Natural Hazards Research and Applications Information Center
University of Colorado
482 UCB
Boulder, CO 80309-0482

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Institutional Warning Response Following the September 11th World Trade Center Attack

Paul W. O'Brien
California State University, Stanislaus
E-mail: POBrien@csustan.edu

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INTRODUCTION

This paper is a result of research conducted in the aftermath of the World Trade Center (WTC) attack of September 11, 2001. The following report is a product of the Quick Response program funded by the National Science Foundation and administered by the Natural Hazards Research and Information Center housed at the University of Colorado at Boulder. The intent of these limited funds is to support the rapid deployment of researchers to a stricken area. Researchers then have the opportunity to collect perishable data for analysis.

This researcher spent six days in New York City conducting interviews with a wide variety of populations in accessing the impact of the event. These interviews were conducted on an "as available" basis with interviewees with the City of New York still on emergency alert. Two additional days of interviewing was conducted two and one half months later. Data collection is on-going by the researcher and student assistants. This report is phase one of a larger project. Phase one was completed to better understand the immediate human dynamics of the event. Follow-up research will be better able to research the population in a more systematic fashion.

These data presented here represent feelings, opinions, and activities in the immediate aftermath of the event. Subsequent research needs to apply rigorous social science research methodology to the event. Structured interviews, structured focus groups, and survey research using representative samples of the population and an elaborate detailing of events, actions, and warnings need to be undertaken in addressing critical public policy issues.

One of the focus populations for this investigation was the K-12 public school system. Many schools were impacted by this event. The New York City school system is responsible for over one million children on a daily basis. This event had a profound impact on their administrators, staff, teachers, and pupils.

This report is a result of those initial interviews. Much follow-up research needs to be undertaken as noted above. Based on the interviews conducted, it is felt that considerable effort needs to be accomplished in the theoretical area of terrorist's attacks to better explain the human dimensions. The long-term objective of this research is to better understand the risk communication model dynamics that occur in such an event. This understanding will greatly enhance the ability of both the private and government sectors to deal with any possible future events.

DESCRIPTION OF EVENT

On the morning of September 11, 2001, two highjacked jetliners were flown into the World Trade Towers in lower Manhattan in New York City. The first impact occurred to World Trade Tower One at 8:48 a.m. This event brought a wide array of emergency personnel and vehicles to the aid of victims. At 9:07 a.m., World Trade Center Tower Two was struck and emergency personnel were coming to the realization that this was not an accident.

At 9:50 a.m., the South Tower collapsed. History provides only a few instances of such large-scale structural vulnerability. Structural engineers are currently investigating this aspect. Thirty-nine minutes later, at 10:29 a.m., the North Tower also collapsed. At the time it was believed that upwards of 20,000 lives were lost. Victims included those working, visiting, and running the twin towers. In addition, there were hundreds of emergency workers who were victims, including police, fire, emergency medical, medics, and Port Authority personnel among others. Many say that this disaster is the worst in the history of the United States. The only other comparison is the attack on Pearl Harbor when 2,403 citizens lost their lives. Some historians feel this high loss of life has no comparison in all recorded human history. Since the initial loss of life projections were made, the number has been drastically reduced from the early estimates. Currently the number hovers at approximately 3,000. Emergency personnel, including New York City police, Port Authority police, medical emergency workers, and fire fighters, comprise approximately 500 of those who perished.

SAMPLING FRAME

The sample of this investigation was a purposeful sample chosen on the basis of availability, willingness to be interviewed, and being in a position to have knowledge of the topic. There were three types of interviewees. The first were emergency personnel. This group consisted of persons in the direct emergency chain of events. Examples of persons interviewed include police, fire department personnel, military posted around the World Trade Center site, and officials of the public school system.

The second set of interviewees were citizens in the area with more than a passing knowledge of the situation but not having an official emergency function. Examples in this category include K-12 teachers, business persons (e.g., restaurateurs, displaced WTC employees, and Wall Street traders), and support personnel of the World Trade Towers. Religious leaders including priests and ministers were also interviewed. The third sample category were people on the street, in stores, restaurants, subway stations, and anywhere people congregated to discuss events. Interviewees comprised sixty percent female and forty percent male and included forty percent Anglo, thirty percent African-American, fifteen percent Asian, and fifteen percent Latino. Although anecdotal, the citizens of New York City gave their time in the hope that this research would aid future victims.

THEORETICAL MODEL

Upon entering the field, the risk communication model informed the collection of data. Risk communication is a well-established model developed largely through the work of Dennis Mileti (Mileti 1975; Mileti and Sorensen 1990). The model is known to both disaster researchers and practitioners in the field as a method of understanding the complex human behavior of hearing and responding to warning messages. Until this event, the risk communication model has been

used extensively in the area of disaster research, e.g. primarily natural disasters such as earthquakes, hurricanes, and tornadoes.

This event proved to be very different from its usual context with natural disasters. The magnitude of this event has not ever been witnessed in this country. Upon entering the field there were a series of research questions that guided the research, as outlined in the original Quick Response proposal. They included:

- What warning messages were heard
- Sources of warning information
- Content of messages
- Procedures for dissemination of information to children and parents
- Protective actions taken for school populations
- Warning messages heard by both parents and children
- Languages used in warning messages
- Public responses to warnings

These research questions guided the interviews. In addition, background information, diversity issues, and the history of World Trade Towers were also collected.

PRELIMINARY FINDINGS

Findings from this investigation must be seen as preliminary. Whereas every effort was made to interview a representative sample of all populations, i.e. victim, emergency personnel, and citizens, it nevertheless did not have the ability to use widely accepted social science research methodologies that would allow for greater generalizing. This notwithstanding, much was learned from this initial data collection phase and will be detailed in this section.

Upon entering the field, the model of risk communication was adapted for use in attempting to understand the on-going emergency. Although usually used in a natural hazard setting, the risk communication model proved extremely useful in interpreting how people processed information.

The risk communication model has three pre-event variables including: pre-event salience, pre-event knowledge, and pre-event experience. Prior research (Mileti and Sorensen 1990; O'Brien and Mileti 1992) shows that pre-event variables are important in understanding whether a public takes protective actions. These variables did not have applicability in this situation. Given the nature of the event, no event in prior experience could be called upon by the public to help form their perceptions in preparing them to undertake protective actions.

The second set of variables are informational in nature and include: the source, the consistency and the frequency of warning messages. Emergency personnel and the public were inundated with information regarding the event. This was not only the case in the locally impacted area, but also nationwide and worldwide. The magnitude of this event made it impossible to escape both

official and unofficial warnings that were being disseminated by federal, state, and local officials. Based on this preliminary research, it appears that a new variable of magnitude must be added to the model for certain events. This event was so extraordinary, that trying to get the public to take protective actions (in the example of earthquake aftershocks) was not necessary. At times the public's perceptions and responses were in front of official warning messages.

In addition, this event was not only a human disaster but a crime scene as well. This made for some special dynamics. Law enforcement agencies from local to state to federal were involved. Instead of the usual crowd control concerns of keeping on-lookers at a distance (Quarantelli 1984), these agencies were tasked with the arrest of anyone who did not follow instructions. This raised the level of urgency and seriousness to a much higher level than in many natural disasters.

The third set of variables is categorized as situational and include: environmental cues, social setting, and social ties. Prior research shows that these variables have an impact on whether one takes protective actions (Drabek 1969; Mileti and O'Brien, 1992). It is difficult to give some sort of magnitude or scale of the public to these variables. Given the nature of this event, situational variables had an acute salience. The entire region and country were impacted by the events. It was impossible to deny the gravity, magnitude, seriousness, and reality of events. All of these variables coalesced to create a public that was proud, scared, angry, sad, and giving all at the same time. In addition, the entire country was witnessing the entire event live. Environmental cues and social setting were conducive to taking protective actions. One stark example of an environmental cue was the posting of WTC victims picture's in the subway. Many stations were filled with thousands of pictures of lost and/or missing people. The scope of loss and its real life consequences were unavoidable in the entire region. In addition, social ties also played a pivotal role in getting the public to take protective actions. Not only were many people's social ties directly involved in the event, be it as emergency responder or victim, but included family and friends across the country.

Lastly in the risk communication model are the demographic variables, which include: sex, age, socio-economic status (SES), and ethnicity. Similar to the environmental cues noted above, the severity of the event brought all types of people together. New York's history is that of a melting pot in this country. That tradition continues today with a highly diverse population along all the variables in this category. That notwithstanding, the enormity of the event cross cut all of traditional factions that divide a society. All populations had lost loved ones, and members of their respective groups were involved in the subsequent response. The public behaved very similarly to a natural disaster where one sees the emergence of a "therapeutic community" (Barton 1969).

One of the focuses of this investigation was the New York City school system. Currently the system is responsible for over one million children daily with 79,924 teachers in 1,198 schools (New York Board of Education 2001). Numerous interviews were completed with administrators and teachers. One of the "fortunate" aspects of this event is it occurred in a city with tremendous resilience and infrastructure. The New York Board of Education accomplished its responsibility of caring for the region's school age children. In addition, it used its resources and intellectual capital in the event. Curricular changes to help children cope with the situation were instituted immediately. An already strong diversity curriculum was reworked and offered to teachers

within days of the attack. In addition, the public school system, which has one of the largest police forces in the region, were utilized in the aftermath.

The Board of Education has an elaborate emergency response plan in place. The plan is located on a CD-ROM disk in each and every school. The CD-ROM allows administrators to use a cascading scenario approach to select the best course of action, be it a bombing, shooting, or hostage situation. One of the major problems that occurred with the school system was the wide area impacted. The emergency plan, for example, foresaw many schools evacuating to Stuyvesant High School. Stuyvesant, however, was also being evacuated. Planning needed to be modified given the scale of events.

One of the issues arising out of this investigation is dealing with low probability events. How is a society to deal with events that might never happen again? As in the case of the New York City school system, how many personnel and resources should be devoted to updating an excellent emergency plan to include another event on the scale of the World Trade Center attack? If no additional planning is completed with the modification of current plans, and another low probability event does occur, who receives the blame? On the other hand, if personnel and resources are diverted to create an enhanced plan that is never used, who bears the political costs of such a decision?

As noted throughout this document, additional research needs to be conducted. A formalized investigation needs to be undertaken which can be generalized to the region and nation. Theoretical development in the area of terrorist attacks should be given priority by funding agencies. Lastly, public school policy concerning pupil safely and low probability events needs to be addressed before another city or region must face what the City of New York faced on September 11, 2001.

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hazctr@colorado.edu