HURRICANE GILBERT: THE MEDIA'S CREATION OF THE STORM OF THE CENTURY

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PREFACE

This paper is one of a series on research in progress in the field of human adjustments to natural hazards. The series is intended to aid the rapid distribution of research findings and information; it was started in 1968 by Gilbert White, Robert Kates, and Ian Burton with National Science Foundation funds but is now self-supporting.

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SUMMARY

A two-person field team spent five days videotaping local and network news broadcasts, obtaining copies of local newspapers, and interviewing local officials and media personnel during the preimpact, impact, and postimpact periods during Hurricane Gilbert's march toward the south Texas Gulf coast in September 1988. The research objectives were 1) to determine the incidence of the media's mythical versus accurate portrayal of the behavioral response to Gilbert and 2) to explain why the media's portrayal was mythical or accurate. The team worked in Houston, Corpus Christi, Brownsville, and Galveston. They also briefly visited Matamoros, Mexico.

Upon returning from the field, the researchers conducted additional telephone interviews of local officials and media personnel. An analysis of the information gained during the interview process, combined with that gained from a content analysis of the broadcast and print media news stories on Gilbert, has resulted in the following findings: First, the media were fairly accurate in their overall portrayal of the behavioral response to the threat posed by Hurricane Gilbert. They were particularly accurate when it came to portraying rational behavior in preparation for the storm, in portraying the usual disaster subculture behavior, and in portraying the usual altruism. Second, however, the media exaggerated the evacuation rates, shelter populations, and the gravity of weather changes. Third, the disaster myths which were most often perpetuated were

looting, price gouging, and panic. And fourth, variation in accuracy was observed among the various media forms. Reasons suggested for this variation center around three themes:

1) Most news personnel subscribed to the disaster mythology which influenced their news gathering and reporting perspective. However, variation in organizational approaches to gathering and reporting news affected the extent to which the belief in the disaster mythology framed the accuracy of news reporting.

2) Norms governing local versus network news gathering and reporting affected accuracy; the local media were more altruistic, while the network organizations were more self-serving.

3) Differences between the organizational approaches to news gathering and reporting resulted in greater or lesser control of what constituted news, and hence, affected accuracy. The greater the control, the greater the inaccuracy, for control resulted in managing the news to reflect the (mythical) perception of behavioral response to Gilbert.

Local media personnel were governed by a norm which defined their role as being the information gatherer and disseminator to help save their community (an example of the altruism typically experienced by most would-be victims). Local news organizations tended to serve as a conduit for disseminating the information the local emergency management officials wished the public to have. These news organizations would broadcast the entire press conferences held by local emergency management officials, and the local print media would devote major stories to reprinting the

transcripts of these press conferences. Accuracy was therefore dependent upon the degree to which local officials subscribed to an accurate (versus a mythical) view of the behavioral response to disasters.

The network organization personnel functioned as pack animals, often setting up their cameras and satellite dishes away from the emergency operations center (EOC) and other emergency response organizations, preferring more picturesque settings like the sea coast. Once their satellite dishes were set in place they tended to bring interviewees to their location. This practice gave greater control of the news-making process to the networks. Network personnel were governed by a norm which defined their role as that of managing the news to provide a good pictorial story for their viewers. The news they created tended to conform to their perception of the behavior they expect during a disaster. Greater control over news management resulted in greater inaccuracy.

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BELIEF IN THE COMMUNITY BREAKDOWN MODEL

The average American believes that when a disaster strikes, the victims have to contend not only with immense damage, death, and injury, but also with the irrational and selfish behavior of the other survivors and those converging on the scene (Wenger et al., 1975). Americans commonly believe that a disaster normally results in the breakdown of the norms which govern our behaviors during non-emergency times. The behavior of the "human animal" during disasters is thus seen as more animal than human. The would-be victim is expected to react with total self-preoccupation. He or she is expected to seek personal gain rather than act for the common good (e.g., to engage in price gouging of customers). Furthermore, atavistic humans are expected to flee the impacting disaster agent in panic, with the great majority evacuating and, thus, jamming the roads and making escape impossible—behavior which, in turn, is believed to result in more panic. Most of these fleeing evacuees are expected to seek the safety of the nearest shelter, and, except when at the shelter, they are believed to engage in unseemly behavior. In the aftermath of the disaster, individuals are expected to loot and selfishly inflate the normal price of food stuffs. Martial law and the National Guard are viewed as necessary to maintain or restore order. Survivors are thought to be unable to fend for themselves until helping organizations arrive. Some victims are expected to be immobilized by shock.

Such a perception of behavioral response to disaster is

mythical. The common view of how we react comprises what students of disaster behavior often refer to as the "community breakdown model" (see, for example, Phillips and Neal, 1988; Fischer, 1988). The sociological literature on behavioral response to disasters (for example, Dynes, 1970; Wenger, et al., 1975; Scanlon, 1979; Quarantelli, 1980a and 1981; Wenger, 1980; Goltz, 1984; Fischer, 1985, 1987, 1988; Wenger and Friedman, 1986; Phillips and Neal, 1988) suggests that the actual response to disaster is quite different from what is commonly perceived. During the preimpact period of a disaster, most citizens refuse to evacuate; emergency management personnel have a very difficult time getting people to leave their homes. Damage, death, and injury estimates, as well as estimates of the number of people who have evacuated and gone to shelters, tend to be greatly exaggerated. Survivors are usually very altruistic and not selfish at all, often giving food and other needed items away, or selling them at or near cost. The incidence of deviance tends to decrease, not increase, as the members of an affected community pull together to help one another.

As a result of the common belief in the myths surrounding disaster, when disasters do occur, governors continue to activate units of their National Guard to forestall panic and prevent looting. The media frequently report the declaration of martial law, the increase in postimpact crime, and the evacuation of massive numbers of victims, and, as with the Chernobyl nuclear power plant incident, estimates of physical damage, casualties,

and deaths as well as sheltering of victims are commonly portrayed as extremely high, resulting in the donation of often unneeded clothing and other materials by well-meaning citizens and governments. Typically, the public feels compassion for disaster victims thought to be suffering from shock that leaves them dazed for hours after impact.

Even training films produced by emergency management agencies present inaccurate portrayals of behavioral response and need (Fischer, 1985). Yet, emergency managers and public officials make decisions on how to allocate emergency resources based upon their perception of the public's likely behavioral response to the impact of a disaster agent. If their perception is based upon belief in the community breakdown model, then their disaster plan will likely result in preparation for events that do not occur, as well as poor preparation for events that could have been anticipated. Belief in the disaster mythology costs community members in two ways: it causes unnecessary fears and results in increased tax dollars.

THE RESEARCH QUESTION

Several students of disaster research have sought to determine why the community breakdown model continues to be the definition of the situation, i.e., the explanatory model, for the vast majority of Americans (for example, see Wenger, et al., 1975). Why do people continue to believe in the common occurrence of widespread panic and flight, the declaration of martial

law, psychological dependency, convergence to the scene by non-victims for the purpose of looting and other forms of deviant behavior, immoral competition for necessities and price gouging, the mass evacuation of the majority of potential victims, the massive number of personal injuries and deaths, massive property damage, the occurrence of disaster shock, contagion behavior, and the mass sheltering of a majority of the would-be victims? Some researchers have suggested (Quarantelli, 1980b) that Hollywood movies may play a roll in forming our frame of reference. Perhaps expectations of deviant responses to disaster come from the images of self developed by this celluloid approximation of reality.

Disaster researchers frequently return from the field noting that the media's portrayal of both disaster events and the subsequent behavioral response has not been altogether accurate. Some (Wenger and Friedman, 1986; Fischer and Bischoff, 1988) have suggested that the media actually perpetuate the community breakdown model. Until recently, little empirical research had been done to assess the accuracy or inaccuracy of disaster media coverage. Scanlon et al. (1978) and Goltz (1984) found such coverage to be highly accurate in the broadcast and local print media. Wenger and Friedman (1986) found the coverage to be mixed, both accurate and inaccurate, in the local print media's coverage of Hurricane Alicia. In studies of the "national print media" (news magazines) Fischer and Bischoff (1987) observed many inaccuracies which tended to perpetuate the community breakdown

model. Hence, a debate exists among disaster researchers (Quarantelli, 1987), the central questions being: To what extent do the media perpetuate the community breakdown model? If they do, why is this the case? If they do not, why not? Furthermore, does accuracy vary by media type, i.e., local versus national media and print versus broadcast media?

The focus of the quick response field research discussed here was 1) to empirically determine the extent to which the local media (print and broadcast) perpetuate the mythology surrounding behavioral response to disaster, and 2) to determine why this mythology is perpetuated, to the extent that it is, during emergencies. The objective of the quick response trip to the Texas Gulf coast during Hurricane Gilbert in September 1988 was to gather data which would provide empirically based answers to these questions.

METHOD

On-Site: In the Field

Shortly after its inception in the Caribbean, Hurricane Gilbert was dubbed the "Storm of the Century" by the national weather service as it became a category five hurricane. Following this declaration, the American media began to flood the airwaves and printed page with predictions of what one could expect in terms of damage, devastation, and behavior in response to such a storm. Great numbers of media personnel began to converge on the Texas Gulf coast. Local, regional, national, and international news

personnel took their positions in Houston, Galveston, Corpus Christi and Brownsville.

Our two-person field team monitored Gilbert's progress through the Caribbean, across the Yucatan, and into the Gulf. After consultation with the Natural Hazards Center at the University of Colorado and disaster research colleagues around the country, we decided to depart for Houston so that we would arrive on-site by noon, Thursday, September 15, 1988, which would be (according to NOAA predictions) twenty-four to thirty-six hours before hurricane landfall. At the time of departure for the field, the National Hurricane Center felt the most likely impact area would be between Corpus Christi and Galveston. Since we were doing a media study, we felt that it would be most prudent to be on-site before, during, and after impact, since this was the "Storm of the Century." We would be able to gather data on the media's portrayal of behavioral response to Gilbert across all three of these emergency time periods.

As soon as we arrived in Houston, we set up our equipment in our hotel room. We videotaped and audiotaped the local television and radio broadcasts on Gilbert before going to the Houston Emergency Operations Center (EOC) late Thursday night. (It became too difficult, however, to tape both television and radio broadcasts as well as conduct interviews in the field, so we had to abandon our plan to systematically record radio news broadcasts and settle for a sporadic sample which did not enable us to conduct a proper analysis when we returned from the field).

While the EOC visit secured our safety (afternoon predictions suggested impact could occur during the early hours of Friday morning in the Galveston-Houston area), we were there primarily to interview the EOC and media personnel who came and went during our visit. By late Thursday night the forecast had changed, however. Impact was not expected until late Friday, and Gilbert had still not made its expected turn north toward our location. We returned to our hotel room, resumed taping, and began telephone interviewing.

Friday morning we continued to tape broadcast media reports as well as obtain copies of local newspaper coverage of Gilbert. Impact predictions changed; Gilbert was expected to reach landfall further south. Landfall was now expected to occur between Brownsville and Corpus Christi. Our field team decided to move closer to the expected impact area to gather data on media portrayals. We spent the remainder of the day, Friday, September 16, recording broadcasts, buying newspapers, and interviewing local officials and media personnel in Corpus Christi. When the prediction of landfall changed again, to the area between Brownsville, Texas, and northern Mexico, we moved again. We spent the remainder of Saturday, September 17, recording, obtaining newspapers and interviewing media personnel and officials in Brownsville. On our fourth day in the field, Sunday, September 18, the team returned to Houston to tape the postimpact media portrayal, to do some interviewing, and to prepare to enter Galveston on day five (Monday, September 19) to interview officials and media

personnel. Late on the fifth day we returned to our research center in Ohio.

When we interviewed local officials we had to assume the role of the researcher to facilitate admission and acceptance. We tended to follow our interview guide (see the Appendix 1) fairly closely, adding questions as it seemed pertinent to do so. When interviewing media personnel, however, we frequently assumed the role of an interested bystander, not acknowledging our research role. We found this approach highly beneficial, for we believe the information we obtained was far more honest than would have been forthcoming otherwise. We had the feeling that the media personnel were distrustful of anyone who might seek to make them "look bad," in the words of one interviewee who we had apprised of our research mission. By our assuming the role of a "would-be groupie," the media personnel seemed to be flattered and highly cooperative. However, when taking on this role, we had to be very flexible in our questioning and go with our instincts; hence, we did not follow the interview guide closely when interviewing media personnel in the field. (Telephone interviewing conducted after returning from the field was similar to that done with local officials both on-site and off-site; the guide was followed more closely and interviewees knew of our mission—and were far more guarded).

Off-Site: Back at the Research Center

After returning from the field, the team conducted follow-up

telephone interviews with media personnel and local officials. We spoke with those who were important to the study but were unable to meet with us while we were in the field. A complete analysis of the videotapes, audiotapes, newspaper reports, and interview data was then begun. We developed two content analysis forms (see the Appendix 2). One form was for use in analyzing the television news broadcasts, the other for analyzing the newspaper news stories. Telephone interviews were conducted to determine reporters' prior disaster experience, belief in the disaster mythology, and news gathering strategy. These interviews were conducted with the aid of an open-ended question guide (see Appendix 1, this question guide was employed when interviewing both in the field and by telephone afterward). Each of these research tools is briefly described below.

Content Analysis

A primary objective of the content analysis was to determine the incidence of myth portrayal by the local broadcast and print media. We were guided by the disaster literature reviewed earlier and sought to identify media portrayals of instances of panic flight, disaster shock, price gouging, looting, convergence for other forms of deviance, declaration of martial law, exaggerated estimates of the number of evacuees and persons sheltered, exaggerated estimates of the extent of damage as well as injury and death counts. We decided to also look for exaggerations of the weather conditions, since such distortion also seemed possible. The traditional definitions of what constitutes

each of these types of "disaster myth," as viewed in the disaster literature, were employed in the study and will not, therefore, be redefined here.

To determine if, in the media, a true disaster myth had been portrayed versus an accurate portrayal of a behavior (e.g., a looting incident that may have actually occurred), we interviewed records personnel in the police departments of the cities we visited to determine such things as actual arrests for looting, price gouging, and means for estimating the number of evacuees and so forth. In this way we could ascertain, for example, if verified instances of looting had occurred and if evacuee estimations were reasonably derived. We found the disaster literature served as an accurate predictor of what actually occurred during the response to Hurricane Gilbert.

There were two arrests for price gouging in Galveston, however, which took us several weeks to clear up. The first evening in the field we were watching and recording a local news broadcast in which the reporter stated that two merchants had been arrested for price gouging. We immediately turned to the phone and called the Galveston city police records office, told them what we had just heard on the evening news show, and asked for confirmation. The policeman said there had been no arrests for such behavior. Several days later, however, we read in the Galveston newspaper that two Houston citizens, who were not merchants, purchased truck loads of plywood and converged on Galveston to sell each sheet at a 300% markup. They were re-

portedly arrested. When we contacted the city police records office again, the record-keeping process had been updated, and they confirmed that the newspaper had the correct story. The television broadcast did leave the impression that price gouging is a common occurrence in disaster settings and that it was being done by Galveston merchants. The newspaper was accurate while the television broadcast was not. This differential reporting was a familiar pattern, as the findings of this study show.

We also sought to determine the extent to which both behavioral and organizational response to disaster were accurately portrayed. For example, when burglaries were discussed rather than looting, we categorized this reference as an accurate portrayal. The burglary rate was usually qualified in those media reports as being lower than during normal times. Furthermore, the term "burglary" carries a much different connotation than that of looting. We also looked for instances where citizens were portrayed as behaving rationally (purchasing supplies in anticipation of the electricity going out), engaging in typical disaster subculture behavior (surfing), and behaving altruistically (helping others prepare for the storm).

We also sought data which would aid in the analysis. We identified the news source (the specific local newspaper, television station, or network); the news story reporter; the disaster period being reported on; the news type ("soft," "hard," mixture); the orientation of the news story (behavior, weather, human interest, damage, information dissemination, organizational

activities, hurricane history, or a mixture); and the location of the story in the medium (headline, front page story versus page 13 story, or lead-off broadcast news story versus an item buried later in a news program). The location of the news story proved to be a valuable piece of information, for we found that the information gathered by traditional content analysis examining for disaster myth incidence, yielded an incomplete quantitative picture of the substance of the news stories we examined. For example, by comparing the location of the news stories which contained mythical versus accurate portrayals of behavior before, during, and after Gilbert, with media type, we found what we believed to be a much more accurate quantitative picture, one which was compatible with the anecdotal information we gathered in the field and from the videotaped broadcasts and newspaper articles.

Interview Guides

In interviewing local officials and media personnel we had two primary objectives. The first was to ascertain the extent to which disaster mythology may or may not be mythology in the case of the behavioral response to Gilbert. The second was to determine the reasons why the mythology was perpetuated in the media to the extent that it was found to be doing so. We sought to determine the extent of prior disaster experience of both local officials and media personnel, and we sought to determine if interviewees believed in the disaster mythology or subscribed to a more accurate definition of the situation. For example, typi-

cally we would approach a broadcast reporter and start what appeared to be a casual conversation just after he or she completed a live feed, by asking, "You seem very experienced in dealing with storms like this; what kind of behavior do potential victims usually engage in, I'm curious?" The answer to this question fit a rather uniform pattern: the average reporter believes the disaster mythology is not mythology, but reality. One exception was two newspaper reporters who had learned about disaster mythology through educational or training experiences. The accuracy of their writing was far superior to that of other broadcast and print media personnel who believed in the mythology.

We sought to obtain an understanding of how the various media forms (local print, local television, and network television) approach coverage of such a news story in order to determine variations in organizational structure which may explain variations in news content, slant, and so forth. We observed distinct differences in how the various media managed the story. We believe that these differences were instrumental in producing different pictures for the viewing and reading audience. A person's perception of the behavioral response to the "Storm of the Century" may have depended on his or her chosen media form as a source of information.

FINDINGS

Hurricane Gilbert's Life Cycle and Path of Destruction

Gilbert's destructive life cycle lasted approximately one week—from Friday, September 9, through Friday, September 16, 1988 (see Appendix 3). It reportedly was responsible for several hundred deaths and caused billions of dollars of damage. On Friday, September 9, 1988, the storm which was to be Gilbert, had not yet been classified a hurricane. It passed by the Windward Islands (St. Lucia, St. Vincent, and Dominica) causing a reported $750,000 in damages to the banana crops on each island.

On Saturday, September 10, the storm increased in strength and became a hurricane. The northern edge of the newly dubbed Hurricane Gilbert crossed over Puerto Rico causing power outages and an estimated $200,000 in crop damage. Other nearby islands reported flooding and agricultural damage.

On Sunday, September 11, five deaths were attributed to Gilbert in the Dominican Republic. One hundred families were reported homeless, and there was widespread agricultural damage.

On Monday, September 12, Haiti reported ten dead because of Gilbert, serious agricultural damage, and many fallen buildings. Jamaica took a direct hit. There were reportedly 26 dead, an estimated 500,000 homeless, an estimated $8 billion in damages. Reportedly, 80% of Jamaica's homes were damaged, 20% were destroyed.

On Tuesday, September 13, Gilbert hit the Cayman Islands with 130 mile per hour winds. Widespread flooding was reported

with reputed destruction of between 5% and 10% of all houses.

On Wednesday, September 14, Mexico's Yucatan Peninsula was directly hit by Gilbert with 180 mile per hour winds and 18-foot waves. There were 17 reported deaths and millions of dollars in reported damage.

On Thursday, September 15, the day the field team left for the southern Texas Gulf coast, Gilbert was believed to be heading for the Galveston-Corpus Christi-Brownsville area and was expected to regain its category five strength. Neither occurred, however.

On Friday, September 16, Gilbert maintained winds of 120 miles per hour and made landfall at approximately 5:35 p.m., 120 miles south of Brownsville, Texas. It primarily impacted the Mexican coast in an area almost totally devoid of people. The torrential rainfall did cause flooding in areas further inland, such as around Monterrey, Mexico, and reportedly killed over 200 persons. Tornadoes were spawned by Gilbert in Mexico and Texas, with significant damage but no deaths.

Assessment of Actual Behavioral Response

As outlined earlier, certain behaviors are commonly assumed to occur during disasters, and during our on-site research in Brownsville, Corpus Christi, Galveston, and Houston, we sought to determine the degree to which any of these occurred. For example, while we did not collect specific numbers of persons sheltered, we visited shelters, police stations, and so forth to ob-

serve and interview appropriate personnel.

We found no verified instance of panic, looting, or disaster shock. Martial law was not declared, and the numbers and behavior of evacuees and persons in shelters was as expected, i.e., the evacuation rate was approximately 10%, and most evacuees stayed with relatives, friends, or in motels/hotels. Only a small percentage of evacuees appeared to actually stay in shelters. As mentioned above, a few out-of-town citizens, not merchants, did converge to Galveston to sell truck loads of plywood at inflated prices (300% above normal). There were two arrests for such activity in Galveston. (Broadcast media mistakenly reported that these were local merchants committing a sin that they said typically occurs in disasters; the local print media published an accurate story on this price gouging.) There were no verified instances of price gouging by local merchants or local citizens generally. In fact, examples of altruism were abundant as were examples of very rational preparatory behavior and the usual disaster subculture activities. The most common disaster subculture activities observed during Gilbert included surfing, hurricane (beer) parties, and converging on the beach to watch the tide rise. In each city, burglary rates actually declined from normal.

While weather is not included in the list of disaster myths, we want to note that the only time we experienced any mildly severe weather personally was on Friday, the night of September 16, when we were along the Gulf coast in Corpus Christi. Wind

gusts were between 50 and 65 miles per hour. On all other occasions, whether in the motel, on the road, in an EOC, walking along the beach, interviewing media personnel, we had difficulty believing we were in a hurricane area. When we watched CNN reporters broadcasting live from the cities we were in, we sometimes went to our motel door and opened it to make sure we were not missing something; the news report did not correspond with our own experience; we wondered if the reporters were talking about the same event we were experiencing.

The Media's Portrayal of the "Storm of the Century"

A hurricane has a slow onset time. It is therefore possible to monitor its development, follow its life cycle, attempt to predict its landfall, and prepare for its impact. When Gilbert began its march of destruction through the Caribbean, the growing ferocity and size of the storm (it became a category five storm approximately 500 miles in diameter at its peak) not only captured the attention of the National Hurricane Center, weather personnel generally, and Gulf coast emergency management personnel and residents, it also captured the attention, and sometimes the imagination, of the local, national, and even international television, radio, and print media. Our research team spoke with television and print media reporters and crew personnel from numerous Texas communities, from communities in California, Oklahoma, New York, and Florida, from the national networks, and from such nations as Holland, Japan, and Australia. Media per-

sonnel converged onto the southern Texas Gulf coast. Friday evening we stood along the coast in Corpus Christi, for example, and saw an endless line of tripods strung along the sidewalks, parking lots, streets and marinas. Mass media had invested heavily in covering this "Storm of the Century." With such an opportunity at hand, we decided to also examine network news coverage of Gilbert in addition to the local broadcast and print media coverage.

Our findings of the media's coverage of Gilbert are based on our analysis of 243 television news broadcast stories or segments, 311 local newspaper stories, and 53 interviews. We interviewed local emergency management personnel, local government officials, local residents (evacuees and non-evacuees), local media personnel, and national media personnel. Interviews were conducted both on-site face to face and by telephone, as well as off-site by telephone.

Broadcast Media

We recorded 243 news stories broadcast by the local Texas Gulf coast television stations (Houston, Corpus Christi, and Brownsville) and the networks (ABC, CBS, CNN, and NBC) during our five days on-site. While we were not able to record every broadcast made by CNN, which broadcasts continuous news twenty-four hours a day, we were able to record virtually every Gilbert-related news story broadcast by the other networks. We also recorded all the local television news programs which were broadcast while we were on-site during the preimpact, impact, and

postimpact periods. We recorded and analyzed a total of 95 local television news stories and 148 network stories (see Appendix 4, Table 1). This disparity reflects the continuous coverage given Gilbert by CNN, which virtually ceased normal broadcasting during the immediate preimpact, impact, and immediate postimpact periods. The other networks devoted the majority of there normal evening news broadcasts to Gilbert during these time periods, but provided little more than occasional minute updates. The local television stations continued normal programming throughout Gilbert's life cycle. Some listed shelters which were open by running announcements across normal programming during the day; otherwise, the only coverage given Gilbert consisted of the normal evening news broadcasts devoted almost entirely to storm coverage.

As previously mentioned, we were able to record 243 Gilbert news stories: 148 from the networks and 95 from local stations. Of the 95 locally broadcast news stories, nine were from Brownsville, 23 from Corpus Christi, and 63 from Houston (Appendix 4, Table 1). In perhaps a crude fashion this variation is indicative of the attention given the storm over it's life cycle. We were recording in Houston during the preimpact (and somewhat during the postimpact) period, in Corpus Christi during impact and immediate postimpact, and in Brownsville and Houston during postimpact. Broadcast media attention to Gilbert gradually increased through the preimpact period which extended over the better part of a week (though we were recording only one day),

and the incidence of this coverage peaked just prior to impact. Coverage during impact was intense, but the impact period lasted for only a few hours. Coverage gradually declined following impact. This process is illustrated (in Table 1) by the fact that we recorded 126 broadcasts during the preimpact period, 54 during impact, and 63 during postimpact.

With regard to the type of news (soft versus hard) being broadcast, two out of three news stories broadcast were thoroughly intertwined with both soft and hard news. Of the remaining third, soft news was broadcast more often than hard by a margin of approximately two to one (Appendix 4, Table 1).

The focus of the stories varied (Appendix 4, Table 1). However, the plurality (42%) concentrated on the behavioral response to Gilbert before, during, and after impact. Approximately a fourth (28%) of the news stories focused on weather reporting, while less than a sixth (16%) focused on reported the damage created by Gilbert. The remaining news stories (14%) focused on various items including public information (e.g., shelters available, how to prepare), organization activity (e.g., Red Cross efforts, actions of city officials), the history of previous encounters with hurricanes in the area (e.g., the 1900 Galveston storm in which 6,000 are believed to have died—the worst hurricane death toll in U.S. history), and various human interest stories (e.g., the hurricane travel experiences of one reporter).

Examining the results of the traditional elements of our content analysis which, as noted earlier, do not tell the whole

story, we find that the television news stories were fairly accurate in their portrayal of the behavioral response to Gilbert (Appendix 4, Table 2). We examined 243 news stories for evidence of mythical versus accurate portrayal in ten behavioral categories: panic flight, looting or other forms of storm-related deviance, price gouging, evacuating, sheltering, injury and death toll reporting, damage estimate reporting, acting rationally, engaging in disaster subculture behavior, and behaving altruistically. Hence, there were a possible 2,430 instances of such behavior being reported (243 stories multiplied by the ten behaviors we looked for). Most of the time (2,204 instances), the behavior in question was not addressed in the story, e.g., stories dealing with weather did not focus on behavior. Behavior was addressed in 226 instances (103 stories addressed behavior in some way, and in some instances multiple behaviors were included in one story, hence 226 instances from 103 stories). Looking at the 226 instances in which the behaviors were addressed (Appendix 4, Table 2), we find that two out of three times the behavior is described accurately, e.g., potential victims are behaving rationally and not fleeing in panic flight. In only a third of the cases is the community breakdown model perpetuated, e.g., fear of looting is reinforced. Hence, on the basis of these numbers alone, one could conclude that the broadcast media provided knowledgeable coverage of the behavioral response to Gilbert.