UNIVERSITY OF DELAWARE
DISASTER RESEARCH CENTER

FINAL PROJECT REPORT #36

Mass Media Systems and Community Hazards and Disasters*

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1989

*Much of the work reported on in this volume was supported by the U.S. National Science Foundation (NSF) under Grant #CED-8504423. However, all the opinions, findings, conclusions or statements expressed are those of the authors and the Disaster Research Center (DRC) and do not necessarily reflect the views of NSF.

Acknowledgements

As with nearly all DRC publications, what is reported represents a collective product. Many staff members at DRC contributed directly and indirectly to the end product.

At the Center much of the initial and some of the later work was carried out by graduate students at the University of Delaware who were part of the DRC field teams. These students included Robin Christensen, Bruce Crawford, Henry Fischer, Barbara Friedman, Michael Hackett, Laura Ketter, Sarah Kingsley, John Linn, Dorothy Lockwood, Lynn Snowden, James Wright,and Dana Zeidler. What these DRC staff members contributed to the data gathering and initial data analysis are reflected in this report, and we gratefully acknowledge their assistance.

A particularly important role was played by Barbara Friedman who not only helped in the data gathering but also contributed significantly to the analysis of the data. Some of her substantive contributions are presented in the Master's thesis which she wrote from the data. We thank her very much for all the contributions which she made to the research project.

We also want to credit several undergraduates who helped with various aspects of the study effort. Among them were Elaine Denning, Michele Klein and Stewart McKenzie.

The DRC support staff also played it usual crucial role in many phases of the work. In particular, Margie Simmons, the Center's Office Coordinator handled most of the administrative and logistic matters connected with the field work and the production of this report. As usual she did an excellent job and we thank her for all she did.

We also have to acknowledge the assistance of many people in the mass media and other organizations that we studied. The great majority were very helpful and gave freely of their time and attention. Without their cooperation no study would have been possible. We thank them all for their help.

THe bulk of the final analysis and initial report writing was done by Dennis Wenger. As such, he is truly the senior author of the volume.

However, since the undersigned made the final decisions on much of the data gathering and on all of the data analysis, any faults, shortcomings and errors in this volume are our collective responsibility alone.

Russell R. Dynes, DRC Co-Director
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PART I INTRODUCTION

Chapter 1. Introduction

From September 1985 through August 1988 the Disaster Research Center (DRC) at the University of Delaware undertook a study of local mass media response to community disasters. A total of 15 new field studies were undertaken for this research, fourteen in the United States and one in Canada (and for certain purposes comparable data from two earlier studies were also used). The research had a number of specific topical goals, namely the following.

First, we conducted a **survey** of **all** local media outlets in those communities in which DRC carried out field work for this study. The purpose of the survey was to document the involvement of the local radio, television and newspaper organizations in local community disasters. We were interested in establishing the degree and kind of participation in the response that the local mass communication system would show in disasters in their own areas.

Second, 32 **in depth case studies** were undertaken of the largest and **most involved** local radio, television and newspaper outlets. The primary goal of this second research objective was to determine the organizational structure and news processing patterns of these entities in the emergency periods of disasters. Specifically, we examined such intraorganizational and interorganizational elements as the gatekeeping process, the decision making structure, news sources used, and news processing during the emergency period and to compare these patterns with normal, day-to-day operations.

In addition, the study included an examination of what problems were encountered by local mass media outlets as they attempted to respond to the disaster. Again we looked at both intra and interorganizational problems.

Finally, the **content** of the media studied was examined. In depth content analyses were performed on radio, television and newspaper material that was broadcast, aired or published during or immediately after the disaster. Hours of radio and television tapes and hundreds of newspaper stores were analyzed.

This report presents a summary of the findings from this research endeavor. In Part II we focus upon the organizational analysis. We will present findings related to critical intraorganizational and interorganizational patterns. Furthermore, problems inherent in mass media coverage of disasters will also be discussed.

The results from an in depth analysis of 32 case studies are presented first. Subsequently, we present findings from the survey of all local media outlets. Part II concludes with a discussion of general themes derived from the analysis.

Part III presents the results of the content analysis of local media coverage. Over 900 local newspaper, television and radio reports or stories of local disasters were examined. In this summary report, we will present some major conclusions and themes from this analysis.

Finally, in Part IV we will briefly discuss a very few implications of both the organizational and content analysis findings, and present some suggestions for future research.

A discussion of the conceptual and methodological issues we had to address are presented at the beginning of both parts II and III. Since the nature of the organizational analysis and the content analyses involve different research methodologies and conceptual frameworks, they will be presented separately. However, as will be noted below, we assume that the content that is produced can only reflect the structure and characteristics of the organization that produces it. Furthermore, relevant literature will be reviewed within each portion of the report.

An important caveat must be noted. This is a summary report of a major research project, and is intended primarily to bring closure for research sponsorship purposes. This final report for the sponsor is neither inclusive nor exhaustive of the totality of the descriptive and analytical work that has been done. It primarily highlights the more significant and important findings and conclusions. While one M.A. thesis (Friedman, 1987), a general essay on mass media intra and interorganizational adaptations to disasters (Friedman and Wenger, 1988), a published annotated bibliography (see the 1988 DRC publication, Mass Media and Disasters: Annotated Bibliography) and a general review of the topic (Quarantelli, 1988) have already been produced from the research effort, an updated revision of this report already underway will provide more details of the empirical data. Additionally, there will be papers and articles which will deal with more specialized theoretical and methodological issues addressed in our work.

PART II ORGANIZATIONAL ANALYSIS

Chapter 2. Assumptions From the Literature

As noted by any number of students of mass communication studies in the last fifteen years, mass communication organizations are structured and oriented toward the coverage of routine events (see e.g., Epstein, 1973; Altheide, 1976; Tuchman, 1978; Gans, 1979; Fishman, 1980). Under the influence of organizational financial, technological, political and legal constraints, these organizations establish traditional and routinized patterns of coverage in response to expected, if not planned, events.

Thus, the infrastructure of news gathering is geared for covering the expected event. The major sources of news are press conferences, wire services, syndicated services, press releases, and routinized "beats" with traditional sources (see e.g., Sigal, 1973). Furthermore, mass media organizations work within the rather stringent time frames of their deadlines and programming. Their organizational decision making structure, gatekeeping patterns, and news production activities are all oriented toward filling an allotted amount of time or space each day with news. The most efficient manner in which that can be done is to routinize the process, eliminate surprises, and construct a news product based upon a known and controlled environment.

When a major disaster occurs within a community, this pattern is necessarily altered. The occasion is not a routine one (see, e.g., Barton, 1970; Dynes, 1974; Kreps, 1984; Drabek, 1986). The event is news in all local communities; it is a story that must be covered. However, due to the frequently large magnitude of the event, its often unpredictable nature (in the sense of the specific consequences which may be produced), and the disruption of both the social and physical environment, it is a story that does not lend itself to the usual, traditional, routinized patterns of coverage. For organizations geared to covering planned and predictable events, disasters present a problem of adjustment.

In this study, DRC was concerned with examining what alterations occur in media organizations in their attempt to adapt to this changed environment, and the social organizational consequences from the inapplicability of their normal structure and news gathering activities. In a basic sense, we worked with the very general hypothesis that modifications had to take place in the operations of the mass media organizations caught up in a community disaster. Furthermore, we were also interested in seeing what problems for organizational activities were inherent in these changes.

In addition, DRC had a research interest in examining the content or output that results from these adaptations. Media scholars have often debated the nature of the relationship of media content and society (McQuail, 1984:134-126). Some have argued that media content shapes or influences the social setting, others argue that the reverse pattern dominates. Furthermore, representatives of the media, particularly television, often propose a "mirror metaphor" and state that the

content of news simply mirrors or reflects "reality" (Epstein, 1973; Tuchman, 1978). However, it is our assumption that the content of the media can only reflect the characteristics of the organization that produces it and the contextual environment and forces (such as disasters) acting upon that organization. Mass communication content is a collective product, produced by an organization through its normative, organizational and ideological structures and influenced by economic, technological, political and temporal forces. It reflects the internal and external environment of the organization and is not a simple mirror of "reality" or the product of individual action.

Therefore, although we will discuss organizational and content analyses somewhat separately in parts II and III, this is primarily for expositional purposes. We see them as inherently interrelated.

Chapter 3. Activities of Mass Media Organizations in Disasters

The analysis of mass media news gathering and news processing has been a small cottage industry for sociologists and others over the past two decades. Based upon the classical works of gatekeeping undertaken by White (1950), Breed (1955) and Gieber (1964), the research has focused upon the political, economical, temporal, and organizational factors that influence the production and distribution of news (e.g., Cohen and Young, 1973; Epstein, 1973; Sigelman, 1973; Altheide, 1976; Tuchman, 1978; Gans, 1979; Fishman, 1980). These types of studies show how intraorganizational structural patterns and interorganizational relationships influence news processing.

However, the focus of these studies have been exclusively upon the normal, day-to-day operations of television, radio and print media organizations. The routinized patterns of news production that exist during normal periods have been documented, and the influence of a known and stable environment upon these patterns has been noted. Much is known about these matters.

In contrast, there have been both the relatively and absolutely few studies of the organizational structure and news processing of mass media organizations during disasters and other mass crisis situations. A comprehensive 1980 National Academy of Sciences review of the state of knowledge regarding media response to disaster indicated that serious knowledge gaps existed and that nothing had been studied in depth (see the report, Disasters and the Mass Media). As part of our research project, DRC compiled an annotated bibliography of the social science literature on mass media and disasters (see Mass Media and Disasters: Annotated Bibliography, 3rd edition, 1988). This work includes annotations on 118 items. However, only about 20 of the research items focus upon the organizational structures and/or news processing of mass media outlets. Most of the rest of the material presents content analyses of disaster stories (e.g., Nimmo and Combs, 1985; Wilkins, 1987) or discussions of the efficacy of the media in distributing warning messages and general public information (e.g., Carter, 1980; Ledingham and Massel-Walters, 1984).

There is considerable variation in focus within this core group of twenty pieces of research. Some place most of their emphasis upon the effects of mass media organizational behavior on the response of the community to the disaster (e.g., Morentz, 1976; Singer and Green, 1978; and Rogers and Sood, 1981). Other studies focus primarily upon one type of disaster agent and its related problems. For example, Friedman (1981) and Rubin (1987a, 1987b) have examined accidents at fixed site nuclear power facilities and the interorganizational relationships between media organizations and governmental or nuclear experts. The great majority of this work has been done in North America (for Canadian research see e.g., Singer and Green, 1972; Scanlon and Hiscott, 1985; Scanlon, Alldred, Farrell and Prawzick, 1985; Scanlon and Alldred, 1987), but some studies have been undertaken in Japan (Hiroi, Mikami and Miyata, 1985).

Within the United States, the major studies of organizational issues about the mass media in disasters have been produced by DRC. An initial doctoral dissertation by Brooks (1970) has been followed by a number of organizational analyses (Waxman, 1973a, 1973b; Adams, 1974; Kueneman and Wright, 1976; Quarantelli, 1981; Green, 1983; and Friedman, 1987). Additional and non DRC studies in this area include the work of Harless and Rarick (1974), Sood (1982), and Sood, Stockdale and Rogers (1987).

This research literature provides the start of a good compendium of information on certain mass media activities during disaster conditions. But the research results are markedly uneven. There are a number of areas in which our knowledge is extremely limited. Comparative research is particularly rare. For example, no empirical studies exist that actually compare normal organizational patterns and processes of electronic and print media with those that can be observed during a disaster.

The DRC study attempts to fill this void. It is an empirical examination of news gathering and news processing of local radio, television and newspaper organizations during disasters. The prime focus of our field research was upon intraorganizational and interorganizational alterations in structure and news processing. First, we will discuss our research findings relevant to nine intraorganizational and interorganizational dimensions. These dimensions include: 1) the gatekeeping process, the decision making process, 3) reporter autonomy, 4) the division of labor involved, 5) the influence of technology, 6) news sources, press conferences, press releases, and the normal infrastructure, 7) news competition, 8) contrasting roles of the various local media, and 9) the role of the media in the local community emergency response pattern. The discussion of these issues is based upon in depth case studies of 32 local television, radio and newspaper organizations.

Second, we discuss some of the major intraorganizational and interorganizational problems that were encountered by mass media organizations in attempting to cover the disaster in which they were involved.

Third, we present major findings from a survey of all local media outlets in the various communities that were studied. The purpose of this survey was to determine the extent of variation in media coverage by organizations under disaster conditions.

Finally, a series of general, summary themes regarding organizational response will be advanced.

A Brief Methodological Discussion

Before considering the conceptual framework and the empirical findings from the DRC research effort, we will discuss the research methodology

that was utilized. Basically, we employed the same type of quick response, qualitative field research that has been utilized by DRC for over 25 years. This primarily involves intensive preplanning for a study, extensively training a team of researchers, getting into the field early, being on the scene during the emergency period, observing behavior, conducting open ended interviews, collecting documents, and analyzing all the data through a modified grounded theory methodology (see Quarantelli, 1987).

For purposes of analysis, we have combined data gathered during an earlier DRC study of mass media operations in disasters in Houston and Tulsa, with the material specifically collected during this research effort. This previous work of DRC was the result of a joint study with Japanese colleagues comparing mass media responses in Japan and in the United States (the results of this cross societal comparative study is to be published in Okabe and Quarantelli, forthcoming). In fact, the research with the Japanese actually provided the initial basis for the study we are reporting on here and so the data are quite compatible.

Data were gathered on the activities of mass media organizations during the following disasters:

Houston, Texas - hurricane in 1983
Tulsa, Oklahoma - flood in 1984
Santa Rosa, California - flood in 1986
Sweetwater, Texas - tornado in 1986
Pittsburgh, Pennsylvania - flood in 1986
Houston, Texas - hurricane in 1986
Dayton, Ohio - toxic spill in 1986
San Juan, Puerto Rico - hotel fire in 1986
Gulfport, Mississippi - hurricane in 1986
Covington, Kentucky - tornado in 1986
Nanticoke, Pennsylvania - toxic fire in 1987
Pittsburgh, Pennsylvania - toxic spill in 1987
Minneapolis, Minnesota - tornado and flood in 1987
Edmonton, Alberta - tornado in 1987
West Memphis, Arkansas - tornado and flood in 1987
Las Vegas, Nevada - plant explosion in 1988
Springfield, Massachusetts - toxic fire in 1988

At these disaster sites, detailed and intensive mass media studies were undertaken in Houston (in both 1983 and 1986), Tulsa, Sweetwater, Dayton, San Juan, Nanticoke, Minneapolis, Edmonton, Las Vegas and Springfield. Extensive observations regarding media response were made in the remaining communities; but the focus of the field research in these sites was not primarily upon mass media response. So while relevant data from these other situations was examined, it was as supplementary material and used to further check or test what we were analyzing from our primary eleven community mass media data set.

These sites present a wide variety in both types of disasters and the size of the local media market. Among the natural hazards examined were three hurricanes, five floods, and four tornadoes. In addition, the technological disasters studied included three fires, two toxic spills, and one explosion. The communities and their corresponding media markets range in size from millions of inhabitants to small towns of 20,000.

The initial trip made to each disaster community followed roughly the same pattern. DRC sent teams of trained researchers to the locality within hours of the event (or in the case of those disasters that allowed for a period of forewarning, they actually arrived before impact.) During this initial trip, a great deal of observational data concerning emergency activities were obtained. A number of in depth interviews were also conducted with mass media organizational personnel. In addition, we gathered disaster plans, after action reports, and other secondary type of organizational and community documents.

During this phase of the research, the primarily open ended interviews focused essentially upon disaster operations. The emphasis was placed upon obtaining a detailed description of the structure and activities of the local radio, television, and newspaper organizations during disaster. However, the interviews were also intended to gather data on such dimensions as the normal structure of the organization, news processing patterns, decision making and gatekeeping procedures, definitions of news, utilization of sources, resources for news gathering and processing, and the perceived role of the media in the community. The field team attempted to see if there were any changes in these normal patterns and the observed activities during the disaster. Furthermore, we collected information on the degree of previous disaster planning undertaken by the organization and any specific problems encountered in covering the disaster.

In the eleven communities that were the focus of our mass media studies, follow up trips were made to the sites approximately three months after the disaster. During the second trips, the focus was mostly upon normal operations, as well as specific differences between normal and disaster periods. Again, intensive interviewing was carried out. Observational data on normal operations was also gathered during the second trip. The use of the two trips allowed for systematic comparisons across time periods and the opportunity to "fill any holes" in the information gathered during the initial visit to the community. The interviews in both trips averaged about one hour in length, but many were considerably longer.

Within the eleven communities studied in depth a total of 312 contacts were made with mass media personnel. These contacts included a total of 286 unstructured, open end interviews with media representatives. These individuals were treated as informants, not respondents. In other words, they were asked to discuss of the activities of the organization, not to talk about their personal experiences, except as

it involved organizational operations. Our informants came from all levels of the studied organizations. Within the television stations we researched, interviews were conducted with administrators, news directors, producers, assignment editors, reporters, photographers, anchors and operations personnel. Radio station interviews were held with administrators, news directors, anchors or disc jockeys, editors, reporters, and operations personnel. Interviews within newspapers were with publishers, managing editors, copy editors, metropolitan/ city editors, reporters, editors, and photographers. In all cases, additional interviews were conducted with other involved personnel as dictated by the situation in the particular organization being studied.

In addition, in the eleven communities another 94 interviews were conducted over the telephone with single informants in different media outlets as part of a survey of all local media in the community. Excluded were operations such as most of the public educational stations that we knew ahead of time did not have any news reporting of any kind. In total, a total of 380 interviews were completed.

Information was gathered from a total of 97 radio stations, 44 television stations, and 20 newspapers, for a total of 161 mass media outlets. Many of these organizations were included in the survey, or were the object of interviews obtained as part of other concurrent DRC projects. However, thirty two were in depth case studies of the most involved local media organizations.

Upon returning from the field, the DRC research staff put together field reports on each trip. These reports summarized the substantive data and noted pertinent findings, observations, and conclusions regarding the various mass media organizations. In addition, in depth case studies were constructed for eleven of the disaster communities. The case studies detailed the normal and the disaster structure and operations of the major radio, television and newspaper organizations. These case studies provide the major data base for the following discussion.

Case Studies of Local Media Outlets

As noted above, in-depth case studies were undertaken of the most involved local radio, television and newspaper organization in eleven disaster sites. A total of 32 mass media organizations were studied. (One television station refused to cooperate after initially agreeing to do so). The sample is <u>not</u> representative of all outlets in the communities in which we conducted research, because in general the largest organizations and those most committed to news coverage were included. However, there is considerable variation in the size of these outlets. They range from a one person news department in a radio station and a four person newsroom in one local paper, to staffs numbering in the hundreds.

The focus of each case study was to examine any alterations that could occur in the intraorganizational and interorganizational structure of

media organizations during the emergency period of disasters. It is not possible in this report to discuss all the dimensions that are relevant to this issue (this is one of the matters that will be reported on later in a more specialized article). However, we focus upon the following nine dimensions that appear to be particularly significant and upon which we had existent knowledge from previous studies. Each dimension is briefly discussed, any pertinent research findings from the literature is noted, and the findings from the present study is discussed in light of the previous research. (Much of the initial analysis about these matters were done by Friedman (1987) in an M.A. thesis that involved a preliminary analysis of the data from six disasters.)

INTRAORGANIZATIONAL ISSUES

1. Gatekeeping Processes.

Gatekeeping positions refer to those work statuses or locations in media organizations who's incumbents can modify, alter or control the flow and construction of content in a significant way. Such positions include producers, editors, and reporters in news organizations (Gieber, 1964). Gatekeeping should not be viewed as the simple selection or rejection of available stories. It should more properly be seen as encompassing the activities by which news people, and others, transform any happening into a news event for the purpose of reporting it, and the ways in which a story gets formulated and presented (see Wright, 1985:73-84).

When the concept of gatekeeping was first being developed, it was clear that it was to refer to an organizational process, not an individual one. For instance, Gieber stated:

> The fate of the local news story is not determined by the needs of the audience or even by the values of the symbols it contains. The news story is controlled by the frame of reference created by the bureaucratic structure of which the communicator is a member. (1964:178)

In other words, the activities of the gatekeepers are more than individual; they are heavily influenced by the organizational setting and the policies of the organization.

During normal periods in both electronic and print media, the gatekeeping process involves a number of stages or steps in which incumbents in various positions manipulate and modify the content prior to its diffusion. For example, the flow of story construction in a moderate to large newsroom of a newspaper would involve such gatekeepers as reporters, assistant city editors, city editors, news editors, copy editors, and copy desk editors. Usually the story will pass through at least three and sometimes as many as six hands. Each gatekeeper may alter the nature of the content by editing, cutting,

placing, or writing a headline for the story. The content, therefore, is truly a collective product.

A similar, though generally not as complex, process operates in the newsrooms of television and radio stations. It involves reporters, photographers, editors, anchors, writers, assignment editors, producers and news directors. For example, in television a normal pattern is for a reporter and photographer to be assigned to a story by the assignment editor. Upon returning from the field, the taped footage is edited, and of the total amount of tape shot, generally only about five to ten percent is used in the final story. Similarly, the story line is written and then joined with the visual images. The completed package is often reviewed by a producer or news director prior to airing. Introductory or "voice-over" material is also prepared to be read by the anchor.

These are normal, day-to-day gatekeeping patterns. What changes can be observed to occur during disasters?

Waxman (1973b) examined the role of gatekeepers during normal and disaster periods. He argues that normally more information comes into a news department than can ever be disseminated on the air or in print. Hence, this surplus leads to a selective process; only a few items are ever actually distributed by a mass media organization. However, during disasters this usual condition is altered. Waxman proposes that during a major disaster there is actually a shortage of news and information flowing into the media system. In absolute terms, there may actually be many more news stories; nevertheless, there are also expanded newscasts and space devoted to the event. As a result there is a great deal of time or space to fill. Therefore "everything" related to the disaster is aired or printed. In addition, the news stories generally bypass many of the gatekeeping positions and activities and are therefore not as thoroughly processed.

Perhaps, most importantly, Waxman's (1973a) study indicated that the gatekeeping process is truncated during disasters, that the news processing is simplified, and that news information is distributed to the public without the usual editing and "quality-control" operations. Information received from the public and other sources is distributed in "raw" form in an attempt to fill the expanded time allotted for news. Steps or stages in the gatekeeping process are eliminated. This change in gatekeeping patterns appears to be an adaptation on the part of media organizations to meet demands for increased output of content in an altered environmental setting.

It should be observed that Waxman's findings were based upon a study of radio stations. More recently, Sood and his colleagues (1987) found a similar pattern of truncation. Studying a very limited number of media outlets in five disasters, these researchers concluded that a disaster results in a "situation of open gates, where the news flows resembles an inverted funnel" (1987:32). However, television and newspaper

outlets were not examined separately, and no distinction was made with regard to the differing experiences of print and electronic media.

To what extent do the DRC findings from the case studies support these previous observations regarding gatekeeping patterns?

Our data indicate that the previous findings of a truncated gatekeeping process is only true for the electronic media. Within newspapers, the gatekeeping process often becomes elaborated or more complex during disasters than during routine times. These contrasting patterns would appear to be the result of different technologies and time frames across media.

For example, within radio stations, the patterns noted by Waxman were replicated. In radio stations in both the larger and smaller markets, the usual steps of writing, editing and recording news stories were eliminated. With little time available to record stories or bring tapes back to the studio, there was a considerable increase in the amount of live coverage broadcast during the emergency. Information was broadcast without the normal news processing. Reporters, officials and citizens were often placed on the air "live" and their raw information was instantly distributed.

Television stations evidenced a similar pattern. Video tape was not edited as carefully as usual and significantly more live coverage was aired. One station we studied, for example, devoted hours to live coverage of a major toxic spill from its own helicopter. Raw tape brought to the station was aired in an unedited form. Another television station in the immediate aftermath of a tornado aired live footage being shot out of the station's back door, and then also placed raw tape taken by a citizen with a home videocamera on the air. In the smaller stations that lacked the capability for live coverage, raw tape and film was shown with accompanying unscripted, descriptive narrative.

However, a very different pattern prevailed in the eleven newspapers that we studied. The gatekeeping process became more elaborate as an additional step in the normal patterns was often added. The newspapers tended to designate "rewrite persons" as they attempted to cope with the disaster demands. This new gatekeeping position was filled by reporters were asked to remain in the newsroom. Reporters in the field would phone information to the "rewrite persons" who would take the information from a variety of reporters and construct the initial story. From there the story would usually pass through the normal gatekeeping patterns of the newspaper. In other words, a new gatekeeping position was created between the normal ones of reporter and editor. This pattern was found in both small and large newsrooms. In one four person newsroom, for example, the city editor became the "designated writer" who would receive all incoming information and write the stories. In those newsrooms with hundreds of staff personnel, multiple "rewrite persons" were used.

In sum, the previous findings from the literature must be qualified for the proposition that gatekeeping is truncated during disasters is only true for the electronic media. Both electronic and print media face the similar problems of gathering and processing information in a dramatically altered and nonroutine environment. However, the time frames for their activities differ. The electronic media have the technological capability for immediacy of coverage; the print media generally do not. Because of the contrasting time frames, the former truncates the gatekeeping process, while the latter elaborates it. However, both of these alterations are in response to the same problem, i.e., collecting and processing news content in an altered environment.

2. Decision-Making Processes.

During normal operations, the formal division of labor and authority structure generally determine what positions are responsible for making final decisions regarding what content is distributed on the air or in print. The most broad and encompassing decisions are made at the highest levels of the organization, with middle level decision makers most directly influencing the actual news product. In this regard, mass media operations tend to be similar to other bureaucratic organizations.

For example, Epstein (1973) describes at length the work of producers at network news organizations:

> At each network, executives first determine how far the net will be cast for news - i.e., the cities in which news crews will be deployed, the number of correspondents, and the budget for relaying news from remote locations. Within these limits, assignment editors choose which of numerous possible stories to allocate to a limited number of network crews; and once at the scene, the news crew itself decides which aspects of the happening will be filmed. (1973:182)

This description of a linear, somewhat individualized process of decision making within network television news tends to also describe the usual patterns within local radio and television stations. Top management sets the broad parameters regarding budget, personnel, equipment, airtime, etc. within which the news department operates. However, they are very rarely involved in the actual operations of the newsroom. Within the newsroom the producer and/or news director are involved in daily construction of a coherent news program and in determining which stories to play. At many stations where both these individuals share this responsibility, they will often meet in a budget meeting hours before the newscast to discuss the lineup. Assignment editors decided which reporters and photographers should cover specific stories. Decisions on the actual content of the story and the visual footage that accompany it are initially made by the reporters and photographers, and then the material undergoes the normal gatekeeping processes of the organization.

The print media have a somewhat similar structure. Publishers and executive editors generally set broad parameters, but do not become involved in daily activities of the newsroom. The actual amount of space that will be available for news, i.e., the size of the "news hole", is usually determined by the advertising department. After determining the space requirements for the advertising that is to be published, they inform the managing editor as to how many column inches are available for news on any given day. This "news hole" tends to vary from 40 percent to 60 percent of the total space in the newspaper. The managing editor usually hires the journalistic staff and "decides what the staff will do, which is the most important single step in the process of journalism." (Bagdikian, 1971:125). Desk editors make reporter assignments, and reporters are responsible for producing the first copy, which is then sent through the organizational gatekeeping process.

The major difference between electronic and print media appears to be the somewhat more collective nature of decision making within the latter. Newspapers hold a daily news budget meeting or "huddle". For morning papers, the meeting usually occurs about 4:30 in the afternoon prior to the production of the next morning's edition(s). At this meeting, the managing editor meets with the various desk editors (e.g. the city editor, sports editor, features editor, etc.) the wire service editor, and assistant editors and determines the makeup of the front page, and the general format of the paper given the size of the "news hole" available from the advertising department. In general, decision making in electronic media is less collective and more linear and individualistic in nature.

There are no in depth studies of decision making processes within mass media organizations during disasters. However, decision making within a variety of other local organizations during disasters has been examined. In general, it has been found that the rate of decision making and the number of decisions made at lower levels of the organization increase. There appears to be less consultation among organizational members. (Quarantelli and Dynes, 1977:24). In other words, there is a general tendency toward increasing decentralization in the decision making structure during disasters.

The disaster derived principle of group continuity (i.e., that patterns of organizational behavior during disasters are embedded within the context of previously existing normal, everyday activities and structures) indicates that the disaster decision making structure will not be radically or totally different from normal operations. However, the alterations in the environment and the stress placed upon media organizations almost insures that some alterations in decision-making will occur. A disaster context does make a difference.

The findings from our case studies indicate differences between the electronic and print media in the degree and nature of alterations that occur during disaster conditions in their normal decision making structures. Simply put, the degree of change was more extensive for

radio and television stations than it was for newspapers, and within the electronic media decision making became more centralized and collective in nature.

Within the moderate and large television and radio stations, decision making became focused upon one group of individuals who took on primary responsibilities for overseeing all operations within the newsroom. For example, the decision making "group" within most television stations included the news director, executive producer and assignment editor, who huddled often together in their attempt to coordinate activities. The radio stations evidenced a similar pattern.

The decision making structure within the print media groups was generally less affected by the disaster. Most of the newspapers did not undergo the degree of change in decision making experienced by their electronic counterparts. Top level management did not become involved directly in the operations of the newsroom, normal news budget meetings were held, and normal work roles were maintained.

As will be discussed later, these differential patterns may be the result of the influences of time and technology. Newspaper organizations are usually not under pressure to produce a news product immediately, and hence they have time to allow normal decision making processes to run their normal course. It is interesting to note that in those few newspapers that did undergo tremendous stress and the pressure of time, e.g., those newspapers that experienced disasters after their normal news budget meetings, but prior to deadline for their next editions, those that lost production equipment, and those that issued special editions, tended to mirror their electronic neighbors in both the degree and nature of alterations in organizational decision making.

3. The Degree of Reporter Autonomy.

Related to the issue of decision making, is that of reporter autonomy within news organizations. In general, reporters view themselves and are viewed by the organizations for which they work as exercising autonomy in covering stories. In fact, autonomy is a prized characteristic of the job (see Wright, 1986:80).

However, sociological theory and research indicates that one would not expect reporters to have total independence. Media organizations, as all bureaucracies, necessarily require standardization. Therefore, the degree of freedom held by reporters to do whatever they want with a story is limited. Often, standardization is ensured through written guidelines and formal and informal socialization (see Breed, 1955; McQuail, 1969:65). In addition, social control is also exerted over reporters. This control occurs primarily through the system of rewards and punishments such as having stories published with minimal editing (see Donohew, 1967 and also McQuail, 1984:106-111).

In addition to the socialization of organization employees, other factors work to limit their autonomy. For example, coming to depend on the use of traditional sources is one factor. Working on a beat system and concentrating on the use of officials and key sources, reporters have little input regarding whom they interview and what contacts they will use (Sigal, 1973). Furthermore, there is high priority placed on covering events that are predictable ahead of time (Epstein, 1973). As much as news organizations like to try to cover breaking news, most of the stories they report are planned events such as news conferences and scheduled meetings.

The only previous study of the degree of autonomy exercised by reporters during disasters did note that: "individual news personnel working in the field during disaster assume greater independence and autonomy from their hierarchical superiors" (Sood, Stockdale and Rogers, 1987: 30). This finding is consistent with certain expectations from the general literature on organizational activities during disaster (see Dynes, 1974; Drabek, 1986). With the disruption of normal mechanisms and channels for communication, (e.g., downed or clogged telephone lines, a shortage of radios, etc.) and the typical pattern of increased decentralization of activities at the level of operations, increased autonomy during disasters can be expected.

Data from our case studies indicate that reporters are given more autonomy during disasters. This observation is generally valid for all organizations regardless of type, and for all communities. However, as we have noted, reporters do tend to have some autonomy during normal periods. Therefore, during a disaster they are simply given more independence.

Reporters in the disaster situations we studied indicated that they were often given very limited guidance regarding what stories should be covered. They were sent to locations, such as neighborhoods, governmental offices, and institutions, and basically told to bring back a story. Once in the field, many experienced difficulty in contacting the newsroom for further guidance. In addition, those personnel in the newsroom often lost contact for hours with the reporters and knew neither their location nor the nature of the story they were filing.

The degree to which this pattern emerged appeared to be directly related to the magnitude of the disaster, the scope of impact, and the degree of disruption in normal communication lines. In those electronic outlets that do remote broadcasting and had adequate communication resources, greater contact with the newsroom and lower levels of reporter autonomy were observed. Also, when the disaster does not greatly disrupt the normal operations of the organization, there is more interaction between reporters and the newsroom. This pattern is especially true for newspapers, who in general manifest fewer alterations in their normal operations than do the electronic media.

In sum, our findings do support those of Sood and his colleagues (1987). Generally during disasters the rules for contacting the newsroom do seem to be relaxed somewhat. This condition may be a consequence of downed telephone lines, problems with radio equipment, or, in some cases there may not be time to reach the newsroom regularly for instructions or information regarding what is happening. However, it must be emphasized that given the normal degree of autonomy experienced by reporters, this represents only an alteration of degree, not in kind.

4. Alterations in the Division of Labor.

All media organizations are bureaucratically structured. While there are some variations in the structure of print and electronic media, there are strong similarities in their normal organization. Within print media, the highest position in the organization is usually held by the publisher. Beneath the publisher is an Executive Editor, who has overall authority for all news operations, including the editorial page. In addition, there are such departments as advertising (which handles both classified and display ads), production (which is responsible for printing the paper), and business (which handles personnel and budgeting). Furthermore, the news department is usually headed by a Managing Editor. Within that department, there are separate subdepartments of "desks" for metropolitan or city news, wire services, sports, business, features, etc. Editors at these various desks have assistant editors and a number of reporters assigned to their operation. Generally, reporters are further divided into "beat" reporters who cover specific types of activity (such as the police or "cop beat), "general assignment reporters" (who can be used on any type of story), and "specialized reporters" (such as science writers.)

Within electronic media, the station manager is subordinate to the owner, but exercises control over the various departments. These departments include engineering (which is responsible for the quality of the transmission), sales (the department which sells commercial spots), traffic (which schedules commercials and programming), business (which handles personnel and budget,) and programming (the department that produces both entertainment and news). Within most of the electronic media we studied, the news department is a part of the programming division, and the managing editor or executive producer is directly responsible to the program director. Within the newsroom there is the further division of labor between the news director, producer, assignment editor, editors, writers and their assistant. Anchors, reporters and photographers constitute the first line, operational level.

Within both of these types of organizations, the division of labor is specialized and the normal delegation of tasks is clear. Personnel from one department normally do not performed duties in other areas. People from non news divisions do not normally even step foot in the newsroom. Even within the newsroom the division of labor is clear, in

that feature writers, for example, almost never engage in covering breaking news stories.

What alterations, if any, can be expected to occur in the division of labor in these organizations during disaster? The disaster literature would indicate that the degree of change in the normal task structure is directly related to the degree of stress placed upon the organization (Dynes, 1974; Drabek, 1986). The degree of stress is a function of the magnitude of the demands made upon the organization in relationship to its ability to respond to those demands. Therefore, the degree of change in the division of labor should be a result of the magnitude of the disaster and the size and capability of the organization.

The findings from our case studies is that the greater alterations in the division of labor occur in those mass media organizations that experienced the most severe and disruptive disasters, and those that lacked resources to cover the event. Actually the most severe alterations tended to occur in the moderate sized news organizations. In these departments, the normal division of labor was often altered or changed. Top level management officials frequently came to the newsroom and undertook operational tasks, including assignment and editing duties. Personnel from other departments were brought into the newsroom and used to answer phones and other tasks. In addition, the normal division of labor among reporters on various desks and beats was somewhat altered. Feature writers and columnists were sent into the field on occasion to cover breaking stories. This pattern tended to emerge during the first few hours of the disaster, although through time the normal division of labor was reinstituted.

The level of alteration generally was less severe for the smaller and larger organizations. In the small radio stations and newspapers, workers often did engage in a variety of different tasks. However, the division of labor in these organizations is usually less specialized than that found in the larger units. Normally, on a day-to-day basis, personnel perform multiple tasks, such as being photographers, reporters, and editors. During a disaster this pattern was continued.

In the largest news organizations, less alteration in the division of labor was also observed. Possessing more extensive resources and a very specialized division of tasks, these units tended to utilize their everyday structure. For example, on large newspapers the disaster was often viewed as a "city desk story." The coverage of the event was limited to personnel from that department with minimal involvement from other divisions. However, in those instances where the disaster was of significant magnitude and the demands upon the organization were extreme, even the larger organizations manifested a blurring of normal tasks and the emergence of an altered division of labor.

5. The Role of Technology.

A central issue in mass communication studies concerns the degree to which technology influences mass media organizational structure, processes and content. Gans (1979) has argued that technological advances have very minimal effects on news content. He offers as an example that the novelty of color photographs in magazines and newspapers has worn off, and thus the influence of vivid pictures has not changed the content or print news.

On the other hand, there are those who take the position that technology does influence the structure and processes of all organizations generally (e.g. Perrow, 1967; Hage and Aiken, 1969) or mass media organizations in particular. Thus, for the latter, Wright states: "As we approach the twenty-first century, major developments in mass media technology are rapidly changing the mechanics of mass communication production, distribution, and reception" (1986:202). For instance, technological determinists would argue that the introduction of innovations, such as video cameras and satellites, would effect or change the content and news processing in television news organizations. In fact, McLuhan (1964) advanced the proposition that technology not only influences media content, but that it has a profound effect on all aspects of society.

For our analyses of mass media organizations, the critical distinction would appear to be between print and electronic technologies. The differences in these technologies would appear to influence the structure and news processing of media outlets. For example, the amount of time and personnel necessary to print a story are much greater than to broadcast one. For this reason newspaper outlets are unable to disseminate breaking news as rapidly as electronic organizations.

The disaster context would seem to allow for an examination of the impact of print and electronic technologies on news processing. Disasters bring about a need for continual and timely coverage. However, they result in a predominance of unscheduled events as opposed to the scheduled events of normal times. Hence, it could be hypothesized that emergencies test television and radio's technological capabilities to report live and instantaneously.

The findings from our case studies indicate that technology does have a significant influence on news processing and content. In almost every city, the radio and television stations experienced more alterations in their gatekeeping, decision making, and divisions of labor than did newspapers. (The only major exception to this pattern occurred in a community in which the local newspaper experienced extreme stress due to the timing of the event, the scope of its destruction, and the newspaper's own loss of production facilities.)

The capability to broadcast live reports is the key factor responsible for the impact of technology on news processing during disasters. This

capability forces the electronic media to preempt programming and/or advertisements, while newspapers have the capability to add additional space to the paper. The "good news" for electronic media is that their technology allows for immediate coverage. The "bad news" is that they must have something to broadcast immediately. This dilemma often requires an alteration in their normal structure and news processing. In general, under the influence of the slower print process, newspapers did not face these problems to as great a degree.

Technology also influences the nature of news content in disasters. Television and radio stations have the ability to broadcast information as it becomes available, while newspapers have the time to process the information and fill the story with background information. Furthermore, the nature of the technology prevents newspapers from supplying readers with breaking news and hence they tend to supply news which is less temporal but more in depth in nature.

INTERORGANIZATIONAL ISSUES

6. The Role of News Sources, Press Conferences and Press Releases.

There is a heavy reliance upon traditional, and often official, sources for news by all media organizations. The beat system, which is widely used in American society, is based on an assumption about what sources are most able to supply reporters with news. This system is rooted in the principle of locating reporters "where there is promise of maximal return in publishable news for their investment" (Roshco, 1975:72).

In her discussion of "news net or news blanket," Tuchman (1978) addresses at length the nature of the news net and what is missed or included in it. Her expansion of the image of a news net as opposed to a news blanket illustrates the idea that not all events are included in the system, and that some value decisions are made about what should and should not be included.

Similarly, on a daily basis, news operations receive a great many press releases and announcements. These are distributed to the media because the source is interested in having publicity or public attention paid to the issue (Boorstin, 1961). The media organizations generally decide whether or not they are interested in the event. Most are never used; however, they still account for about fifty percent of the articles printed. This type of scheduled news is easy to cover, primarily because it is usually predictable and timely (Tuchman, 1978).

The role of news sources has been examined by students of the relationship between mass media and disasters. Perhaps most prominent is the observation by Quarantelli (1981) on the existence of the "command post view." Essentially, Quarantelli argues that during disasters (and even more so during civil disturbances) the local American mass media tends to focus on emergency officials (generally located at the command post or emergency operations center) almost to the exclusion of any other sources. The result of the heavy reliance

on these sources is the reporting of disaster events with a bias toward the view of emergency officials. The findings of Sood and his colleagues (1987:34) supports this position.

It has also been noted that media organizations utilize another source of information during disasters which is not traditionally employed. This source is the audience. Radio, in particular, uses the audience as a principle source of information. During emergencies, listeners call with information and questions regarding the emergency. The information supplied by the listeners is often disseminated directly over the air. Questions received by the station often serve the purpose of informing the station as to the type of information their listeners want and need (Waxman, 1973a).

Finally, we should note that there has been little systematic work involving the role of press conferences during disasters, aside from noting their widespread use. However, one might anticipate that under emergency conditions, when the media are in a situation where they "need" news and are less selective about what they will cover, the media would appear to play a more passive role, and would be anxious to obtain any available information distributed at press conferences and through press releases. Sood and his colleagues (1987:35) found that media representatives preferred to have an "information czar" who would centralize all information and distribute it to the media during disasters.

The data in our case studies indicate that there is a heavy reliance within all news organizations upon traditional sources of information. Therefore, the "command post view" would appear to be supported. Certainly in all communities, reporters were sent to the emergency operations center to gather information from "officials." However, we noted that many of these "officials" were traditional, daily "beat" sources for these reporters. Officials were a major source for "hard news" items.

However, the use of traditional sources was not limited to those in the command post. Beat reporters also relied upon their traditional news sources in such locations and areas as city hall, social welfare and health care agencies, and educational and scientific institutions. In effect, in the uncertain and altered environment of a disaster, there was still an attempt to normalize and routinize the coverage.

Nevertheless citizens were also heavily used as sources of news. However, the use of citizens tended to vary with the size of the organization, the nature of the media, and the scope of the disaster. The smaller organizations, lacking certain resources, relied more heavily upon citizens. Likewise, in areas where the nature of the disaster agent made travel and/or contact with officials difficult, citizens were relied upon for "news". Finally, radio stations were much more likely to utilize citizens than the other media. Often, statements and information from citizens would be aired immediately and/or callers to the station would be put on the air. Newspapers, and

especially television, were less likely to use citizens sources.

We also observed that citizens were used as sources in stories that were different in tone from those that used officials. Citizens were more likely to be utilized as sources for human interest and feature stories, than for breaking, hard-news items. This pattern was particularly true for newspapers and television.

We also noted that the role of press conferences and press releases is different during normal times and during disasters. Although our informants appeared to agree that the information provided by them was minimally useful, they seemed to be more valued by media personnel during disaster periods.

In a number of the communities we studied, local officials did not hold press conferences with great regularity and at times press conferences were delayed for hours. This practice became very bothersome to reporters, who felt much more dependent upon them for information than they normally were. Press conferences were viewed as important and helpful, since information was scarce and officials were sometimes hard to reach. Although our media informants recognized that press conferences reflect information that is given in a "controlled environment called by somebody for reasons of their own," they were still viewed as being worthwhile and necessary to fill the informational void that often occurs during a disaster. In addition, reporters are socialized to turn to "official" sources as one mechanism for protecting themselves from charges of bias, their organizations from legal or political harassment, and to lend to credence to their stories. Where press conferences were not held, the reporters were hampered in utilizing their normal procedures.

7. News Competition.

Media news organizations in the United States usually operate in competitive markets. While the existence of the wire services ensures that local media share information with nonlocal media subscribers in other settings, within the local community there is a strong norm of proprietary ownership of information and the production of "exclusive" stories that "scoop" the local competitors.

But do reporters actually share information with each other while in the field? To a large extent the answer to this question depends upon whom one asks. Editors and producers often state that reporters do not share information, or, if they do, producers and editors do not want to know about it. However, it has been noted by some researchers that media organizations are really more concerned with not getting scooped, rather than in scooping others (Scanlon, 1980). If this observation is correct, than one may assume that reporters share more information in the field than their superiors may expect. Simply put, it is a rather easy and effective way of avoiding "being scooped."

It is true, of course, that reporters tend to be overly protective of their sources and somewhat competitive with regard to their beats. However, reporters also have their own rules about what and with whom they will share information (Tuchman, 1978). With over half of all news items originating from press releases and conferences and many others from the news wire, it seems that a relatively small number come from exclusive sources.

However, Quarantelli (1981) notes that although reporters in disasters and civil disturbances converge at the emergency operations center or at the command post, not much sharing of information occurs. He suggests that the fact that reporters see one another at this central location acts as reaffirmation that they are at the right place, but this convergence does not necessarily lead to sharing information with others. He argues that reporters are very protective of their sources and their information during disasters, as well as during normal times. Sood and his colleagues, however, found that otherwise competitive news media cooperated with each other in the disasters they studied (1987:36).

In the eleven communities included in our case studies there was a significant increase in the sharing of information among reporters from different and competing news organizations in the field during disasters. The degree of sharing of information varied by the size and competitiveness of the local markets. In the smaller and less competitive communities, much information was shared. This situation, however, was not a marked departure from normal activities. For example, in one of the smallest markets we studied it is not unusual for the local radio station to call the newspaper with information and ask or request that they investigate the piece and find out some background information. This kind of cooperative relationship was accelerated during the emergency. Outlets in these small markets are so small that there was more than enough news for everyone. They had no qualms, due to a shortage of personnel or time, about giving leads to each other when they alone could not follow up on them.

In another one of the local markets in which we did research, there was also a noncompetitive orientation during normal periods. Most of the people who work in the mass media attended the same local university, therefore many of the reporters are friends. Moreover, there is considerable personnel turnover among organizations and many people in upper management positions know one another from previous jobs. During the disaster we studied, the news director at one station often exchanged information with a former co-worker who was a news director at another station. This information was then passed to reporters to pursue or was aired without additional verification.

This overt sharing of information was less obvious in the larger and more competitive markets. However it occurred at higher levels than during normal times. For example, in the very largest market in our sample, when there is a sharing of information during everyday operations, it is usually in exchange for another piece of information, or

for a ride in another's helicopter or plane. There are strong official organizational policies regarding this arrangement. During the disaster, the official policy did not change, but informally there was more sharing of information. Reporters in the field aided one another in this way.

We should note, however, that the greater sharing of information in all markets tended to occur among reporters from different types of media outlets, rather than among those from the same media type. In other words, newspaper reporters were more likely to share with radio personnel than they were with other newspaper reporters. This pattern was particularly pronounced where media cross ownership existed. In those few communities where the local print and electronic media were owned by the same corporation, the sharing of information was enhanced.

In sum, this pattern of sharing information is heightened in a collective attempt to make sense of the altered environment. The practice is generally hidden from higher management in the organization.

8. The Differential Role of Television, Radio and Newspapers.

Since its discovery and introduction to the pubic, radio has always had the capability to report news with immediacy. Television and especially newspapers, however, have had a relatively limited capability to perform in this same capacity. Because of their particular medium, the news produced by each tends to be somewhat different in nature. Television tends to favor stories that have good visuals, radio prefers items that are quick and fast, and newspapers, because of the factors of time and the nature of print, have tended to favor stories with depth and graphics. The result is not only different media portraying different types of stories, but also favoring different slants to their reports (see the different articles by Scanlon and his colleagues).

Public opinion polls reveal that television is the major source of news for most people in the United States. In 1985, when asked which medium they relied upon most as their major source for news, 65 percent of those replying named television. This statistic has increased consistently since 1959 (Witt, 1986:310). Television has replaced newspapers as the prime source of information to the public. On the average, news viewing increased from 20 minutes in 1965 to 27 minutes in 1975, while newspaper use had decreased from 33 minutes to 26 minutes (Jamieson and Campbell, 1983).

The value of such opinion polls have been questioned for a multitude of reasons (See Witt, 1986). However, for our purposes, the important point is that people do rely heavily upon television for news during normal times. The question we want to pose is, do they continue to rely upon it during disasters?

Data from the case studies indicate that newspapers compared with radio and television stations adopt different roles and cover different

aspects of disasters. This differentiation or specialization of function appears to be an elaboration of the slight specialization which exists during normal times.

In general, the electronic media were the primary distributors of hard news items during the impact and early emergency periods. Where there was not a loss of electrical power, television played the primary role. On those occasions where power was lost, radio performed this function. Furthermore, there was a definite tendency for these "mass media" to become "personal media." In a number of radio stations, personal messages would be transmitted from listeners concerning their safety, the well being of others, and additional personal information.

Newspapers became more dominant during the post impact period. During this phase they provided background material and analytical coverage of the disaster. As opposed to the electronic media, they did not become involved in transmitting personal messages to their readers.

9. The Role of the Mass Media in Emergency Management.

A final critical issue concerns the perceived role of the mass media in the overall emergency response in the community. The issue is quite simple. There are inherently two conflicting roles that media organizations may perform during disasters. On the one hand, they may be part of the emergency response effort or system. In such cases they are responding with such organizations as local police and fire departments, emergency planning agencies, public works, utilities, welfare and social service groups, health and volunteer agencies. On the other hand, they may play the traditional media role as simple chroniclers of the event. In effect, the organizational work force are simply media personnel covering a story, and are not a part of the disaster response itself.

Local emergency officials sometime view mass media organizations as being one of the responding groups (see Wenger, Quarantelli and Dynes, 1988). In planning for overall community disaster response, they assume that the mass media can be an important conduit for distributing information that will be vital for citizens generally. Although realizing that the mass media cannot be totally controlled, local officials often believe that the media will be, or at least should be, somewhat at their disposal to aid emergency activities. If this role concept is not shared by local media representatives, however, the potential for interorganizational conflict is present.

What role did the local media organizations in our case studies assume with respect to the emergency management response in the community? In the 32 mass media organizations that we studied, the electronic media were more likely to see themselves as part of the emergency effort or response than were the print media. Informants from radio and television were both willing to accept a partial responsibility to serve as a communication link from emergency officials to the general population. They acknowledged that the nature of their technology allowed

for the rather immediate transmission of emergency messages to citizens. Of course, some of this orientation is traditional within the electronic media, and is embedded in the Emergency Broadcast System.

However, the print representatives define their primary role as one of providing coverage of the event. They were more likely to offer that the disaster was "just another big story." Most were adamant that they "were not a part of anybody's team." Emergency management officials are not always sensitive to this differing role perceptions on the part of media organizations. Their planning and preparedness activities are not always cognizant of the somewhat differing role perceptions of the different media in the emergency response.

At this point, let us simply summarize our findings regarding the nine intraorganizational and interorganizational issues we have considered. Within the media organizations, the gatekeeping process tends to be truncated for the electronic media, but elaborated within newspapers. Decision making patterns are altered most extensively within the electronic media, as a pattern of collective decision making replaces the normal patterns of individualized, or linear coordination. Newspapers generally did not manifest this altered pattern, unless they experienced extreme stress. Reporter autonomy tended to increase in all media organizations; however this does not represent a dramatic shift in that reporters often have some autonomy during normal operations. The division of labor during disasters was particularly altered in moderate sized organizations and in those that underwent the most stress. Technological differences between electronic and print media appear to be critical factors influencing the degree of alteration in their intraorganizational structures at times of disaster.

With regard to external or interorganizational issues, DRC found that traditional sources continue to be utilized by all media organizations and there is some evidence for the "command post view" of disasters. However, citizens are also relied upon heavily by radio in providing information during the immediate post impact period, and other media for feature or human interest stories. Furthermore, press conferences assume a heightened importance and are more needed by media personnel during disasters. There is an increase in the sharing of information by reporters in the field during disaster periods, with this sharing being particularly pronounced in less competitive markets, where there is cross-ownership, and across different types of media organizations. The electronic media and the print media play different roles in the community during major disasters, with the former providing hard news items during impact times and the early emergency periods, and the latter offering analytical coverage later in the disaster experience. Finally, the electronic media are more likely than the print media to view themselves as part of the overall community emergency response pattern.

We now turn to a brief discussion of some of the major problems that were observed in these organizations in covering disasters.

Chapter 4. Mass Media Problems in Covering Disasters

What were the major intraorganizational and interorganizational problems experienced by these organizations in covering local disasters? We found a number of them in the course of the analysis of the 32 major media organizations that were part of our case studies. These are now discussed. The presentation is not exhaustive in depicting all of the specific problems that occurred in all the organizations. However, it does represent a compendium of typical and common difficulties that were observed.

INTRAORGANIZATIONAL PROBLEMS

1. Coordinating Coverage Among Many Reporters in Diffuse Disasters.

As noted previously, the 32 organizations from which the case studies were derived were the largest and most committed news organizations in their areas. When their local communities experienced disaster, the mass media involved undertook a rather massive assault on the problems of covering the story. The larger newspapers had from 30 to 40 reporters in the field. The smaller outlets tended to send all available personnel to work on reporting the disaster. Similarly, the electronic media mobilized all their resources, sent all their reporters and film crews into the field, and some even utilized personnel from outside the newsroom.

This massive assault presented intraorganizational problems of coordinating the coverage of the event. This problem was especially severe in disasters that had a diffuse pattern of destruction. In the case of three of the tornadoes and the hurricanes, the damage was spread throughout the impacted community. In the minutes immediately after impact, there was great pressure to act quickly. However, there was also a lack of information within the newsroom on the actual magnitude of the event. Producers, news directors, assignment editors, managing editors and city editors often had to monitor police scanners and obtain information from citizen callers in order to have some idea of what was occurring. Without a clear picture of the extent and nature of the destruction, the magnitude of the response effort, and the general parameters of the story, it was very difficult to coordinate the coverage of the large number of reporters who were sent into the field.

As a result, personnel were often sent out with little guidance. Beat reporters tended to work their traditional beats to see if there was a traditional angle to the story. Some reporters were simply sent to certain geographical locations, as word of destruction at particular localities came into the newsroom. Others that went into the field were told to work the "shelter story" or the "fire story". Some workers from mass media organizations just went into the field on their own without direct assignment and gathered whatever information they could.

This lack of coordination of field coverage not only presented problems of management within the newsroom, but it also influenced the content of what was produced. For example, in one community a tornado was in the vicinity for 45 minutes and inflicted massive damage over miles of territory. However, the most severe damage was inflicted at a mobile home park at the end of the twister's path. But the local newspaper sent most of its reporters to the sites initially damaged as the location of these became known through listening to the police scanner. By committing their resources to the initial, but least severely impacted areas, the coverage of the disaster was somewhat biased. For the rest of the world, the story of the tornado was one of death at the mobile home park. Within the local newspaper, however, more attention was paid to other areas of the community because of the initial assignment of reporters. Similar problems of coordinating coverage to encompass the entire span of a disastrous event were found in other mass media organizations in other cities.

2. A Surplus of Content and the Clogging of the Editing Process.

Because of their commitment of large numbers of reporters to cover the story, media organizations often faced an unforeseen problem. With a large number of reporters filing stories and supplying information to the newsroom, there tended to be a surplus of information. Editors were swamped with material and the editing process and copy desk were often overwhelmed.

This problem was most pronounced for the larger newspapers. Possessing many reporters, these organizations sent tens of people into the field. Being reporters, they filed copy with the newsroom. The positions of Assistant City Editors, City Editors, and the Copy desk that are normally used to construct stories with a much more limited staff and in a routinized time frame were overwhelmed by the flood of information. As a result, a considerable amount of information was not processed into stories prior to deadlines.

A number of newspapers attempted to solve this problem by altering their normal gatekeeping process. Rewrite persons were stationed within the newsroom to gather information from the reporters in the field. These individuals would collect the information from disparate reporters and combine it into a comprehensive story. Serving as a "filter" between the reporters and the normal editing staff, they limited somewhat the impact of informational convergence on the newsroom. In effect, they served as "writing editors" and performed gatekeeping functions. However, for those newspapers that normally operate on the principle of "one story, one writer" and stress byline credit, such an arrangement did engender unhappiness and hostility from reporters who were used to receiving individual credit for their own field work.

Similar problems were observed in some electronic media, but they generally were not as severe. In the television area, reporters and camera crews are very specialized. People were not brought in from

other departments and asked to construct stories. However, in the larger stations reporters and photographers did have to compete for air time. In radio, the convergence of information upon the newsroom was more likely to come from citizen sources who called the station with information. As we have previously noted, with the truncation of the gatekeeping process in these electronic outlets and the pressure to "go live," any information that was received tended to be rather quickly distributed. This practice tended to bypass the problems of informational convergence and clogging the editing process.

3. Expanded Work Schedules and Stress Upon the Staff.

In those disasters that extended over a number of days, such as a toxic spill that lasted for five days, and hurricanes and floods that had an extended period of forewarning and impact, work schedules of mass media personnel were expanded. This generated stress upon the staff of a number of mass media organizations. Fatigue and exhaustion of workers were a problem in many of the mass media groups. The problem was exacerbated because most of these organizations had not planned for disasters, and had made no provisions for the caring of their own personnel.

Of course, the expansion of work schedules is not unique to mass media organizations. It can be observed in many emergency response oriented agencies, police and fire departments, hospitals, and volunteer associations (Quarantelli, 1984; Wenger, Quarantelli and Dynes, 1988). However, many of these groups have double or triple shift work forces. This is not a typical job pattern among mass media organizations. Thus, not having foreseen the problem of expansion, many of these organizations had to develop ad hoc provisions for the relief and aid of their own exhausted personnel.

4. Confusion Resulting from Alterations in the Decision Making Process.

Previously we noted that the decision making structure of many of the media organizations, particularly the electronic media, were altered during the disaster period. Basically, decision making became more collective in nature within the newsroom. In addition, we also observed that high ranking administrators, such as station owners, managers, and publishers, often came to the newsroom to participate in the disaster coverage of their own organization.

For operational personnel and others, this condition often created confusion with regard to authority and decision making. Some reporters said that they did not know "who was in charge" back in the newsroom. One newsperson reported that the publisher was in the newsroom, and the reporter had never seen him there before. Normally operating under clearly delineated patterns of authority and decision making, this abrupt alteration in those patterns created problems of coordination and conflicting directives within a number of mass media organizations.

5. Loss of Control of Reporters in the Field.

Related to the pattern of increased autonomy for reporters, it was observed that often personnel in the newsroom lost all contact and control of reporters in the field. This problem was most pronounced for those units that lacked communication equipment that allowed for feedback. Reporters would be dispatched to locations, and then would not be heard from for hours. Editors and management personnel did not know the nature of the stories that were being obtained, nor were they able to gather important information from the field in order to plan their own patterns of coverage.

As a result of this condition, there was some overlap in the stories reported. Also, certain important aspects of the disaster were not covered, because assignment editors were not certain what was being worked on in the field. Once again, the severity of this problem of overlaps and gaps in story coverage appeared to be most pronounced in diffuse, damaging disasters.

6. Loss of Electrical Power and/or Printing Capability.

Most mass media organizations do not engage in any kind of disaster planning. Furthermore, when they do, they often ignore the possible direct impacts of a disaster agent upon their own facilities. A number of electronic outlets in the situations we studied were temporarily "knocked off the air" by the loss of electrical power. Usually this situation lasted for a few hours at most, but, coming in the immediate aftermath of the disaster, it could not have occurred at a worst time.

Print media also faced these problems. Increasingly newspapers are computerized operations. The disruption of electrical power seriously handicapped two of the newspapers we studied and they were not able to file and edit stories electronically. In addition, one newspaper had its production facilities made inoperable. Without prior planning, an ad hoc solution had to be developed. Charter jet planes were hired and the completed copy was flown over 200 miles to a paper owned by the same chain. It was printed at their facilities and then trucked back to the city for distribution. This solution was extremely costly to the newspaper. It was not only economically expensive, but also produced a crisis situation in the newsroom that influenced the size and content of the initial edition of the paper that first reported on the disaster.

7. Lack of Needed Equipment, Particularly Communication Equipment.

A lack of equipment was perceived to be a problem by a number of different local media organizations. Some of the smaller television stations and those in less competitive markets did not have the mobile units that would allow them to broadcast live from the field. They had to improvise "on air" without the visual footage that is the lifeblood of television journalism until taped footage could be brought from the field and broadcast (usually in an unedited form).

In addition, many of the local organizations complained about a lack of cellular phones, radios and other devices that would facilitate communication in the absence of normal landlines. Even when these devices were available, they were not always reliable. The cellular phones of one newspaper failed, for example, and that resulted in serious problems of communication between the disaster site and the newsroom.

8. A Lack of Quality Disaster Planning.

The general issue of disaster planning will be discussed when some findings from the general community survey are presented. But at this point let us simply note that many of the intraorganizational problems result from the lack of attention to emergency and disaster planning that is evident in most of the mass media organizations. The majority of these organizations had no disaster plans whatsoever. They had given no consideration to either the physical problems of being directly impacted by a disaster agent, or the difficulties of controlling and coordinating coverage of a major story in an altered physical and turbulent social environment.

Even in the minority of those outlets that had engaged in prior planning, it was generally of inadequate quality. Often plans only involved brief documents that specified systems of notifying and mobilizing personnel, how provision of aid and food were to be given to the working staff, and listed phone numbers of emergency relevant organizations. Furthermore, these plans were usually outdated, never exercised, and often could not be located by the staff.

There were occasional exceptions to this general pattern. For instance, excellent planning had been undertaken in one of the television stations. A general plan for hurricane coverage had been developed. Not only did it include provisions dealing with the problems noted above; it also incorporated a procedure for sectoring the coverage area and coordinating the activities of the various reporters. The plan was updated annually. It is not a coincidence that this television station had significant fewer of the intraorganizational problems that we have been discussing.

INTERORGANIZATIONAL PROBLEMS

9. Lack of Information About the Overall Impact of the Disaster.

Mass media organizations face the same problem in initially responding to the demands of a disaster that plagues all community organizations, i.e., a lack of information regarding the early damage assessment in the emergency period (Quarantelli, 1984). No local organizations has, as a part of its normal, day to day activities, the responsibility for monitoring the overall condition of the community. Thus, at the time of disaster, with the social and physical environment disrupted, with normal communication lines down or overloaded, and with many different

organizations involved in emergency activities, the collection and codification of information about overall damages can be very problematical.

This situation created severe problems for mass media organizations, particularly in those disasters that inflicted broad, diffuse patterns of damage in their communities. Reporters found that their traditional sources were not of much assistance, because members of those organizations (e.g., police departments) also often lacked an overall picture of the occasion. Without this kind of information, it was very difficult for newsrooms to coordinate their news coverage.

The media organizations in the communities we studied tended to rely upon their own personnel in the field to supply them with information. Of course, this pattern is not a sharp departure from their usual operations. However, there were two problems with this attempted solution. First, the reporters in the field often had difficulty in gathering information from their traditional sources. Second, contact with the newsroom was often limited due to problems resulting from a lack of communication equipment, clogged telephone lines (which was a problem even in newsrooms that had established "hot lines"), and the altered division of labor (people did not know to whom to supply information). Therefore, needed information often was not forthcoming, even from the reporters in the field.

10. Denial of Access to the Impacted Area.

In a number of disasters, particularly focused events (such as toxic spills), reporters complained about the lack of easy access or entry into the damaged areas. Impacted areas would be cordoned by security personnel and access controls would be initiated. Even where pass systems were established, confusion was often evident in this task (as generally discussed in Wenger, Quarantelli and Dynes, 1988).

In many cases, "media tours" would be collectively given by emergency management officials for the reporters. This solution was only partially acceptable to the press people involved. While it somewhat provided equal treatment to all media personnel and allowed a reporter to "make sure that you are getting the same information as everybody else," it tended to conflict with journalistic values of freedom. While being sympathetic to the needs of security personnel, reporters complained of being "blacked out." Conflict between media and security personnel over this issue arose at a number of impacted sites.

11. Limited Access to Emergency Managers.

Reporters noted that the denial of access to the damaged areas might have been more acceptable if local emergency officials had been readily available as an alternative source of information. However, many reporters claimed that there was often no easy access to key officials. It should be observed that these reporters desired direct access to the decision makers and officials who were responding to the event. They

perceived that decisions were being made "behind closed doors," and expressed skepticism regarding the motives of officials. Conversely, many emergency officials believe that the media often "get in the way" of emergency activities (Wenger, Quarantelli and Dynes, 1988). They prefer to isolate their emergency management activities from outside "disruptions" of all types, including the actions of reporters.

This interorganizational conflict is frequently exacerbated from the perspective of media personnel, because they often have direct access to many of these traditional sources during normal periods. In fact, they are often "courted" by various governmental and private officials in search of mass media coverage. The rather abrupt change in the nature of the relationship during disaster conditions is particularly problematical to reporters who are under great pressure to gather information in an altered environment. When their traditional sources are not available, they must improvise; a solution that is usually more difficult than utilizing routine, daily patterns.

12. Lack of Public Information Officers(PIOs) and Scheduled and Recurrent Press Briefings.

Compounding the problems of a lack of access to damaged areas and officials, was the often expressed complaint by reporters about the lack of trained Public Information Officers for the emergency management system and the paucity of press conferences and briefings. While praise was given at a number of disasters for the activities of PIOs, many reporters often expressed dismay at the lack of expertise and sensitivity of PIOs to the needs of mass media personnel. Often work space for reporters was not provided at the Emergency Operations Center. Access to phone lines was not made available. Information was often seen as being inadequate or not consistent. Some concern was also expressed that PIOs did not always have the necessary authority to answer questions.

As we noted in a prior section of this report, press conferences take on an added importance during disasters. They are desired, needed, and sought after by reporters in the field. Not only do reporters want press conferences to be regularly held, but they want the briefings to be scheduled around the time constraints of their own deadlines and to be held on time.

Sood and his colleagues (1987) had found that reporters tend to want an "information czar" during disasters. For one, this makes their job much easier, for it eliminates the problems of "digging for information." Furthermore, it allows them to normalize their coverage to the usual day to day patterns of news gathering. In addition, it also is one way of handling the following perceived problem.

13. Difficulties in Verifying Information.

Within the norms of journalism in the United States and Canada at least, objectivity is a strategic, ritual device that is utilized by

reporters to protect themselves from charges of bias (Tuchman, 1978). One way in which objectivity becomes operationalized is to reference, cite or quote official sources for the information that the reporter has gathered. In their training, journalists are constantly reminded to "cover your facts," to verify accounts and statistics, and thereby protect both themselves and their news organization.

Many reporters complained about the problems of verifying information during the emergency period of disasters. The initial period of a lack of information during disasters is usually and soon replaced by a surplus of accounts, statistics, and reports. These come from citizens, on-scene observers, and a variety of formal and informal organizations. For reporters, the problem is one of getting an "official" to acknowledge that certain, specific items of information are accurate. Given that information tends not to be centralized in any specific location, and that reporters perceive that they are denied access to "official verifiers," this situation creates problems for media personnel who are used to operating in an controlled environment of traditional sources.

14. Conflict Regarding the Emergency Response Role of the Media.

We previously discussed the important issue of the role of the mass media in the emergency response system. In concrete terms, for some representatives of the local media in the organizations we studied, the relationship was viewed as problematical. They perceived that local emergency management officials wanted to "use them" as a part of the local formal response effort. They were asked to disseminate public information statements, release official announcements, and, at times, withhold certain information.

It must be emphasized that <u>many</u> media personnel readily complied with these requests. In particular, representatives of the electronic media saw such activities as being a part of their responsibilities to their own community. Furthermore, given the nature of their technology, they stated that they had an important role to play in reaching large numbers of the citizenry with official information in rapid time.

However, other mass media personnel, particularly representatives of the print media, did not see themselves as part of the emergency response system. They continued to view themselves as members of the "fifth estate" and argued that their appropriate role was that of a an observant, chronicler of the events surrounding the disaster. Furthermore, these mass media informants were often critical of the lack of access to emergency management decision makers, and, felt that the request to "be a part of the team" was somewhat hypocritical.

This situation is an essential example of conflict in work role expectations. When two parties in any relationship enter into interaction with contrasting, and conflicting, views regarding the nature of that relationship, conflict is somewhat inevitable. The

relationships between mass media and emergency response personnel in these settings can be described as "strained" at best.

15. Conflict with Outside Media.

One aspect of emergency planning that is often overlooked on the part of mass media organizations is the relationship with outside media who come to the disaster scene. The relationships can be both of a vertical (up and down to other organizations) and horizontal (across to other organizations) nature. The problems are generally least severe for the print media. In most instances, the major vertical linkages are in providing copy for wire services. Given that this relationship is a part of normal operations, relatively few problems in disasters are encountered. The horizontal print relationships involve the convergence upon the disaster site of representatives from nonlocal newspapers. These "outsiders" tend to make few direct demands upon the local newspapers. Normally, they neither require space in the newsroom nor logistical support. The major problem of outsiders is one of access to community officials and competition for attention at press briefings.

For the electronic media, these relationships are often more problematical. Vertically, the relationships involve network affiliation. For radio, the problem is one of supplying reports to the network. Once again, this presents few problems and actually serves to enhance the prestige of the local outlets. For television, however, the problems are somewhat more severe. Network film crews and reporters often need local resources, such as work space in the newsroom, editing bays, and network linkages. This outside convergence, of course, occurs at a time when the local station is already stretching its resources to the limit. Although overt expressions of hostility toward outsiders generally is muted, local television personnel did express some hostility to the invasion of network personnel. Horizontally, the relationships with outside electronic media were less problematical. Generally, they involved competition for sources and access to information.

It must be emphasized that all of the local outlets were quite friendly to their outside brethren. Cooperation was the norm, with reciprocity being the underlying promise. However, the local mass media organizations, already under stress and utilizing their resources to their fullest capacities, did indicate that they had some difficulties in their relationships with these outside representatives. The latent uneasiness seldom became overtly manifest at the time of the disasters we studied, although open clashes between local and outside mass media personnel have occurred in other crisis situations (see Quarantelli, 1988).

16. Lack of Planning and Preparedness for Interorganizational Relationships.

Many of the difficulties described above stem from a total lack of

disaster planning on the part of mass media organizations for interorganizational relationships, both with local emergency management agencies and outside mass media representatives. Even where some disaster planning had occurred, it ignored these critical external linkages.

Within the local community, the inclusion of mass media personnel in the development of community wide disaster plans essentially was nonexistent in the localities we studied. Part of the responsibility for this difficulty resides with local emergency management officials, and not solely with the media. While local emergency preparedness officers may view the media as being part of the response team, they generally do not specifically include their needs in their own agency plans, and they are rarely included in any exercises of those plans. (The local mass media organizations will often "cover" local disaster exercises and drills as a news story, but they generally do not participate as part of the response effort or team in the drills.) Furthermore, local mass media organizations do not consider the needs of emergency management officials in their planning. What limited planning they do is based upon the notion of simply maintaining their autonomy and covering a "big" story.

Similarly, local mass media organizations do not plan for the convergence of outside media representatives. The designation of liaison personnel, allocation of work space, and anticipation of the needs of these outside units is rarely undertaken.

In sum, we have discussed a few of the major problems encountered by local mass media organizations in responding to disasters. It should be noted that many of these difficulties could be surmounted or at least alleviated by improved planning on the part of local organizations. One of the primary difficulties in mass media coverage of disasters is that local media outlets attempt to report on the event as if it was simply "another big story." They do not consider the implications of the radically altered, qualitatively differentiated, external environment brought about by major disasters.

Chapter 5. Some Findings From the Survey.

In addition to developing case studies of 32 major local mass media organizations, DRC also undertook a survey of other local mass media outlets during disaster. Information was gathered on 80 radio stations, 30 television stations, and five newspapers. This information was obtained through telephone interviews with individual informants at each organization. In this summary volume, we are only going to highlight a few major themes from the survey research findings with the greater detail being reserved to be presented later in more specialized reports.

1. Local mass media outlets vary considerably in their involvement in disaster coverage, i.e., there is no one, uniform, massive across the board pattern of coverage.

Coverage of the disaster was extensive by all of the newspapers and most of the television stations. All of the newspapers added open pages and three published special editions. Among television stations, coverage also was rather extensive, as 27 of the 30 local stations covered the disaster. (Two did not cover the event and one was "knocked-off the air"). Furthermore, 83.3 percent of the stations preempted regular programming and 96.4 percent increased their time devoted to news during the disaster period. These observations of massive coverage occurred in all communities, regardless of the nature of the disaster or the size of the local media market.

However, patterns of radio coverage were much more varied. (Although information was gathered on 80 stations, we are limiting our analysis to 59 stations that were not "twins," i.e., owned by the same larger organization and presenting similar programming.) A total of 18.6 percent of the radio stations did not cover the disaster in their community at all. Three of these were small stations with no news department; they continued with their normal programming. The remaining eight stations were off the air. Among the remaining stations who did present news coverage of the disaster, significant variation were observed in the pattern and depth of their treatment. Thirty percent of the stations who covered the disaster in their area never preempted local programming, and 28.3 percent did not increase their normal time allocated for news.

In sum, although a local disaster obviously is an important news story that is covered by a majority of radio, television and newspaper organizations in a community, the magnitude of the coverage is likely to be considerably less for radio.

2. For the electronic media, the size of the organization is important in influencing its degree of coverage and the amount of change that occurs in its normal structure.

There was great variation in the size of the news departments in the 115 mass media organizations we studied. THree of the radio stations

and one television station had no news department. At the other extreme, the newsrooms in some newspapers and large television stations had over 100 employees.

In our analysis all radio and television stations were classified as either small, medium, or large depending upon the size of their news departments. (All of the newspapers in the sample were large.) For the radio stations, the greatest alteration in structure occurred for the medium sized stations, while both the small and large stations were more likely to normalize their coverage. In other words, the relationship between size and alteration in structure during disasters was curvilinear. For example, of the 32 small stations, only 58 percent preempted programming, as compared to 83 percent of the seven large stations and 100 percent of the 12 medium stations. Similarly, only 57 percent of the small stations increased their news output, while all of the medium and large stations did so. Furthermore, only 45 percent of the small outlets and 50 percent of the large stations increased their news staff in order to cover the disaster, while 91 percent of the medium stations experienced an increase in staff. Finally, only 41 percent of the small stations and 50 percent of the large ones actually sent reporters into the field to report on the event, while 91 percent of the medium outlets did sent personnel to sites outside of the newsroom.

These patterns are understandable in light of the personnel and resources controlled by these different organizations. The small stations generally lack a commitment to news. Lacking extensive personnel and resources, at the time of disaster they continue to take a passive approach to news programming. Many of these outlets are classic "rip and read" stations, i.e., they take material from the wire services or local newspapers and distribute it directly over the air.

Conversely, the large stations do possess adequate resources and personnel to cover a major breaking story. They are oriented toward news and provide more extensive air time during normal periods to its distribution. These resources and commitment allow for the larger stations to also "normalize" the process.

It is within the medium outlets that we see the greatest change in personnel and time devoted to news. These organizations appear to experience considerable stress as they attempt to provide more expanded coverage and match the larger, more news oriented stations in their markets. Greater alterations occur in their normal divisions of labor and decision making structures as personnel are brought from other divisions in the organization to bolster the staff of the newsroom.

The effect of size upon television stations is less pronounced. However, the smaller stations in our study had a significantly lower amount of disaster coverage and concomitantly fewer changes in their normal structure and news processing. For example, while all but one of the 28 stations for which we have data increased their time devoted to news, only 50 percent of the small stations preempted regular

programming, while 100 percent of the medium and 93 percent of the large stations did so. Only 25 percent of the small stations increased personnel, while 97 percent of the larger outlets added staff to their news coverage. Similarly, only 38 percent of the small stations actually sent reporters and camera crews into the field, while all of the medium sized and 88 percent of the large stations allocated field personnel. In addition, the work schedule was altered in only 50 percent of the small stations, but was changed as shifts were extended in all of the medium and large outlets. In sum, lacking extensive equipment and resources, the small stations did not attempt to compete with their larger competitors in coverage of the event. In the few small outlets that did attempt expanded coverage, considerable stress was observed and corresponding alterations in their intraorganizational structures were found.

3. The Print Media Undergo Fewer Alterations in Normal News Structure and Processing than the Electronic Media.

Perhaps as a result of a technology that does not allow for the kind of rapid dissemination of information that can be provided by the electronic media, newspapers appear to undergo fewer changes in personnel, work schedules, divisions of labor, and news processing activities. Certainly the degrees of change observed in radio and television stations were not apparent in the newspapers. However, as was noted in the discussion of the case study material, under certain conditions the newspapers may undergo significant alterations. Specifically, when the print media lose production facilities, electrical power, or the ability to communicate with field reporters, and when the disaster occurs after their daily budget meeting, but prior to deadline, the stress upon these organizations increases. Under these conditions, the newspapers resemble the electronic media in the magnitude of alterations in their operations. But on the whole, print media change less than the electronic media in handling disaster news.

4. The Level of Disaster Planning Among Mass Media Organizations is Limited, the Quality of that Planning is Generally Poor, and the Actual Implementation of that Planning at the Time of a Disaster is Rare.

We previously noted that the level of disaster planning among the 32 media organizations in our case studies was poor. It must be remembered that these 32 organizations were the largest and most heavily "news-oriented" outlets in this study. They were not a sample or representative of all local mass media organizations as such.

However, when we examined the level of planning by the other local mass media outlets, it is obvious that disaster planning did not receive much attention anywhere. Among the 59 radio stations in our survey, only 20 or 33.8 percent, had disaster plans. For the other media, the figures were somewhat higher, but still do not indicate a great sensitivity to disaster planning. Fifteen of the 28 television stations, 53.6 percent, and three of the five newspapers, 60 percent, had plans.

However, with a few notable exceptions, the quality of this limited planning was quite low. The plan documents were often vague, general statements regarding the mobilization of personnel. Most ignored the problems that could result if the station or newspaper were directly impacted by the disaster agent. Few considered the serious problems of coordinating coverage of a major story in an altered environment. Almost none of the plans incorporated interorganizational linkages into their planning, except to list phone numbers of some official sources. Furthermore, little recognition was given to the role of the media in the community's emergency response system. Also, what typically existed was a notable example of "product oriented" planning. In other words, a document had been created, but planning was not viewed as an on going process; a major flaw according to most disaster research (Quarantelli, 1984). Finally, the plans had not been exercised and were rarely updated.

Perhaps the quality of these plans is indicated by the fact that while 38 plans existed in these media organizations, only 14 or 36.8 percent of them, were actually utilized during the disasters we studied. In fact, many could not be located by mass media personnel even a number of weeks after the events during DRC follow up field studies.

Chapter 6. Major Summary Themes Regarding Mass Media Organizational Response

Our discussion of the organizational analysis we undertook will be concluded by the presentation of a number of general themes that were inductively developed from both the case study and survey data. These themes delineate significant general patterns of an overall nature than the more specific findings discussed earlier.

1. Significant Differences Exist Between the Print and the Electronic Media in Their Patterns of Operations in Covering Disasters.

Simply stated, the print media made significantly fewer changes in their organizational structures, divisions of labor, gatekeeping patterns, decision making arrangements and utilization of sources than did the electronic media. Newspapers were more likely to normalize their news production activities, while radio and television stations were more likely to adopt new, emergent and/or altered arrangements. Within the electronic media, gatekeeping was more likely to be truncated, decision making became more collective in nature, and citizens became more prominent as news sources. Within some electronic outlets, the essential orientation of the media changed, as they moved from being vehicles of mass communication to channels for the distribution of interpersonal messages. (This pattern was first observed by Singer and Green, 1972, and was also found by Sood and his colleagues, 1987.

As will be noted shortly, these differences appear to be a result of the influence of time and technology upon organizational activities.

2. Problems in the Coverage of Disasters Appear to be More Severe for the Electronic Media Than for Their Print Counterparts.

The technology of radio and television allows the opportunity for immediate and simultaneous coverage of a disaster. As noted previously, that potential represents the "good news" for electronic journalists. The "bad news" is that some content, some news product, must be rapidly constructed to fill the time. We observed a number of changes that happened in the structure and news processing of electronic outlets that appeared to fill this increased demand for news.

For example, it is evident that the gatekeeping patterns are significantly altered. The story construction process is truncated and shortened. In the case of radio, information received from the public is often disseminated without the usual editing and verification procedures. To a much great extent than during normal periods, raw information flowing into the organization soon flows out without having undergone the usual processing.

This lack of "quality control" over the product can influence a community's perception of and response to the disaster. The problem is not so much that inaccurate or misleading information may be distributed.

(However, the distribution of such information obviously may be a problem.) However, what is most critical is that the lack of normal news processing can facilitate the perception of confusion and disorganization within the local community and engender rumor transmission. Even if the information that is distributed is accurate, its presentation in a nontraditional format may lead to these dysfunctional results.

For example, initially in the emergency period a number of different organizations may make requests for assistance and equipment. The media often rely such requests to the public and sometimes disseminate "blanket calls" for any type of aid the audience may provide. This action may precipitate the "convergence problem" upon the disaster site. In a number of instances in the case we studied, on air personnel in radio and television stations issued requests for assistance, suggested that volunteers and organizational personnel all report to work, and indicated that almost any type of aid would be beneficial in the community crisis. These requests were often made independently from that of any other local emergency response organization. As the flood of food, clothing, and volunteers converged upon the disaster site in amounts far in excess of needs, the media were then frequently asked to cease issuing such requests. In these instances, the information that flowed through the mass media system defined the response for the audience in less than effective ways.

3. **Dialectical Changes in Decision Making Occur in Those Media Organizations that Undergo Stress.**

We were able to observe changes in decision making within the organizations that underwent stress, i.e., they were faced with the demands of covering events that exceeded their normal capacity to respond. The patterns of change were more pronounced for the electronic media, but they could also be observed under certain conditions in newspapers. A discernable pattern involved the dialectical processes of increased centralization within the newsroom and increased autonomy in the field. Both the former and latter patterns are a result of organizational adaptations to an altered environment and increased demands upon the news organizations.

The former pattern of increased centralization within the newsroom is a response to an increased need for the coordination of reporters' efforts in the coverage of a disaster. Normally, only one, or at most two, reporters work on a story at the same time. Problems of allocation of personnel, duplication of story lines, and coordination of activities are almost nonexistent. On "big" stories, such as the visit of a dignitary to the community, the local election, or a major celebration, more staff may be assigned to cover the event. However, these types of stories are almost always of planned and predictable and predictable occasions. Therefore, planning can be undertaken before the event to guarantee coordinated coverage.

Disasters, however, present a more difficult and serious problem. The entire staff of the news department may be "working on the same story." Greater centralization and coordination in the newsroom is required, otherwise the editor's nightmare of 16 reporters filing stories on life in a public shelter may become a reality. This attempt to have increased centralization was observed in most of the mass media organizations that were a part of our study.

Simultaneously, however, the latter pattern of increased autonomy for reporters in the field could also be observed. This pattern resulted from the unknown nature of the physical and social environment in the aftermath of disaster. While the newsroom may assign reporters to certain locales or to cover certain activities or institutions, there is a considerable lack of information about the actual condition of the community. Therefore, reporters are generally given more freedom than they usually have even in everyday activities.

But this increasing presents some major problems. Reporters often lack information about the general or overall nature of the disaster. They do not receive adequate information from the newsroom that will allow them to place their stories and experiences within a broader, community wide context and thereby integrate their stories with other reporters covering the same event.

While some of this difficulty may have been the result of technological problems and an inability to communicate, it is also evident that it as a result of the continuation of normal day to day patterns of activity during the emergency period. Reporters are used to providing information to the newsroom where it is processed into stories; they are not used to receiving and requesting information at the same time. The usual pattern of information flow is primarily one way in these organizations. This pattern can be detrimental in disaster coverage, particularly where the scope of impact is diffuse. In such kinds of disasters, the coordination of coverage among many reporters and the provision of needed information to them becomes problematical.

4. The "Command Post View" of Disasters is Prevalent, Though Its Generality Must Be Qualified.

Prior studies from the disaster literature had led us to expect that the media would evidence a "command post view" of disasters. Our findings indicate that this observation is generally correct. Certainly emergency officials can and do provide a ready source of information for those mass media organizations that are searching for information under stressful conditions and with expanded space and time for news. Television stations particularly appear to place a rather heavy reliance upon official sources.

However, the generality of the "command post view" must be qualified somewhat. Radio stations appeared to increase their use of public or citizen sources in an attempt to fill their expanded news time. Particularly in news/talk outlets, citizen input was openly sought and

often aired with little of the normal gatekeeping activities taking place. Generally television ignored this possible citizen input. Newspapers primarily relied upon citizens for sources for feature stories and human interest copy. Therefore, although the views of officials is certainly strongly represented by local media organizations, at least radio and newspapers also tend to present citizen generated content.

5. **Local Mass Media Continue a Heavy Reliance Upon Traditional Sources of News During the Emergency Period of Disasters.**

We should first note that during a disaster, certain traditional sources of news are ignored, such as wire services, press releases, and syndicated services. This is because of the simple reason that their content is not perceived to be relevant to the local coverage of the disaster story in the community. However, there appears to be a reliance upon other normal, traditional sources that may have informational payoff for the coverage.

As we previously discussed, all media organizations rely upon traditional sources that are nurtured through the "beat" system. When information is at a premium under the stress of covering a disaster, the traditional sources continue to be utilized. In fact, many reporters in these organizations turned first to their normal news sources They worked their beats. For those who were able to maintain contact, the story was often composed from the perspective of their usual sources. However, as we earlier noted, reporters often complained that they were denied access to officials. In these instances, reporters had to improvise and seek alternatives. Interestingly, even some radio stations had a heavy reliance upon citizens as news sources (e.g., for news/talk stations, the public is often defined as a source for content). These radio stations continued that traditional pattern of relying upon citizens in their disaster coverage.

One result of a reliance upon traditional sources, of course, is that the activities of nontraditional sources "slip through the news net." In other words, the activities of volunteers, emergent groups (for their importance in disasters see Quarantelli, 1984) and organizations that are not a part of the normal "beat" system or regularly courted for news tend to be ignored in mass media accounts of disaster. A somewhat distorted image of the disaster can be created by this practice. Because the activities of emergent groups and volunteers are often not depicted because they are not part of the traditional news net, the image that is created in media content is that emergency response is primarily an activity of formal, traditional organizations.

6. **"Hard News" Items Dominate Electronic Media Coverage of Disasters.**

For all of the electronic media, "hard news" items dominated their coverage of the disaster. (By "hard news" we are referring to reports that are descriptions of disaster conditions, official and unofficial

announcements, and items that describe events occurring at or around the time of distribution. "Soft news" refers to analytical and feature stories concerning such issues as planning, causality, blame, and human response to the disaster.) For some outlets, this stress on "hard news" was a simple extension of their normal definition and preference for news. However, in other stations, this preference represented a shift from a more "feature" oriented content.

It could be argued that this emphasis on "hard news" represents the effect of journalistic values and ethics that stress presenting factual, informative content of immediate import during disaster. The argument may have some validity. However, it must be noted that the presentation of "hard news" is also a quick and easy solution to the problem of immediately filling expanded news time. Analytical and feature stories require a longer time to construct. In general, they require some research and consultation with a variety of sources. Their structure is not consistent with organizational demands of rapid, intense coverage under stressful conditions. In the instance of disasters there appears to be a fortuitous convergence of journalistic values, the nature of "hard news stories," and the organizational needs of the media outlet.

7. Time and Technology are Important Elements in Media Coverage.

With regard to time, two issues appear to be important. First, one must consider the amount of warning that is associated with the impact of the disaster agent. Where warning was possible, such as in instances of hurricanes, fewer alterations and problems of coverage could be observed in those organizations that utilized the warning period to plan and coordinate their response.

Second, the actual time of the impact is also critical. If the event occurs near to air time or press deadlines, if the disaster happens after the budget meetings, or if the event takes place when most staff members are not on duty, the problems of coverage are much more significant. Perhaps the worst time of day to have a disaster for the mass media is late in the afternoon for both electronic outlets and morning newspapers. Traditionally oriented to the dinner hour newscast and the 4:40 pm huddle, an unexpected event at this time can be very stressful and require considerable alteration in structure and operations within a short period of time. Disasters that tend to occur at the normal time for press conferences, such as 10:30 am, appear to present fewer problems. This general pattern illustrates the importance of looking at social time as well as chronological time in the study of disasters.

As we have noted, technology is important in determining the role various media play during disaster, the amount of change that they experience in their normal structure and news processing, and the number of problems they experience in their coverage. In general, newspapers did not undergo the changes and problems experienced by the electronic media. While this finding may indicate the influence of

print technology which does not facilitate immediacy of coverage, it must be emphasized that technology is not totally determinate. A few newspapers did undergo extensive changes and experience significant problems. These conditions seemed to occur when the disaster struck after the daily budget meeting and before press time. Suddenly, these newspapers were faced with the stress of altering their already planned content, reorganizing and restaffing their coverage, and coordinating reporting on a major story that could not be ignored. Under these conditions they faced the stress of time, and, regardless of their technological differences, they reacted like their electronic brethren.

In sum, in this part of our report we have focused upon the intraorganizational and interorganizational alterations that occur within local mass media organizations as they respond to the demands of covering a disaster. We have noted changes in gatekeeping, decision making, the division of labor, and reporter autonomy, news sources, news competition, and the role of the media in the community response system. The influence of technology was found to be significant in at least one respect, because differences between print and electronic organizations were observed. However, the impact of the timing of the disaster in relationship to normal organizational rhythms and news processing activities appeared to be more important than technology alone in producing these social adaptations.

These changes are necessitated because of the magnitude of the event, the disruption of the normal community environment, the pressures of time and deadlines, and the inapplicability of normal, day to day patterns of news processing. The output of these changes, of course, is manifest in the content that is produced. Electronic media reports and newspaper stories represent collective, organizationally derived images of disaster. At this time, therefore, let us turn to an examination of this content.

PART III CONTENT ANALYSIS

Chapter 7. Prior Content Analyses of Disaster Topics

In this chapter, we very briefly allude to the existing literature on content analyses of disaster topics. In further reports from this project this material will be elaborated in more detail.

The first systematic analysis of mass media content was undertaken by Moore (1955) who examined the pattern of tornado coverage in a Waco, Texas newspaper. This initial effort did not precipitate an avalanche of research. Twenty five years later, the body of content analyses of disaster topics numbered less than ten studies. It included the works of Molotch and Lester (1974, 1975) who examined the bias in national media coverage of pro and anti environmental forces involved in a major oil spill, and Needham and Nelson (1977) who analyzed the coverage of floods and erosion in the Great Lakes region in seven newspapers and concluded that it was sensationalized. While Scanlon was beginning a series of long term, continuing research in Canada (Scanlon, 1978 and Scanlon, Tuukko and Morton, 1978) the lack of development of the field within the United States led a National Academy of Science workshop on mass media and disasters to recommend that content analyses of media coverage ought to be given high research priority (1980).

Since 1980 the interest in content analysis and the number of published studies has significantly increased, both within the United States and other countries. With regard to the work outside of the United States, Scanlon has continued his work in a number of studies (see the listings under Scanlon in the bibliography). McKay (1983) studied the accuracy of media coverage of brush fires in Australia and determined that, within the limits of normal coverage, the reports tended to be accurate. Alexander (1980) undertook a crosscultural study of media coverage of the Florence floods in both Italian and British media. Lombardi (1988) recently examined the content of three Italian newspaper accounts of the Chernobyl nuclear disaster. In addition, Rogers and Sood (1980) studied the content of national media organizations in India, France, and the United States with respect to both the Andrha Pradesh cyclone and the drought in the Sahel.

Within the United States the research has focused upon a variety of issues. Much of the effort has examined content related to technological disasters. Such events as the accident at Three Mile Island (Friedman, 1981, 1988; Stephens and Edison, 1980, 1982; Mazur, 1984), Love Canal (Ploughman, 1984), and toxic threats to the environment (Sandman, 1986) have been studied. In addition, Wilkins has undertaken major studies of both print and electronic media coverage of the Bhopal (Wilkins, 1986; 1987) and Bhopal and Chernobyl disasters (Wilkins and Patterson, 1987).

Natural disaster issues have also been examined. For example, Turner (1980; 1982) analyzed the nature of media coverage of earthquake topics in six local Los Angeles newspapers and electronic media. Network television coverage of Three Mile Island and five other major disasters were examined by Nimmo (1984) and Nimmo and Combs (1985) using both

quantitative and qualitative (dramaturgical) analysis. Quarantelli (1985) has undertaken the only systematic analysis of the content of disaster films. Finally, the issue of whether or not the content of the mass media perpetuates myths about disasters has been studied by Goltz (1984) and Wenger and Friedman (1986). The former argued that the content does not perpetuate myths, while the latter offered evidence that they do, although the differences in these conclusions probably stem from contrasting conceptual and methodological approaches to the problem. (For new studies which appeared when this report was being finished, see Masel-Walters, Wilkins and Walters, 1988).

Chapter 8. The Content Analysis Methodology Used in This Study

In this study we have built upon this foundation of previous content analysis work on disaster topics. In addition to the organizational analysis, we undertook detailed content analyses of 128 radio news reports, 175 television news stories, and 906 newspaper stories. Both quantitative and qualitative techniques were utilized in these analyses. Before presenting some summary findings, we will briefly discuss the methodology that was employed and note the variables that were included in the examination.

The content was gathered from two television stations, two radio stations, and nine newspapers . (This content was produced by the outlets that were included in the case studies of mass media organizations.) For the electronic media, the material covers the first two days of the post impact period. For the print media, the content includes all stories published over a two week period after the disaster.

Each report or story was classified on the following dimensions:

Headline - the headline attached to the story.

Placement - page on which the story appeared or the placement of the story within the newscast.

Column Inches or Time - the total space or time devoted to the story.

Photographs or Graphics - accompanying photographs and graphics were noted and described.

Format - for electronic content, the format of the story was classified as anchor only, anchor-reporter-anchor, etc.

Percentage of the News Hole or Broadcast - the percentage of the total news in the paper or broadcast included within each story was recorded.

Source - the source of the story was classified into the following categories: 1) wire service, 2) syndicated service, 3) local bureau, 4) local staff, 5) other and 6) not discernible.

Dateline - any dateline associated with the story was noted.

Location - the location of the story was classified as 1) local, 2) state, 3) national, and 4) international.

Disaster Period - the disaster period discussed in the story was classified into the following categories: 1) pre impact, 2) impact, 3) crisis or emergency, 4) short range restoration, and 5) long range rehabilitation, and various combinations.

Disaster Agent Generated Activities - stories were analyzed in order to determine if they included a discussion of the following activities: 1) disaster planning, 2) structural mitigation activities, 3) warning, 4) evacuation, 5) short term sheltering, 6) scope and intensity of impact, 7) search and rescue, 8) casualty care, 9) extended sheltering, 10) restoration of essential services, 11) provision of food, clothing and human services, 12) restoration of housing, 13) restoration of commerce, 14) long range individual effects, 15) long range community effects, 16) debris clearance, 17) future mitigation and planning activities, and 18) other. None, one or any number could be discussed in each story.

Response Generated Activities - stories were analyzed in order to determine if they included a discussion of any or all of the following response generated activities: 1) convergence, 2) communication, 3) social control, 4) coordination, 5) assignment of responsibility, and 6) fund raising.

Estimates of Impact - estimates of loss of life, casualties, and property destruction were noted.

Authoritative Sources - stories were examined to determine if they cited any of the following sources: 1) national government, 2) regional government, 3) national environmental agency, 4) regional environmental agency, 5) state officials, 6) other national officials, 7) local governmental officials, 8) local relief officials, 9) local business representatives, 10) local utility officials, 11) local media representatives, 12) local military representatives, 13) local police, 14) local fire, 15) local emergency management officials, 16) local public weather officials, 17) local private weather representatives, 18) local hospital officials, 19) local emergency medical service representatives, 20) local religious representatives, 21) local educational representatives, and 22) local citizens.

Type of Story - Each story was classified as being 1) hard news: a story focusing upon the description of facts about an empirical event that occurred within the past two days of coverage; 2) soft news: a story focusing upon the description of facts about an empirical event that occurred prior to two days before publication or broadcast, or that is likely to occur after two days of publication or broadcast, 3) hard analysis: a story involving the analysis of events, problems, activities, etc., of current disaster events, and 4) soft analysis: a story involving the analysis of events, problems, activities, etc. of disaster events occurring prior to two days before publication or likely to occur at some time in the future, but after two days. Combinations of the above were also recorded.

Tone of the Story - the "tone" of each story was classified as being 1) instrumental (a story primarily concerned with "facts" about the scope and intensity of impact, magnitude of relief and restoration activi- ties, warning predictions, and other general preparation and/or response activities), or 2) expressive (a story primarily concerned

with human interests, morale maintenance, etc.) Combinations of these elements were also noted.

Disaster Myths - stores were analyzed to determine if they discussed the following disaster myths: 1) panic, 2) looting, 3) martial law, 4) mass evacuation, 5) heightened criminal behavior, 6) disaster shock, 7) shelter utilization, and/or 8) other. A single story could discuss none, one or more of the above topics.

In addition, a **qualitative analysis** of all of the stories was undertaken. This analysis focuses upon the themes and depictions that are included in each story for all of the agent generated activities, response generated activities, sources and disaster myths. In other words, all stories concerning specific activities, such as evacuation and panic, or specific sources, such as citizens or local fire officials, were read in an inductive search for these inherent in the content.

The content was analyzed by trained researchers. Each story or report was coded according to the preceding variables. A separate researcher undertook the qualitative analysis. With regard to the quantitative variables, intercoder reliability for the most easily coded material, such as location, size, placement, etc. was about 98 percent. For some categories, such as authoritative sources cited in the material, the reliability dropped to about 90 percent. For the coding of more interpretative content, such as the tone of the story, approximately 80 percent reliability was obtained.

Chapter 9. Some Major Themes and Findings from the Content Analysis

In this summary report we are only going to highlight certain major findings and themes from the massive analysis we undertook. A comprehensive, detailed analysis is being completed separately and will be published as an independent volume and in professional journals.

1. The Level and Prominence of Disaster Coverage Was Very High in The Involved Communities.

For both the print and electronic media, the disaster was obviously a big story. Local newspaper coverage was examined for nine communities. The range of coverage was from 44 to 160 stories with an average of almost 90 stories in each newspaper concerning the disaster. Of these stories, 33 percent appeared on the front page and 55 percent appeared within the first three pages. In addition, a total of almost 700 photographs accompanied the 904 stories.

With regard to coverage by the electronic media, within the two communities where data were obtained, the local television stations selected for analyses produced a total of 175 reports during the first two days, or about 44 reports each day. In both cases normal programming was preempted, and news coverage was extended to cover the disaster. Radio coverage during the first two days totalled 134 reports, or about 34 reports each day.

2. Local Media Have a Strong Proprietary Relationship to Their Disasters.

In all of the communities, and across all of the media groups, not only was the disaster a local story, but it was produced by coverage within the local mass media organizations. Over 95 percent of all the stories were produced by the local staffs of the media outlets. The few stories that were not written by local staff writers or produced by local staff were from state, regional and national bureaus.

News services, wire services and outside sources amounted to less than one percent of the coverage, even though they were producing copy and tape in many cases and this material was available to the local outlets. As a result of this pattern, the percentage of the news hole devoted to local stories significantly increased in the outlets. Normal gatekeeping and news processing activities had to be altered to produce the unusually heavy load of local reports. Furthermore, within the print media there was considerable concern evidenced over copyrighting material. For these communities it was "their disaster" and "their coverage."

3. Certain Agent Generated Activities Receive Extensive Treatment by Local Mass Media Organizations, While Other Important Activities are Relatively Ignored and are "Invisible".

All of the mass media pay particular attention to the disaster tasks of warning, evacuation, short term sheltering, and impact behavior. In fact, there is somewhat a fascination with these activities, which are the heart of movie portrayals of disaster. Of the 134 radio reports, 76.9 percent mentioned the effects of the impact and the behavior of individuals during impact. In addition, 47 percent discussed evacuation behavior, 42.5 percent mentioned warning, and 30.6 percent dealt with sheltering. The 175 television stories also focused upon impact behavior, 48.6 percent; evacuation, 36.6 percent, and sheltering, 16 percent. Newspapers also focused upon these activities; however their treatment was not as concentrated.

(It is important to note that we have material on two weeks of newspaper coverage in each community, but only two days of reports by the electronic media. However, it is our general observation that disaster coverage tends to be more extensive and of a longer duration for newspapers. The electronic media, particularly radio, seems to "lose interest" in the story rather quickly after the initial emergency period. Currently, analyses of the content of all the media in a linear fashion through time as measured by days after impact is being undertaken. The presentation of these findings will be made in subsequent publications.)

Less attention is given in mass media content to such matters as casualty care, the provision of food, clothing and human services, and the restoration of essential services. For example, 14.9 percent of the radio reports, 13.7 percent of the television stories, and 13.3 percent of the newspaper accounts discussed the provision of human services. Moderate attention was paid to the preimpact issues of disaster planning and structural mitigation measures. Radio provided the most coverage of these issues, with 16.4 percent of its reports discussing planning and 19.4 percent noting issues involved in mitigation.

However, what is most interesting is the lack of attention paid to other important disaster tasks that occur during the emergency period. In particular, search and rescue behavior tends to be ignored by local media. Only 8.2 percent of the radio reports, 8.6 percent of the television accounts, and 8.5 percent of the newspaper stories discussed search and rescue. <u>This important activity is almost invisible in most stories</u>.

Why is search and rescue relatively invisible? We will consider the issue in more detail when we discuss sources. However, one hypothesis that may be offered concerns the reliance upon traditional sources and "beats" in the coverage of disasters. A great deal of search and rescue activity is emergent, ad hoc behavior undertaken by individuals and small group volunteers. These citizens are not a part of the

normal news net for these organizations; i.e., they are not traditional sources. Therefore, this activity "falls through the holes in the net."

Finally, the electronic media pay little attention to such issues as long term individual and community effects, future mitigation, the restoration of commerce, extended sheltering and the provision of housing. During the first two days of coverage, newspapers also tend to ignore these issues; however their coverage is somewhat more extensive than that of the electronic media.

The attention paid by local mass media outlets to certain emergency activities at the expense of other tasks may create a distorted image of the problems of disaster for their audiences. Specifically, by focusing upon behaviors surrounding warning, impact, shelter, and evacuation, an individualistic orientation to the disaster is created, while systemic or commonweal concerns are relatively ignored. The mass media in the United State have often been charged with simplifying their coverage of complex events. Furthermore, being embedded within a society that culturally values and extols the virtues of individuals as being paramount to those of the society or group, mass media content often has an "individualistic orientation." These two elements fuse in disaster coverage. The vivid, "hollywood" tasks that directly impact upon the lives of individuals are focused upon. (Interestingly, these activities are also the responsibility of organizations that generally are included within the traditional news net.) Restoration of service, the provision of mass care, and longer range community restoration are not given prominence.

4. **With Regard to Response Generated Activities, Inter-Media Differences Can Be Observed.**

Within the electronic media, radio provides more extensive coverage of such issues as problems of convergence, communication and coordination than does television. Conversely, television, with its focus upon destruction and visual impact, places more attention upon the effects of the impact upon the destruction of property and loss of life. For example, 47 percent of radio reports discussed problems of convergence, while only 10.9 percent of television accounts reported on this common disaster problem. Similarly, 22.4 percent of radio reports discussed problems of communication, while only 3.4 percent of television stories noted these problems. The corresponding figures for problems of coordination were 18.7 percent and 11.4 percent. On the other hand, television was more likely to focus upon impact effects (21.2 percent of all stories as opposed to 15.7 percent) and blame for the disaster (9.7 percent compared to no attention on the part of radio.) It should be noted that these comparisons involve the same media in the same disasters over the same time period.

While newspapers did discuss impact effects in 27.8 percent of their stories, they were more attune to such issues as blame, future fund raising, and social control activities than were their electronic

competitors. The breadth of coverage by the print media was more extensive.

In general, however, all mass media paid somewhat less attention to response generated problems than they did to agent generated concerns. (For a distinction between response and agent generated problems see Dynes, Quarantelli and Kreps 1981). Once again, this pattern may indicate the influence of traditional news values. The obvious problems of warning, evacuation, sheltering, and casualty care are not only vivid and important, but they are also easy to cover. The less obvious concerns of coordination among responding units, communication difficulties between emergency response organizations, and convergence of supplies and personnel upon the disaster are more difficult to cover. Given the pressures of time and the need for producing some form of content to fill the expanded newshole, the focus upon those issues that are apparent and easy to cover is understandable.

5. Variation in the Sources Cited in the News Reports Indicates a Continued Reliance Upon Traditional Local Sources With the Addition of Considerable Citizen Citation.

Few national or regional officials are cited as sources in the content of the mass media. For example, only 6 percent of radio reports, 6.3 percent of television stories, and 8.5 percent of newspaper accounts cited national officials. State officials were cited more often. However, some local officials tended to be relied upon heavily in these stories. Local governmental officials were cited in 14.2 percent of radio, 18.9 percent of television, and 23.7 percent of newspaper stories. Local business representatives were also cited as a high rate. Other frequently cited sources represented police, fire and relief agencies.

It is interesting to consider what local sources are <u>not</u> cited to any great extent. Representatives from the local churches and educational system are rarely cited. Weather agency personnel received little attention. Also representatives from the mass media themselves were seldom a cited source for information, even though they are often an unofficial source. Finally, we noted that local emergency management officials were only cited in 7.6 percent of radio reports, 1.7 percent of television accounts, and 2.6 percent of newspaper stories.

These patterns indicate the influence of traditional "beats" and sources in the coverage of disasters. Those source that were ignored in media accounts tended to represent segments of the community that are generally ignored during normal, day to day coverage. In addition, the reliance upon local, as opposed to state and national officials, is not only consistent with traditional news gathering patterns, but is also compatible with the "proprietary" orientation that is developed by media organizations toward "their local disaster."

The use of citizens as a source is also rather extensive. Radio used citizen sources in 17.2 percent of its stories, television in 18.9

percent, and newspapers in 28.5 percent. This finding raises a number of important research questions. First, what are the implications of relatively heavy citizen citation in stories for the "command post view?" Second, what types of stories are likely to include citizen sources? Third, are there any differences across print and electronic media in the use of citizens as sources? Fourth, are differing uses of citizens as sources related to the organizational needs of the various media? In pursuing these questions, the following observations were made.

6. **The "Command Post View" is Prevalent for All Media Organizations, but it is Particularly Strong for the Electronic Media.**

We developed an index of sources and classified each story or report as to whether or not it utilized: 1) only command post sources, 2) only non command post sources, 3) both command post and non command post sources, and 4) no sources. The electronic media are very "command post oriented." Within radio, 62.4 percent of the reports used some command post sources and 41.8 percent relied solely on command post officials. For television, 53.7 percent of all stories incorporated these sources, and 37 percent relied solely on command post officials.

Newspapers were somewhat less oriented to the command post point of view. Only 21.3 percent of the stories during the first two days of coverage relied solely on these types of officials. However, a total of 47.7 percent of the articles utilized at least one command post source. Conversely, only 15.7 percent of radio reports, 21.2 percent of television accounts, and 33.3 percent of newspaper stories utilized solely non command post sources.

Our organizational analysis, based upon participant observation and interviews with organizational informants, had indicated that citizens became an important source of information for reporters during disaster. This observation seemed to question, somewhat, the generality of the "command post view" of disasters. In other words, it was suggested that although there is a heavy reliance upon official and organizational contacts for reporters during disasters, their information is not limited to such official contacts.

However, the content analysis we undertook clearly shows that although citizens may be used as news sources by reporters, official and command post sources clearly dominate the actual content that is produced. In other words, although private citizens may be an important source for 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. though it is less evident in actual news gathering process and the

construction of news accounts. Even though reporters do not rely solely upon officials, when constructing their stories, the views of command post representatives dominate.

7. Citizens are Utilized as Sources Differentially by Print and Electronic Media.

As we have observed, the use of citizens as sources, though dwarfed by references to command post officials, was still rather significant. Newspapers utilized citizen sources in 28.5 percent of their stories. The corresponding figures for radio and television were 17.2 percent and 18.9 percent.

It is interesting to note, however, that the print and electronic media utilized citizen sources differently. Newspapers primarily utilized citizens as sources in expressive or feature and human-interest stories. Of the 167 citations to citizens, 54.5 percent were in expressive pieces, while only 36 percent appeared in primarily instrumental articles. However, the electronic media being very instrumentally oriented, used its citizen sources 67.8 percent of the time in instrumental stories and only 26.8 percent of the time in expressive or feature accounts. The differences are striking and significant.

This differential utilization of citizen sources would appear to be a result of the contrasting organizational needs of the two types of mass media. We have previously noted that electronic outlets experienced more stress and underwent more change as a result of disasters. Furthermore, we also discussed the severe problem that they face given the interaction of the capabilities of their electronic technology for instantaneous transmission of content and the pressures of time and increased air time devoted to news. To fill this rapidly created, expanded newshole, the electronic media turn toward "hard news" and instrumental material. In gathering this material, electronic media personnel appear to rely upon any source that can provide any type of information, including citizens. Furthermore, given the truncation of the gatekeeping process that occurs in the electronic media, these citizen sources are more likely to be placed on the air live, or cited in the reports as some attribution must be given for the raw, instrumental content that is flowing out of the organization.

However, newspapers do not face the same problems. Gatekeeping is not truncated, in fact, in tends to be elaborated. Without the pressures for immediate dissemination of content, more expressive and analytical articles are produced. Citizens provide an important source of information for such stories, which is probably not a significant departure from normal practices.

8. Instrumental and Hard News Stories Dominate the Local Coverage of Disasters; However Newspapers, Even During the First Two Days After the Event, Are More Oriented Toward Expressive Accounts.

During a disaster, all of the local mass media are oriented toward instrumental stories. For all of the newspaper stories, about 58 percent were primarily instrumental in nature, while only 35 percent were primarily expressive or feature pieces. For the electronic media, the pattern is even stronger. Exactly 80 percent of the 303 reports were of an instrumental nature, while only 14.9 percent were primarily expressive.

In order to control for the effect of a longer period of coverage, we have compared the stories only for the first two days after the impact across all the media. The previously observed pattern still holds. For radio, 93 percent of the stories were instrumental, while television devoted 77.6 percent of its accounts to this type of material. The more expressive, feature and analytical nature of newspaper reporting, however, can be seen even during the initial days of the emergency period. Only 52.9 percent of the stories were instrumental, and almost one half were of an expressive nature.

As was previously discussed, the emphasis upon instrumental and "hard news" accounts may be a result of the need for electronic outlets to fill expanded air time quickly. Newspapers, free of the pressures of time and able to allow their normal news processing activities to function, present more of a balance between expressive and instrumental elements.

9. Traditional News Gathering Procedures Can Be Dysfunctional for Covering Certain Types of Disaster Activities.

The reliance upon traditional sources and beat can sometimes be detrimental to mass media coverage of disaster. This observation is particularly valid for those activities that are often undertaken by emergent, nontraditional groups, and individuals. Search and rescue, for example, represents such an activity.

Previously we noted that only 8.6 percent of newspaper articles and 8.4 percent of electronic reports discussed the important issue of search and rescue. The content analysis indicates that traditional sources are less likely to be referenced in material concerning search and rescue. Within the newspaper stories, only 12 percent of the search and rescue stories relied solely upon command post sources; this figure contrasts with the sole use of command post sources in 21.5 percent of the non search and rescue stories. Within the electronic media only 19.2 percent of the search and rescue reports solely relied upon command post sources; in contrast, 43.6 percent of the other stories did.

In other words, when covering search and rescue activity, reporters were forced to use nontraditional sources for their information. Not

being a part of the traditional "news net," these sources were often missed, and as a result an important activity was given rather slight attention.

10. The Mass Media in General and Television In Particular Present Content that Perpetuates Certain Disaster Myths.

A quantitative analysis of media accounts indicates that only a small minority of them refer to such disaster myths as panic, looting, martial law, disaster shock, increasing crime, massive shelter utilization, mass evacuation, and victim helplessness. In general, less than ten percent of the stories and reports in both print and electronic media discuss these issues.

However, the qualitative analysis of such material presents a different image. Television is particularly prone to perpetuate the myths. After viewing hours of television news accounts, it is apparent to us that television's penchant for "shooting bloody," getting "good visuals", and focusing upon the dramatic can perpetuate certain myths. For example, although references to panic and looting constituted only a small proportion of the total television content, their presentations were dramatic and consistent with disaster myths. Reporters were asked to "discuss the panic and shock that they found among the victims." One station even showed films of a family pet, "in shock." Although the visual footage often belied the claim of panic and helpless, the commentary would suggest that these were common reactions. By presenting the typical coverage of life in public shelters, the image was espoused that all victims were located in these shelters, without noting that only about 10 percent of all the evacuees had found their way to such locations. Similar patterns were observed for other disaster myths.

PART IV CONCLUSIONS

Chapter 10. Summary Discussion of Findings

This summary discussion is based upon some observations made by Friedman and Wenger (forthcoming) derived from an analysis of this data. In particular, we are concerned with presenting some findings regarding the previous literature and some implications of our observations for the study of the effects of the environment upon mass communication organizations.

How do these findings compare to what is already known regarding the activities of the mass media in disasters? While some previous findings are supported or elaborated, others are contradicted.

The data regarding the gatekeeping processes were clear. Concerning the electronic media, the findings were similar to those offered by Waxman (1973) and Sood and his colleagues (1987). The gatekeeping processes were truncated during the emergency. Waxman's study, however, was limited to the gatekeeping activities within radio stations. Sood's work made no distinction between electronic and print media organizations.

Our study extended the examination of gatekeeping into the print media. A significant difference was found. Rather than being truncated; the gatekeeping processes within newspaper organizations is elaborated. This elaboration allowed them to extensively process and filter incoming information. While the electronic media attempted to broadcast "everything" pertaining to the disaster in an attempt to fill air time, the print media condensed all the incoming information into collaborative stories in an effort to conserve space.

The needs of these organizations are different during disasters, and consequently they adapt in dissimilar ways. Simply put, (proportional to the amount of disaster information) the electronic media have more time to fill during disasters; newspapers outlets have less. The respective alterations in the gatekeeping processes, therefore, are adaptive measures needed to respond to this emergent situation.

However, we have also observed that the role of technology is somewhat of secondary importance to that of time. When the disaster occurs is one of the most significant factors that influences the patterns of organizational response by the mass media. When the timing of the disaster creates stress upon print organizations, they respond in a manner that is similar to the electronic counterparts.

The findings concerning the sources commonly used by mass media organizations raise some questions regarding the "command post view" (Quarantelli, 1981). These findings do <u>not</u> contradict the notion that the mass media generally rely upon officials as sources of news; however, they are not the exclusive sources. In other words, the use of the audience as a source of information for some mass media activities in disasters occurs. Such sue may serve to counter balance the command post view to a certain degree.

However, the content analysis indicates that although citizens may be used as sources for information, they are less likely to be sources of attribution for information in the actual content that is produced. In the content itself, official sources still dominate.

Therefore, while the command post view is definitely present during disasters, and officials are often sought as news sources during disaster, the audience also is an important source of news, particularly for the electronic media who utilize citizen sources in the production of instrumental or hard news stories.

As was observed by Sood and his colleagues (1987), a substantial amount of information sharing was observed to occur among reporters. The sharing tended to be informal in nature and heightened during the emergencies. Information was often scarce and needed. At command posts, evacuation shelters, hospitals, and other sites, reporters congregated and swapped information.

In this study we have presented a number of specific findings and discussed a number of specific problems that confront mass media organizations in responding to local disasters. At this time we would like to discuss further the important linkages between the environment and mass media operations.

This study has taken an organizational approach to the study of mass media organizations in disasters. It has attempted to illustrate how these organizations are affected by a sudden and dramatic change in their environment. The relationship between the mass media organization and the environment is critical.

During non-disaster or normal times, the mass media organizational structure allows the organization to order the environment in such a way that it is able to report only a limited number of events from an infinite number that are available; i.t., it cannot mirror reality. Studies by mass communication scholars, such as Epstein (1973) Tuchman (1978), and Gans (1979) have demonstrated how mass media organizations work within organizational limits and economical and temporal constraints. In an effort to operate within these parameters, and within the timing and rhythms of the organization, organizations rely upon such devices as beat systems, press conferences, press releases, wire services, other media outlets, etc. These mechanisms allow the organizations to report many events without actually attending them or at least with very little effort. In part, restraints such as these are responsible for the different types of coverage and stories reported by the different types of media. Their particular technology and the normal timing and patterns of organizational activity facilitate the coverage of certain events. The timing of an event has a substantial effect upon whether or not it will be covered. Basically, the earlier an event takes place, the greater are its chances of being covered by the media. Therefore, press conferences and other pseudoevents are often scheduled at times which are most amenable to the media. But

because of the differences in technology and deadlines, certain events are more easily covered by the electronic media and other events by the print media.

However, the result of these organizational limitations is that many possible newsworthy events are never covered because they fall outside of the news net. Simply put, mass media organizations, like most organizations, must make their environment as predictable as possible. Day to day these organizations, therefore, can rely upon the environment to fit their organizational limitations and needs. However, in the event of a disaster, the environment is altered and the organization is placed in a turbulent and unplanned situation.

The changes within the environment can have a substantial effect on the organization. The extent of this effect varies with the ability of the organization to respond, i.e., its resources, flexibility, and the degree of effort it undertakes to meet these environmental alterations. Many small media outlets do not experience any change at all because they make no effort to respond to the new situation. For those that do respond, what are their adaptations?

The unpredictability of the situation tends to throw off the normal organizational rhythms. The organization can no longer rely upon the daily routine of events to occur in its environment. For example, the normal Tuesday night town council meeting or the Thursday night basketball game may not be held as scheduled. In addition, the normally convenient time for press conferences may not be met. These types of changes can be extremely problematical for the normal deadlines and press times of media organizations. Furthermore, certain normal, traditional sources and beats, such as the county court, may become unimportant or irrelevant, while others, such as the Red Cross or Salvation Army, may become critical. Reporters may not know the representatives from these organizations or have the degree of rapport with them that they have with their traditional sources. Hence, reporters may face difficulties contacting sources and obtaining information. Moreover, and perhaps most critical, rather than having an overabundance of news, these organizations suddenly are faced with the possible problem of having a shortage of information to fill the time or space devoted to content.

The effects of the altered environment and new demands lead to alterations in the organization. Instead of the organization shaping the environment, the environment shapes the organization. Among other changes, gatekeeping processes are truncated or elaborated, the decision making becomes a collective process, reporters are granted more autonomy, and sharing information becomes a prominent norm. In effect, the news net is shifted to capture different kinds of news items.

Chapter 11. Suggestions for Future Research

With regard to future research, the findings laid out in this report point to the importance of continuing to examine differences across types of media and across media of varying sizes. Furthermore, the relationship between technology and the timing of the event must be explored in more detail. Under what conditions do newspapers evidence the same degrees of stress and alterations as electronic outlets? In addition, studies of the influence of disaster planning upon media response should be undertaken. Evidence from this study indicates that the level of disaster planning is quite low in media organizations; however where planing existed and was of good quality, response patterns benefitted. Further research into this linkage is needed.

An important area requiring further analysis involves the role of the mass media in the emergency response system. Studies of the interorganizational relationships between mass media and emergency management officials should be commenced, particularly in light of the serious issues of conflict or disagreement about role and organizational responsibilities that can emerge during disasters.

In addition, future research should focus upon the role of the media in facilitating the convergence problem. Our content analysis indicates that the electronic media can stimulate the convergence of unneeded and nonessential material aid upon the disaster through unsolicited calls for aid. However, these observations are simply clues or hints. A systematic study of media content and its relationship to convergence should be undertaken.

Finally, content analysis must be focused in the future on the electronic media. In this study we have only been able to observe and analyze the first two days of coverage by four electronic outlets. There are serious methodological problems of data access in doing this type of research, but more attention must be paid to electronic, and specifically television content, given its preeminent position as a news source for the audience.

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