at risk.

Also, the situation is relatively unexpected when the occasion occurs. If it is somewhat anticipated, then steps can be taken to reduce the risk. In a crisis there basically is a need to react for the effects are likely to be even more negative if nothing is done. That is, there will be more casualties, and/or destruction and damage, and/or social disruptions, and/or costs of all kinds from the economic to the psychological to the ecological, if no remedial actions are taken. Therefore, a return to routine behavior is deemed as necessary, at least by the established community authorities. Thus, in the face of a deteriorating social occasion, steps are almost always taken to try and restore the normal.

It should be noted that not all kinds of situations which may involve some kind of threat or danger need necessitate immediate actions. There are hazardous situations where a delay in response of hours or days and even longer, will not be significant. These typically are where there is considerable lead time before the risk will manifest itself in its most dangerous form. Examples would be instances such as the slow chemical poisonings as might be occasioned by asbestos, radiation contamination by radon, climatological pollution through acid rain, some health epidemics, coastal erosion and land subsidence, and all but the last stages of famines and droughts (as well as a variety of potential conflict situations). Of course whether some of these situations should be defined as crises can become matters of political dispute, as seen in the current AIDS pandemic.

At any rate, slow on-set risks pose both theoretical and methodological research problems as well as practical issues of planning and managing not encountered in quick on-set dangers (see Quarantelli, 1987). Given these differences, in this paper we will be discussing only sudden type crises that significantly affect a community (e.g. some transportation accidents while happening in

particular localities may not actually disrupt community life as can be seen in the instance of a plane crash in an uninhabited area near an airport; while disasters they are not necessarily community disasters).

All sudden type crises also share certain behavioral outcomes. We want to note in three prefatory statements some of these common consequences, specific examples of which we later provide.

1. In all such crises there are both positive as well as negative effects. It is perhaps not accidental, that the Chinese language character for crisis also stands for opportunity. In this vein Joe Scanlon, the leading Canadian disaster researcher has noted that there are always winners as well as losers in disasters (1988). Put more generally, despite the popular thinking about such occasions, they are never totally unmitigated negative in their consequences, be these economic, social, psychological or political. This is true of conflict circumstances too; not everyone loses in terrorist attacks, riots, civil strife situations, revolutions or wars for instance, myths to the contrary. There are, at the individual, household, organizational, community and societal levels, those that gain and win from such situations.

2. There are both longer run as well as shorter run effects of sudden crises, with the former almost always being more important than the latter. To some extent, the short attention span of mass media coverage of anything obscures the fact that it is the long run outcomes that are likely to be more significant. What occurs in the recovery or longer run time phase is in most cases more consequential than what happens during impact or the immediate emergency time period. The accident at Three Mile Island reinforced by the later disaster at Chernobyl markedly changed the worldwide development of the nuclear power industry. The urban and student riots that swept American society in the late 1960s had significant longer run national political effects, although not necessarily those intended by the participants.

3. Finally, as already mentioned, there are effects at different levels from sudden crises. There is a tendency at times to think of only the individuals or households involved, but inevitably there are consequences above those levels, namely to organizations, communities, and societies. Furthermore, whatever the effects are in different social entities, they are not necessarily consistent with one another, so it can be very misleading to attend only to consequences at one level. Thus, some Alaskan coastal communities gained economically from undergoing the 1964 Alaskan earthquake, while some households in the same localities never recovered--economically or psychological-- from the same experience. And many have argued that the current production output and strength of German and Japanese industry is the result of the almost total destruction of those industries during World War II, which allowed

a complete modernization that could not occur elsewhere in the world; this longer run effect resulting from the same air bombing which literally destroyed millions of families and households in those same societies.

As already indicated, while all community crises by definition share some common aspects, there are different major types of crises. Thus, many researchers frequently make a major distinction between:

consensus type crises--

under which natural and technological disasters and catastrophes are included, and

conflict type crises--

under which riots and civil strife disturbances are included.

The typology advanced is not important in itself. Rather it is that the context for organizational activities and the behavioral consequences of the two types of crises can be rather different (see Warheit, 1968: 11-113 for a description of the contextual differences in disasters and in riots and the effects this had on organizational behavior).

As an example, we may note how the delivery of emergency medical services and the functioning of hospitals differ markedly in disasters and riots (see Quarantelli, 1983 for disaster occasions; see also Butman, 1982 and Auf der Heide, 1989). The flow of patients in disasters to hospitals tends to build up quickly, peaks and then drops off quickly with the more seriously injured arriving after the less seriously injured. In riots instead there is no such clear pattern; there may be several peaks, the flow can be rather erratic, and the severity of the injured arriving is not related to the time period. Furthermore, in disasters hospitals typically can use personnel from all three work shifts during the height of the emergency; in riots, they frequently are forced to operate with only the staff members who happen to be present at work when the crisis develops. This is related to the fact that in riots, the violence in the streets and curfews prevents a convergence of hospital workers on their working places. Also in riots, the conflict can spill over into the hospital setting requiring security measures (including handcuffing of patients or their physical guarding) which simply are not necessary in disasters; in fact, during a riot a medical facility can itself come under attack at different times, an unknown danger in a disaster if the building has survived the initial impact. In fact, an ethical issue can even arise in riots if the injured that are brought in refuse treatment because of the race or ethnic background of the medical staff, a dilemma unheard of in disaster occasions.

These are merely illustrations, although drawn from actual research findings, with respect to one kind of typical problem in a crisis, the delivery of emergency medical services by hospitals. But the existence of such behavioral differences necessitates making partly different kinds of preparations and managing the crises in ways most relevant to their particular characteristics. While the distinction between natural and technological disasters no longer seems to have much validity to many researchers, the differences between consensus type crises such as disasters and conflict type crises such as riots, is something that has to be taken into account. As previously indicated, this does not mean that they do not share certain common elements which allow similar kinds of planning and managing. Rather the point is that there are significant differences that also have to be prepared for by anyone interested in community crises.

Let us look at the two major types a little more systematically.

The consensus type crises are best exemplified by disasters and catastrophes. While not everyone has proceeded in the same way, the vast majority of self designated disaster researchers have dealt with the human and social aspects associated with natural hazardous agents (such as hurricanes, floods, volcanic eruptions, tornadoes, earthquakes, tsunami, and blizzards) and with risk producing technological agents (such as explosions, fires, chemical and nuclear plant accidents, electric and energy system failures, biological poisonings, and large scale transportation wrecks and structural collapses). While there are exceptions (see e.g., Baum, Fleming and Davidson, 1983), most disaster researchers have not found it particularly useful for study purposes to draw a distinction between so called Acts of God and Acts of Men and Women (Smith, North and Price, 1988). It is noticeable that the events associated with the above occasions are all relatively sudden in appearance and generally have a fairly definable locale or area of impact. Most important, they are also characterized at the time of impact by widespread consensus on terminating the crises as soon as possible, although there may be disagreements on the means to be used for that purpose.

This contrasts sharply with the conflict types of occasions, that is, where one or more parties in the situation are consciously and deliberately trying to inflict damage, destruction and/or disruption on some of the populations involved. The intent often is to prolong the crises until one side or other wins the struggle or is successful in attaining its objectives. We have in mind such social occasions as wars, riots and civil disturbances, collective terrorist attacks and hostage takings, product tampering and sabotage by groups, and pogroms and massacres. In disasters there may be disagreements but it is not the conscious and deliberative intent of any of the parties involved to prolong the crisis. In addition, as a whole, disasters tend to be relatively localized in time and space, whereas the conflict type behaviors tend to be more

diffuse in time and space. We as well as others do see conflict occasions as one kind of collective stress situation (as discussed in Barton, 1970), and as such there are certain common elements shared with disasters but nonetheless the differences are far more important than the similarities (see the contrast in Quarantelli and Dynes, 1970 and Dynes and Quarantelli, 1973; but see Kreps, 1984 for the opposite view).

It should be noted that this kind of typological distinction has been made for other social phenomena. For example, our reference to consensus and conflict types of crises parallels one made in the social movement research literature. In those writings a distinction has recently been made between consensus and conflict movements (e.g., Lofland, 1989; McCarthy and Wolfson, 1992; Schwartz and Paul, 1992). In the general collective behavior literature there has been an even older drawing of a line between accommodation and conflict groups (see, Quarantelli, 1970).

In what follows we discuss consensus type sudden crises, especially disasters, more than anything else. In part, this is because in the North American context, these are the kinds of occasions that emergency planners and managers are mostly likely to face. Thus, while not ignoring the behaviors in conflict type situations, our discussion is mostly about consensus type crises.

Also, with respect to conflict type crises, we confine ourselves primarily to observations about the behavioral effects of riots. In this respect, it should be kept in mind that, for instance, protest demonstrations are not riots, in the same sense that everyday emergencies and accidents are not disasters (for differences between the former and latter occasions with respect to the responding groups involved, the degree of organizational autonomy possible, the performance standards applied, and the blurring of the line between the public and private sectors, see Quarantelli, 1988a: 49-52).

Also, we shall be primarily discussing the effects of disasters rather than catastrophes. The latter are both quantitatively and qualitatively different from the former (see Quarantelli, 1991a). In catastrophic occasions, such as could be generally seen in the aftermath of Hurricane Andrew, there are at least the following differences.

1. Most or all of the total community is impacted (e.g. in a number of communities in southern Dade County in Florida, such as Homestead, the vast majority of all houses were damaged or destroyed making it impossible for displaced victims to seek shelter and housing with nearby relatives and friends as is typical in disasters).
2. The facilities and operational bases of most if not all emergency organizations are themselves directly hit (in southern



Florida, many of the buildings housing police, fire, welfare and local medical centers were impacted making their work operations all but impossible).

3. Related to this is that in catastrophes outsiders initially have to take many leadership roles in the early stages of the emergency response in the community because local officials are either dead or injured, do not have undamaged offices in which they can operate, and have few if any local resources which they mobilize for their purposes (e.g., in the impacted Florida communities, many social workers had neither useable homes or offices out of which to operate, and there were no nearby friends and relatives to which they could go or close by similar agencies in which they could restart their operations).

4. Finally, most of the normal everyday community functions are sharply interrupted with places of work, recreation, worship and education such as schools totally shut down, and the lifeline infrastructure badly disrupted resulting in stoppages or shortages of electricity, water, mail or phone services as well as other means of communication and transportation (this seemed the case in many places after Hurricane Andrew; similarly for several days after the Xenia tornado, community life was mostly nonexistent, for details see Taylor, Ross and Quarantelli, 1976).

Finally, while in our remarks we highlight some of the major research findings, the presentation is neither a completely systematic summary of all observations, nor a point by point comparison of the similarities and differences between disaster and riot effects or behavioral consequences.

## 2. Multiple Consequences at Different Levels

We shall now talk about effects at the individual, organizational and community levels. Initially we will indicate some of the major consequences in the short run, in the impact or immediate post impact time period (sometime called the emergency or crisis time period). After that observations will be made about the later time phase of crises, the recovery time period.

### INDIVIDUAL BEHAVIOR.

**1. When disasters do occur, individuals react actively and with a prosocial mode; there is more variability in riots with antisocial behavior frequently surfacing.**

As a whole, human beings respond well at the impact times of disasters. People in such situations actively seek relevant information and attempt to do what they can to deal with the exigencies presented by the emergency. The threat of a disaster just about to happen or its actual impact does not paralyze those affected. Passivity in the face of danger is almost nonexistent.

The nearer the threat is perceived to be or the more there have been life or household disrupting problems to be solved as a result of an impact, the more active persons and households will be in responding.

For example, the bulk of the search and rescue is quickly initiated by survivors. Typically this informal action, sometime undertaken by small ad hoc groupings, attempts to establish the whereabouts and status of most of those in the searched neighborhoods, locates the injured, and frequently gets them transported for medical treatment (e.g., De Bruycker et al, 1983). Concurrently, other survivors will be attempting to find out if relatives and friends in other localities are safe, while still others will go to places they think they might be needed, and others will voluntarily undertake a variety of emergency tasks from unofficially clearing streets of debris and directly traffic to informally providing shelter, food and clothing to their neighbors in immediate need of such assistance.

During and immediately after a sudden impact disaster, individuals tend to think of the event as something centered around their immediate physical surroundings, and to underestimate therefore the scope and destructiveness of some kinds of disasters. This often results in considerable variability in the initial behavior of victims as they enact their usual social roles of coworker, family member, friend, neighbor, etc. Survivors do so much prior to and separate from the actions and directions of officials that it sometimes leads emergency agency personnel to mischaracterize the activities as confused and non-goal directed (Dynes, 1990). But at the individual and small group level the behavior is organized, meaningful and goal oriented, although to outsider observers it incorrectly appears as chaotic, confused and random (Dynes, Quarantelli and Kreps, 1981).

Victims not only act positively, but they also show little deviant behavior. The belief that disasters generate much personal deviancy is very widespread and deeply rooted in the population at large, community officials, and to some extent even among the personnel of emergency organizations, and disaster victims themselves (see Wenger, James and Faupel, 1985 for survey data on this particular observation). Several themes predominate in this kind of thinking.

Thus, it is assumed that disasters generate irrational panic and unleash anti-social behavior. Stories and rumors about such behavior are almost universal after a disaster, but actual instances are often nonexistent, very low in relative frequency when they do occur, and surface only if there are particular set of circumstances which tend to be rare in community type disasters (and even in situations where conditions are favorable such as fires in night clubs, panic flight behavior is very rare, see Johnson, 1988). However, these myths about individual disaster

behavior are important because they affect what both citizens and officials often expect and accordingly influence other behaviors, e.g., a reluctance to evacuate because of concern over possible looting, or not issuing warnings because of the belief that panic flight may occur (Quarantelli, 1960).

Disaster victims do not generally act irrationally, certainly no more so and even less likely than in their everyday activities (if by rationality is meant considering options in a crisis situation and/or using appropriate means given certain desired ends, see Quarantelli, 1981b). People who perceive themselves in great danger, if they have any contact with social reality, will feel greatly afraid. But even great fear does not automatically translate into hysterical paralysis, wild flight, or other dysfunctional actions--three frequent referents when the term "panic" is used. This is well exemplified in the behavior depicted in the video shown at this conference on the Oakland, California forest fire. It showed residents surrounded by exploding fires and heavy smoke, with some cars they were using to attempt to leave catching fire. Yet, the video clearly shows these individuals maintaining great control and goal oriented behavior as they carefully worked their way out of a literal physical hell around them.

Now panic flight additionally endangering self and/or others can and does occur in some collective stress situations (Wenger, 1980b), but even isolated episodes of such behavior are very rare in community disasters. This is because the typical disaster setting lacks the specific conditions necessary for panic flight: namely, a confined space, an immediate and a very high specific risk to self, a perception that escape from entrapment is still a possibility, and a sense of social isolation (contrary to popular notions, a sense of entrapment does not lead to panic flight, see Quarantelli, 1954). These circumstances are more likely to be present in an isolated hotel or theater fire than in a community wide disaster. However, even this is not always the case; the American heat video on the Harlem Social Club fire shown earlier at this meeting, clearly showed that no panic flight whatsoever occurred despite what might be called rather favorable conditions for such behavior.

Instead of wild flight away from a disaster site, there is far more likely to be convergence on places where emergency tasks are being carried out (for the earliest discussion of convergence, see Fritz and Mathewson, 1957). Motivations to help others, rather than narrow self preservation or help, predominate in community disasters. Now, especially to inexperienced officials and journalists, disasters are seen as offering maximum opportunities for the surfacing of antisocial behavior. It is speculated and written that survivors are the easy target for looting and other forms of criminal activity. The imagery is that as Mr. Hyde takes over from Dr. Jekyll at the time of the emergency, property crime

rates will rise, violent crime will increase, and exploitative behavior will spread.

However, the research evidence lends almost no support to these notions (Dynes, Quarantelli and Kreps, 1981). For example, many stories of looting (stealing of goods) will circulate and almost everyone will hear some of them. Sometimes up to 90% of a surveyed victim population will report hearing such accounts. But in actuality looting is very seldom a serious problem; often, apparently not even a single case occurs. (In Hurricane Andrew while mass media stories indicated that displaced residents were very concerned about possible looting, often showing them armed and watching their damaged homes, in Louisiana at least, the police had received no reports of looting anywhere in the state within the first 48 hours after impact, Maraniss, 1992:A2; in Florida, the Dade County police reported that for the second day in a row after impact, they had arrested no one for looting despite claims of some residents that they had firsthand experience with armed burglars, Treaster, 1992). Such instances as do occur are not numerous, usually involve articles of little value (which may be picked up by sightseers), and seem to be committed by outsiders to the community--at times by members of security forces brought in to prevent looting!

Overall, prosocial rather than antisocial behavior is the dominant characteristic at the emergency time period of a disaster. Such crime as occurs will be far below that which would normally happen on an everyday basis, the mythological belief to the contrary. While some exploitative behavior, such as profiteering and price gouging may occasionally occur, it is not typical and pales in significance in the face of the massive convergence of free goods, supplies and services that almost always inundate an impacted area as could be seen in the aftermath of Hurricane Andrew. If the height of a disaster unleashes anything, it is less criminality than altruism.

How do individuals react to more conflict type crises? The answer is that at the emergency time period there is somewhat more variability in behavior than exists in disasters. Also whatever prosocial behavior appears is often obscured by widespread antisocial behavior.

Along some lines, individuals behave at the height of the emergency phase in the same way they do in disasters. For example, even in riots, there will be individuals trying to help out others (e.g. in the Los Angeles riots there were a number of television pictures of black citizens helping whites that had been attacked). Even in conflict occasions there is little panic flight or irrational behavior, although prosocial activity as a whole is more rare than in disasters (but "counterrioters" frequently do appear, see Anderson, Dynes and Quarantelli, 1974). Put another way, as in disasters, rational behavior predominates even in riot situations.

The label of "irrationality" widely used by outsiders in riot as well as disaster occasions is essentially a name calling term that says more about those who use the term than those to whom the term is applied.

Nevertheless, in riots there almost always is vandalism at the height of the emergency. Frequently there is looting. In fact, while looting and other anti-social behavior is a very rare phenomena in disasters, it is a hallmark of very many riots and civil disturbances. Furthermore, the characteristics of the behavior differs in the two types of crises in that looting in riots is almost always overt or public, socially supported by many, collectively undertaken and selective in target, whereas in disasters it is usually covert or hidden, seen by most as deviant behavior, undertaken by solo or only a few individuals together, and involves primarily targets of opportunity.

In conflict type crises too there will also be occasions where there will be the more extreme form of antisocial behavior, the conscious physical attacking and murdering of others. This is far more likely in prolonged civil strife situations than riots since in the former the situation is more and more likely to resemble a revolutionary or war-like situation (what we currently can see happening in Bosnia). Just as catastrophes differ from disasters, so does civil strife from riots in that they too are more diffuse in time and space.

**2. While the experience of a disaster is a memorable one, and there are differential short run effects, there does not appear to be too many lasting behavioral consequences; riots seem to leave more of a residue.**

There is a major dispute among researchers regarding possible pathological consequences for victims of disasters (see Perry and Lindell, 1978). On one side, there are those who believe that the traumatic stress of a disaster experience has both short and long run negative consequences for the mental health of those impacted. Thus, community disasters supposedly drive some people "crazy", psychologically scar numerous others so they cannot function normally in the postimpact period, and leave in their wake many seriously emotionally disturbed victims. These pathological psychological behaviors are presumably manifested by almost all or a majority of individuals involved in a disaster, and may last indefinitely unless treatment is obtained (e.g., for an exposition of this position see some of the articles in Lystad, 1988; but see Taylor, 1990: 79, who in her review of the book notes:"upon competing the book I sensed a paradox...in the fact that the consensus that emerges from Part I is that disasters do not provoke widespread psychological and emotional impairment. Yet the remainder of the book is devoted to outlining the necessity for specialized planning and services directly at alleviating the mental health consequences of disasters").

However, according to other researchers and we agree with them, this image of community disasters as inevitably creating many and significant mental health problems is another one of the prevailing major myths of disasters (for an analysis of the different points of view on this issue, see Quarantelli, 1985a). Thus, our reading of the research evidence indicates that community disasters very rarely if ever produce any new psychoses or severe mental illnesses (particularly if measured against the degree of mental illness that can be found in the everyday in the typical community, which supposedly is about 15% of the population in the average American community). It does appear such occasions can generate many surface psychological reactions such as sleeplessness, loss of appetite, anxiety and irritability (Tierney and Baisden, 1979). But these symptoms tend to be subclinical, short lived and self remitting. In some postimpact situations most of the victims exhibit many such characteristics, but it has to be remembered that if no disaster had occurred many individuals would still manifest the same symptoms as a result of everyday stresses. Actually and far more typical for disaster occasions, there is considerable variation in the number of individuals who exhibit them and the kinds of postimpact psychological reactions that appear. Equally if not more important, even those persons showing these kinds of reactions are rarely functionally incapacitated in terms of their normal everyday home, school and work behaviors.

The exception to this picture of victims generally coping well with the stress of a disaster, is sometime found among first responders to disasters among emergency organizations. Members of such groups do often show pathological reactions, what is frequently called the post traumatic syndrome (PTS). This is especially likely to occur if such responders have to deal with especially stressful or horrific scenes such as having to deal with numerous dead bodies and/or disfigured or dismembered ones (the worst case scenario apparently is when the responders have to handle the mangled bodies of little children--very few adults cope well with such a scene). However, not all first responders show PTS and when it appears it is not always of the same magnitude and dysfunctional in consequences.

With respect to nonpathological consequences, there also seems to be differential effects especially in the short run. Thus, while "experience increases hazard perception" (Drabek, 1986: 327), for some this results in more sensitivity to future cues, but for others it appears instead to create a sense of future invulnerability. The latter seems to be similar to a phenomena noted with respect to individuals who survived a "near miss" during World War II air raids or rocket attacks; they too generally felt less vulnerable to later threats (Janis, 1951). Also, development of more positive self images as a result of having reacted well to the crisis has been reported by researchers who looked for other than just negative aftereffects (see, e.g., Taylor, 1977).

Behaviorally too, there are differential nonpathological effects. For example, it has been reported that direct victim family members compared to nonvictim family members not only feel closer to one another than before the disaster, but they also come to interact more with one another than with others outside of the family (Drabek and Key, 1984). A minority view among researchers is that there can be a variety of behavioral as well as psychological negative effects in the long run, the major example often cited was the aftermath of a very atypical and rare catastrophic occasion, namely the Buffalo Creek flood disaster (Erikson, 1976).

However, while a major disaster experience is seldom forgotten, in the long run it seems to fade somewhat in salience and importance. It is especially difficult to see from the research done many behavioral consequences for individuals which can be attributed to having experienced a disaster. In some ways this is to be expected. People experience very many things in their lives, and while a disaster may be a dramatic incident, it often is simply that--a one time memorable occasion embedded in very many other more important family and work experiences of a continuous nature. These other experiences will necessarily have greater impact on the person. In that context, it is not surprising that one study found far more serious psychological and behavioral consequences from an economic recession than it did from even the extended stress created by the Three Mile Island nuclear plant accident in the same general area.

What can be said about the effects from experiencing the other major type of community crisis, the riot or civil disturbance? Although the evidence of the magnitude of the effects is far from clear, there is some indication that riots are more likely than disasters to create mental health and psychological problems. This is understandable because people who are the object of direct physical attacks by others tend to suffer negative psychological effects. There is also reason to think that the experience is more memorable in riots than in disasters. This is because the conditions that have led to the riots usually have some association with the economic and lifestyle circumstances of those that get involved.

#### ORGANIZATIONAL BEHAVIOR.

**3. Organizations typically have major problems in attempting to manage crises, although these are often not the expected difficulties.**

It is very easy to assume that if there has been organizational planning there will be successful emergency management. That would seem to be the purpose of planning. But apart from the possibility that the planning could be poor to start with (Dynes, 1983), there is also the fact that planning is not managing, and that the former does not automatically transform into the latter.

We may perhaps clarify this by drawing a parallel. The military draws a distinction between strategy and tactics: 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 crisis planning involves the general strategies to be followed in preparing for a sudden community crisis. Good management involves using particular tactics to handle the specific situational contingencies which are present or arise during the course of a crisis occasion (Quarantelli, 1988b; see also Drabek, 1990).

There are at least three sets of crisis management problems which organizations have to solve. One set has to do with the information flow in the communication process. Within this there typically can be five sources of difficulty, namely in the:

intra and interorganizational information flow; information flow to and from organizations and the general public; and information flow within systems of organizations.

The technical means of communication seldom are the roots of serious trouble.

Second, there can be problems in organizational decision making. These can stem from:

losses of higher echelon personnel because of overwork; conflict regarding authority over new crisis occasion tasks; and confusion over jurisdictional responsibilities.

But it would be extremely rare in crisis occasions to have any breakdown in the chain-of-command and lines-of-authority in established organizations.

Third, are the problems associated with the need to have interorganizational coordination as well as a loosening of the command structure. These can result from:

lack of consensus about what constitutes "coordination"; strained relationship created by new crisis tasks; and the magnitude of the crisis impact (for a detailed discussion on these sources of organizational difficulties, see Quarantelli, 1988b).



As far as we can see at this point, the organizational problems in disasters and in riots during the emergency time period do not seem to differ that much. There does seem to be some variation in the degree to which communities have planned for both types of occasions, with some being better prepared for one type or other rather than both. Clearly this will affect the managing of the crisis.

Given the potential difficulties it is almost certain there will be organizational problems during the emergency period of a crisis. Inevitably to meet these, there will be emergence and innovations in organizational behavior (Kreps, 1991). This is not a statement of despair about being unable to do anything ahead of times. It is instead a suggestion that it is too late to wait for a crisis to occur before starting to think how organizations can cope with problems and what tactics they can use (those who sometime argue that every crisis is different and therefore prior planning cannot be undertaken, seem to assume the opposite). There also has to be a realistic conception of what actual problems will surface in crisis occasions.

A major lessons from all of this is that even good planning is not enough. Organizations must also learn to manage the problems during the emergency period. Planning and managing while related are two different processes.

**4. There is selective organizational change at best from undergoing a community crisis.**

In the immediate postimpact period there usually is much talk within organizations on how improvements should be made in preparations for future crises. In this regard there does appear to be a difference between disasters and civil disturbances. Unlike after civil disorders (at least those in the 1960s in American society) where organizational change was often the norm (Weller, 1972, 1974 but see Warheit, 1968), there typically is relatively little change in group structures and functions in the recovery period of disasters (Anderson, 1969). The talk seldom gets translated into concrete actions.

There are occasional exceptions. A few crisis-type organizations have sometimes been markedly changed after undergoing a disaster (Ross, 1978). The facilitating conditions are complex and some of the research results are not altogether consistent (see Drabek, 1986: 284-288 for a discussion of some of the literature). But how the group performed during the emergency period appears to be less of an impetus for change than the willingness of some key officials to lead an organized effort for better disaster planning (particularly if planning was already an expectation in the organization given that future threats might have to be faced, see Forrest, 1974). In some cases the disaster occasion simply seems to accelerate organizational changes already planned or underway;

disasters per se do not seem to be spawning grounds for totally new initiatives for social change.

On the other hand, riots do sometime lead to major organizational changes. For example, the student and ghetto riots of the late 1960s and early 1970s in the United States led to significant structural alterations of police departments (to lesser extent of fire departments) and to some extent of colleges and universities. As Weller notes:

More changes and more significant ones occurred in police departments, partly because their mobilized social network not only provided normative demands for innovations, but also provided funds to pay for them. Fire departments also had rather high levels of innovation, but not as great as police. The fire department social network succeeded in mobilizing normative demands for innovations, but not the monetary support provided police (1974: 97).

The police not only made changes in the way they were generally organized but in their preparations for riots; in many respects they became more professional (see Kreps, 1973). The student disturbances:

were considerably successful in having certain reforms made in University practices; For instance, liberalized dormitory rules, more interesting and "relevant" courses and majors available, and greater participation by students in university decision making (Rose, 1982: 114).

Why there is likely to be somewhat more likelihood for organizational changes after riots than after disasters is not altogether clear. It is possible that in some communities the likelihood of the occurrence of such crises is thought to be simply more likely. Riots and civil disturbances also would appear to be somewhat more politically sensitive occasions, thus encouraging more attention to efforts to prevent them or to weaken them when they occur. Weller suggests the following:

Because the civil disturbance problem was national, the network included both normative and comparative reference organizations... However, local networks concerned with disaster provide only normative reference relationships for most organizations. Thus, organizations faced with the threat of civil disturbance found the problem salient at the

same time other organizations of the same type did. Thus, for example, police departments copied heavily from each other in developing community relation programs. The police were provided not only with the impetus toward innovation by other types of organizations which encouraged or demanded that they relate more successfully to minority groups, but also they provided each other with models of how to define their problem and what sort of innovation would meet it (1974: 102).

However, Weller notes that the aftermath of the urban riots in the United States in the late 1960s was different than usually encountered following disasters:

In contrast, a police department which has experienced severe disaster-response problems many encounter encouragement to innovate from normative reference organizations, but they will not find a network of other police departments for whom the problem is also salient at the same time. Thus, they are without the same sort of comparative reference models that so facilitated innovation in anticipation of civil disturbances (1974: 102).

#### COMMUNITY BEHAVIOR.

##### **5. The greater the crisis, the more there will be the emergence of new structures and functions.**

Typically, the overall community response during the emergency period in crises is fragmented and differentiated. In fact the greater the occasion, the more and the wider the variety of responding entities from different layers of the governmental and nongovernmental sectors (Dynes, 1974). In addition, groups responses are not uniform at different chronological time phases since some groups are just starting to get involved when others are already no longer involved (e.g., weather agencies have usually phased out before relief groups start operating in a disaster). Similarly, tasks of the same organization will often change through time (e.g., police and fire departments who may initially help in preimpact to alerting residents to a disaster threat will undertake search and rescue after impact).

This extreme heterogeneity in response stems from a variety of factors. In the United States and also in Canada, for example, by law and tradition as well as expectation, governmental response is decentralized. So local agencies will be complemented by state organizations, and both in turn will be joined by federal groups.

Also for the same reasons, organizations in the public and the private sectors take and are assigned various responsibilities for varying emergency time tasks.

However, there may be one difference along this line between disasters and riots. Research has consistently found that even in the most preplanned of such occasions, disasters draw to themselves a massive convergence of people, communications and material goods from outside the impacted area. So a major community disaster insures an uncoordinated "mass assault" (Fritz, 1961; Kreps, 1983). There is less of a massive convergence in riots at least at the individual level and there may also be less as the organization level apart from conflict oriented groups and agencies.

In both types of crises, community officials sometime struggle to impose some overall order in the emergency, attempting to bring into being what has been called a "command and control" mode of operation. This is a model which essentially involves the idea of centralizing authority and operating with a top down, decision making structure (for its relationship to poor planning, see Dynes, 1983). At the operational level, the effort is to try and answer the question: "who is in charge?"

However, research in disaster crises indicates that the last question is not a very meaningful one. Coordination rather than control is the best that can be achieved, and that in certain respects a loosening of the command structure and decentralization of decision making to lower levels will be the most effective community response (Quarantelli, 1988b). There typically is the emergence of many new behaviors in the attempt to cope with the multiple contingencies created by the occasion (Quarantelli, 1984a; Drabek, 1987). The greater the crisis, the more improvisations of all kinds appear accompanied by new groupings and pluralistic decision making in tasks ranging from search and rescue (Drabek et al., 1981) and the providing of emergency medical services (Quarantelli, 1983), to interorganizational coordination and community priority setting (Dynes, 1974, 1978). While the emergent phenomena is partly rooted in and comes out of preexisting structures and functions, there is also always an element of the new, novel, nontraditional or nonroutine in what can be seen at the height of a disaster, and as such there is the appearance of a temporary "synthetic community" (Drabek, 1986; see also Bosworth and Kreps, 1986).

A lesson of all of this is that any thinking about disasters has to come to terms with the fact of substantial emergent behavior at the community level. But as we shall discuss later, it is this kind of behavior that is mostly missed by reporters and the mass communication system. There is a tendency to look for the traditional community patterns when these are mostly set aside at the height of the emergency period of a major disaster.

Is a command and control mode more appropriate at the time of a riot? This is a question not very extensively studied as far as we can see. But such evidence as does exist might suggest that control is often more of a goal than coordination in dealing with riots, possibly because of the political significance of the happening. This does not mean that control is necessarily the goal that should be followed for dealing with the crisis; in fact, it could be argued that a decentralized system is best for coping with the very diffused nature of riots. However, what officials believe and what actually may be better community coping mechanisms are not necessarily the same.

**6. There are some selective longer run outcomes and changes in communities that have been impacted by crises, including the surfacing of negative aspects.**

There does appear to be some differences, although the magnitude is unclear, between the longer run consequences of disasters and of civil disturbances. Typically, disasters bring about relatively little change in any impacted community, at least in developed countries. Thus, studies in the United States have shown no discernible disaster related long term effects on such community characteristics as population, age composition, housing stock and values, rents, family income, size of work force, unemployment level, retail sales, number of businesses, etc. (Rossi et al., 1978; Friesema et al., 1979). While some of these findings have been strongly challenged on methodological grounds (see, e.g., Drabek, 1981: 160-170), most researchers would probably agree that community change as a whole is not an outcome of disasters. Even very heavily stricken communities are rebuilt and socially restructured fairly similar to what they were before impact (see e.g., Francaviglia, 1978).

However, it is possible that the very long run effects may obscure intermediate time happenings. For example, there is a very interesting post impact economic recovery pattern that typically shows up after disasters. Initially, in the early recovery period there often is an economic boom as victims turn to rebuilding their homes, and businesses to reestablishing their plants and offices. But the longer run consequence of such restoration is an economic downturn. Generally speaking, the economic boom is followed by an economic bust.

For example, in Charleston, South Carolina in the three years after Hurricane Hugo the Center for Business Research in the city found the following patterns with respect to unemployment, construction permits and retail revenue (see Jones, 1992). The immediate losses suffered as a result of impact were followed by gains, and then by losses again. The initial gains were mostly fueled by the payment of insurance claims (2.7 billion dollars) and government loans and gifts (540 million dollars).

The number of unemployed first fell then escalated:

In 1988	the number of unemployed were	8,940
In 1989		9,470
In 1990		8,060
In 1991		11,590
In 1992		15,230

The number of building permits first soared, then slumped:

In 1988	the number of permits issued were	2,614
In 1989	the number was	3,645
In 1990		4,715
In 1991		3,864
In 1992		3,865

The retail revenue (in billions) adjusted for inflation failed to hold its initial post impact gain:

In 1988	revenue was	\$6.7 billion
In 1989		6.7
In 1990		7.2
In 1991		6.9
In 1992		7.0

However, other research does indicates that there can be some relatively permanent community changes in one direction as well as functional and dysfunctional consequences (see Kartez, 1984; Scanlon, 1988). As to the former there is some evidence (see Drabek, 1986: 293-298) that disasters can both accelerate some ongoing community trends (e.g., in local governmental arrangements and power structures) and generate limited new community patterns (e.g. in the providing of local mental health services and some mitigation measures such as flood proofing regulations). However, all the conditions which will produce some disaster induced community changes and in what ways, are complicated and not fully understood.

The recovery phase of impacted communities seems to be related to a variety of factors, especially the political aspects of postdisaster intergovernmental relations (Rubin, 1981; Stratton, 1989). In that context, it is not surprising that there is some evidence that those worse off before impact are those that suffer the greatest post impact losses. Thus, an impressionistic newspaper article notes that in the aftermath of Hurricane Hugo in South Carolina:

There are poor people in Charleston whose homes have never been repaired from the storm, but the worst toll can be found in hundreds of rural communities and backwoods hamlets that

were poor before the storm and poorer now  
(Applebome, 1992: A16).

It does seem to be clear that there is often the surfacing of negative feelings and opinions in the community after crises. For example, there frequently are consistent and complained about discrimination in rehousing of disaster victims (Quarantelli, 1984c), and complaints that some neighborhoods or sectors are being favored in relief efforts. Some of the former is manifested in blame assignation which however may deflect attention away from social structural flaws to a mass media influenced search for individual scapegoats (see, e.g., Drabek and Quarantelli, 1967; Neal, 1984). In fact, one of the longer run effects of disasters is the return not only of preimpact community conflicts, but of the addition of new ones created by recovery and reconstruction efforts (Quarantelli and Dynes, 1976; Stallings, 1988).

On the other hand, there does seem to be in some cases more relatively permanent community changes associated with riots than with disasters. For example, after the black ghetto disturbances of the late 1960s in the United States, research:

studies have found that the size and damage of these riots gave rise to the expansion of the welfare roles and expenditures on welfare and related social welfare programs (Jenkins, 1983: 545);

Betz, 1974) examined financial support for welfare programs in the 23 largest American cities which experienced major riots compared with the 20 largest urban areas that had no riots or only minor civil disturbances from 1960 to 1969. He found that there had been a large increase in welfare expenditures in each city for the year after it had experienced a riot while similar increases did not occur in other years or in the control group of nonriot cities.

In addition, there is the argument that the riots led at least indirectly to political coalition building and realignment, although a distinction is seldom made in this approach between effects at the local and at the more national (e.g. in social movements) levels. Some have in fact have argued that they were a major source for the exercise of political influence by lower-stratum groups (see Piven and Cloward, 1977; 1988, 1992). Also, it has been argued that conflict action tends to have a unifying effect among the protesting groups in particular (Rose, 1982: 119). Thus, it has been said that:

the effects of disruptive crowd behavior may be determined more by its effects on the participants and sympathizers than by its immediate and direct effects in the larger community. If the common-fate consciousness

aroused in a riot is translated into organization so that planned strategy in support of identified goals, implemented by a disciplined body of adherents, replaces the crowds, the momentary gains from disorder can be the start of significant changes (Turner and Killian, 1987: 401).

On the other hand, the general picture derived from most research is that at best there are both concurrent positive and negative long run community aftereffects (for a summary of a number of studies that found functional and structural changes, see Miller, 1985: 250-253). Thus, it has been observed that:

Specific effects are often paradoxical, like construction of Martin Luther King Hospital in the Los Angeles Watts riot zone, providing health care and employment for residents, while many essential retail establishments such as supermarkets had not returned to the neighborhoods years after the riot (Turner and Killian, 1987: 400).

Similarly, other studies have found that while:

urban riots may have generated increase welfare spending...they also worked against the passage of civil rights legislation (Burstein, 1981 cited in Jenkins, 1981).

Perhaps more important, the articulated "demands" of rioters are seldom met either in the short run or the long run. While occasional exceptions can be found, overall, riots like almost all collective behavior incidents, rarely are successful in attaining whatever may be their explicit goals assuming that such exist (see Rose, 1982: 112-121, for a discussion of the factors affecting the success and failure of riots). In addition, especially violent riots often bring with them a negative backlash in terms of "public opinion" (see Turner, 1969; Schumaker, 1975; Goldstone, 1980). Thus, it has been written that:

Even if the complaints of a group are seen as fully legitimate, their tactics in promoting their demands may be rejected by public opinion. This was in fact the reaction in American public opinion to the violent and disruptive tactics of both student and black demonstrators (Rose, 1982: 119).

Overall, it appears that if the research base being used about longer run effects is valid, a general conclusion is that while there are differential outcomes in the community from crises,



negative aspects also frequently surface. The latter seem particularly related to reporting by the local mass media. This is not to imply that the mass communication systems create the problems, only that they are a factor in their existence. We now turn to a discussion of such systems in the United States and Canada.

### 3. The Mass Media Responses

The stories put out by local mass communication systems are especially important for two reasons. Increasingly, emergency organizations are themselves directly depending on reporting about the disasters in their own communities as this is presented in news stories, especially on radio and particularly in television (for a descriptive account of what happened in Hurricane Andrew, see Goldman and Reilly, 1992). Additionally, research has shown that mass media reports, especially in television, tend to present content that perpetuates certain disaster and riot "myths".

A quantitative analysis by DRC of media news accounts does indicate that only a small minority of them refer to such disaster myths as the prevalence of panic, looting, martial law imposition, disaster shock, increasing crime, mass shelter utilization, mass evacuation flight and victim helplessness. In general, less than 10% of the stories in all media present these images. However, the qualitative analysis indicates a different matter. The content often highlights the myths. Television in particular is prone to perpetuating disaster myths. For example, although references to panic and looting constitute only a small proportion of the total television content, their presentation is very dramatic and consistent with the mythologies.

There is reason to think that the mass communication reporting during riots also perpetuates mythologies about such occasions.

As just noted, the importance of these observations is that not only citizens but local public officials often depend on news accounts during the early stages for information on the situation. (During this meeting a number of speakers have alluded to the importance of the "information" on crises provided by the CNN network). To the extent that what officials receive is incorrect, the more difficult it will be for them to react appropriately in crisis occasions. Also, as we shall note just below, the mass media personnel themselves are no better off than emergency organizations officials in trying to ascertain the situation after impact. Thus, to the extent that the latter are depending on the former for accurate information, it becomes a matter of the "blind" leading the "blind."

Let us now look more specifically at the problems that mass communication systems have in covering community crises.

**1. Mass media personnel are usually faced with an initial lack of information about the overall impact of any sudden crisis.**

Local mass media personnel are almost always faced with the problem of a severe lack of information about the magnitude and scope of major crises (Sood, Stockdale and Rogers, 1987; Quarantelli and Wenger, 1991). Often it is not even a question of accuracy but of trying to make some coherent sense out of a variety of fragmented and multiple details, frequently of a contradictory nature. This is not surprising because even emergency organizations with formal responsibility for monitoring and assessing crisis damages often also have very little initial and verified overall information about casualties and destruction, needs and problems (Quarantelli, 1988b). Right after impact, with a turbulent social and physical environment, with normal communication channels disrupted, and with many different organizations trying to mobilize and respond, the collection and codification of information about the overall situation can be very problematical. While this massive lack of damage assessment usually prevails only in the first few hours, in major crises the reaching of a good general picture of the overall emergency situation may take a day or more.

This creates severe problems for mass media organizations, especially in those crises where there are very many and diffuse impact areas in the community. News personnel often find that their traditional sources of information are not of much assistance, because members of those groups (e.g., police departments) also usually lack an overall picture of the occasion. Reporters who attempt to obtain information in the field, if they can get through debris/cordons often can not call back to their newsroom because of disrupted or clogged telephone lines. In more geographically focused crises, reporters often do not have easy access or entry into the areas of crisis activity, because of police cordons or ongoing work of emergency workers sometime trying to save the lives of victims. In these kinds of situations as we shall discuss later there often is verbal conflict, sometimes of a very heated nature, between media personnel and security/emergency worker (Wenger and Quarantelli, 1991).

**2. In localities with multiple mass media outlets, there is considerable variation in providing news coverage of crises, and there also are intermedia differences.**

The mass media system as a whole in any given community very seldom responds across-the-board to a crisis. Not all media outlets will cover even a major occasion, much less all disasters and riots. There is also considerable variation in the pattern and depth of those who present news coverage of the occasion.

In particular, radio gets differentially involved with only a minority of stations providing special crisis coverage. One DRC study found that 19% of all stations did not cover disasters in

their own communities (going off the air or continuing with normal programming). Another 30% never preempted local programming, and 28% did not increase their normal time allocated for news. The same pattern seems to hold in riot situations.

In contrast, newspapers almost always add open pages devoted solely to news about the local crisis and often publish special issues, during the emergency or immediate impact period, about the occasion. Television coverage is only a little less extensive: some stations go off the air or do not operate (e.g. in the United States, public education stations). One DRC study found that 83% of operating television stations preempted regular programming and 96% increased their news time during the emergency period of disasters; this appears to be equally true of riot coverage.

**3. There is a rather selective reporting of important emergency time related activities with some receiving extensive treatment and others, little, if any at all.**

Despite the fact that reporters typically have more autonomy at times of crises, they do not generally seek new sources of information. Instead there continues to be a heavy reliance upon traditional--which usually means official--sources of news by all media organizations (although certain everyday sources such as wire services and syndicated services are ignored since their content is generally not relevant to local coverage of a community crisis). Many reporters first turn to their local normal news sources, usually working their "beats". For those who are able to communicate with their newsroom, their news stories are often composed almost exclusively from the perspective of these sources.

One DRC study of disasters found that local governmental officials were cited by name or title in 14% of radio, 19% of television and 24% of newspaper stories; this obviously understates the informal use of such sources. Police, fire and certain relief agencies were also frequently cited. In contrast, local emergency management officials were infrequently cited, being mentioned in only 8% of radio, 2% of television and 3% of newspaper stories. Officials from outside the community who have come in to respond to the disaster are seldom cited. These patterns indicate the influence of traditional "beats" in the coverage of disasters. Those sources that are ignored, and that could have relevant information on disasters, are generally unattended to during normal day to day operations. In addition, a reliance upon local, as opposed to other officials, is not only consistent with traditional news gathering patterns but is also compatible with the "proprietary" orientation that is developed by many mass media personnel towards their local disasters.

What of traditional sources of information such as press conferences and press releases? Their role are different during normal times and during crises. First, given the difficulties

reporters have in obtaining information, they view press conferences at such times as more valuable than during normal times. But second, unlike on an everyday basis, press conferences in crises are irregularly held and often delayed for hours (although much local community crisis planning calls for regular and frequent conferences, this procedure is not always implemented in actual emergencies). Third, conferences and releases while considered helpful are sometime viewed with a little suspicion in that the official information released is given out by "somebody for reasons of their own"; in fact, if not reporters questions are not handled well, the situation can become a "media disaster" as was the case in the Three Mile Island nuclear plant accident where there was increasing media doubt and skepticism that they were being properly informed about what was occurring (see Rubin, 1987). Doubts about what they are being told is even more pervasive among reporters during riots.

One consequence of a reliance upon traditional sources is that the actions in disasters of nontraditional sources slip through the "news net." The activities of volunteers and of emergent groups and organizations that are not part of the normal "beat" system or regularly courted for news tend to be ignored in mass media accounts. A somewhat distorted image of the crisis can be created by this practice.

For example, search and rescue in disasters is overwhelmingly carried out right after impact by the immediate survivors, whereas mass media accounts focus heavily on formal and search efforts that often are relatively insignificant in the carrying out of the task. Thus, while thousands may be informally rescued alive, news stories may primarily concentrate on accounts of organized dog teams from outside who almost always find a relative few dead bodies, if they find anyone at all. In one DRC study, it was found that only 8% of the radio, the television and the newspaper stories discussed search and rescue, making this crucial emergency time task invisible in most coverages.

Similarly, the activities of certain organizations familiar on an everyday basis to mass media personnel, such as police and fire departments, are highlighted, whereas other more unfamiliar groups such as the public utilities or many relief agencies go all but unreported. Thus, the media content can create the impression that the emergency response is primarily an activity of a few formal and familiar organizations. For example, the police almost inevitably are portrayed as having a lead role; this is certainly true in some occasions, but in many disasters the mass media attention to them is misleading of their relative importance (if we keep in mind our earlier remarks that our pictures of disasters is mostly what the mass media report, it should be seen why this is an important research observation).

There is also selectivity, of an even more conscious nature, in the reporting of riots. There is a tendency to hold back on some news stories in riots that does not happen during coverage of disasters (see Kueneman and Wright, 1976). Essentially certain reports are held back because of the concern that they may exacerbate the crisis.

**4. In spite of the use of traditional sources, there is almost always some conflict between reporters and officials.**

Although there is a strong tendency to use traditional sources of information, there are a number of other circumstances which tend to exacerbate the relationship between local reporters and community officials (Scanlon, Alldred, Farrell and Prawzick, 1985). This general problem seems to prevail in both disasters and riots. Let us note three sources of the problem that can and often do create tension and sometime open conflict.

In numerous crises, but especially focused ones, reporters often have difficulty in getting easy access or entry into damaged areas. Sometime this is simply a result of physical barriers such as debris strewn roads; at other times it stems from the roadblocks or cordons set up by security personnel (who unlike the officials the reporters are trying to reach frequently do not personally know media personnel nor are they particularly sensitive to journalistic expectations).

Often too, the more relevant and key local emergency officials are not accessible to reporters. Again, there are different reasons for this. In many cases the officials are very busy with responding to the exigencies and contingencies of any emergency period, which has much higher priority than meeting with people only seeking information. In other cases, personnel from community agencies believe reporters are looking for "negative" information; whether this is correct or not is irrelevant if the belief exists.

Also in addition to or compounding the problems of a lack of access to damaged areas and officials, is what reporters see as a paucity of press conferences and briefings, the absence of a central point for official information distribution, and the scarcity of Public Information Officers (PIOs) who have experience with and are sensitive to the needs of mass media personnel. Again often it is not what is factually the case, but what is perceived to be the situation (e.g., sometime PIOs know what the reporters are asking and are not "covering" up, but the information necessary to answer the question is just not known to anyone, such as the exact number of dead and injured).

A consequence, if any of these problems emerge, is that they often engender tense relationships between media personnel and community officials. At times these can erupt into shouting matches. When two parties in a work relationship enter into interaction with

contrasting if not conflicting views regarding the nature of that relationship, conflict is inevitable.

**5. A "command post" perspective in crises is generally assumed particularly in the electronic media.**

Some earlier DRC studies suggest the local mass media by obtaining information mostly from community officials generally located at the command post or emergency operations center tend almost exclusively to present a "command post view" of the crisis occasion. Thus, it is argued that there is a bias in the reporting towards the perception and construction of "reality" as seen by only one set of social actors in the situation, mostly emergency oriented governmental officials (Quarantelli, 1981a; see also Sood, Stockdale and Rogers, 1987 and Hornig, Walters and Templin, 1991). This is one possible perspective, but it is only one of many different orientations that could be possible about a crisis (e.g., the perspectives of on-the-line operational personnel such as police and fire officers; of those living in affected neighborhoods, of crisis impacted victims; of relief workers from outside of the community; of foreign researchers; of distant relatives and friends of victims; of looters, of non-impacted community residents, etc.) Therefore, coverage is somewhat limited and reflective more of an official, top down, governmental and social control perspective than other possible views. It might also be questioned if taking this perspective does not contribute to mythologies about looting and antisocial behavior, given that such matters are the understandable interests of such social control agencies as the police.

The more recent DRC research indicates that a command post perspective is especially assumed in the electronic media, although somewhat less true of radio stations. A DRC study of disasters found that within radio, 62% of the reports used some command post sources and 42% relied solely on such officials; for television, 54% of all stories incorporated these sources and 37% relied solely on command post officials. Newspapers were somewhat less command post oriented; only 21% of the stories relied solely on these types of officials (see Wenger and Quarantelli, 1989).

Although citizens and other officials are sometimes contacted and informally used, command post sources clearly dominate the actual content that is produced. In other words, although private citizens may be a valued source of information, they are not an important source for attribution in published articles and broadcast reports. In utilizing the strategic ritual of objectivity, reporters continue to turn to command post officials for quotes and citations. Although citizen input may shape the structure of a story or news report, it tends to be a hidden, covert source. In sum, the "command post view" is certainly present in the content although it is less evident in actual news gathering process and the construction of news account.

As to any difference between disaster and riot reporting, if anything, the command post perspective is even more likely to be taken in the latter occasion. In fact, the initial studies of reporting of crises tended to focus on riot occasions, and the notion of a "command post perspective" was derived from such research (Quarantelli, 1981a).

**6. The gatekeeping process is mostly truncated in the electronic media disasters and it is the same in coverage of riots.**

One of the key concepts developed in the sociology of mass communication area is that of "gatekeeping" (Wright, 1986: 73-84). It refers to those work statuses or locations in media organizations whose incumbents can modify, alter or control the flow and construction of content in a significant way. During normal times, in all media the gatekeeping process involves a number of stages or steps in which incumbents in various mass media organizations mold and change the content of a news story so that eventually it is a collective product.

An earlier study on radio stations during disasters suggested that gatekeeping is truncated during disasters. That is, the news processing is simplified and the news details are distributed to audiences without the usual editing and "quality control" operations. Information received from citizens and other sources is transmitted in "raw" form with steps or stages in the gatekeeping process eliminated. This change in the pattern appears to be an adaptation on the part of media organizations to meet demands for increased output of content in an altered and turbulent environmental setting (Waxman, 1973; see also Sood, Stockdale and Rogers, 1987).

The more recent research indicates that the previous finding of a truncated gatekeeping process is primarily true for the electronic media. In both radio and television stations there is a considerable increase in the amount of live coverage during disaster occasions, with news stories not going through the everyday filtering process. In DRC studies it was found that in both small and large radio stations, the usual steps of writing, editing and recording news stories are often eliminated. Reporters, officials and citizens are often placed on the air "live" and their raw information is instantly distributed. Television stations evidence a similar pattern with video tape not being as edited as carefully as usual and with significantly more live coverage being aired (see Wenger and Quarantelli, 1989).

In contrast, in newspapers the gatekeeping process often becomes more elaborate or more complex during disasters than during routine times. There is a tendency to use "rewrite" persons who often take information from a number of different reporters and construct a story from the various accounts. From there the story is usually passed through the normal gatekeeping patterns of the newspaper.

In riots especially with the use of advanced technologies which allow much on the spot reporting, the gatekeeping is also often sharply truncated, especially by the electronic media.

#### 4. Future Community Crises

Even if crisis planning and response was perfect at the present time, that would not solve some of the problems that will be present in the future. This is because the nature of crises is changing. Let us explain this in a little more detail.

The 21st century, less than a decade away, will bring us more and worse crises. Why? We can note six different categories of threats that will bring this about (for a more detailed discussion, see Quarantelli, 1991b), namely:

- (1) old kinds of natural disaster agents will simply have more to impact.

While such physical agents as floods, hurricanes, tornadoes, earthquakes and volcanic eruptions are probably not increasing (at least on any observable human time scale), what they can socially impact is changing. Population growth, building of structures and economic development means that in most places, more people, more property, more wealth are increasingly at risk. For example, there are more people and settlements than ever before in riverain flood plains. Where in the past there was marsh or swampy areas, there are now housing complexes and industrial parks. Where empty space might have been hit in the past, in the future people and developed areas will be hit. There is practically nothing of the reverse--abandonment or withdrawal from dangerous localities.

One way to document the probable greater future impact is to ask the following: If the last disaster to hit a particular area were to hit exactly in the same way now or in the future, would there be less, the same or more lost? In the vast majority of cases, the answer would have to be more.

- (2) new and increasing kinds of technological accidents and mishaps that were almost nonexistent prior to World War II.

To the category of so-called natural hazards has been added a relatively newer category of technological accidents and mishaps. These are the disasters resulting from human errors and collective mistakes of groups. To the so-called Acts of God, the human race is increasingly adding Acts of Men and Women (see Lagadec, 1982).

There are the increasing risks associated with the production, transportation and use of dangerous chemicals (the relative recency of these threats are perhaps attested to by the fact that when I



started research about 40 years ago, they were simply not mentioned as a major or frequent danger). Bhopal has shown what can happen. An interesting aspect of the appearance of these threats is that even localities which in the past had none or few risks from natural disaster agents, are now vulnerable to toxic chemical spills, explosions or fires, if they have any roads, railways or navigable waterways. To the in-plant and transportation kinds of acute chemical types of disasters, we have also been adding the more slowly developing and diffuse types associated with hazardous waste sites such as seen in Love Canal.

Then there are of course the risk associated with nuclear power. Three Mile Island suggested the potential: Chernobyl presented the reality. Apart from problems in the aging nuclear plants around the world, there is the danger that will be increasingly generated by the handling and transporting of nuclear wastes all over the world (and the often overlooked transportation of military generated radioactive material). One abandoned cancer treatment machine in Goiania, Brazil not only created casualties but massive economic disruption.

These kinds of disasters can be qualitatively different than other kinds of disasters. For example, chemical poisonings and radiation contaminations require complex and sophisticated kinds of medical treatment, require far more costly cleanups and require more specialized knowledge than necessary for natural disasters. Also, in some case, there are second order effects; for example, health consequences such as cancer cases can surface years after the event.

There are other interesting implications of these kinds of disasters. We will simply note that increasingly natural disaster agents will generate concurrent technological disasters, e.g., a flood impacting a chemical complex or an earthquake affecting a nuclear plant. Also, increasingly localities are facing disastrous conditions from disaster sources that may be quite distant, as seen in the radiation fallout from Chernobyl that affected much of Europe.

(3) technological advances that add complexity to old threats.

There are two aspects to this: (a) preventive or protective measures which indirectly can lead to possible disasters, and, (b) the scale of chain reactions possible in modern societies which can turn a little accident into a catastrophic disaster.

As to the first, take this as an example. Fires in high-rise buildings, in combination with the highly combustible and toxic construction and furnishing materials presently used, have brought an additional threat dimension to that kind of situation. People are prevented from being burned by raising the probability of their

being asphyxiated. The MGM hotel fire in Las Vegas is an example of what is more likely to occur in the future.

Somewhat in the same vein, let us quote a former head of the Environmental Protection Agency. He said:

It is entirely possible that somewhere in the country toxic metals are being removed from the air, transferred to a waste water stream, removed again by water pollution controls converted to a sludge, shipped to an incinerator, and returned to the air (Lee Thomas, quoted in the New York Times, 5/11/86).

He is pointing to the fact that certain technologies that reduce or prevent the development of particular kinds of risk or environmental threats do so by solutions that often generate their own dangers or hazards.

Another quotation will illustrate our point about the increasing scale of disasters. It goes as follows: "small scale failures can be produced very rapidly, but large scale failures can only be produced if time and resources are devoted to them." For example, we have always had, since their coming into being, electric power and telephone system failures. However, the 1965 blackout in northeastern United States that originated in Canada suggests how, in the modern world, large areas of a country can become vulnerable to electric grid system malfunctions. Not only can something in a far distant place have local effects, but the complicated linkages almost insure that sooner or later there will be large scale effects (see Perrow, 1984).

(4) new versions of past dangers.

In some instances we can see new manifestations of old kinds of threats. Droughts used to be thought of as rural problems. This is no longer the case. Increasingly, in different countries, urban and metropolitan localities will find themselves faced with shortages or reduced water supplies. So far we have had only emergencies coped with by reducing industrial water usage, but one day there will be a disaster if a major part or all of an urban area runs out of water or has enough only for the most necessary of water needs.

This is most likely to occur in combination with the collapse of a major tunnel, pumping station or other critical facilities of a water supply system. This brings us also to the fact that there is an increasing problem generated by the deteriorating physical and public works infrastructures of lifeline systems (at least in older American cities). The prevalence of decaying bridge and tunnel structures, crumbling highways, obsolete and overloaded waste water

and sewerage treatment plants, worn out sewer and water mains, aging subways and rail systems, all suggest a variety of many disastrous possibilities beyond the isolated and occasional accidents of the past.

(5) developing kinds of new risks that have not been traditionally thought of as in the province of emergency management.

Let us indicate two major very hazardous situations that will certainly occur in the future: biotechnological accidents and computer failures that will result in disasters.

There is the newly developing area of biotechnology, especially genetic engineering (DNA). Basically, this involves altering the blueprint for any living organism--plant, animal or human--and creating new characteristics, some of which are very useful (e.g., there have been created various kinds of oil and chemical waste eating bacteria that can be used to clean up spills). However, there can and will be the creation of, or the escape from control of some altered organism that cannot be checked by present known means. Some of the oil-chomping organisms developed for cleanup purposes could go ahead and attack lubricants in all machinery. Our ability to custom design living organisms almost insures that one day there will be some almost Frankenstein-like bacteria, plant or animal let loose on the world. This is not science fiction; as one commentator on this coming problem wrote:

The advocates of recombinant DNA technology claim that it is safe because they cannot see how a disaster would occur and because no disaster has ever happened yet. That amounts to saying that the technology is as safe as the Titanic, the Chernobyl nuclear reactor or the space shuttle (Robert J. Yaes letter in 1987 New York Times).

Then there are all the disastrous consequences that are linked to the computer revolution. Use of computers have improved disaster planning and managing. But our increasing dependence on computer technology will magnify future disasters and turn some minor ones into major ones. When the technology fails, and it will fail at times, what will those who have come to depend on them do? We know of one chemical plant disaster, because the computer monitoring system failed, where it took hours before the surrounding population was warned; in pre-computer days the warning would almost certainly have been issued much earlier.

More important, many sectors of government and business are increasingly computer based for the data and information they need to function, sometimes literally from minute to minute. It can be predicted with certainty that in the future such systems will fail

or function incorrectly. We will then have a really new kind of disaster--a computer disaster. Many will have very complex chain reactions. One scenario of a single computer failure in California indicates there would be serious problems in the international banking and financial community within 24 hours.

- (6) Conflict type occasions are more likely in the future.

For a variety of reasons, class, ethnic, religious, and other sharply differentiating social dimensions are likely to become even more important in the future. These differences will particularly be played out in metropolitan areas. What we see today in countries ranging from Bosnia to Somalia to Peru to Afghanistan to the former Soviet Union, are harbingers of the future.

It is true that in talking about these six conditions that will prevail in the future we have been mostly talking about the increase in risks, and risk is not automatically turned into a crisis. Nevertheless, even if the proportion of risks that turns into crises remains the same as at present, there will simply be more crises because there will be more risks. Actually we think that the proportion will not remain the same but that there will be relatively more crises in the future from the increased risks.

Furthermore, implied in our previous remarks is that we should stop thinking of crises, including disasters, solely in terms of casualties and property damage and destruction. Implied in our remarks is that crises of the future will partly differ from those of the past and present in that they will increasingly be economically costly, socially disruptive and politically dividing. Let us make this a little more explicit.

First, there will be the need to cope with the fact that many future crises will not necessarily create many human casualties but will otherwise be very socially costly. Certain of the future crises have catastrophic potential even if they would occasion few or no casualties or even have physical impact. One writer has made this point very well:

Some events make only small ripples; others make big ones. Early theories equated the magnitude of impact to the number of people killed or injured, or to the amount of property damaged. Unfortunately, things are not this simple. The accident at Three Mile Island (TMI)...provided a dramatic demonstration that factors besides injury, death, and property damage impose serious costs.

It is then noted that:

Despite the fact that not a single person died at TMI, and few, if any, latent cancer fatalities are expected, no other accident...has produced such costly societal impacts. The accident at TMI certainly devastate the utility that owned and operated the plant. It also imposed enormous cost (estimated at 500 billion dollars...) on the nuclear industry and on society, through stricter regulation, reduced operation of reactors worldwide, greater public opposition to nuclear power, reliance on more expensive energy sources, and increased costs of reactor construction and operation. It may even have led to a more hostile view of other large scale, modern technologies, such as chemical manufacturing and genetic engineering. The point is that traditional economic and risk analyses tend to neglect these higher-order impacts, hence they greatly underestimate the costs associated with certain kinds of mishaps.

It is then noted that:

Although the reaction to the TMI was extreme, it is by no means an isolated example. Other recent events that have had enormous indirect impacts include...the discovery of pollution from chemical wastes at Love Canal...and Times Beach....the disastrous launch of the space shuttle Challenger... Following these extreme events are a myriad of lesser incidents events varying in the breadth and magnitude of their impacts.

New theories and methods of analysis are needed to forecast costly ripple effects so that they may be factored into risk-management decisions (Slovic, 1987: 3-4).

In addition, the reporting of technological hazards is complicated by issues of responsibilities and blame. News reports are likely to attempt to fix responsibility for the disaster. Such issues of liability and blame place the occasion within a conflict oriented context. Also:

an adversarial relationship may develop between media representatives and emergency management personnel as the former engage in

"investigative reporting" that appears to be callous "snooping" from the perspective of the latter (Wenger, 1985: 23)

Actually, blame is also increasingly being placed in natural disaster situations as human beings rather than God are assigned responsibility. If so, what is now a mass media problem with just one class of disasters will spread out to almost all disasters.

Finally, so as not to end up on a negative note, let us say the following. For purposes of exposition we have stressed the negatives, the unfavorable conditions and circumstances that exist or are developing. We could have provided a totally different picture by stressing the success that planning has had in preventing crises, preparing for them when they threatened, weakening their impact by a good response, and improving the recovery from them after they have occurred. Any kind of planning can help. However, good planning can make a significant difference.

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