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THE MASS MEDIA AND HURRICANE DISASTER ALERTS

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*Handwritten note:* Hazardous materials research

## PRELIMINARY REPORT: The Mass Media & Hurricane Disaster Alerts

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\*The authors are listed alphabetically. They consider their efforts on this research project to be of equal value. Further, the research report is co-authored, with no "senior" or "junior" authorship.

### Introduction

The literature concerning the mass media and disasters is varied and extremely interesting. Such research falls into two distinct bodies of literature. One concerns disasters created by mankind; assassinations, chemical disasters, bombings, terrorism and the like. The other concerns natural disasters, such as storms, floods, earthquakes and similar non-created disasters. A complete review of the literature is found in earlier work by the authors reported in Newspaper Research Journal, Winter, 1985 in an article entitled "Written on the Wind: The Mass Media and Hurricane Alicia."

Through the literature, several sources of information were seen as playing a role in the decision-making process residents go through when selecting appropriate behavior during the warning phase of a natural disaster. These included the mass media, interpersonal sources, statements by public officials, agencies charged with responsibility for alerting the populace to danger, and their own (the residents) past experience with similar situations.

Information processing theory provides the backdrop for that study and the subsequent study. At one time, information processing was seen by media scholars as a one-step process. In that perspective, information was disseminated by the mass media to a waiting audience that then reacted (monolithically, it was thought) to that message. The one-step analysis of information flow and human behavior was supported by the view that media were extremely powerful in their ability to motivate humans and direct the action of audience members. Studies of so-called "opinion leaders" led to a somewhat more complex view of communication flow and information processing as "two-step." Studies of the various components concerned with message origination, dissemination, receipt and response have altered the way in which information processing is viewed. Today, most scholars would agree that communicated messages are processed through a nexus of intervening variables, sources, and evaluative processes. The mass media are, in this context, but one of those variables -- what we

have termed "spheres of influence."

If, indeed, information processing flows through various sources, then, an additional perspective is called into question. For many years, communication scholars have conducted research for decades within the Laswellian Paradigm. That framework for examining communication flow states that communication can be examined within the context of "who says what to whom through which medium or media with what effect." As is easily seen, the Laswellian Paradigm, as were the "all-powerful effects" theory and the "one-step" theory, operates essentially from the perspective of the message originator. The process of communication, in this view, is driven by a person or entity, utilizing a mass medium. Interaction is seen as occurring within a process in which the message flows from originator to audience.

However, some scholars prefer to take a different view of the communication process. In this framework, communication messages are not examined from the perspective of the message originator, but, rather, from that of the audience member. Thus, the Laswellian Paradigm is turned inside out, stood on its head, and restated in terms that encompass "who uses what messages from which medium or media to gratify what need." In this "uses and gratifications" paradigm, the audience member is seen as acting as a message consumer selecting from the myriad media messages those which he or she wants to attend to, based on that individual's own needs, wants, background, attitudes and predispositions.

Some communication scholars are less than enthusiastic where "uses and gratifications" research is concerned, seeing it as a somewhat elevated version of marketing consumer research. Others, of course, find that "uses and gratifications" perspectives hold the potential for explaining more about human behavior than the Laswellian approach. As increasingly advertising and public relations become common parts of the communication curriculum, more scholars who work in those areas of research bring to their labors a point of view about human behavior and media grounded in a marketing perspective, which is essentially a uses and gratifications framework for examining the uses and effects of media messages. Adoption theory, which attempts to explain the process of adoption of an innovation, is at heart also a uses and gratification perspective.

Moreover, theories of active selection on the part of "media consumers" are supported by concepts of selective attention, selective perceptions, and selective retention. These concepts hold that audience members choose from the available media messages those messages which relate to matters the audience member already is interested in. Moreover, those messages are perceived in different ways, with the major effect of media messages seen as reinforcing already existing predispositions, beliefs and attitudes. Additionally, some messages are retained, while many are not. Again, the issue of which ones are saved and which discarded seems based on the relative importance of that message in supporting positions already held, or because of their ability to be useful in reducing cognitive dissonance, the situation that results from holding two conflicting notions simultaneously.

The situation with regard to warning messages that are issued in times of threatening natural disasters provides a rich area for the study of communication and an analysis of sources used, and their relative importance. A warning of impending disaster triggers a set of responses, many conflicting, in the minds of residents. Should I leave? What will happen to my property if I do leave? What may happen to my family, or myself, if I do not leave? What actions are appropriate? Which ones do not conflict greatly with my preferred action? What do others think about the situation? What are they going to do? What do public officials tell me to do? Are they correct? What about public agencies? And, the mass media -- what do the media advise? Should I believe the media, or are they crying wolf?

In short, what are the forces set in motion by a warning of an impending natural disaster? Are messages effective (do they motivate the intended action)? What sources do residents use, in what ways, to gratify what needs?

Our earlier research focused on the reactions of residents of Galveston Island, Texas to warnings of the impending arrival of Hurricane Alicia. Alicia, as it turned out, was a fierce hurricane that destroyed millions of dollars of property, littered the streets of nearby Houston, Texas with glass and debris, toppled trees onto homes throughout the Northern Gulf area of Texas, and flooded large

areas of Galveston Island. Miraculously, no one was killed as the direct result of Hurricane Alicia.

Yet, in spite of several days of warning, most Galveston Islanders did not leave their homes. The reason why is wrapped in a package of political haggling, a lack of confidence in public officials, conflicting interpersonal advice, and the residents own past experience. Many had resided in Galveston when Hurricane Allen had been forecast to hit the island community. Instead, Hurricane Allen veered at the last moment, missing Galveston completely, but leaving a massive traffic jam of Galvestonians who had thought it prudent to flee the island. When Hurricane Alicia was forecast, Galvestonians were not advised to leave. Apparently, no political figure wanted that hot potato. Texas Governor Mark White postured that perhaps Mayor Gus Manual of Galveston ought to advise residents to evacuate. The mayor, on his part, did not think evacuation throughout the island necessary. Some residents reported that they did not hear of the warnings until mere hours before Alicia came ashore in all her fury. Most who had heard the warnings talked with friends, neighbors and co-workers about what to do. In many instances, the Allen story was re-told, reinforcing the reluctance to leave their homes for many of the residents.

The study of Hurricane Alicia established a benchmark of sorts against which to measure the behavior of Galvestonians in future situations similar to Alicia. Would the events surrounding Alicia color the behavior of Galvestonians in a future hurricane warning situation as Hurricane Allen had predisposed Galvestonians to stay for Alicia? That question is the focus of our second study in mass media, communication and behavior.

To find out, we prepared to be ready to go into the field the next time a hurricane was forecast. Hurricane Danny provided that opportunity. With the mixed feelings that must be typical to those involved in research of this type, we waited while Danny stayed offshore, dangerously teasing the residents of Galveston. The media watched along with the residents of Galveston. As it appeared Danny would hit Galveston, we entered the field with a telephone survey of those same residents who we had interviewed regarding Hurricane Alicia.

We asked these respondents what action they had taken during the warning period preceding the arrival of Alicia, what they had heard through the media, through other sources, what they perceived to be the position of public officials, and the critical question of whether or not, if Danny was predicted to hit with a force roughly equal that of Alicia, they would evacuate prior to the storm's arrival. More than 200 respondents from our original survey were included in this second study, providing the opportunity to examine the behavior of these residents over time with regard to warning messages. In addition to those +200 respondents, additional residents were interviewed until a total of 400+ telephone interviews were completed.

Those results are being entered for statistical analysis. When that portion of the project is completed, we should be able to gain some insight into the role Alicia played with regard to decisions made when Danny was forecast. We will also have the opportunity to again examine the uses of mass media and other spheres of influence called into play in a natural disaster environment. And, we will have the opportunity to determine if there are policy matters that can be addressed -- such as who issues warnings, public understanding of warning ratings, and authority for ordering evacuations -- as the result of the companion studies of the warning phase of natural disaster situations.