

Our traditional approach to content analysis failed to take into account that the existence or occurrence of every mythical portrayal or accurate portrayal does not influence the viewer (or reader in the case of a newspaper) equally. We argue that it is reasonable to assume that the headlines and stories on page one of a newspaper or the lead story(s) of the evening news are more influential in forming reader/viewer perceptions of the behavioral response to a disaster than the articles that appear later. We are not saying that the appearance of accurate or mythical portrayals anywhere in the story do not influence the viewing or reading audience, but we are suggesting that impact can be rank ordered. Lead stories and headline stories are more likely to influence perceptions than those which appear in a later story or are buried on page 33 of a newspaper. An examination of the results of a traditional content analysis will suggest that there are few differences among media types regarding accuracy in news stories. As researchers who were on-site and who have thoroughly examined the data, and as consumers of the news stories on Hurricane Gilbert, we felt there were subtle differences, however. Therefore, we used an alternative approach to categorize the data in conducting our content analysis—a technique which, we believe, is more revealing of the potential impact news stories may have on forming accurate versus erroneous perspectives of the behavioral response to disaster.

First we looked at each news broadcast (and each issue of a newspaper) as a unit of analysis (instead of the story itself).

We tried to view the data from the perspective of a potential news consumer, i.e., we looked at the nature of the lead-off story(s) (or headlined articles on page one of a newspaper). We categorized such stories as either prominently (lead story, front page article) or nonprominently (late in the news program, buried in the back pages of the newspaper) displaying myths or exaggerations or as containing no myths at all in any stories. This analytical approach yielded some very interesting results. The lead stories on the network news (Appendix 4, Table 3), especially CNN, portrayed elements of the disaster mythology (deviance and exaggerations) in a majority (53%) of programs, while less than a fifth (18%) of the local news programs contained elements of the mythology in their lead stories. Conversely, a fourth of the network news programs were myth-free, whereas almost two-thirds (64%) of the local news programs were. Further anecdotal evidence is cited throughout this report illustrating the qualitative differences between network and local news coverage of Gilbert and demonstrating possible reasons for this variation.

Local versus network television news stories. Again, the total story of the television coverage of Hurricane Gilbert is not told by a traditional content analysis. Reducing human behavior to quantitative dimensions necessarily results in the loss of some substance. This is true for the current analysis. The field team, both while in the field and while reviewing the television news videotape, detected a clear, unmistakable difference in the focus of the local news versus the national news treatment

of Hurricane Gilbert. The interview process substantiated what we felt we saw, but the difference was not as clearly revealed by traditional content analysis.

To review our findings, however, we will first return to the traditional analysis to consider what it does indicate.

Table 4 (Appendix 4) indicates that the story of a majority (54%) of the local news stories focused on behavioral responses to the hurricane while approximately a third (35%) of the national stories did the same. On the other hand, approximately a third (32%) of the national news stories also focused on weather aspects of the hurricane, while less than a fourth (22%) of the local stories did this. Additionally, approximately a fifth (21%) of the national news stories focused on hurricane damage, while less than one in ten (8%) of the local stories did so. On the other hand, more than a tenth (12%) of the local news stories provided basic hurricane information (e.g., shelter locations for potential evacuees) and information on organizational activities and decisions (e.g., if and when an evacuation decision will be made), while almost no national news stories (3%) engaged in this kind of reporting. Hence, the analysis indicates there was a subtle, but distinct, difference between local and national news reporting regarding the hurricane. Local news tends to focus more on behavioral response and information giving, while national news focuses more on weather and damage.

This trend was also evident in the background video shown during reporter's comments. Although we do not have hard data to

support our observations, during our analysis of the videotaped news broadcasts we noted that local news broadcasts tended to include reports from on the scene roving reporters with their mini-cams reporting from city hall, an evacuation shelter, a beach, a damaged home, a police roadblock, and so forth. National news broadcasts, on the other hand, tended to contain reports that appeared to be on the scene, but actually were not (at least to the extent that local reports were). The network news rotated from one coastal city to another to get a live, on the scene report from their man or woman. In virtually every case, the reporter was physically stationed along the beach with rising tide pictured in the background. To the unknowing television viewer the reporters appeared to be on the scene watching for the hurricane to hit land, with waves (more or less) crashing on shore, wind blowing through the reporter's hair, and so on.

Since we were on-site we could observe the behind the scenes activity of the news organizations and interview relevant news personnel. A picture emerges which points to a very different normative and social structural-organizational approach to how local and national organizations covered Hurricane Gilbert. The local news crews are familiar with the local officials and the local organizations charged with responding to an emergency. In some cases they are on a first name basis with these officials, and in many instances they know who they can trust to get an accurate assessment of the situation. The local news organization is, in a sense, an extension of the local political and

emergency structure. To be sure, the local news organization is a separate entity, and often a critical one at that, but local norms seem to dictate that it willingly join in the mission to get out information to help the people in the community.

Traditional content analysis does not reveal the slant of news stories. The above observation, i.e., that the normative mission of the local emergency organizations and the local news organizations are parallel, became apparent to us through anecdotal data gathered both on-site and during the analysis of news video. Through our interviews with local news media personnel it became apparent that the dominant norm governing their behavior during an emergency event is to get out the information that will help their community. Of course, they are trying to get good stories, but their driving motivation is truly the quest for news that will describe the nature of what is happening in such a way that the viewing audience will be aided, e.g., in deciding to evacuate and determining what to do and where to go if they do. The norm of getting good information for the community audience is reinforced by the belief that this audience is motivated to watch local broadcasts for the information that may govern their decisions.

National news reporters, however, have a very different mission. Our interviews with reporters and anchors for network news organizations, combined with our observations of their news presentation activities, led us to conclude that the driving norm of the national news organization is to get a good pictorial

story-dramatic video which will motivate the viewing audience to stay tuned rather than change stations. The national news organization does not see itself as broadcasting to a local audience which is attempting to get information upon which to make decisions. Network news is engaged in a ratings battle. Unfortunately, a good story and good news are not the same product.

To demonstrate these differences between local and national coverage, we offer synopses of several interviews and some personal observations. The evening we were in Corpus Christi we informally interviewed several members of a network news team preparing live satellite feeds from Corpus Christi. The general view was summarized by one crew member who said:

A great deal of creativity (read: imagination) goes into these newscasts. He (anchor) positions himself in front of those palms and out in the rain for effect . . . high drama, all drama . . . we spent the day driving all up and down the coast looking for something exciting to tape for background video tonight, nothing, there was nothing (the storm is a fizzle here). They (network) put so much money into this thing, we have to report something . . . so, drama, high drama.

While our sources were talking, we observed that the anchor/reporters, who had been standing under the overhang of the hotel they were reporting from prior to the live feed, were no longer standing under it, instead they were standing in the drizzle in front of a palm tree which had branches just above the head of the reporter and whose branches appeared to move most freely and dramatically (of those they could have chosen) when the wind blew. One reporter, an anchor, even deliberately messed his hair just before air time ("drama, high drama").

Local news organizations did not engage in such a quest for drama. As noted earlier, the norm governing their news gathering and reporting behavior appeared to be distinctly different: to relay a precise description of what was occurring to facilitate local preparation for and recovery from impact. These organizations appear to feel a responsibility to their community and therefore seek to be an active part in preparation and response activities by gathering and disseminating information.

In addition to normative differences, we detected a structural difference between local and national news organizations which appeared to influence the news produced. The local news personnel, as previously noted, were more likely to know some of the key decision makers in local emergency response organizations. Hence, with their portable cameras they could travel to these officials and provide information directly to their audience. Local officials tended to plan their news conferences with the local news broadcast hour in mind. Therefore, the local news could provide live coverage of the emergency management official who wanted to get up-to-date information to the citizenry, and the local media's altruism resulted in their essentially turning the airwaves over to such officials. While the national news personnel attended some staged, previously announced press conferences and also did some additional on-site interviewing, they had a greater tendency to bring those they wanted to interview to their location.

This may appear to be an insignificant difference, but we argue that it impacts dramatically on the slant of the news broadcast. Interviewees were brought to the location of the network's satellite dish for the live feed. This location (e.g., the Corpus Christi coast with rising tide and blowing palm leaves in the background) usually provided "maximum drama." By selecting and bringing local officials to this location, the network maintained greater control over what was broadcast. They selected who would speak, who would represent what is happening in the community. Those selected were more likely to tell the story from the perspective that the news personnel believed to reflect the situation accurately; the network producer and director, as well as the reporters, were in control.

In such a situation, if the news personnel believe in the community breakdown model myths, they may be inclined to select interviewees who report observing or fearing such activities. The reporter believes he is accurately reporting on disaster events by selecting reports on these dramatic events, mythical though they may actually be. Such interviewees are typically flattered to be on national television and are often willingly led by the reporter.

To reiterate, the local news personnel, in contrast, functioned in their communities as a conduit. While they hunted for interesting stories and novel ways to present to their viewing audience what was happening, they tended to put the local officials on live while they were presenting their prepared state-



ments; when interviewing one on one, they seemed to focus more on individuals they had some working relationship with and whom they trusted to provide "the truth."

National news personnel tended to offer more superficial treatments based on more tenuous relationships. Typically, they would arrive on-site and would determine where the press was meeting local officials for interviews and press conferences (following or acting like a pack animal, as Scanlon and Fischer, 1988, have described). They would announce their presence and begin interviewing the official who appeared to know what he or she was talking about. This judgment as to who was knowledgeable was not made on the basis of a prior working relationship, but on the basis of the perceived presence, the apparent credentials, and the apparent veracity of the speaker (i.e., the concordance between the speaker's beliefs about behavioral response to disaster and the reporter's). For example, in one instance, we were interviewing a city manager when an out-of-town crew arrived and asked to interrupt our interview. We readily agreed, seeing this as an opportunity. During the taping of this interview of a city manager, one of us interjected some information in response to a question that the city manager was having difficulty answering. We had previously prepared credentials hanging around our necks to facilitate entree, so we looked very professional and (we believe) sounded knowledgeable. The television reporter took notes as if what we were saying was Gospel. We probably could

have told her anything and it would have been believed or at least reported.

The "pack animal" nature of the national media, was further demonstrated when we were in Corpus Christi on the evening the hurricane hit the Mexican coast. We were amazed at the lineup of tripods and satellite dishes along the coast. Crews from all over the country and world were parked up and down the street running along the shore. The crews were staying in hotels along this street and set up shop to report from literally right outside their hotel rooms. They were on-site only to the extent that they were in the city which was expected to be dramatically affected or impacted by the hurricane. Network people did drive through the city, but they primarily focused on finding local spokespersons, gathering dramatic video, and sending their live feeds back from the coast—right outside their hotel rooms. It was quite a sight to see television equipment and personnel lined shoulder to shoulder, block after block. Were they getting the scoop or trying not to be scooped? Since they looked like pack animals, the latter seems more accurate than the former.

These anecdotal observations are shared in order to provide an accurate analytical focus to the qualitative differences that do exist between the local and national news broadcasts (recall Table 3). We argue that both normative and structural differences between local and network news gathering and reporting result in differences in accuracy.

Variation in broadcast accuracy. Table 5 (Appendix 4) shows that 80% of the local news stories were accurate when discussing behavior associated with the community breakdown model myths, while only 52% of the network news stories contained accurate references. Conversely, 37% of the network stories contained mythical references while only 22% of the local news stories did so. Hence, it appears that the local news stories were more accurate overall than the network stories.

There was little difference in the reporting of accurate or mythic behavior between local and network news when it came to their treatment of panic, looting, price gouging, and injury and death estimates. The most striking differences concerned the handling of evacuation, sheltering, and damage estimates as well as references to rational behavior, disaster subculture behavior, and altruism.

Disaster researchers (Quarantelli, 1987, for example) know that the number of evacuees is usually overestimated by local officials. In most instances approximately 10% of the potentially affected population evacuates. In the case of the cities of the southern Texas coast during Hurricane Gilbert, we suspect the evacuation rate may have been higher than the norm given the previous experience that these communities had during other recent hurricanes. There is no evidence, however, to support the claims of the network news reporters that the towns along the coast were "ghost towns, with most people having left--all but a few stragglers who refuse to go." When we drove up and down the

streets of these cities, we found the neighborhoods full of people preparing for the storm. These people flooded shopping centers to buy munchies for the kids and spouses who were unexpectedly at home and in need of entertainment. They were in their yards securing lawn furniture and boarding up windows. We do not believe the estimated evacuation rates of between 60% to 80% which were reported in national broadcasts, and suspect that an estimate of 20% would be high.

Again, one reason for the exaggerated evacuation estimates is the tendency of network reporters to work as "pack animals" from the central business districts where the hotels were located. More than one network reporter stood in the deserted streets, sometimes at 3:00 a.m. citing the empty backdrop as evidence of the massive evacuation of the city. When downtown stores are closed so that employees can go home to prepare for a storm and possible evacuation, it is unlikely that people will be downtown window shopping. (In addition, even in nonemergency times, most people do not window shop at 3:00 a.m.) What struck us as even more remarkable was that such claims of massive evacuation, rendering the city a ghost town, were frequently followed by video of the shore which showed that hundreds, perhaps thousands, of locals were strolling the beaches, surfing and otherwise engaging in typical disaster subculture behavior. The contradiction usually escaped most reporters. To be sure, local reporting also included some broadcasts which overestimated evacuation figures, but their level of accuracy was distinctly

greater than the networks' (14% of the local news accounts dealt with evacuation estimates accurately versus only 5% of the network reports, see Appendix 4, Table 5).

The literature on behavioral response to disaster (Dynes, 1970, for example) observes that most evacuees do not go to shelters but stay with relatives or friends or rent motel/hotel rooms instead. In conjunction with the exaggerated estimates of evacuees, the numbers of persons sheltered are usually exaggerated. Indeed, some local and network broadcasts exaggerated the population sheltered from Gilbert. We visited some shelters in Corpus Christi during the impact and immediate postimpact periods and found less than two hundred persons sheltered. The director of one shelter indicated that only a few of the city's shelters were open, because the local disaster plan stipulates that as one shelter fills up, another will be opened. Even if every shelter had been opened and filled to capacity, the total sheltered population would not have equaled the estimates being broadcast.

The network news regarding shelters was more inaccurate than the local news in two ways. First, the estimates were even further inflated on the network news than on the local news, and second, a higher percentage of network news stories dealt inaccurately with these estimates (8% versus 2%, see Table 5). We suspect that this greater inaccuracy on the part of the network news is the result of two influences. First, the network news was governed by a norm (get good video, offer a good story) that led to exaggeration. Second, the "pack animal" behavior of net-

work news personnel leads to a kind of "whisper down the lane" phenomenon. For example, one CNN reporter said, on air, that "someone around here said that perhaps as many as 60,000 are housed in shelters." The someone he was referring to was a fellow reporter from an affiliate. The direct live feed form of reporting facilitates such inaccuracy, for normal editing processes are short circuited as Wenger and Friedman (1988) have observed.

Another example of theatrics in national coverage (but not an example of myth reinforcement) was the networks' exaggeration of weather conditions in communities from which reporters were broadcasting. For example, a CNN reporter stated that the "wind is picking up now" and suddenly stepped backward as though to catch himself from falling in response to a wind gust. The wind gusts were not exceeding 35 miles per hour at that point (far below hurricane strength) and the wind had, in fact, not been picking up before, during, or for hours after that broadcast. Interviewed crew members suggested that "when you broadcast continually and invest this much equipment and personnel in a story, there will be a story."

We now turn from myths per se to three areas that the disaster literature (see, for example, Quarantelli, 1987) identifies as typical disaster behavior but behavior that varies distinctly from that expected according to the community breakdown model. First, students of disaster research have found that victims and potential victims tend to behave in a very rational manner. They

prepare themselves if time permits, e.g., by purchasing bottled water, food, flashlight batteries, and so forth. Second, as mentioned, many localities that are frequently affected by disasters, tend to develop what Wenger (1980) labels "disaster subcultures." For example, people in hurricane-prone areas will sometimes throw hurricane parties and surf in the large storm-created waves. Third, most victims and potential victims tend to not respond to disaster events selfishly (as looters or price gougers), but tend to be altruistic. They help one another, give food away, organize search and rescue groups long before emergency organization personnel arrive on the scene, and so forth.

In our content analysis we sought to assess the extent to which the local and network broadcast media portrayed such disaster behavior. We found them portrayed more accurately and more often among local news reports than in broadcasts by the networks (see Appendix 4, Table 5). Rational behavior was portrayed on 30% of the local news reports, but on only 12% of the network stories. Disaster subculture behavior was accurately portrayed by the local news 10% of the time but only 5% of the time on the network news. Finally, altruistic behavior was accurately portrayed in 7% of the local newscasts compared to only 1% of the national newscasts.

Our interviewing of local and network personnel suggested that the primary reason for these differences was organizational/structural differences in the two levels of television news broadcasting. It became very clear that almost all news person-

nel believe the community breakdown model is a real description of how people behave during an emergency. We "played dumb" and asked reporters, for example, "how do people usually behave during these things, since you have seen so many you must have a clear picture?" To a person, they provided a complete description which essentially formed the community breakdown model: looting, price gouging, antisocial behavior generally, "crazy behaviors," selfishness, panic, and inability to respond to subsequent events (shock). Reporters frequently ask public officials if there has been any looting, price gouging, and so forth. One anchor asked a reporter who was broadcasting live on-site (in front of his hotel), if there had been "any crazy behavior, looting and price gouging and so forth." The reporter responded that local officials felt that they "had things under control and did not expect such to occur." Even if they reported that these behaviors did not occur, the questions were asked and answers reported in a way that would lead one to believe that such behavior usually did occur during disasters.

Again, the local news seemed to be more accurate in reporting such behavior because they see their role as getting necessary information out to their community. Thus, they concentrate on televising such things as local press conferences of local emergency management officials. Even though many local reporters believe in the community breakdown model, their control over what is broadcast results in reporting that is qualitatively different from the networks. With network news, where the control is not



local, the goal is to create a dramatic stage from which to feed the big story to their largely unaffected "arm chair" audience nation- and world-wide.

If this analysis is correct, the accuracy of the local news is limited by the extent and accuracy of local emergency officials' knowledge. In most instances, we found the local officials and emergency management personnel in Texas coastal communities to be fairly knowledgeable and accurate in their perception and understanding of the behavioral response of citizens to disasters. However, these were mostly designated spokespersons. Other individuals within the organizations were often far less knowledgeable and more likely to believe in the community breakdown model. To illustrate, one emergency management official acknowledged during an interview that it would be impossible to evacuate his city, because it would take too long to get that many people out of the area. In another city the city manager repeatedly went on local television warning citizens to prepare and leave the area rather than wait for an official evacuation declaration. He acknowledged the difficulty in getting people to leave. The one major mythical behavior that he perpetuated during interviews was an apparent belief in looting. He stated that roadblocks and police patrols were in place to "guard against looting in those areas where citizens have evacuated." When we interviewed this city manager, he spontaneously acknowledged that looting does not normally occur during disasters, but he had to "convince the people that it was guarded against; otherwise they

would never leave, but would stay to 'protect their property' against imagined looters." So he was using the media to counter the public's belief in disaster myths. Of course, in communities where previous training and disaster experience has not enlightened officials regarding these myths, the "news" broadcast directly from official spokespersons may be erroneous and perpetuate the community breakdown model, even though the altruistic norm of getting information out to save the community may still govern local news personnel behavior.

#### Local Print Media

We analyzed 311 Hurricane Gilbert news stories published in the Brownsville Herald, the Corpus Christi Caller Times, the Galveston Daily News, and the Houston Chronicle. We were able to obtain copies of every issue of the Galveston newspaper published for the week comprising the preimpact, impact, and postimpact periods. We were not able to obtain every issue of the remaining newspapers which were often sold out before we were able to reach these cities. Most (88%) of the news stories were written by the newspaper staff, while approximately a tenth (12%) of the hurricane news stories were written by AP or UPI staff members (see Appendix 4, Table 6).

Because we obtained all issues of the Galveston paper published during the life cycle of the storm, more articles were analyzed from the Galveston Daily News (39% of the total) than from any other paper. (One should not conclude that the variation in distribution of Hurricane Gilbert articles presented in

Table 6 is indicative of the quantitative treatment given by the various newspapers.) Since the Galveston newspaper is the only newspaper for which we had every issue, we used the Galveston publication as a base from which to compare our findings across all the newspapers we examined. There were no differences observed between the data from the Galveston newspapers and the total data generated by the four newspapers from which articles were analyzed.

The second largest percentage of articles was obtained from the Houston newspaper (36%). The particular issues examined, including the Sunday edition and immediate pre- and postimpact editions, were editions in which newspapers would tend to devote a larger percentage of the news to the disaster story. The Houston paper has a larger circulation which includes the other cities (Brownsville, Corpus Christi, and Galveston) threatened by the hurricane. The Houston paper contained many more pages per issue; hence, even if the same percentage of the news were devoted to the storm, with the Houston paper more newsprint would be involved than with the smaller newspapers.

A majority (57%, see Table 6) of the news stories were devoted to preimpact activities, more than a tenth (13%) were devoted to impact activities, a quarter of the stories (25%) focused on postimpact activity, and the remaining 5% reported on a mixture of activities during two or more disaster time periods. This variation is attributable to several factors. First, we could not obtain every issue of each newspaper for the entire

life cycle of the storm. Hence, we had Houston papers which reported on preimpact and postimpact activity. The Houston paper is a larger newspaper, and therefore contained more articles written about the storm. Second, because hurricanes are slow-onset events, the preimpact period is often the longest time period of the storm's life cycle (the case with Gilbert). Finally, the impact period is typically the shortest time period of the life cycle of the storm. One would thus expect fewer stories to be written about activity during this period.

In contrast to television news stories about Gilbert, which primarily consisted of soft news or a mixture of soft and hard news, the local print media focused primarily on hard news (60%) (Appendix 4, Table 6). Only a third (34%) of the hurricane printed news stories were soft, with the remaining 6% being a mixture of the two. This difference in orientation between the broadcast and print media probably indicates a significant difference between the two. In our analysis, we noted that the print media were similar to the local broadcast media in that they seemed to be governed by the altruistic norm of gathering and disseminating information that would be helpful to the local community. However, the depth of detail is, of course, much greater in the print media. Local staff reporters are not competing to offer the best thirty-second sound bite; they are competing to write the most accurate, thorough story—in this case, on a particular event related to the hurricane.

The range of news stories published in the print media was also significant. Table 6 indicates that, for the print media, the number of stories focusing on behavioral response to the storm were equal to the number of stories reporting on storm-related organizational activities (29% each). While the broadcast media (Appendix 4, Table 1) also primarily focused their stories on storm-related behavior, they did so far more often (42% versus 29% of the time) than did the print media. The broadcast media had few stories (3%) on storm-related organizational activity, whereas the print media, as just noted, had 29%. The print media also devoted a larger proportion of space to pure information dissemination (where shelters were, etc.) than did the broadcast media (13% versus 4%).

Like the broadcast news stories, we found that the print news stories were fairly accurate in their portrayal of the behavioral response to Gilbert (Appendix 4, Table 7). We examined 311 news stories for evidence of mythical versus accurate portrayal of the ten behavioral categories mentioned above. Hence, there were 3,110 possible instances of such behavior being reported. Most of the time, in 2,806 instances, the behavior in question was not addressed in the story. Behavior was address in 304 instances. Within these 304 instances (in Table 7), 77% of the time the behavior was described accurately. In less than a fourth (23%), the community breakdown model was perpetuated (e.g., fear of looting). The inaccuracies that did occur were primarily centered around the perpetuation of the looting and

price gouging myths. Inaccuracies occurred slightly less frequently than they did in broadcast media news stories (compare Tables 2 and 7). Additionally, the print media were distinctly more accurate in their published estimates of evacuees, sheltered persons, and damage. The print media are similar to the local broadcast media (and unlike network news personnel) in that they are likely to have working relationships with key leaders and can discriminate between those who are knowledgeable and those who are not.

Even when myths about deviant behavior were portrayed in the print media, they were usually either in articles buried in the newspaper (not headline news) or received only passing notice in other articles. On the other hand, the broadcast media tended to highlight behavioral responses to the storm that perpetuated the breakdown model. To be sure, most print reporters, but not as many as among the broadcast media, believe in the disaster mythology. Their stories, however, were less sensational than broadcast media stories. The norm governing their news gathering and reporting behavior was not to get the equivalent of "good video," but to report accurately on the varied activities of individuals and organizations in preparation for impact and cleanup. A hard news orientation coupled with organizational norms distinctly different from those of the broadcast media (particularly of the networks), led to a more even-handed and accurate presentation of the behavioral response to the storm.

Table 8 (Appendix 4) demonstrates that, in perpetuating disaster myths, the print media follow a pattern similar to the local broadcast news. Most (78%) of the newspapers examined either did not prominently display articles which contained behavioral myths or had articles which contained no myths. Only 22% of the newspapers prominently displayed articles which portrayed disaster mythology. Comparing network news broadcasts with both types of local media combined indicates the divergence between the national news and local news coverage. While a majority (53%) of the national news programs led off with stories that perpetuated disaster mythology, such inaccuracies occurred in only 21% of the local media.

We observed earlier that local broadcast media behavior appeared to be more altruistic than national coverage in that it seemed to be intended, at least in part, to help the community. Of course, this may result from the local broadcast personnel living in the area and defining themselves as potential victims along with the other local residents; whereas the network personnel are outsiders converging on the scene to get a story that will attract viewers and, possibly, promote their career. If the local broadcast personnel were seeking to get information out that would help their community obtain a complete picture of what was occurring during the storm, the local print media were doing the same to a much fuller extent. In comparison to the broadcast media, the print media reported in detail on virtually every aspect of the storm.

While the network media devoted most of their hurricane air time to live reports from their reporters stationed in the coastal cities, the local broadcast media devoted most of their hurricane coverage to reports--some live, some filmed--on multifaceted storm-related activities from various settings within and without their threatened community, and the local print media devoted the bulk of their hurricane newsprint to an even greater variety of storm-related news and information. In viewing the network news one feels excitement or hype; when reading the newspaper accounts one feels informed about many aspects of the experience of preparing for and living through the storm in the given locale.

Local staff writing versus wire service writing. Similar to our analysis of local and national broadcast media, we attempted to determine if there was variation in reporting between local newspaper writers and those from the wire services. The parallel is not totally analogous, however. Local newspaper personnel decide which AP or UPI articles to publish in their local papers; the wire services do not disseminate directly to the public as do national television networks. Therefore, the primary result of our analysis is an understanding of the local print media's accuracy with respect to community breakdown myths, but this understanding is presented in a format which breaks the data down by writing source--local staff versus wire service.

Table 9 (Appendix 4) shows that the story line of a plurality of the staff stories focused on behavioral responses to the storm (31%) and organizational responses (31% also). On the



other hand, the focus of the wire stories published in the local newspapers was on damage (26%) and weather (21%), followed by stories dealing with storm preparation information (16%). Stories focusing on behavioral and organizational responses to the storm were relatively few (11% and 13% respectively).

Most of the wire service stories did not have a byline published with the story, so we were not able to interview wire service writers. We did, however, interview staff reporters from each newspaper. As with broadcast media reporters, newspaper reporters generally believed in the community breakdown model, thus the occasional focus on resident fears of looting and price gouging. However, these reporters also shared the same approach to news gathering as the local broadcast media, resulting in a similarly high degree of accuracy in reports on other behavioral responses to the storm. Again, being a part of the local social fabric, these news people had working relationships with numerous community leaders whom they would seek out during such emergencies. Of course, just as with the local broadcast media, the print media reporters are constrained by the accuracy of these local officials. Since we found many local officials in the cities threatened by Gilbert to be rather knowledgeable concerning human response to disasters, the perpetuation of disaster mythology was limited in the reporting on Gilbert. Many reporters still asked leading questions which reflected their own belief in the mythology, but since the local officials were fairly knowledgeable and since the reporters were essentially acting

as an information disseminating extension of the local emergency officials, the print news stories were fairly accurate (some reporters took pains to write articles that talked about burglaries as opposed to looting and to note that the burglary rate actually decreased during the emergency--the result of information given them by a knowledgeable local official who suggested the story orientation). The print media assumed that local officials were their best source for the most complete picture of what was occurring in their community--a perception that could be characterized as an example of the "command post" view of disasters (Quarantelli, 1981). The press assumes the validity of the command post view which, of course, may not always be a safe assumption.

Variation in print media accuracy. While the news stories published in local newspapers were fairly accurate, there were lapses in this accuracy, as noted above. Deviant behavior, e.g., looting and price gouging, was the most common myth to appear. This inaccuracy was counterbalanced, though, by the special attention given to the rational behavior, typical disaster subculture behavior, and altruism that occurred. We found differences, however, between the degree of accuracy in local staff writing and that of the wire services (see Appendix 4, Table 10).

Articles written by local staff tended to be more accurate than wire service articles when it came to evacuation estimates (14% versus 5%), descriptions of rational behavior (21% versus 5%), and disaster subculture behavior (7% versus 0%). The ob-

served differences appear to result more from the variation in story orientation between local staff and wire service articles rather than from an increased tendency for the wire services to perpetuate myths; as noted above, wire service articles focused more on damage, death, and injury than on behavior. Both staff and wire service articles reflect a high degree of accuracy in these areas.

#### CONCLUDING SUMMARY AND OBSERVATIONS

A rank ordering of the news sources we analyzed yields the following: the local print media most accurately reported behavioral and organizational response to Hurricane Gilbert; they were followed by local television broadcast media, and then by the network news, which was the most likely to exaggerate. When myths were portrayed, those most likely to appear in either medium were myths perpetuating belief in increased deviance during disaster, such as looting and price gouging. The behaviors most likely to be reported accurately were those dealing with rational preparation and clean-up activities engaged in by individuals and their families, typical disaster subculture activities such as surfing, and instances of altruism such as search and rescue activities. Typical exaggerations involved evacuation and shelter population estimates. Again, degree of accuracy did vary by media type.

To summarize our findings and observations on the local and network television news broadcasting regarding Hurricane Gilbert,

we found the television news, generally, to be fairly accurate. There were some references to panic, looting, price gouging, and other imagined forms of deviant behavior which perpetuated the community breakdown model. Property damage, injury, and death estimates were also fairly accurate. However, exaggerations in evacuation and sheltering estimates did occur. Altruism, instances of typical disaster subculture behavior, and the rational behavior of local citizens preparing for and cleaning up from the storm were all portrayed.

An underlying cause of the myth perpetuation which did occur was the widespread belief in the community breakdown model among news personnel. Their mistaken definition of the situation framed their news gathering and reporting perspective. Even when officials were not mistakenly reporting such behaviors, reporters frequently asked if any had occurred, implying that their occurrence is normal and to be expected.

Differences in accuracy were observed between local and network reporting. The news gathering and reporting behavior of local news personnel was primarily governed by an altruistic norm. They sought to gather and disseminate information their communities needed in order to adequately prepare for, protect against, and recover from the hurricane. Even though most local news personnel believed in the community breakdown model, the accuracy of their reporting was enhanced by their organizational approach to the news. They tended to devote large portions of their coverage to the prepared statements of emergency management

spokespersons. Hence, the accuracy of their news depended on the accuracy of those officials. The spokespersons in the communities under study were reasonably accurate.

The news gathering and reporting behavior of network news personnel, on the other hand, was primarily governed not by altruism, but by self-interest. The network personnel were not from the community, but converged on it for the purpose of covering the "Storm of the Century." As it became clear that the storm would not impact directly on the Texas coast, they had to go ahead and gather "good pictures" and, in a sense, create the drama they expected of such an event. Weather was exaggerated, evacuation rates and the number of persons sheltered were exaggerated. Personnel staged events that they thought were indicative of what was really happening. The trouble with their organizational approach (i.e., pack animals staging events that they thought were symbolic of what was really happening) was that they were wrong about what they thought people typically do during a disaster.

To summarize our findings and observations on the print media, we again found the reporting to be reasonably accurate. There were, again, some references to panic, looting, price gouging, and other imagined forms of deviant behavior which perpetuated the community breakdown model. Property damage, injury and death estimates were again fairly accurate, but again, the usual exaggerations in evacuation and sheltering estimates occurred. Altruism, instances of typical disaster subculture be-

havior, and the rational behavior of local citizens preparing for and cleaning up from the storm were all portrayed.

As with the broadcast media, print media personnel believe in the disaster mythology (community breakdown model), and this belief frames their news gathering and reporting perspective. Again, even when officials were not mistakenly reporting such behaviors, print reporters asked if any had occurred, again implying that their occurrence is normal and to be expected. The print media stories were far more diverse than those broadcast in the television news, particularly network news; a more complete picture of the behavioral and organizational response to Gilbert could be obtained from the printed stories. The broadcasts were generally rather superficial, and the network news was often more fable (as Nimmo, 1984, observed) than fact.

As noted above, the network media personnel in particular behaved as "pack animals" (Scanlon and Fischer, 1988) and gathered in herds along the coastal beaches of those southern Texas cities most likely to be affected by the storm. They tended to bring interviewees to their satellite locations and sent film crews around the area to obtain dramatic video, which they would use as a backdrop for their brief reports regarding the behavioral and organizational response to Gilbert. The network productions were far more staged than the local broadcast and print media stories, which focused on information that would be helpful to local citizens. Apparently, the network organizations saw their audience as more global than did the local media,

and perceived their mission more as entertaining than informing.

While reporters from all media functioned under the "command post" view (Quarantelli, 1981) of disaster response, local reporters (both broadcast and print) devoted more of their reporting to what local officials were saying than did network reporters. In the case of Gilbert, this facilitated greater accuracy, for many of the officials cited were fairly knowledgeable with respect to the community breakdown model. In contrast, the network crews sought to manage their news to present a story of what they believed occurs in disasters. Their creative efforts, however, tended to result in greater inaccuracy. Their erroneous definition of the situation, coupled with their organizational structure which allowed them to stage what they sought to broadcast, produced a "fable" version of the "Storm of the Century."

The irony in the reporting on the "Storm of the Century" is that when the network personnel came into a city, locals were impressed and somewhat intimidated by these national stars, even though local officials were more knowledgeable about behavioral responses to disaster.