Reliability in Chaos:
Crisis Communication in State Emergency Management Agencies

J. Suzanne Horsley

A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the School of Journalism and Mass Communication.

Chapel Hill
2006

Approved by:

Lois A. Boynton, Ph.D.
Patricia A. Curtin, Ph.D.
Elizabeth Dougall, Ph.D.
Steven K. May, Ph.D.
James V. Porto, Ph.D.

ABSTRACT
J. Suzanne Horsley

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(Under the direction of Lois A. Boynton, Ph.D.)

Reliable public communication before, during, and after a crisis can save lives and

protect property, yet scholarly research has neglected crisis communication in the public

sector, particularly from an organizational perspective. To begin to fill this void, this

dissertation employed the qualitative methods of participant observation and in-depth

interviews to analyze the organizational practices of state emergency management agencies'

(SEMA) public affairs offices. An understanding of the roles that public affairs officers have

in supporting SEMA's mission of disaster mitigation, preparedness, response, and recovery

emerged from the data analysis. The public affairs office had two distinct personalities while

operating under routine conditions and under crisis conditions. As a result, this research

presents a new model to explain how SEMA public affairs offices shift into disaster mode.

Crisis Adaptive Public Information (CAPI) accounts for two distinct operational philosophies

and explains the transitional nature of this type of organization as it reacts to a crisis

stimulus. CAPI incorporates chaos theory as a means of interpreting a crisis event and the

concept of high reliability organizations as a means of interpreting the public affairs office's

organizational behavior. This model considers the specific organizational environment of

SEMAs and provides a new theoretical foundation for further exploration of this vital area of

public communication.

To Joe,
my enabler.

ACKNOWLEDGEMENTS

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DFO – Disaster Field Office

DHS – Department of Homeland Security

EAS – Emergency Alert System

EMA – Emergency Management Agency

EOC – Emergency Operations Center

ESF – Emergency Support Functions

FEMA – Federal Emergency Management Agency

HRO – High Reliability Organization

JIC – Joint Information Center

KI – Potassium Iodide

NRC – Nuclear Regulatory Commission

PAO – Public Affairs Office

PIC – Public Inquiry Center, or Disaster Hotline

PIO – Public Information Officer

SEMA – State Emergency Management Agency

CHAPTER I

INTRODUCTION

Crises come in all forms: big or small, domestic or international, long or short-term, natural or man-made, creeping or sudden, and manageable or catastrophic. Many of the crisis events transpiring since the beginning of the 21st century present new challenges for government agencies in the United States. Long accustomed to dealing with concerns of natural disasters, public safety issues, and routine traffic jams, government communicators have more recently found themselves trying to talk about a serial sniper terrorizing the nation's capitol region, hijacked airplanes flying into icons of American capitalism and the military, and a mysterious white powder that was coursing through the mails. Not only was there a delay in public officials' full understanding of these three crises, but no guidelines existed for responding to these specific incidents. The public wanted reassurance, and they needed answers.

Federal, state, and local government agencies became involved in all three crises, but there was no true precedent for them to follow. Public safety was a real concern until the serial killers were captured, the nation's airports were secured, and the post offices were cleared of anthrax spores. In the meantime, uncertainty prevailed for the public as well as the investigators involved in each incident. The media clamored for information and ran expert speculation alongside terse official statements. The public relied on the government to solve the problems and prevent them from happening again; there is no other entity that can single-

handedly help the public recover from such tragic acts and work to mitigate them in the future (Schneider, 1995). To further complicate matters, government agencies cannot predict or plan for every possible crisis scenario.

The crisis management shortcomings and vulnerabilities of all levels of government were exposed by the attacks on the United States on September 11, 2001, the Washington-area snipers, and the anthrax outbreak. Since these events, daily government communication has been extended to include critical information for the public about security threat levels, public safety, and the country's military response. Meanwhile, the federal government created a new Department of Homeland Security and introduced a color-coded alert system, which quickly became a routine part of television newscasts as well as fodder for cynical comedians. The Homeland security director, Tom Ridge, compounded Americans' fear of the uncertainty of terrorism by instructing them to buy duct tape and plastic sheeting to protect their homes from chemical agents. The Department of Homeland Security attempted to correct some communication miscues by launching an ad campaign five months after the attacks featuring Secretary Ridge calmly telling Americans how to prepare for future terrorist activity (Advertising Council, 2003).

Soon after the federal government completed its investigation of the September 11 response and redirected the nation's resources for terrorism preparedness, along came Hurricane Katrina in September 2005. This massive natural disaster wiped out nearly an entire Gulf Coast port city, putting local, state, and federal governments to the ultimate test of disaster response and recovery. Once again, citizens demanded information and explanations, this time asking when the National Guard would rescue them from their flooded homes, how could they get help, where were their evacuated families staying, and what could be done to

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restore their homes and jobs, and thus, their lives. The U.S. government will be responding to Hurricane Katrina's aftermath for several years to come.

Both the public and private sectors played vital roles in the response to the aforementioned crises. During a public crisis, however, government entities often have to respond quickly to avoid loss of life and damage to property, public structures, and public services. The public sector's ability to effectively communicate with citizens during a crisis is not only necessary, it is expected. As Garnett (1992) observed, "Speaking, writing, reading, listening, gesturing, transmitting data, and other forms of communication so pervade government that they are often taken for granted. And yet communication often makes the difference between government success and failure, sometimes between life and death" (p. 3).

Despite the importance of public communication, there is significantly less analysis and empirical study about government crisis communication than corporate (Garnett & Kouzmin, 1997; Graber, 2003; Horsley & Barker, 2002). This is surprising, considering the vital role of government in communicating to its citizens and its obligation to inform citizens, especially in times of crisis.

The purpose of this dissertation is to explore crisis communication in the public sector, filling gaps in existing research that have ignored this crucial obligation of government to its citizens. This research employs an organizational perspective to reveal how state emergency management agencies communicate with the public during both routine and critical times. The introductory chapter defines crisis and crisis communication, explains the unique environmental characteristics of the public sector that merit a new research approach

apart from the private sector, illustrates examples of crisis communication from case studies, and reviews the public sector crisis communication research.

Defining Crisis for the Public Sector

There is a corporate bias in the crisis management literature in which crisis is defined in terms of its impact on an organization. Crisis has been defined as "a specific, unexpected, and non-routine event or series of events that create high levels of uncertainty" (Seeger, Sellnow, & Ulmer, 1998, p. 233). These events threaten "image, legitimacy, profitability, and even survival" of an organization (Seeger, Sellnow, & Ulmer, 2003, p. 4). Pearson and Clair (1998) classified crisis as "a low-probability, high-impact event that threatens the viability of the organization and is characterized by ambiguity of cause, effect, and means of resolution, as well as by a belief that decisions must be made swiftly" (p. 60). Hearle (1993) defined a crisis based on the effect it has on an organization: "a crisis is a situation that, left unaddressed, will jeopardize the organization's ability to do business normally" (p. 397).

According to Fink (2002), "A crisis is an unstable time or state of affairs in which a decisive change is impending—either one with the distinct possibility of a highly undesirable outcome or one with the distinct possibility of a highly *desirable* and extremely *positive* outcome" (emphasis in original; p. 15). Fink (pp. 15-16) lists the characteristics of an oncoming crisis as follows:

1.   Escalating in intensity.
2.   Falling under close media or government scrutiny.
3.   Interfering with the normal operations of business.
4.   Jeopardizing the positive public image presently enjoyed by a
     company or its officers.
5.   Damaging a company's bottom line in any way.

Although he emphasizes that not all crises are negative, Fink's list of characteristics imply that crises have an adverse effect on an organization.

Coombs (2002) generalized the various approaches to operationalizing the concept of a crisis in the existing crisis management literature, concluding that the term is used in two ways: as an event that disrupts an organization's operations, or as an event that threatens an organization's reputation. As Coombs explained, these approaches "tie crises to the financial bottom line of an organization" (p. 340). Neither approach considers the impact of a crisis on the public, as most crisis research focuses internally on the organization rather than externally on publics. Lee (2005) summed up the definitions found in organizational crisis literature: "Three core elements characterize an organizational crisis: significant threats, unpredictability or suddenness, and urgency or immediacy" (p. 277). Once again, the concern rests with the impact of the crisis on an organization.

Interestingly, Millar and Heath (2004) considered government organizations in formulating a definition of crisis. They also focused on the organizational frame, stating, "each of these crises consists of an event, or series of events, that gives stakeholders reason to believe that the leadership of the organization has lost control of the organization's operations in ways that harm its stakeholders" (p. 3). In this definition, the impact on reputation and operations is the key consequence of a crisis. In keeping with this corporate bias, crisis communication is conceptualized as a process of communicating about an unexpected event to concerned publics in an effort to "minimize damage to the image of the organization" and to "alleviate or eliminate the crisis" (Fearn-Banks, 2002, pp. 2-3).

The public administration literature has presented definitions of crisis that are more applicable to the public sector than the existing crisis management literature. The focus here

is on society rather than the bottom line. Governments may face crises that are more diverse in nature with broader and more significant implications than corporations, including "natural disasters, transportation and industrial accidents, war or military operations, terrorism and sabotage, major service or performance breakdowns, corruption and scandal, hostile changes in leadership, major misinformation or miscommunication, and severe citizen dissatisfaction" (Garnett, 1992, p. 204). Definitions of crisis in the public sector focus more on the government's *response* rather than the *impact*. For example, public affairs scholar John M. Bryson (1981) argued that crises occur "when a system is required or expected to handle a situation for which existing resources, procedures, laws, structures, and/or mechanisms, and so forth, are inadequate" (p. 181). Rosenthal and Kouzmin (1997) added that shortened response times differentiate a crisis from normal operations, and, during a crisis response, government agencies often experience atypical interruptions in communications or resources.

Broadly speaking, crisis communication in government involves all four phases of a public crisis: mitigation, preparedness, response, and recovery (Petak, 1985). Mitigation activities work to reduce the harm of a disaster, preparedness activities help to identify and even avoid potential crises, response activities address immediate needs after a disaster, and the recovery phase includes long-term efforts to rebuild a community and assess the disaster response. One only has to watch the top stories on the evening news to see how critical it is for government agencies to communicate with citizens before, during, and after natural disasters, terrorist attacks, and other public emergencies.

Therefore, for the purposes of this dissertation a crisis is defined as an event that requires a response from one or more levels of government, exceeds the range of normal operations for a single government agency, disrupts a governmental organization's routine

operations, and affects a number of citizens. Furthermore, a public crisis is an event to which no private or nonprofit organization can sufficiently respond without government intervention and one in which government agencies can anticipate intense media and public scrutiny. Crisis communication is initiated by and directed through the responsible government entities to help citizens prepare for, respond to, and recover from a crisis event.

The Public Sector Environment

Current organizational research acknowledges the importance of understanding environments in analyses of organizations. The environmental differences between the public and private sectors necessitate a new approach to government crisis communication research. Although these distinctions have not been made apparent in the existing crisis communication literature, the unique environment of the public sector has been well documented. Public administration scholar Hal G. Rainey (2003) asserted that the study of the public sector environment is particularly important because government agencies are subject to more obligations and limitations than other types of organizations. Despite this importance, much of the organizational research "has focused on the private sector, and although adapting private-sector models to public-sector research has been useful, it has been inadequate" (Viteritti, 1997, p. 81).

Rainey (2003) suggested a continuum exists, rather than a clear dichotomy between the sectors, that ranges from a government bureau to a private business with various crossbreeds in between (see Table 1.1). The continuum considers ownership, sources of funding, and method of control for each organization. This chapter focuses on pure government agencies represented by "public" on the continuum.

Table 1.1

The public-private sector continuum (Adapted from Rainey, 2003).

Public	Hybrid	Private
Transportation Agency	American Red Cross	Privately held business
Emergency Management Agency	Nuclear Power Station	Independent Consultant
Public Health Agency	Research University	
Law Enforcement Agency	U.S Postal Service	

There are at least seven environmental characteristics unique to the public sector that play a role in government communication: "focus on the public good rather than the market; transparent environment coupled with legal restraints; constant media scrutiny; lack of importance of the communication function; negative public perception of government communication; lagging professional development; and complicated network of relationships due to federalism" (Fisher & Horsley, 2005, p. 4). These factors, when combined with the government's mandate to respond to public crises, create circumstances for crisis communication practices that are not integral to private sector crisis communication and merit attention in scholarly research.

A primary environmental difference between the public and private sectors is that government agencies are not subject to market pressures or preoccupied with organizational survival (Garnett, 1997; Graber, 2003; Rainey, 2003). Agencies operate within established budgets to accomplish their missions without concern for making a return on investment or beating the competition. Rainey (2003) explained that government organizations "provide

services that are not exchanged on economic markets but are justified on the basis of general social values, the public interest, and the politically imposed demands of groups" (p. 64). More importantly, government manages social problems and emergencies that exceed the ability of a market economy to address.

Transparency, or openness of operations, distinguishes public sector agencies from most private corporations. In a democracy, the public has a right to government information. The only legal barriers to open information are exemptions imposed by state and federal access-to-information laws. Public administration scholar Joseph P. Viteritti (1997) explained, "Meaningful communication between government and the people is not merely a managerial practicality. It is a political, albeit moral, obligation that originates from the basic covenant that exists between the government and the people" (p. 82). The media play a large role in government transparency. Allison[1] (2004) pointed out that government affairs are covered more often in the media than are the private sector's, and that government decisions are often played out in the media and timed to meet reporting deadlines. There is a "mutually dependent" (p. 404) relationship between government and media that is not apparent in private industry. The media serve as yet another watchdog of government business, while the government relies on the media to communicate laws, policy, and other public matters to citizens. Although most government information is truthful and accurate, public perception does not always indicate trust in government communications (Graber, 2003). Government communicators must deal with the reality that "The negative connotations of the term 'propaganda' and the derogatory use of 'spin' make the public cynical about the intentions of government communications" (Fisher & Horsley, 2005, p. 7). This makes the third-party

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[1] Original source: Proceedings of the Public Management Research Conference, November 19-20, 1979 (1980). Washington, D.C.: Office of Personnel Management, OPM Document 127-53-1, pp. 27-38.

distribution of government information all the more important, as the media add credibility to government messages (Viteritti, 1997). In addition, the media are uniquely capable of distributing information to a mass audience in a short amount of time; no government agency could replicate that scale of communication as effectively or as efficiently (Cutlip, 1981). Web sites, however, have been better utilized by government agencies in recent years to fill gaps in the information provided by the media and to make available more details to augment news reports (Graber, 2003).

The system of federalism in the United States adds another layer to the public sector environment. During crises, the responsibility for a response moves from the local to the state and finally to the federal level, depending on the magnitude of the event (Bryson, 1981; Schneider, 1995). As Bryson (1981) explained, "A crisis tends to broaden the perceived scope of any issue by compounding or confounding the perceived causes and effects of the issue…. The broader the perceived scope of the issue, the more likely it will be dealt with at a higher level of government" (p. 185). The higher an issue goes, the more complex the governmental response as the number of governmental entities and interest groups who may ecome involved multiplies. Despite the increasing complexity of the response, any action taken on a crisis event is more likely to be met with "consensus at higher levels of government by changing the nature of the perceived costs and benefits of any proposed action" (p. 186). In other words, once a problem reaches a certain level of government attention, it is perceived to have gained the importance necessary to merit a response and a financial commitment. A higher government response also equates with more resources to devote to the crisis. Although Bryson found greater consensus at higher levels, the United States' system of federalism also creates an opportunity for miscommunication. As Graber

(2003) explained, "The lack of centralized control over external communications explains why public officials in the United States often do not speak with one voice about major issues. When authoritative pronouncements are contradictory, people become confused, annoyed, and often cynical" (p. 228). Discordant messages can create harm during public emergencies when the public does not have the time to question them.

The public will never lose its reliance on government information, whether in times of war, presidential scandals, social unrest, a poor economy, or a national disaster. Graber (2003) rationalized the importance of government communication, stating, "Every person's life, in good times and bad, in peace and war, is affected by the ways in which government organizations, including thousands of administrative agencies, handle [communication]. That is why the study of communication in public organizations is so vital" (p. 5).

This section demonstrated why the definitions of crisis and crisis communication found in the prevailing crisis communication literature are inappropriate for the discussion of public crises, such as natural disasters or terrorist attacks. The unique environment of the public sector, coupled with the legislated mandate of government agencies to respond to public crises, requires the implementation of relevant terminology and definitions in order to develop suitable theories of public sector crisis communication. The following literature review describes the available research in crisis communication and demonstrates the application of health communication and public administration research to public sector crisis communication.

Literature Review

There is a wealth of literature on crisis communication that is designed to help businesses restore relationships with stakeholders and rebuild damaged reputations. Crisis

communication in the public sector, however, is a relatively unexplored area of scholarly study. This literature review first synthesizes the vast supply of crisis communication literature and identifies the inadequacies in addressing the needs of the public sector. Next, the scholarly studies and practical guidelines are discussed that were developed specifically for government agencies. This chapter concludes by pinpointing the gaps in public sector crisis communication literature and suggesting a new paradigm for research.

Crisis Communication Literature

The literature is abundant with advice on how organizations should prepare for and respond to crisis situations. Although most of the literature on crisis communication can be categorized as a case study or a guide for implementation, there is relatively little empirical research. Many authors go into great detail about how to anticipate problems, develop responses, and execute crisis communication plans (e.g., Penrose, 2000; Saffir & Tarrant, 1996; White & Mazur, 1995). Significant problems with the existing crisis communication literature that prevent it from being fully applicable to the public sector are the definitions of public, crisis, and crisis communication, as well as the emphasis on the corporate operational environment.

The public relations literature is known for segmenting publics, using marketing techniques to target key audiences, and treating publics as organizational artifacts that do not exist until they are identified as being important to the organization. The concept of a general public has been rejected for segmented publics that are easier to target and assess. Madsen (2005) argued that the use of the terms "public" and "publics" can have a significant impact on the understanding of how public relations *should* be done (normative models) versus how

public relations *is* done (positive models). The use of "publics" in the prevailing public relations and crisis literature excludes the audience for major crises such as natural disasters: the general public.

The definition of crisis is also problematic. Most of the definitions offered in the crisis communication literature focus on the organization, rather than an affected public. Coombs (2002) and Fink (2002) defined crisis as an unexpected event that can have deleterious effects on corporate image, operations, profitability, and reputation. Other definitions have focused on the interruption of operations (Hearle, 1993; Pearson & Clair, 1998). Millar and Heath (2004) said that a crisis can make the public believe that the leadership is out of control of the situation. Lack of strong leadership can result in damage to an organization's reputation, which can have an impact on the company's bottom line. Seeger, Sellnow, and Ulmer (2003) echoed the preceding definitions of crisis and added that the learning that occurs after a crisis benefits the organization, rather than an outside public. A definition of crisis that encompasses events that are external to an organization and have a detrimental effect on publics who are not intrinsic to an organization are necessary for crisis communication theory to be relevant to the public sector.

Coombs (2005) argued there are two uses of crisis communication: as information and as strategy. During the crisis, communicators gather information that can be used by the crisis management team to develop or adjust its response. Strategy is about how to release information and when, and which response options to employ that will best preserve the interests of the organization. Crisis communication scholar Kathleen Fearn-Banks (2002) concluded that crisis communication is the process of protecting an organization's self-interests while working to reduce the crisis. All of these definitions, while useful for the

corporate world, do not address significant public crises such as earthquakes, hurricanes, and public health scares, in which most of the harm is done to a public rather than to an organization.

Of course, there are instances when the private sector definition of a crisis is applicable to government, such as during a presidential scandal or act of fraud by a public employee. Those types of crises, however, are already addressed in the reputation management literature (i.e., Coombs, 1999). The gaps in the literature concern the crises that are external to any one organization and that have a negative impact on a community, region, or nation.

Crisis Stages and Response Practices

Many researchers have analyzed crises and suggested phases and best practices that aid in the analysis of a crisis situation from both academic and practical perspectives. The resulting models help researchers dissect a crisis response as well as assist crisis managers in responding to a crisis event. Crisis management expert Steven Fink (2002) found there were four phases in the life cycle of a crisis: prodromal, trigger event, chronic phase, and resolution. During the prodromal phase, a potential crisis is noticed and may start to develop. The trigger event is generally unexpected, although it may not be unforeseen, and immediately focuses public and media attention on the organization. The event leaves the organization with a short time frame to respond. The chronic response phase encompasses the crisis management and communication strategies, selection of response approaches, and maintenance of message formation and information dissemination. Resolution signals when the event is over and is no longer a concern of the organization's stakeholders. The resolution

phase potentially can last for a long period of time, as evidenced by the continuing clean-up and recovery efforts following Hurricane Katrina in the gulf region. Fink's four phases of crisis do not mention steps for evaluation or feedback on crisis management efforts, nor do they mention providing for the information needs of the public during a crisis situation.

Public relations researcher Timothy Coombs' (1999; 2005) four stages of crisis communication vary from Fink's crisis management model. His stages include preparation, the crisis event, response, and learning. During preparation, the organization identifies and prepares for a variety of crises that may affect the company. This is where the crisis communication plan is developed and rehearsed. The crisis event, much like in Fink's explanation, is sudden and unexpected, although not necessarily a surprise. During the response phase, the organization has three options: deny, diminish, or deal. The organization can refuse to accept any responsibility, it can attempt to dilute the problem by shifting blame or claiming that the situation is not as bad as reported, or it can deal with the situation head-on, accepting full responsibility for the problem and the recovery. As an example of response, after the Exxon Valdez oil spill, leaders at first tried to put all blame on the ship's captain. Then they attempted to diminish the amount of harm that was done by saying that not as many animals had died as previously reported. When neither of those tactics worked, Exxon ultimately took responsibility for the accident and cleanup efforts, although it was too late to reverse public opinion. Finally, the organization learns from the experience so that it is better prepared to address the next crisis. Coombs' response phase, in which the organization decides if or how it will accept responsibility for the crisis, does not consider the legislated mandate of government agencies, such as department of emergency management, that must respond to a crisis whether or not it is to blame for the events.

Fearn-Banks (2002) explored the public relations crisis literature, specifically

Grunig's excellence theory, to develop a list of best practices for crisis communicators.

Unlike the previous crisis management researchers, her analysis was specific to public

relations practices and scholarship. Fearn-Banks' list suggested inclusion of the public

relations manager in the organization's leadership; implementation of two-way

communication; identification, segmentation, and ranking of key publics, and evaluation to

inform future crisis responses. All of her best practices are intended to reduce financial and

perceptual damage of an organization.

Corporate-based models of crisis and organizational response do not address the

public sector's priorities of serving the public good during a public crisis. The focus on

private sector goals such as reputation management and profitability, as well as the concern

with acceptance of blame, are antithetical to the goals and concerns of government agencies

communicating with the public during a natural or manmade disaster.

Crisis Communication Research and Theoretical Scope

In public relations, there is an abundance of case studies and theory building research

with limited empirical analysis. This section explores some of the predominant theories used

for crisis communication research, including corporate apologia, image restoration theory,

situational crisis communication theory, contingency theory, sensemaking, organizational

learning theory, and chaos theory.

Coombs (2002; 2005), a prolific corporate crisis expert, identified three major

research streams in the crisis communication literature: corporate apologia, image restoration

theory, and situational crisis communication theory. In corporate apologia, the organization

uses rhetoric to protect and maintain reputation while providing an explanation for what happened. The three response options are denial of responsibility, shifting of responsibility, or taking full responsibility through an apology. Any one of these responses can be effective based on the circumstances. For example, denial of responsibility worked for Johnson and Johnson when the company proved that the lethal contamination of its popular over-the-counter drug Tylenol did not occur in the factory or while the drug was under its control (Andrews, 2005). The shifting of blame option was used by Pepsi when the company's leaders were able to demonstrate that syringes could not have been placed in the cans in the factory and that consumers were attempting to defraud the company (Fearn-Banks, 2002). An example of full responsibility is demonstrated by the recent PlayStation II video game crisis when faulty electrical cords shocked consumers. Sony quickly responded, recalled the faulty video game systems, and replaced the defective parts. Rather than blame a parts vendor and wait for them to take action, Sony acknowledged the problem and dealt with it (Davies, 2005).

Image restoration theory explains how a company works to repair damage done by an organizational crisis. The theory assumes that an organization had a positive image in the first place. Some hurdles to image restoration include legal issues, culturally unacceptable behavior, and failure to take responsibility whether the organization is to blame or not (Coombs, 2002; 2005). In the Tylenol case, the company did not face legal issues because it was not to blame for the contamination. The company's leaders, however, did not ignore the public's fears about the safety of their product. They took responsibility by introducing tamper-evident packaging and convincing the public that they wanted to ensure the safety of

their products. The public ultimately perceived Tylenol as a victim of the contamination scheme and applauded the company's efforts to protect consumers (Andrews, 2005).

Situational crisis communication theory combines apologia and image restoration theory, but adds the element of operational concerns. The crisis response may include any of the response choices listed above but would also attempt to put the crisis in perspective with the organization's contributions to society (Coombs, 2005). For example, a baby formula manufacturer may attempt to overshadow a crisis by emphasizing that it produces a critical item that is needed for a baby's survival when natural feeding options are not available. By emphasizing a company's mission, goals, and contributions to a community (as in jobs) or the larger society (as in goods or services), the company can balance some criticism that is created during a crisis. The downside of this approach is that the company avoids the problem rather than dealing with it up front. For government agencies, avoidance of responsibility is not the preferred response. Agencies have mandated responsibilities that are integral to their missions, and the system of checks and balances at all levels of the U.S. structure of federalism works to ensure that government agencies are fulfilling their duties. In addition, the watchdog role of the media and public interest groups prevents government agencies from easily abdicating responsibility.

Contingency theory (Cancel, Cameron, Sallot, & Mitrook, 1997; Cancel, Mitrook, & Cameron, 1999; Shin, 2005) is an approach to conflict management that has been used in the crisis communication literature. The organization's dynamic shifting from accommodation to advocacy is determined by 86 factors that the organization can take into consideration. The resulting level of accommodation or advocacy can have an impact on the level of conflict and cooperation achieved between the organization and its publics. In a crisis situation, this

approach would help develop an understanding of the choices that the organization made in formulating its response and how the public received the information to form an opinion. The 86 factors, however, do not include factors from the public sector environment that affect the choices that government communicators must make. For example, the factors do not include consideration of political appointments, regular turnover of elected officials, the effect of the federalist system on agency decision making, or the importance of public good over profit making (Fisher & Horsley, 2005).

Seeger, Sellnow, and Ulmer (2003), in their book on organizational crisis communication, identified three relevant theories: sensemaking, organizational learning theory, and chaos. Sensemaking, which was developed by organizational scholar Karl Weick (2001), explains how an organization works to understand and respond to a crisis. There are three phases: enactment, selection, and retention. Enactment describes how members of the organization choose what information to collect, how they assess the crisis situation, and how they develop explanations of what went wrong. Selection involves the members deciding which interpretation of events best explains what went wrong. Retention involves the members learning from the experience and storing the information in such a way that it can be used in the resolution of similar crises in the future. One key difficulty with the sensemaking approach is that all of the learning and decision making takes place in the organization. Sensemaking may be applicable for organizational crises, but it does not consider the public during an external crisis, such as a natural disaster.

The authors' second theory, organizational learning, supports the view that with failure comes learning; an organization does not learn unless it first fails. Organizational learning supports the concept that a crisis can actually benefit an organization in the long run.

Both sensemaking and organizational learning share one thing in common: the impetus of learning is on the organization (Seeger et al., 2003). These theories do not address the public's capacity to learn from crisis situations, or the organization's capacity to respond to crisis events that exceed the organizational boundaries.

Chaos theory alters the worldview of an organization so that crises are no longer annoying interruptions in operations but are explained as naturally occurring events that signal change. Seeger, Sellnow, and Ulmer (1998) suggested that chaos is best used as a paradigm for crisis management that can inspire holistic assessment of a problem that will provide more than a band-aid fix to a crisis. This approach is appropriate for the types of crises identified in this dissertation, including violent weather and terrorism, because the holistic assessment includes groups outside of the primary organization, such as communities, the media, and emergency responders. For example, chaos theory has been used to explain how law enforcement and government officials managed crisis communication during the 2002 Washington, D.C., sniper shooting spree (Horsley, 2005). While most of the other theories discussed in this section are most suited to organizational crises, chaos offers an approach that shows strong potential for crisis management and communication before, during, and after major disasters. Chaos is discussed in greater detail in Chapter II of this dissertation.

In sum, most of the predominant theories for crisis communication focus on organizational crises, rather than larger-scale public crises that exceed the boundaries of any one organization. Learning is primarily accomplished by the organization, not by publics affected by a crisis event. Chaos theory's holistic approach offers a new way to examine crises, both in practice and in research.

The prevalent interpretations of crisis and the resulting best practices are useful to many types of crisis communication, but they ignore key factors that are present in public sector crisis communication. Namely, these problems include definitions of a crisis, crisis communication, and public. The problems in applying corporate-based crisis communication research to the public sector are discussed below.

Crisis Communication in the Public Sector

As explained above, corporate-based crisis communication research utilizes definitions of public, crisis, and crisis communication that do not adequately cover the realities of government crisis response efforts. Public administration and public health literature help to fill the gaps in crisis communication that are left by public relations research. No single discipline appears to be doing a comprehensive job of addressing public sector crises. The public relations literature certainly informs general crisis communication research, but it does not address concerns that the public administration and health communication literature do. The three disciplines in combination offer a new direction for crisis communication research. Consideration of the public sector environment coupled with more appropriate definitions of public, crisis, and crisis communication can launch a new research paradigm that specifically addresses this overlooked segment of crisis communication. As government scholar Joseph P. Viteritti (1997) said, while the private sector models have contributed to the public sector, they have been inadequate. It is time for a new model.

The Centers for Disease Control's *Crisis and Emergency Risk Communication* manual (Reynolds, 2002) addresses the definition of crisis communication that is absent from

the public relations literature. Reynolds explained that the goal of crisis communication during a public health disaster is to provide information to the public so that they can make informed decisions about their own health and safety. Public education is a major component of crisis communication for the CDC. During a crisis, the communicator is an *agent*, rather than a *participant* in the crisis. For example, the disastrous aftermath of Hurricane Katrina showed us that government agencies can be criticized for their response to a crisis as an agent, but government agencies did not cause the hurricane and were not involved in the subsequent flooding of the city as a participant. This distinction further separates government agencies from corporations involved in an organizational crisis. Reynolds outlined nine steps to public health crisis communication:

1. Verify the situation before acting

2. Notify leadership and other agencies of the situation

3. Assess the scope of the crisis

4. Assign jobs to members of the crisis team

5. Prepare information that will explain the situation and agency response

6. Release the information to the public, media, and stakeholders

7. Gather feedback to be sure the messages are being interpreted correctly and to see what needs to be addressed further

8. Educate the public so that they can respond to the situation better the next time

9. Monitor the information flow, messages, and ongoing situation and make adjustments in the communication plan as needed.

When compared to Coombs' (2005) uses of crisis communication as information and strategy, Reynolds' (2002) stated use of crisis communication looks very different. Her focus

is on informing and educating the public so that they can make good decisions about their own welfare. While Coombs explains the benefit of crisis communication to internal crisis managers, Reynolds' explains that both the organization and the public must learn from a crisis situation so that both parties can improve their responses in the future. These opposing uses of the same term suggest that there is another world of crisis communication that has yet to be explored by public relations scholars.

Many of the same concerns about crisis communication in the private sector apply to the public sector, particularly when a government agency is confronted by an organizational crisis. There is significantly less analysis and empirical study, however, about government crisis communication than corporate (Garnett, 1992, 1997; Horsley & Barker, 2002). This lack of analysis is surprising considering the vital role of government in communicating to its citizens and its obligation to inform citizens, especially in times of crisis. Garnett (1992) observed, "Speaking, writing, reading, listening, gesturing, transmitting data, and other forms of communication so pervade government that they are often taken for granted. And yet communication often makes the difference between government success and failure, sometimes between life and death" (p. 3). Governments may face crises that are more diverse in nature with broader and more significant implications than corporations, including "natural disasters, transportation and industrial accidents, war or military operations, terrorism and sabotage, major service or performance breakdowns, corruption and scandal, hostile changes in leadership, major misinformation or miscommunication, and severe citizen dissatisfaction" (p. 204).

Public administration scholar James L. Garnett (1992) presented an eight-stage process in crisis communication for government: recognition of crisis, appearance on the

scene, recruiting a crisis council, mobilizing resources, implementing a crisis plan,

announcing the outcome, distributing rewards, and learning to improve crisis performance.

These stages include many of the pre-crisis steps discussed in the private sector literature,

including identifying potential threats and organizing a crisis team in advance, although it is

unique in that it considers the morale of the government employees involved in the crisis

situation. Garnett's discussion includes historical information from previous presidential

administrations to show how crisis communication plans were implemented, and brings up

issues specific to the public sector.

Doris Graber (2003), an expert on public administration communication, concurred

with Garnett regarding the unique position of government in crises and adds the role of the

public affairs officer. She stated "The principle challenge facing public affairs officials

during crises is to obtain and release accurate information without causing unwarranted panic

or complicating recovery efforts" (p. 244). There are four factors unique to government

agencies in crisis situations: crises spur skepticism about government capabilities; a

government's role in a crisis is not always clearly defined or understood; crises can turn into

political opportunities rather than be "occasions for decisions;" and government agencies can

be at risk for restructuring or reallocation of resources if they fail during a crisis (Rosenthal

& Kouzmin, 1997, pp. 282-83). These factors can be applied to most major crises facing the

United States, including terrorism.

The public administration literature contributes an understanding of the public

sector's environmental constraints and opportunities that have been overshadowed by

corporate concerns in public relations. Fisher and Horsley (2005) found seven factors from

the literature that influence public sector communication: regulated transparency, public and

media scrutiny, lack of professional development for communicators, lack of importance placed on the communication function by leadership, negative public perception of government communication, constraints of a system of federalism, and a focus on the public good. Nowhere in this list are issues with profits, corporate image, or organizational survival. These distinctions between the public and private sectors are crucial in developing a new research agenda and theoretical scope of crisis communication in the public sector.

Research on responses to health crises, which meet the definition of a public crisis used in this dissertation, are also informative for developing public sector theory. Recent research has focused on the communication of the anthrax threat that followed the September 11 terrorist attacks (Mebane, Temin, & Parvanta, 2003) and public information policies regarding West Nile virus and anthrax (Maxwell, 2003). The communication strategies of government leaders have brought attention, including criticism of Homeland Security Director Tom Ridge's advice to buy duct tape and plastic sheeting to protect against bioterrorism (Alter, 2003) and praise for the "Giuliani press conference model" that New York's mayor employed during both the September 11 terrorist attacks and the subsequent anthrax attacks (Mullin, 2003). These studies highlight the dissemination of information to the public during crisis, the capacity for empathy for the public's fears and personal losses, the ability of authority figures to generate trust in the messages, and the degree of learning by both the responsible government agencies and the public. If researched under the theoretical scope offered by public relations crisis communication, the focus would undoubtedly rest on the harm done to the government's image, interruptions in the daily work of government, and excuses or explanations that were used when things went wrong.

Horsley and Barker (2002) derived a synthesis model of crisis communication for the public sector from the prevailing public relations, public administration, and health communication literature. The model has six stages: ongoing public relations, identification of and preparation for potential crises, training and rehearsal, the crisis event, evaluation and revision of communication, and interagency and political coordination analysis. On the surface, the resulting model appears to be similar to those developed by Coombs (2002; 2005) and Fink (2002); however, this model incorporates the public sector environment and the focus on the public good.

Fisher and Horsley (2005) expanded this concept and developed a model for public sector public relations: the government communication decision wheel (see Figure 1.1). Once again, this model is drawn from the various disciplines and works to fill the gaps in public sector crisis communication. The advantages of this model are that it defines the public sector environment, it can be used in a variety of situations, it employs opportunities for two-way communication, it values public feedback, and it considers the best channels to reach the public with credible messages.

This model incorporates the importance of the unique environmental characteristics of the public sector by demarcating four co-existing micro-environments within the public sector. The four micro-environments are not exclusive and can operate concurrently, but in some situations one or two micro-environments may be more influential than the others. Within each micro-environment, communicators must balance mediated and direct communication. Finally, all of the micro-environments are affected by the seven primary environmental constraints and opportunities (focus on the public good, transparency, media scrutiny, a devalued communication function, negative public perception of government

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communication, lagging professional development, and the influence of federalism), but some constraints and opportunities may affect one micro-environment more than another.

Figure 1.1

Government Communication Decision Wheel (Fisher & Horsley, 2005).

Intergovernmental

Mediated   Direct

Intra-governmental   **Multi-level**

Direct   **External**   Mediated
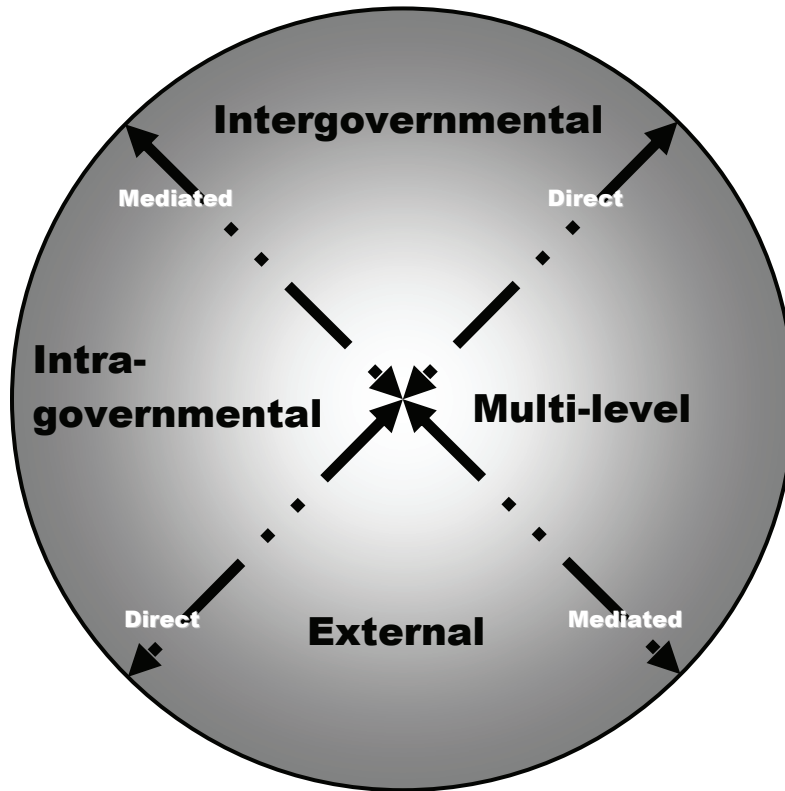
Four Public-Sector Micro-Environments

Role of Communication in Public Sector Crises

     In examining crisis communication in the public sector, it is useful to understand the role of communication during all phases of a disaster, which is missing in the crisis management literature. Many disaster management plans focus on the physical response to a disaster and only include communication as a second thought. The majority of the literature

that features communication as a part of a disaster response focuses on the role of communication *after* a crisis has hit. Communicators' roles before and after a crisis are mentioned only vaguely (Coombs, 2005; Fink, 2002; Millar & Heath, 2004; Seeger et al., 2003). This section will define the stages of disaster and emergency management, summarize two case studies that illustrate a government response to a crisis, and then present public sector guidelines for disaster communication that reveal how communication fits into the phases of a disaster response.

Carroll (2001) explained the United States' model of disaster management in an article in the *Handbook of Crisis and Emergency Management*. The four-phase model, which was developed by a national governor's association in the 1970s and later adopted by the Federal Emergency Management Agency, recognizes the phases of mitigation, preparedness, response, and recovery. During the mitigation phase, disaster management agencies conduct an assessment of potential disasters, how they would respond to them, and how they could be alleviated or even prevented. The preparedness phase includes the development of written response plans, training, rehearsals, resource allocation, creation of mutual aid agreements with other jurisdictions, and other coordinated efforts that would need to be in place when a disaster strikes. The response phase begins as soon as a disaster event happens (the trigger event) and the responding agencies implement their disaster management plans. The recovery phase includes all actions needed to restore the community back to normal, including restoration of public services, including power and water supplies, and any temporary needs such as housing or food. The first two phases, mitigation and preparation, are the proactive stages, and the last two, response and recovery, are the reactive stages.

The corporate crisis management literature also offers explanations of stages of crisis that are similar to the FEMA model. A key difference in Coombs' (1999; 2005) model is the use of the term "learning" phase. His model emphasized that the organizations learn from a crisis so that they are better prepared for the next one. Seeger, Sellnow, and Ulmer (2003) derived a model from the literature that also concludes with a learning phase. Many of the government disaster response models, however, make the public's learning a key part of their model, in addition to organizational learning and evaluation (see Carroll, 2001; Reynolds, 2002). Public outreach during all phases of a disaster is an important responsibility for government agencies that is not addressed in the corporate literature.

Case Studies

There are few analyses of communication efforts during the phases of a disaster. Below are two studies, one from the mass communication literature and one from public health communication, that qualitatively describe government communication efforts before, during, and after a crisis. The authors of the first case study used chaos theory in their analysis. The authors for the second case study did not implement chaos theory. However, their organizational approach to studying crisis communication in the Centers for Disease Control is a novel approach that has not been implemented in the crisis research but that will be used for this dissertation.

1997 Red River Valley Floods

Sellnow and Seeger (2001) conducted a case study of the 1997 Red River Valley floods that devastated areas of Minnesota and North Dakota. Using the lens of chaos theory,

in which crises are naturally occurring events signaling change that must be examined holistically, they explicated the various stages of the disaster and the role that communication played. During the pre-disaster phase, officials underestimated the flooding potential and assured the residents of the river valley that the expected spring flood would not exceed a certain level. The authors found that the officials used linear measures, rather than nonlinear ones, to determine the predicted water levels. The linear measures ignored the effect of a record level of snow that remained in the valley and how that would affect the rising rivers that were filling from the spring thaw. The officials issued forecasts that were so precise and reassuring that the authors argued it was unethical. Chaotic systems have unpredictable outcomes, and the officials ignored the warning signals and relied instead on their traditional measures. The resulting communication left entire communities unaware and unprepared for the impending disaster.

The bifurcation point, or event signaling a major change in the chaotic system, occurred when the river levels unexpectedly exceeded previous records. Officials now had a situation that they had never encountered before. During the crisis phase, emergency management agencies from the local and state levels self-organized to respond to the crisis. This situation required actions and procedures that were not in their routine crisis repertoire. Sellnow and Seeger (2001) stated that the presence of the National Guard and FEMA became strange attractors as they moved in to manage the situation and get help and public services to those who needed it. In other words, assistance from the military and federal agencies helped to focus and create some structure for the crisis management efforts. Crisis communication also became a strange attractor as the public was drawn to government sources of information to learn what happened and how.

The recovery phase after the Red River Valley flood included lessons learned from the disaster, such as how to better prepare residents for future floods and how to more accurately communicate the risks associated with springtime thaws. Only another flood of the same magnitude can reveal if the government organizations and citizens learned from the experience, but the potential is there.

2001 Anthrax Attack

While the country was still reeling from the September 11 terrorist attacks, Americans were confronted with a much quieter and covert threat–anthrax. Robinson and Newstetter (2003) conducted an organizational case study of the Centers for Disease Control's response to the anthrax attack and how the organization managed throughout the phases of a major health crisis. Their findings, based on interviews with CDC communicators, revealed that the agency adapted to the crisis and transformed to manage this new health threat. Before the anthrax outbreak became known, the CDC had a comprehensive crisis communication plan and an army of communicators working in the field as well as in the agency's headquarters. As soon as anthrax was discovered, however, the CDC's crisis plan and arsenal of health crisis information became obsolete. This was a health threat that was relatively unknown and undocumented. The discovery of anthrax-related skin lesions on unsuspecting victims all along the East Coast marked a critical challenge for the CDC and its communication team.

As a result, the CDC was forced to reorganize. The staff members had to come up with creative solutions to learning about the problem and explaining it to the public. The crisis communicators were sent out into the field with research scientists so that they could

learn and report back as the scientists were learning. Meanwhile, the communicators at CDC's headquarters developed news releases and public information materials as the situation developed. The collaboration between public information officers and the research scientists was not a routine one, and, as the authors discovered, it was not an easy match. Conflicting goals of the scientists and the communicators resulted in delays in getting vital information to the public. One cause of the delays was a slow, bureaucratic system of authorizing the release of information. The communicators working the field learned how to circumvent this obstacle and resorted to having the local health departments release the information to the communities instead of the CDC. Continued delays in release of information would have resulted in more public anxiety and the spread of rumors that would fill the information void (Robinson & Newstetter, 2003).

After the anthrax crisis was resolved, the CDC enacted new procedures and bulked up its information resources. The agency developed an entire line of materials related to potential bioterror agents, such as smallpox. CDC managers began to include communicators in information sessions with scientists so that the communicators could keep up with evolving public health research. The CDC also implemented new systems that would be put into place when a situation warranted a crisis response. The CDC communicators adapted to the public health crisis, and, as a result of the changes, they learned from the experience. Had the communicators not taken the initiative to work around bureaucratic obstacles and reinvent their role in a crisis response, the agency would not have been able to cope with the disaster using routine policies and procedures (Robinson & Newstetter, 2003).

Communication Guidelines from the Public Sector

The gaps in the corporate crisis communication literature must be supplemented by guidelines produced by the public sector to sufficiently model crisis response by government agencies. Even then, the guidelines found in the public sector tend to reduce the phases to pre-crisis, crisis, and post-crisis, a model that was also derived from the communication literature by Seeger, Sellnow, and Ulmer (2003).

To address crisis communication needs at the local level, Lampen and Walsh (2002) developed a guide for city, county, and town officials. They recommended a focus on both internal and external communication in preparing for crisis events, which for local government consist primarily of threats to "citizens' safety and security" (p. 3). Information before, during, and after a crisis should help empower the public to make good choices for themselves. The authors concluded that by planning ahead while developing strong relationships with the media and citizens during the pre-crisis stage, localities can make the response by both government agencies and the public more effective.

Ann M. Beauchesne (2001; 2002) authored a two-volume state emergency management guide for the National Governor's Association. Volume two was written after the terrorist attacks on September 11 and therefore focuses on homeland security issues. As a whole, the two volumes offer guidelines for governors during natural disasters, organizational crises, terrorist attacks, and various forms of bioterrorism. Each volume includes a section on state level crisis communication.

During the pre-crisis phase, government communicators familiarize themselves with emergency management plans, learn response procedures, and learn how various state agencies fit into the overall disaster response process. Communicators need a clear

understanding of the state and federal roles in a disaster so they can collaborate effectively with other responding agencies and be able to quickly and easily explain those roles to the public. Agency communicators generate media lists, concentrate on developing strong media relations, and produce materials that contain background information related to common or anticipated disasters. During this time, they also develop communication programs that can help reduce the impact of a disaster and help the public understand the risks.

Once the trigger event, or crisis, has occurred, the communicator's greatest job becomes keeping lines of communication open with agency leadership, emergency responders, the public, and news media. The state opens a joint information center (JIC) that includes public information officers from all levels of government and from all the responding agencies. The JIC helps all the organizations develop cohesive messages so that the press and the public do not receive incongruent or contradictory information. The JIC also makes it easier to identify a primary spokesperson, run press conferences, respond to media inquiries, and answer questions from the public.

Beauchesne (2001; 2002) offered a timeline for communication after a crisis. Within the first 12 hours, the spokesperson offers an initial explanation of the event and agency response. A media room should be set up to accommodate the press. Within 24 hours, the agency should have established a press briefing schedule. Within 36 hours, the agency should be actively talking with the media, correcting inaccuracies, and generating uniform information. During the recovery, or post-crisis, stage, the agency needs to keep public information a priority. Issues that have developed since the disaster, such as health risks, should be addressed. Beauchesne (2001; 2002) added that communications at this point

should foster a positive outlook that shows the state is concerned about the public's welfare and working to restore order and normalcy.

While Beauchesne (2001; 2002) offered guidelines for state government communicators, the Federal Communicators Network (2001) has published guidelines for the federal level. The FCN's guide is similar to the state guide regarding communication practices before, during, and after a crisis. The primary difference is the addition of a final phase of crisis, the evaluation phase. The FCN advocates not only a quantitative accounting of communications (i.e., the number of press releases, Web site hits, or media inquiries), but also a qualitative assessment of the messages. By evaluating the agency messages, how they were presented in the press, and how they were received by the public, a government agency can be better prepared to communicate effectively the next time.

Unlike the simplification of three stages of disaster management shown above, the Centers for Disease Control and Prevention offer a communication model that is similar to the FEMA model (Reynolds, 2002). The CDC's Crisis Communication Lifecycle model has five phases: pre-crisis, initial, maintenance, resolution, and evaluation. Pre-crisis is the time to test messages and plans. During the initial phase, the agency acknowledges the crisis and begins to explain the situation at hand. The maintenance phase is the time to help the public understand the crisis and the government's response, provide background information on the problems created by the crisis (such as health concerns), and elicit feedback to correct miscommunications. The fourth phase, resolution, offers a greater focus on the public's informational needs than the FEMA model. During this phase, the agency educates the public to help improve the public response during the next crisis. The agency also works to promote the organization and its mission so that the public has a better understanding of its role in

similar disasters. The final phase, evaluation, emphasizes the potential for organizational

learning and recommends adjustments in policies and procedures so that the next crisis can

be managed more effectively.

Barbara Reynolds (2002) argued that disasters are different from routine matters, and

that the communication function must adapt accordingly. She supported Koehler and his

colleague's (2001) explanation of morphogenesis by emphasizing that communication must

change when a crisis strikes. The goals of communication during a crisis change and focus on

reducing and preventing death, injury, and illness while helping the community get back on

its feet. During a crisis, communication is vital for reducing harmful behavior such as

looting, alcohol or drug abuse, unreasonable public demands, and fraudulent activities.

Americans witnessed many of these disaster-related bad behaviors in New Orleans with the

excessive looting, gang activity, charges of price-gouging, and fraudulent disaster relief

claims filed by people who were not affected by Hurricane Katrina.

In sum, the crisis communication guidelines developed for government agencies help

fill the void left by the crisis management literature. These guides describe the government

communicator's role during the phases of a disaster and how effective communication can

alleviate some damage caused by a crisis situation.

Toward a New Paradigm

The case studies and examples cited above demonstrate government crisis

communication during all phases of a disaster. The available research is limited, however, in

that there are only a few disaster management studies that specifically address government

communication, and even fewer that address the application of communication in all phases

of the disaster. The prevalence of crisis communication guides for the public sector is encouraging because it suggests that government communicators take their role in a disaster seriously and are working to be prepared. More research needs to be done on this specialized area of communication, but the existing literature suggests that this is a viable direction for both research and practice in public sector crisis communication.

Based on the literature from several disciplines, this dissertation suggests a new paradigm for public sector crisis communication that encompasses a worldview provided by chaos theory and an organizational culture of high reliability. This paradigm supports the development of a model that is specific to the needs of the public sector environment and fills the gaps left by the prevailing public relations research. This theoretical framework is discussed in the next chapter.

CHAPTER II

A THEORETICAL FRAMEWORK FOR PUBLIC SECTOR
CRISIS COMMUNICATION

To prepare for the natural and man-made crises of the 21st century, this chapter

suggests a shift in government organizational culture that endorses a new paradigm of public

sector crisis communication. The purpose of this chapter is to present the theoretical

framework of chaos coupled with the concept of high reliability organizations (HROs) in the

public sector. Chaos theory offers a systematic means of interpreting a crisis event, while

high reliability provides a structure for the study of organizations that operate under chaotic

conditions as a matter of routine. This combination allows for the depth of analysis of a crisis

and the organizations that react to that crisis that is not available from the prevailing crisis

communication theories. These concepts will be explicated with the specific environment of

the public sector in mind. Although these theories have been researched in the corporate

world (e.g., Seeger et al., 1998; Seeger, Sellnow, & Ulmer, 2001; Weick & Sutcliffe, 2001),

there has been limited research related to the application of these theories in the public sector

(Kiel, 1994, 1995; Sellnow, Seeger, & Ulmer, 2002). Scholars have only recently considered

chaos theory in public relations research (Murphy, 1996), while the notion of high reliability

has yet to cross over to crisis communication. Additionally, there has been little research

dedicated to crisis communication preparedness in the public sector as a whole (Garnett &

Kouzmin, 1997; Graber, 2003; Horsley & Barker, 2002; Tierney, Lindell, & Perry, 2001).

This chapter defines chaos theory, which originated in the natural sciences, and high reliability theory, which was developed for organizational science, followed by an explanation of how these two concepts fit together to form a new theoretical framework that is specific to public sector crisis communication.

Chaos as a Form of Order

Chaos theory emerged in studies of the natural sciences in the 1970s and was quickly applied to the social sciences. Management and complexity researchers Parker and Stacey (1994) proclaimed the usefulness of chaos theory in social science research, saying "Since human systems, including business organizations and economies, are non-linear feedback systems, the lessons from chaos are profound" (p. 39).

But what does *chaos* mean exactly, in this context? Chaos may not be as unpredictable and "chaotic" as one may assume. Simply stated, it is a paradigm shift in believing that the apple always has to fall *down* from the tree; it is a leap of faith from the Newtonian concept of order and predictability. A chaotic system is nonlinear, meaning that variables within the system do not change at a steady, predictable rate. In chaos, small variations in a nonlinear system result in extreme changes over time. A chaotic system is nonlinear, but a nonlinear system is not necessarily chaotic (Lorenz, 1993). The nonlinear nature of chaos makes it complex and difficult to analyze using the standards of modern science. According to Gleick (1987), chaos theorists are not interested in the atomic, or simplified, level of things. They are looking for patterns, apparent randomness, complexity, and the big picture. They attempt to explain something by looking at its beginning and its end, searching for clues as to how it got to be what it is now by learning what it used to be.

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Despite the seeming vastness of chaotic systems, they are constrained by a number of factors. The system is deterministic, meaning that it is not truly random and does have a pre-determined end result. A chaotic system is bounded, limiting the variables to a finite range. In addition, a chaotic system is dependent on initial conditions. These conditions can be benchmarked at any point in time, but the outcome of a system over a period of time is a direct result of the variables that existed at the beginning of the time frame (Lorenz, 1993).

This phenomenon in observation can be explained by a concept that was derived from climate studies: the butterfly effect. Edward Lorenz, a research meteorologist, discovered that the slightest change in one of his computer formulas would create an entirely different weather forecast. This miniscule change explained why the weather was so difficult to predict. He created the analogy of a butterfly flapping its wings and affecting the weather on the other side of the world. The idea that an ever-so-slight movement of the air could start a ripple effect that would change the climate many days later and thousands of miles away helped explain why forecasters could not accurately predict the weather for a given location at a given time (Gleick, 1987). By simply observing the initial conditions or the resulting weather as individual phenomena, scientists never would have put together the two concepts to create this complex explanation for climate change.

Besides its *nonlinear* nature, there are several other characteristics of chaos that are helpful in understanding its application to other disciplines: positive feedback, bifurcations, strange attractors, sensitivity to scale, fractals, and self organization. Chaos has an inherent system of *positive feedback* that amplifies certain elements, destabilizes the status quo, and creates new patterns (Gleick, 1987; Lorenz, 1993). Negative feedback will keep a system stable, such as when a mother corrects a child so that she behaves in a socially acceptable

way in public. If a mother gave her child candy every time she screamed in public, however, this positive reinforcement would increase her future outbursts in attempts to get what she wants. Positive feedback essentially gives a chaotic system the energy it needs to ultimately attain a more dramatic change (either good or bad) than a stable system (Lorenz, 1993; Parker & Stacey, 1994).

Bifurcations are points at which the chaotic system diverges and regroups, much like the way a river flows around a small island. One cannot predict exactly what form it will take once it reorganizes. Lorenz (1993) defines a nonlinear bifurcation as, "an abrupt change in the long-term behavior of a system, when the value of a constant is changed from below to above some critical value" (p. 206). A bifurcation can render a system more or less stable, depending on the direction of the change. A change in just one variable can mark a bifurcation point with deterministic results, such as the extinction of a species (Gleick, 1987). The extinction of a species itself then becomes another bifurcation that affects other life forms in positive or negative ways.

Strange attractors are "multiple points of attraction within a finite space" in which "the system's behavior becomes unstable but within bounds" (Parker & Stacey, 1994, p. 97). Strange attractors explain how a seemingly unorganized system is organizing. When the variables are graphed, the resulting shapes look like uneven spirals that have been described as a butterfly's wings or the eyes of an owl. Although they appear to be random, the graphs fit within a finite boundary, and their centers are drawn to a common point, or attractor (Gleick, 1987; Murphy, 1996). The attractor constrains the system and dictates the range of the variables. The system changes when the attractor changes (Parker & Stacey, 1994).

Scale is another characteristic of chaos that unsettles followers of Newton's science. Depending on the observer's perception, distance, and methods of measurement, the same phenomenon will appear differently under varying circumstances or when viewed by other people (Gleick, 1987). Thus, a dollar bill looks very different when viewed at arm's length than when examined under a microscope. Likewise, a system will appear differently to multiple observers if each one discerns a different variable. Murphy (1996) stated "the 'reality' that describes a given phenomenon is determined, not by its universal qualities, but by the observer who chooses the scale" (p. 99). Observers who only study parts of a chaotic system will never comprehend the entire system; chaos theory encourages holistic exploration of a phenomenon to develop a more comprehensive understanding of all the elements. The parable of the blind men and the elephant helps describe the impact of the observer's perception on scale. Several blind men each touched a different part of an elephant and drew their own conclusions on what an elephant was based on the part they touched. Needless to say, each man created a very different definition of an elephant, from a large wall (touching his side) to a snake (touching its trunk).

Fractals, like strange attractors, provide another visual for studying chaos. As explained previously, chaos must be examined as a whole, not in small units. A fractal is a self-generating organic image that changes with each successive iteration. If you pulled out two separate iterations and tried to compare them, they would look nothing alike. But by viewing the fractal in its entirety, you can discern patterns that explain how it evolved from an observed starting point to an end point (Gleick, 1987; Murphy, 1996). Benoit Mandelbrot named these iterations "fractals" because they are fractions of a larger system. Fractals are self-similar, meaning "in many fractal systems, several suitably chosen pieces, when suitably

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magnified, will each become identical to the whole system" (Lorenz, 1993, p. 170). As cited

by Murphy (1996), Mandelbrot's fractals addressed the problem of measuring complex

systems by providing a qualitative measure of "'the relative degree of complexity of an

object'" (p. 100). Murphy explained, "By abandoning traditional quantitative measurement

scales and using fractals, it becomes possible to identify correspondences or 'couplings'

between forms that vary vastly in scale but have similar patterns of complexity, such as

clouds, coastlines, or mountains" (p. 100). Each bifurcation creates slight changes in the

fractals, but by examining the system as a whole, one can track patterns and learn how

change evolved.

Finally, a chaotic system can be described as having the ability to *reorganize* under

its own volition. While its other characteristics promote destabilization, it can also return

itself to its own brand of order (Gleick, 1987). Although a chaotic system is in constant flux,

iterations share commonalities: "iteration also means that systems have continuity; they carry

elements of their original order from step to step, shown in the shape of strange attractors or

fractals" (Murphy, 1996, p. 100). As the new pattern is replicated, the system self-organizes

into a new entity without the help of outside influences.

In sum, a chaotic system exhibits a structure that can be broken down and analyzed.

The elements are best understood in terms of their relationship to other parts of the system.

The apparent randomness and lack of predictability in chaos can be explained using a

systematic method of analysis. The next section discusses a type of organizational structure

that allows an organization to manage under chaotic conditions.

The High Reliability Organization Meets Chaos

The worldview represented by chaos would leave one to wonder what type of organization could successfully function in such an environment. One candidate is a high reliability organization (HRO). HROs are defined as operating in a highly complex technological environment in which the consequences of failure are catastrophic and the activities are subject to intense regulatory scrutiny (Rochlin, 1993). By definition, government agencies that manage communication during public crises are not HROs. This section argues, however, that crisis-mandated government agencies, like HROs, operate in an increasingly complex environment where mistakes can result in the loss of life and property during a crisis event. In addition, public agencies are subject to intense scrutiny by the media and the public and are innately bureaucratic. By applying this concept metaphorically to crisis-mandated agencies, one can then replicate the work of HRO theorists in this unique environment and develop a new theory that applies to public sector crisis communication.

First, this section defines high reliability and summarizes the work of organizational theorists who have researched HROs. Then the weaknesses and limitations of HRO theory are addressed.

High Reliability Characteristics

High reliability organizations were first researched by organizational scientists at the University of California, Berkley (LaPorte & Consolini, 1991). Organizational theorists Weick (1987; Weick & Sutcliffe, 2001) and Roberts (1990b) observed organizations that operate in an environment of high risk and uncertainty, yet where the mission is carried out with a high level of reliability. The authors are careful to point out that efficiency and

reliability are not the same thing, and that many other organizational studies only focus on the efficiency outcome. Effectiveness is an important element of high reliability because the outcomes generally can not be measured in terms of dollars or production levels, but in terms of safety records and an unknowable count of how many things *did not* go wrong. Examples of HROs include "aircraft carriers, air traffic control systems, aircraft operations, hostage negotiation, emergency medical treatment, nuclear power generation, continuous processing firms, and wildland firefighting crews" (Weick & Sutcliffe, 2001, p. xiii). All of these organizations and groups have safety and reliability of operations at the heart of their primary missions. Other researchers have added to this list the Federal Bureau of Prisons' inmate transport division (Babb & Ammons, 1996), nuclear submarines (Bierly & Spender, 1995), the federal Transportation Security Administration's airport security function (Frederickson & LaPorte, 2002), a hospital medical records department (Guy, 1991), pharmaceutical work with dangerous drugs, bridge and dam safety, and the use of pesticides in agriculture (LaPorte & Consolini, 1991), and an electrical company's distribution system (Roberts, 1989). Weick and his fellow researchers found that although these organizations seem very different on the surface, they share characteristics that enable them to succeed in their potentially volatile environments. They presented their findings as models for corporations to follow to help them prepare for and react to crises.

A key characteristic of an HRO is an organizational culture that is concurrently centralized and decentralized. From the beginning, the leadership establishes a strong, central command with a clearly defined multilevel hierarchy (much like the military model). During a crisis situation, however, or even during the precursor to a crisis, personnel at lower levels of the chain of command have the authority to make decisions. The lowest-ranking sailor on

the flight deck of an aircraft carrier can call a halt to all landing operations if he spots a potential hazard on the deck. The sailor must be empowered to make this decision on his own, because seeking approval from the officer in charge would take time and could mean the difference between a crash and a safe landing. Autonomy thus becomes an important cultural characteristic of an HRO (Weick, 1987). A controlled bureaucracy can make organizational learning and communication difficult, while decentralization encourages both (Bierly & Spender, 1995). Roberts (1989) found that existing organizational culture studies did not include "concerns for safety, accountability, and responsibility, three aspects of culture mandatory in high reliability organizations" (p. 120). These unique cultural characteristics further differentiate HROs from other organizational cultures.

Roberts (1990b) found cultural characteristics that were similar to Weick's (1987) in her study of aircraft carriers and discovered more elements that allowed the crew to operate in "organized chaos" (p. 168). She found evidence of empowerment at all ranks; a common understanding of goals; an implicit understanding of the safety concerns on the flight deck; tight coupling between operational functions (i.e., the ship's movement is a separate operation but must in be concert with the needs of planes taking off and landing); redundancy of tasks (i.e., multiple people are observing the take-offs and landings simultaneously from different perspectives); and interdependence among all the crew and their individual duties. She makes a significant point that all of these operations, while conducted in an environment of chaos, are actually routine directives for this type of organization. The day-to-day training on an aircraft carrier is normal; engagement in war is the rare exception.

An underlying assumption of HROs is that a collective group of people (i.e., an organization) can compensate for individual human weaknesses and operate successfully

within a framework of structure and clearly defined goals. Sagan (1993) identified four

recurring elements of HROs: a shared understanding of the ultimate goal of safety,

redundancy in key organizational functions, a culture that promotes reliability, and

continuous rehearsal and evaluation. Although redundancy is associated with inefficiency,

Sagan explained, "Redundancy is absolutely essential if one is to produce safety and

reliability inside complex and flawed organizations" (p. 21). The "culture of reliability" is

made possible when organizations "recruit, socialize, and train personnel to maintain a strong

organizational culture emphasizing safety and reliability (p. 23). The resulting culture

empowers individuals at all levels in the organization to independently make good decisions

when there is no time to consult with upper management. Constant training and simulations

enable all members of an organization to develop the skills and knowledge necessary to

function in this culture. All four factors are necessary to effectively accomplish the

organization's primary goal of safety.

LaPorte and Consolini (1991) described three traits of HROs that differ from

organizations that are not as subject to failure: a malfunction by one element can bring the

entire organization to a halt; an HRO is intensely scrutinized by the public, which fears its

potential for failure; and reliability takes precedence over efficiency. Roberts (1990a) further

distinguished HROs from other organizations by the impact of mistakes on the public. "Many

organizations fail for some of the reasons noted here, but their failures only show up on their

balance sheets. HROs, however, must avoid errors or failure because the potential cost is

unacceptable to society" (p. 112). She summed up the environmental pressures and the

corresponding actions made by HROs to avoid failures (see Table 2.1). The elements listed

under complexity help explain how an organization responds to uncertainty in the

environment, while the elements under tight coupling explain how the organization adapts

internally when one function is closely aligned, or coupled, to another function.

Table 2.1

Environmental factors and corresponding actions made by HROs (Roberts, 1990a, p. 111).

Complexity	
Characteristics	Responses
• potential for unexpected sequences	• continuous training
	• redundancy
	• continuous training
• complex technologies	• responsibility and accountability at all levels
• potential for systems serving incompatible functions to interact	• job design strategies to keep functions separate
	• training
• indirect information sources	• many direct information sources
• baffling interactions	• training of specialized language
	• flexible exercises

Tight Coupling	
Characteristics	Responses
• time dependent processes	• redundancy
	• job specialization
• invariant sequences of operations	• system flexibility
	• hierarchal differentiations
• only one way to reach goal	• redundancy
	• system flexibility
• little slack	• bargaining and negotiation
	• system flexibility

Weick and Sutcliffe (2001) developed the concept of *mindfulness* from their observations of aircraft carriers, a type of high reliability organization. The ability to be on the lookout for anything out of the ordinary, and then prevent it from harming the organization, sets HROs apart from other organizations. HROs notice issues early when they are still small and manageable; other organizations may only notice issues when it is too late to react, or when they are attempting to explain what happened after a crisis has hit. Thus, mindfulness is another key element of the HRO culture.

Weick and Sutcliffe (2001) uncovered five characteristics of mindfulness: "preoccupation with failure," "reluctance to simplify interpretations," "sensitivity to operations," "commitment to resilience," and "deference to expertise" (p. 10). HROs do not count their successes; they count their failures. They encourage personnel at all levels to report problems, share lessons learned, and to not become complacent. On aircraft carriers, crew members are not reprimanded for mistakenly reporting a safety problem because the officers do not want to risk someone not reporting a problem about which they are not certain. When scanning for problems, HROs do not simplify their findings: "Knowing that the world they face is complex, unstable, unknowable, and unpredictable, they position themselves to see as much as possible" (p. 11). Similar to the findings in chaos research, the slightest variation in a system can create significant problems for an organization. Sensitivity to operations is about awareness of one's situation and being able to adapt without harming the organization. A key factor in sensitivity to operations is the leadership's willingness to listen to the employees who are getting the job done and are the first to see potential problems. As in the above example of the crew member reporting a safety problem on deck,

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the crew member must believe that he will be heard and that his concern will be acted on by the leadership. Otherwise, the crew member will not speak up.

A commitment to resilience describes how an organization can recover after an inevitable setback. As Weick and Sutcliffe explained, "resilience is a combination of keeping errors small and of improvising workarounds that keep the system functioning" (p. 14). HROs may not be immune from mistakes, but they operate in such a manner that encourages learning from errors. The final characteristic of mindfulness is that HROs defer to experts within the organization. Although there is a clearly defined hierarchy, the decision-making process is not purely top-down. Personnel from all levels in the organization who have expertise in a certain area are valued and included in the decision process (Weick & Sutcliffe, 2001).

In sum, HROs differ from other organizations based on their primary goal of safety, an entrenched culture of reliability, redundancy of key tasks, tight coupling, and a commitment to mindfulness, all within a complex environment of uncertainty with the potential of harm to society. Thus far, the majority of the HRO research has focused on the military, utilities industry, and air traffic controllers. There are potentially more characteristics of HROs that may be discovered as more organizations are observed. As discussed in the next section, however, high reliability is not a perfect solution to organizational management, and it is not suitable for every type of organization.

Weakness and Limitations of High Reliability

No one would argue that high reliability organizations are perfect. Clarke and Short (1993) point out that HRO theory may only apply under certain conditions. They cite the

erroneous shooting down of an Iranian commercial airliner by the U.S. Navy, in which 290 passengers were killed, as an example of "scenario fulfillment" (p. 391), in which Navy personnel carried out an often-practiced drill with devastating results. Under the conditions of war (the Iran-Iraq war), the information that was given to the officers onboard the *USS Vincennes* became misconstrued and ultimately was taken as evidence that an Iranian fighter jet was about to launch an attack. The authors suggest that the shooting would not have taken place under routine conditions, given the same information.

Another limitation of high reliability comes from the difficulty in defining an HRO. The broadness of the definition of a high reliability organization creates the problem of identifying similar organizations that one can research and draw appropriate comparisons (Clarke & Short, 1993). Roberts (1990b) found the lack of a complete typology of high reliability to be an impediment to research. This dissertation suggests that the problem of formulating a typology of all HROs may be alleviated if other factors, such as environment and organizational mission, were used to further classify these organizations for comparative studies.

According to Bierly and Spender (1995), the flexibility and decentralization that are hallmarks of HROs also present great opportunities for errors. As the level of technology increases and systems become more complex, the possibilities of human error and bad decision making multiply. The culture of reliability also presents problems for assessment. The inherent conflict between reliability and efficiency creates the difficulty in determining how to evaluate an HRO. For example, travelers want to be assured of the safety of aircraft and the protection from terrorism when they board a flight, but they also want to get through airport security quickly and avoid flight delays (Frederickson & LaPorte, 2002). It is rather

easy to rate an airline based on timely flight arrivals and departures, but it is more difficult to assess an airline based on the lack of a mechanical malfunction or the absence of a terrorist attack.

Finally, redundancy, which is a critical method for avoiding errors in an HRO, is an expensive proposition. Onboard an aircraft carrier, for example, there are multiple personnel whose job it is to observe the approach of each fighter jet to be certain that nothing compromises the landing. Most organizations cannot afford the cost of personnel and other resources to duplicate efforts, even in the name of safety (Roberts, 1990b). In the public sector specifically, redundancy violates the public administration mantra to avoid duplication and control costs. For public managers, the idea that accidents are rare drives the decisions to cut costs and reduce redundancy (Frederickson & LaPorte, 2002). In addition to the cost, redundancy may also *reduce* reliability in some instances by compounding the probability of error within each redundant component or by actually decreasing the reliability of each component in the system. Interaction of components can also prove detrimental, and the addition of components can increase the system's complexity rather than simplify it (Sagan, 1994). For example, if five individuals are observing the landing gear on an approaching fighter jet, and one person is blinded by the sun, he would assume that the other four will compensate for his inability to see. If he is the one person with the best vantage point, however, and he does not indicate that he cannot see the landing gear, the other four will assume his silence is indicating that all is well. In this case, redundancy has decreased the reliability of the entire system.

In sum, the limitations of high reliability theory include appropriateness of conditions, the lack of clear definitions, the dangers of flexibility and decentralization, and

the inefficiency of and potential damage from redundancy. Some of these theoretical

weaknesses may be addressed by assigning clear criteria for selection of organizations to

study, including comparable operating environments, similar organizational missions, and

analogous cultures. This selection refinement would reduce the limitations while creating

compatible research programs. This research will address those limitations by considering the

overall environment of public agencies that are mandated to respond to public crises. The

following section describes how the characteristics of high reliability, when coupled with the

worldview from chaos theory, can be applied to public sector crisis communication.

<center>A New Paradigm and Framework for Crisis Communication</center>

Chaos theory combined with the concept of high reliability organizations offers a

fresh worldview and a framework from which to plan for and manage crisis communication.

A multitude of books on crisis communication suggest that crisis planning and management

are separate functions from normal communication activities (see Barton, 2001; Caponigro,

2000; Fearn-Banks, 2002; Ferguson, 1999; Fink, 2002; Lerbinger, 1997). HROs know the

difference between normalcy and chaos, but the transition is seamless and anticipated (Weick

& Sutcliffe, 2001). These organizations are expecting the unexpected.

Weick and Sutcliffe's (2001) description of mindfulness shows similarities to the

concept of issues management in public relations. Pratt (2001) explicated four functions of

issues management in his research on the tobacco industry: "(a) anticipate and analyze issues,

(b) develop organizational positions on issues, (c) identify key publics whose support is vital

to the public policy issue, and (d) identify desired behaviors of key publics" (p. 336). Issues

management is an essential, proactive activity for public relations practitioners both before

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and after a crisis event (Seeger et al., 2001). Issues management can be seen as a complementary activity to mindfulness, which, as described above, is characterized by "preoccupation with failure," "reluctance to simplify interpretations," "sensitivity to operations," "commitment to resilience," and "deference to expertise" (Weick & Sutcliffe, 2001, p. 10).

Public relations scholar Priscilla Murphy (1996) first applied chaos theory to public relations as a means of studying issues management and crisis communication. She considered crisis to be a natural part of organizational life. She found that chaos theory was especially useful for "public relations situations whose salient feature is the unmanageability of public perceptions" (p. 95). She viewed this theory as a qualitative approach to understanding changes in public opinion while detecting emerging issues. Murphy explains that an issue can explode into something entirely different than its original form, much like a fractal image. The initial and resulting issues may no longer resemble each other, but an issues manager would understand how it transformed over time by looking at the larger picture. Based on chaos theory, Murphy offers the following definition of crisis: "incidents become crises when they mark bifurcation points in social values…. [S]ome theorists define crisis as a point in an organization's history which irreversibly changes its culture and business" (pp. 105-106). As an example, after the NASA *Challenger* disaster, the public perception of the space shuttle program changed dramatically, and NASA would forever be changed as it faced budgetary and operational restrictions from the federal government. Although Murphy laid the groundwork for application of chaos to public relations, she did not further develop the theory or conduct empirical studies of its use for crisis communication.

Other scholars have also addressed the applicability of chaos theory to crisis communication. Communication scholars Seeger, Sellnow, and Ulmer (1998; 2001) have done prolific research on organizational crises within the worldview of chaos. However, their exploration into chaos theory was a superficial one that did not reach the depths of understanding that Murphy provided. Their research mainly addressed development of crisis communication plans and analyses of organizational crises with suggestions for incorporating chaos into future research. Seeger (2002) goes a step further to explain the concept of chaos and to demonstrate how an understanding of complex systems can be useful in crisis communication. Seeger emphasizes the importance of examining the larger picture over time to get a better perception of the chaotic system. He proposes that communication itself is a bifurcation point and that crisis communication is a strange attractor. Although as yet untested, the fascinating propositions in these articles present opportunities for further exploration of crisis communication and chaos. Horsley (2005) used chaos theory to explain the violent system that was created by the D.C. snipers in 2002 and the resulting reaction to that system by law enforcement and government officials in their media and public communications.

Marra (1998) found that an organizational culture with the characteristics of an HRO was a better predictor of successful crisis communication efforts than having a crisis communication plan. The concept of autonomy was a deciding factor in case studies of AT&T's long distance network failure in 1990 and the University of Maryland's response to basketball player Len Bias' death in 1986. Marra found that AT&T's public relations staff had a high level of autonomy during their successful communication efforts and were empowered to perform their duties without intervention from management. Conversely,

Maryland's director of public information had to get every message about the Bias case

approved through university lawyers and administration. As a result,

> The *Washington Post* covered the crisis for 42 consecutive days, with
> 18 stories on page one and 42 stories on the front page of an inside section of
> the newspaper. The absence of autonomy for the university's public relations
> practitioners contributed, in part, to the overwhelmingly (84%) negative
> stories in the *Washington Post* – stories that could likely have been balanced if
> public relations staff at the university [had] been able to communicate more
> quickly. (p. 471)

The author does not address questions of blame and liability in these two cases, which

could have played a role in the response. The culture generated by a high reliability

organization that empowers personnel at all levels to react to emerging issues in a timely

fashion outweighs having a crisis communication plan when staff are powerless to enact it

(Marra, 1998).

While communication researchers have noted the benefits of incorporating chaos

theory in their research, no one has specifically addressed the application of chaos theory,

coupled with high reliability, as a theoretical framework that is suited for the public sector

environment. The next section demonstrates how this theoretical approach can be applied to

crisis communication in government organizations.

<p align="center">Chaos, HROs, and the Public Sector Environment</p>

Although chaos theory is still an emerging field of study, it has quickly crossed over

from the corporate realm to the public sector. Kiel (1994) proposed "a new paradigm" for

managing government by using the characteristics of chaos to expose opportunities for

positive change. Acknowledging that the government process is traditionally slow and

cumbersome, Kiel suggested that managing from the viewpoint of chaos can help reorganize

government, manage disasters, and realign the process of budgeting. As complex, dynamic

organizations, government agencies would no longer view change as a threat, but as an opportunity. Following the concept of a fractal, Kiel noted that crisis hopping, "a focus on the immediate problems of the moment without the foundation of any strategy guiding administrative behavior" (p. 181), may actually be damaging in the future. Without knowledge of the greater, more complex, issues surrounding that immediate crisis, the band-aid approach may not have the beneficial outcome one would hope for.

Table 2.2

"Organizational Attributes of the Equilibrium-Seeking and Self-Organizing Organization" (Kiel, 1994, pp. 186-187).

	Equilibrium-seeking organization	Self-organizing organization
Organizational attributes	*Macro-level properties*	
Culture	Unified equilibrium	Diversified far-from-equilibrium
Strategy	Adjustment	Continuous emergence
Planning	Stable goals	Continuous bifurcation
Structure	Flattened	Process structure
Distance from client	Remote	Involved participation
Environmental fluctuations	Damping	Creative response
Work force demographics	Mandated diversity	Intentional diversity
Organizational attributes	*Micro-level properties*	
Work teams	Stable	Unstable
Control mechanisms	Defined tasks	Bounded instability
Work process	Sequential	Reengineered parallelism
Process analysis	None	Activity-based costing
Variation in systems	Source of error	Source for learning
Change process	Incremental restabilization	Perpetual innovation
Chaos	As excuse	As opportunity

Kiel (1994) used the premises of chaos theory to demonstrate the change in thinking that would result if the public sector adopted a non-linear worldview (see Table 2.2). Organizations that follow the traditional systems theory approach of management are labeled "equilibrium-seeking" (p. 186). These organizations work to maintain order, and "disorder, variation, and instability are seen as dysfunctional" (p. 13). Equilibrium-seeking organizations do change, but the change is slow and reactive. The self-organizing organization, on the other hand, welcomes change. As Kiel explained, "Uncertainty is considered an essential element of the change process; surprises are expected" (p. 15). Self-organizing government organizations see chaos as an opportunity for learning and improvement (pp. 15-16).

Sellnow, Seeger and Ulmer (2002) collaborated on an empirical investigation of their chaos propositions for crisis communication (see Seeger et al., 1998; 2001) with a case study in the public sector. They used the language of chaos to interpret the events surrounding a 1997 flood in the Red River Valley in North Dakota and Minnesota and the government's response. Using interviews of government officials and analysis of media coverage and agency documents, the authors identified the following characteristics of chaos:

- Fractals: officials did not consider the full potential of flooding from the spring thaws, remaining ice, land flooding, and continuing snowfall when gauging the river levels.
- Bifurcation points: the river surpassed previously recorded levels with which no one in the area had any experience; city, county, and state agencies self-organized to collaborate on their response.
- Strange attractors: the National Guard and FEMA brought order and security to the crisis by improving communication and distributing recovery information.

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Government officials initially were unable to manage the chaos created by the Red River Valley floods because they relied on established routines and linear measures to mitigate the situation. At a time when the public needed the best available information in a timely manner, emergency management personnel were disseminating inaccurate information that lulled the public into a false perception of safety. The authors claimed that a less-certain assessment of the flooding potential would have been a more ethical approach when there were so many unknown factors. By ensuring the community that the river was not going to flood, officials did not make residents aware of the less probable consequences that would have allowed them to be more prepared for evacuation or to protect their property (Sellnow et al., 2002).

As shown above, high reliability has been researched almost exclusively in the public sector, including the U.S. Navy, government-run airport security, and federal prisons. There has been no research on crisis-mandated public agencies, however, such as departments of emergency management, or on the reliability of crisis communication. The limited field of crisis communication preparedness in the public sector demonstrates a need for more research and evidence that there is plenty of room for new theoretical approaches. Using Weick's and Roberts' characteristics of an HRO, one avenue of research would be to investigate the characteristics of a government HRO, such as an emergency management agency, and then present them to non-HRO government agencies, such as departments of agriculture or education, much in the way that Weick and his colleagues did for corporations. As Weick and Sutcliffe (2001) make clear in their findings, any organization can benefit from using the characteristics of an HRO, and those characteristics can vary from industry to industry. The goals and mission of a government agency would likely differ from a corporate

HRO and therefore present a different set of characteristics to explore. Additionally, the HRO characteristics have been applied to an organization as a whole, not to a specific activity such as communication. Furthermore, a quantitative area of research could include a survey of government public relations managers' attitudes toward chaos and an evaluation of their potential to operate using such a worldview. The identification of fractals, bifurcations, and strange attractors would change the way public sector communicators evaluate their efforts and plan for future crisis situations. Chaos theory, when coupled with the concept of high reliability organizations, presents an abundance of opportunities for research in public sector crisis communications.

Summary and Implications

Chaos theory and high reliability organizations (HROs) combine to allow an organization to better predict, adapt to, and manage crisis situations. In sum, chaos theory presents a worldview in which people expect things to go wrong *naturally*; crisis is an inherent part of organizational life and can lead to organizational learning and positive change. By operating within a chaotic worldview, people become more aware of potential dangers, are ready to respond to them, and accept these challenges as opportunities (Kiel, 1994; Murphy, 1996). High reliability provides the structure for operating under such a worldview. Employees are empowered to respond to a crisis situation without having to go through a rigid hierarchy, all members of the organization have a clear understanding of the mission and goals, and everyone knows how his or her role corresponds to the accomplishment of that mission. An overarching characteristic of an HRO is the concept of mindfulness. Much like environmental scanning in public relations, all members of the

organization are on the lookout for anything out of the ordinary that may signal a change. Signals that other organizations might ignore as being insignificant are noticed and attended to in an HRO (Weick & Sutcliffe, 2001). The structure of an HRO allows an organization to benefit from the worldview of chaos and do a better job of mitigating, preparing for, responding to, and recovering from a disaster.

Koehler et al. (2001) elaborated on the benefits of chaos theory in disaster management. Using an evolutionary metaphor of organisms adapting as they approach "the edge of chaos" (pp. 297-98), the authors described how an organization, when confronted with chaos, has the potential to be highly adaptable. After an organization faces a disaster, it is unlikely to implement the same emergency response plan that was so carefully developed and rehearsed during the proactive phases. Instead, the organization exhibits signs of fractals, bifurcations, and self-organization that allow it to adapt to the problem at hand. This process reduces the predictability that an organization will succeed or fail in its response. It is interesting to note that Koehler and his colleagues state that the organization goes back to its original form after the disaster is over. They do not indicate that the organization has any lasting changes that would be the result of learning.

Koehler et al. (2001) called this process of adaptation morphogenesis. This term explains how an organization breaks down its previous form of order and reorganizes in response to a substantial stimulus, such as a disaster. The authors argue that an emergency management organization cannot effectively deal with a disaster unless it goes through this metamorphosis. The change is constrained by the organization's understood mission and roles and the scope of the disaster. The disaster becomes the bifurcation point that reorganizes the system. Therefore, the policies and procedures from the proactive phases are

no longer applicable to the system after it bifurcates. The dynamic nature of an organization responding to a disaster complements the HRO concept in which the organization is flexible and willing to change the rules to respond to a change in the environment.

Chaos and disorder can be liberating for a public agency if the adaptation is well executed. This allows employees to be creative, autonomous, and to set aside outdated formalities while seeking new approaches to problems. Kiel (1995) claimed that this liberation creates variation in an organization, which in turn signals learning. Although Koehler and his colleagues (2001) left learning out of their explanation, Kiel filled this gap to show that a public organization can learn from chaos.

CHAPTER III

RESEARCH QUESTIONS AND METHODS

The literature review found in Chapter I reveals the inadequacy of the prevailing

crisis communication research in addressing the unique needs of the public sector. In sum,

the existing crisis communication literature focuses on how a crisis affects an organization

rather than a general public. The research is biased toward the operational environment of the

corporate sector, which includes missions and goals that differ from government agencies.

Also, the definitions of public, crisis, and crisis communication in the literature are

incongruent with the way crisis-mandated government agencies define these terms. The

public sector's organizational mission, environment, and terminology must be incorporated

into research to produce findings relevant to this important area of crisis communication.

One solution for filling the gaps in public sector crisis communication research is to

incorporate the worldview of chaos theory and the concept of high reliability, as discussed in

Chapter II. Chaos theory offers a systematic approach to deconstructing a crisis event to

enhance understanding of how the crisis evolved, while high reliability provides a framework

for observing the organizational characteristics that allow an agency to respond to chaotic

conditions. The resulting theoretical model will be tested for its application to government

communication during public crises within the specific parameters of the public sector

environment. Therefore, this study builds on the existing literature in public administration,

public relations, and high reliability research to develop a middle-range theory specific to public sector crisis communication.

Research Questions

This study builds upon three fundamental questions. The questions address the organizational characteristics of state government public information offices in crisis-mandated agencies.

1. What are the organizational characteristics of a particular state emergency management agency's public information office?

This question allows an examination of the routines, structure, policies, and procedures of one public information office that will reveal how the staff members generate communication regarding crisis events. This question fills the gaps in crisis communication literature in which government agencies and their public information organizational practices have been left out of the research.

2. Do emergency management agencies in other states demonstrate similar characteristics?

This question permits triangulation of findings based upon similar state agency units operating under comparable environmental parameters with compatible goals.

3. How well does high reliability organization theory explain the observed characteristics and behaviors of state emergency management agencies' public information offices as they respond to chaotic situations?

This final question explores the applicability of HRO theory to emergency management public information to determine the suitability of this theoretical explanation to the observed phenomenon in this study.

This dissertation employs qualitative research methods to explore these three questions. The following section describes the participant observation and in-depth interview methods selected for this study.

Methods of Data Collection

I conducted a participant observation study of the public information office at one state's emergency management agency (SEMA) for a total of six weeks and then interviewed public information officers from emergency management agencies in five different states. Organizational studies by Karlene Roberts (1989; 1990a; 1990b) and Karl Weick and Kathleen Sutcliffe (2001) influenced my methodological choices. These researchers spent months observing activity on Navy aircraft carriers and interviewing everyone from the captain to the cook to learn how this group of men (predominantly) operates in a safe fashion under chaotic conditions. Through their extensive observations and interviews, these researchers developed characteristics of high reliability organizations (HROs) that described how the aircraft carrier operations avoided calamity and achieved their highest goal of safety.

Roberts was initially influenced by the work of organizational scientist John Campbell (1977). Campbell challenged researchers to develop theories of organizational effectiveness using the participant observer method. Through participant observation, a researcher can immerse herself in the setting and develop the trust of the participants (Denzin & Lincoln, 2003). Although participant observation is perhaps the most demanding and time-

consuming of all the qualitative methods, it helps the researcher develop a deep understanding of the topic of interest and leads to rich, descriptive detail in the analysis (Angrosino & Mays de Perez, 2003; T. W. Lee, 1999).

During my participant observation, I assisted the members of the public affairs office (PAO) by helping with special projects, mailings, proofreading, and phone calls. I took extensive field notes daily, conducted casual interviews with participants for clarification or explanations, made sketches of the setting, outlined routines, and began to generate thematic categories that help explain how this agency conducts crisis communication. I followed the advice of Lee (1999) and began to analyze the data and develop initial findings after five weeks before returning for another week to test, verify, and further develop my findings. Although Denzin and Lincoln (2003) suggest that most participant observations can take months or years, the six-week timeframe was sufficient for this research study and fit the realistic constraints imposed by my dissertation schedule. I reached data saturation when I began to notice in my fifth week that daily observations became repetitive and did not disclose any additional information.

Triangulation is one method of validating qualitative data (Creswell, 2003; Denzin & Lincoln, 2003; Trochim, 2001). Therefore, I utilized a second research method and conducted in-depth interviews of public relations managers at other state SEMAs. These interviews are relevant to my findings because they were conducted with state agencies that have similar missions and environmental constraints as the SEMA that I observed. I followed McCracken's (1988) guidelines for the long interview, which entail four steps. The first was the literature review, in which the topic of crisis communication was researched thoroughly, research questions were developed, research gaps were identified, and potential categories of

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data were initiated. Second was the review of the cultural characteristics. For my study, this involved a thorough reading of the literature on the public sector environment and how that may affect the public relations function. The third step was categorizations of the cultural characteristics, in which the questions for the interview guide were developed. McCracken explained that the interview should consist of "grand tour" (p. 35) questions that are open-ended and will spark conversation; floating prompts that are derived from the participant's own words and used for follow-up questions; planned prompts which help keep the conversation going in the right direction for the researcher; and auto-driving techniques, in which the researcher would show the participant a visual or textual prompt as another way to spark a conversation. McCracken emphasized that the interview should be free-flowing yet controlled to be sure that the researcher's questions are addressed. The final step was the analysis phase, in which the utterances were transcribed and separated as individual observations that were then categorized thematically and analyzed in terms of connections, similarities, and differences. The result is a comprehensive list of the characteristics that describe how this SEMA conducts routine and crisis communications.

The interview guide I used for this research had two primary statements: "Describe for me what you do in a "normal" day in the public affairs office," and "Describe for me what you do in an "abnormal" day in the public affairs office." These statements were intended to get the participants to discuss the routines in the public information office. Probes, such as "How do you do that?" "What is the approval process like for items such as news releases or information requests?" and "In what way are the procedures different, if at all, during a crisis situation?" were geared to reveal how the staff transition from routine public relations to crisis communication (see Appendix I for the complete interview guide).

Participants

For the participant observation study, I selected a state emergency management agency that responds to a wide variety of natural and manmade disasters. This particular agency, which will remain unnamed because of promises of confidentiality, granted me full access to the public information office for the duration of my study. All individuals who participated in the interviews or the observation study were assigned pseudonyms. The participants in the in-depth interviews were public information officers from five different state emergency management agencies: two Southeast states, one Northeast state, one Midwest state, and one western state. Four interviews were conducted over the telephone averaging 38 minutes each. One interview was conducted over email to accommodate the participant's schedule. The agencies were selected to provide geographical diversity across the United States. This was important to develop an understanding of the organizational factors involved in crisis communication that are not based on response to similar crises. The sample of five follows recommendations for interview sample size by McCracken (1988). This small number allows for deeper exploration of crisis communication practices in each state. However, I also considered Glaser and Strauss' sampling criterion of "theoretical saturation," in which new data no longer emerged from the interviews or observations (1967, p. 61).

I conducted a pilot study in the spring of 2005 to test my interview guide and to identify potential problems that may result from the participant observation. I selected a state department of transportation for the pilot study because it operates under similar environmental constraints, it manages a variety of crises from major interstate accidents to potholes, and it maintains close communication with the media and the public. I chose not to

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use an emergency management agency because the total population is small (50 states), and I did not want to eliminate a potential interview subject from the sample pool. I conducted one in-depth interview with the public information director and completed a two-day participant observation study of the public information office.

For the pilot study, I contacted the public information director by email and phone to explain the study and determine her interest in participating. The only concern that the director expressed was for my potential exposure to personnel issues. I explained that personnel matters were not intrinsic to my study and that I would leave the room, turn off recording devices, and cease taking notes if these issues arose during my observation. The director was satisfied with those conditions and agreed to participate in the study.

The director and her staff were all informed about the parameters of the study and given an informed consent form to read and sign, which was approved by the University of North Carolina at Chapel Hill Institutional Review Board. All members of the public information office were told that their participation was voluntary and that neither their names nor the name of the agency would be identified in the report. The agency was only identified as a state transportation department, and each participant was assigned a pseudonym. No one outside of this study had access to materials, and all notes, audio recordings, and transcripts were password-protected on a computer or locked in an office. Once consent was obtained, the interview guide was used for the in-depth interview with the public information director. The two-day observation period began after the initial interview. A total of nine staff members participated in casual interviews throughout the observation period. In addition, I had a follow-up visit with the director after the study was completed for

clarification and validation purposes. I examined the data using the methods of analysis

discussed in the following section.

The pilot and dissertation research were approved by the UNC-Chapel Hill

Institutional Review Board, JOMC 05-018 (see Appendix II). The same contact letter (see

Appendix III), consent form (see Appendix IV), and interview guide (see Appendix I) that

were used for the pilot study were used for the dissertation.

Data Analysis

For this study, the first steps were to transcribe the in-depth interviews and write

detailed field notes from the observations. I transcribed the interviews verbatim from a digital

recording device, and I wrote field notes at the end of each day of observation. For the data

analysis, I used the matrix method developed by Miles and Huberman (1994). This method

included data reduction, data display, drawing conclusions, and validation. Data reduction

entailed reducing the miles of transcripts and field notes to words, phrases, and ideas that

could be organized in meaningful ways. I developed matrices, which allowed for the creation

and categorization of variables that could be analyzed for thematic connections, process

connections, counting of phrases or words, and identification of patterns. Once the matrix

display was done, I was able to draw conclusions about the derived variables, themes, and

patterns. I had two matrices in my final analysis: the first from the participant observation,

and the second from the in-depth interviews with public information directors from other

states. The resulting matrices were compared and contrasted for validity as part of the

triangulation of findings.

I used analytic induction to draw comparisons between the high reliability

organization theoretical framework and my observations of a SEMA public affairs

organization in action. Analytic induction is a formal means of analyzing qualitative data.

For my research, I proposed that HRO theory would explain the routines, policies, and

procedures evident in state emergency management crisis communication efforts. Using the

matrix method, I compared my findings from the first case, the participant observation, with

the known variables of HROs. Next, I compared the findings from my second case, the

collective data from the phone interviews with other state emergency management agencies,

with the HRO variables. The two cases were analyzed independently for fit in the theoretical

framework, and then compared and contrasted for differences in the cases that would present

new variables for consideration. This multi-step method of analysis allows one to continue

until a case is found to falsely correlate with the presumed explanation, and then to either

refine the sample or refine the explanation until a common denominator is reached that

connects all of the cases (Ryan & Bernard, 2003).

Reflexivity and Reactivity

Both Creswell (2003) and Glesne (1999) agree that the interpersonal nature of

qualitative research requires that the researcher examine how her presence can affect her

interaction with participants and her interpretation of the data. Essentially, the researcher

herself becomes the research instrument. I approached this research with great familiarity of

some areas, and little familiarity with others. As a former state government PIO, I have

knowledge of the environment in which the public relations work takes place, but I did not

have professional experience in an emergency management agency. My ability to "speak

their language" from my career in government gave me credibility with the participants, while my inexperience with emergency management allowed me to ask naïve questions that garnered detailed responses from the PIOs. For example, the SEMA staff members were very willing to decipher acronyms or define terms when I asked for explanations, but they were comfortable using general state government jargon in our conversations.

The PIOs welcomed me as part of their staff during my observation period, giving me an office with a computer and including me in all staff business. I reciprocated by stuffing envelopes for large mailings, proofreading news releases, and assisting on projects. After just a few days of observing the SEMA staff, I discovered that they began to feel comfortable opening up to me. Several of the PIOs talked to me off-the-record about job-related issues, and two asked me for career advice. One spoke to me privately about her dissatisfaction with her job, and on my final day at SEMA told me in confidence that she was going to resign. Although at times I felt uncomfortable playing the role of confidante, I chose to handle the private conversations with empathy and did not initiate these conversations on my own. I never discussed this information with other SEMA members, and therefore maintained their trust throughout my six-week stay. There were few occasions when the PIOs asked me to leave the room or stop taking notes during a discussion, and I never felt that they altered their behavior in my presence.

I felt an unexpected sadness when I said my good-byes to the staff. The five PIOs had treated me as a colleague, and I enjoyed the time I spent with them. I realized that the training and exercises that the staff went through were not only a bonding experience for them, but also for me, since I was part of the ups and downs, excitements and disappointments, successes and failures. This emotional connection added to my experience

and gave me a better perspective on the day-to-day life in the public information office than if I had been studying them from a distance.

While I had less of an emotional connection with the SEMA PIOs during my phone interviews, I found that my background as a government PIO gave me instant credibility with the participants, and that once again my naivety with emergency management allowed me to ask the appropriate probes and get the detailed responses I needed. As a result, the interview participants were very willing to help, and I enjoyed the conversations with them.

Summary

This chapter presented the research questions that guided this study, described how the data collection was conducted using qualitative research methods, and explained how the data were analyzed. This chapter also discussed my role as a participant observer and interviewer. The next chapter details the results of my participant observation.

CHAPTER IV

RESULTS FROM PARTICIPANT OBSERVATION

During my six-week participant observation in January and February of 2006, I had

the opportunity to watch the public affairs staff from one state's emergency management

agency in action as they went about their daily duties, trained in a new, state-of-the-art

emergency operations center (EOC), participated in a statewide terrorism drill, worked on

long-term projects, and prepared for an annual radiological exercise. After just a few days of

observing the public affairs staff in action, I realized that they operated differently while

doing daily, routine tasks, than they did while responding to a crisis. The policies,

procedures, and routines that the staff followed while conducting normal public relations

activities changed when a crisis threatened or emerged. Therefore, the following discussion

of observed organizational characteristics of a SEMA public affairs office (see Table 4.1) is

delineated according to the prevailing dynamics: routine, transition to crisis, and crisis.

Background on the State Emergency Management Agency (SEMA)

The mission of this state's emergency management agency is to coordinate the state's

emergency preparedness, mitigation, response, and recovery efforts with the ultimate goal of

protecting lives and property. The coordination efforts include working with localities,

federal agencies, other state agencies, and other states as needed to respond to emergencies.

The most common emergencies that SEMA responds to are weather-related emergencies, but

terrorism preparedness and response have become a high priority since September 11, 2001. There are approximately 120 full- and part-time employees agency-wide and an additional 150 reservists and trainers with expertise in a variety of areas who are called in when needed. The agency leadership includes 11 individuals at the director level and above: the state coordinator of emergency management, deputy coordinator, deputy state coordinator for administration, director of local support services, director of technological hazards, chief financial officer, director of operations, director of preparedness, director of recovery and mitigation, director of human resources, and director of public affairs.

The Public Affairs Office (PAO) has three full-time employees and two unsalaried, part-time employees. I used pseudonyms for all PAO staff members to preserve their confidentiality. David is the director of the public affairs office. He has taken graduate courses in mass communication and is accredited by the Public Relations Society of America. David oversees the office's budget, staff, strategic planning, and project management. He is the primary media contact and spokesperson for the agency. As a member of the agency's leadership, David consults regularly with top management and advises them on issues related to public information, media requests, campaigns, and hot topics that could affect the agency. He attends the weekly leadership meetings, communicates regularly with the deputy state emergency coordinator in person or by email, and has a close relationship with the governor's communication staff. David shares the information he learns with the PAO staff in meetings, emails, or informal conversations.

Table 4.1

Summary matrix of environmental and organizational characteristics in SEMA public affairs.

Mode	Characteristics	Example	Significance
All Times	Reliance on technology	PAO staff members communicate with email, BlackBerry, cell phones, and emergency management intranet; News-quality cameras at EOC send footage via satellite directly to media or other agencies.	PAO staff members' dependence on technology helps them communicate with other parties but can also be detrimental when communication systems fail.
	Reliance on the news media	PAO develops relationships with reporters, pitches preparedness stories, and disseminates information to the media during emergencies.	SEMA public affairs does not have the resources to reach the public with preparedness or emergency messages on its own.
	Coordinating agency	Uses training and communication with state and local agencies to reinforce the concept of a statewide team that responds to emergencies.	No single agency can respond to a disaster on its own.
	Emergency Management culture	SEMA employees do not expect a 9-5 work schedule every day and are ready to respond to a crisis.	This mindset helps employees keep the agency mission at the forefront; they are ready to disrupt routines.
	Issues Management	PAO monitors daily news stories; SEMA leadership consults regularly with the PAO director.	The PAO is able to respond to media inquiries; PAO keeps leadership informed of potential media issues.
Routine	Training and exercises	"Any exercise helps us be more prepared for any emergency that comes along. Since 9/11, we have been raising the bar to be better prepared."	PAO staff prepares materials for a variety of potential crisis events and sharpens communication skills.
	Lack of concern about routine duties	PAO director is largely unprepared for upcoming meetings and seems to only concentrate on one issue at a time.	PAO staff demonstrate little concern for negative consequences in everyday matters.

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Table 4.1 *(continued)*

Routine	Lack of leadership on projects and outreach programs	No one was in charge of the invitations for the grand opening of the EOC, and mistakes were not discovered until the last minute.	Individual staff members do not take responsibility for successful completion of their assigned duties.
	Lack of importance placed on the PAO function by other SEMA departments	PAO was not informed of the state employee terrorism preparedness program launch.	The PAO missed an opportunity to issue a proactive news release and generate positive news.
	PAO has little independence on agency projects	Webmaster had to coordinate a 13 person committee for the Website redesign; When they were all called out for a crisis response, the work came to a standstill.	Routine projects can be delayed by the agency bureaucracy.
	PAO written job descriptions	Several PAO staff said that their job descriptions are inaccurate, vague, or useless.	PAO staff are unclear about their responsibilities in day-to-day work.
Crisis	Tremendous importance placed on the PAO during radiological exercise	"This drill is much bigger for the public affairs office than any other division at (SEMA). We have a much busier role in this exercise than anyone else and are heavily scrutinized by the FEMA evaluators."	Poor performance can result in a low grade and corrective orders from FEMA.
	Rumor control	All rumors are followed up on and then clarified in media conferences and news releases.	The media (and public) get accurate information in a timely fashion.
	PAO coordinates activities with other units during a crisis.	Sirens, news releases, and EAS message must be carefully coordinated and timed.	The media (and public) get accurate information in a timely fashion.
	Little attention given to mundane details during exercise	Basic information such as phone numbers were not verified before using in news releases.	These mistakes required correction by the FEMA evaluators and could cause confusion among the public during an actual disaster.

Table 4.1 *(continued)*

Crisis	Reliance on intergovernmental relations	SEMA works closely with state police, transportation, national weather service, and other agencies as the event requires.	SEMA is a coordinating agency, while other local and state agencies are responding agencies.
	Reliance on reservists and PIOs from other agencies	"They bring different knowledge and capabilities depending on what agency they are from, and we use their skills."	SEMA does not have enough public affairs personnel on staff to manage a disaster event on its own.
	Strong chain of command	SEMA employs the joint information center (JIC) structure.	The JIC structure eliminates confusion by addressing training, resources, roles, authority, and responsibilities.
	Reliance on internal communications	PAO office is located near the EOC, the director of operations, and the executive briefing room; The PAO staff is always included in decisions and activity reports.	The public affairs office is informed of all activities during a crisis event and can distribute up-to-date information to the media.
	Reliance on external resources	Mutual aid agreements provide personnel and resources from states that are not directly affected by a disaster; SEMA also gets help from other state agencies.	SEMA does not have the resources on its own to respond to a major disaster.
	Change in venue	When the EOC is activated, all functions performed by the PAO are done at the EOC so they are in close contact with all involved players and decision makers.	There is a clear distinction among the PAO staff regarding disaster mode and routine mode.
	Change in priorities	"We ignore everything else that is going on. Everything else pretty much goes to the back burner. We've had to cancel events because of storms."	The PAO can dedicate its entire staff and all resources to an emergency response.
	Change in leadership	Leadership over SEMA shifts from Public Safety Secretary to the Governor in a crisis.	This shift improves the line of communication to the top state leader, ensures availability of needed resources, and speeds up approval and procurement processes.

Philip, the agency's outreach coordinator, also serves as a secondary spokesperson for the agency. Philip promotes and coordinates the agency's emergency preparedness efforts, which include weather safety and terrorism preparedness campaigns for local governments, state agencies, civic groups, and the general public. Jack is the agency's Web master, but his official title is public relations coordinator. Jack develops and updates the SEMA Web site, intranet, and the external Web site for all emergency managers in the state. Although his primary responsibilities are Web development, Jack also uses his communication skills for copyediting, broadcasting the Emergency Alert System (EAS) messages, and occasional media interviews.

Zahra, a part-time public relations specialist, is the writer for the public affairs office. She writes agency news releases, Web site content, newsletters, and preparedness campaign materials. Zahra also does event planning and helps cover for the public relations assistant, Leslie, when she is out of the office. Leslie, who, like Zahra, also works about 30 hours a week, primarily does administrative support for the public affairs staff. She routes media calls to David or Philip, and each morning she collects news stories of interest to the SEMA staff and distributes them via email.

As with all state employees, the director, outreach coordinator, PR coordinator (Webmaster), PR specialist (writer), and the PR assistant have written job descriptions that explain their roles in the agency. Some are quick to point out, however, that their job descriptions for everyday tasks are inaccurate, vague, or useless. Jack, the Webmaster, said, "I think they [David and the agency leadership] are still trying to figure out how to best use me." Zahra, the PR writer, said that her job description listed responsibilities such as media monitoring that she never does unless a coworker is absent. Leslie, the PR assistant, who had

been on the job for about one month, said that her written job description does not reflect what she was told to do after she was hired. She feels that her actual work includes more administrative responsibilities than were indicated during the hiring process. David, the director, admitted that he has not done very much training with the staff on their roles and responsibilities, but added, "Most of them, they know their role. That's part of their job description. They know what their job is pretty much from just one-on-one discussion."

As a whole, the public affairs staff is relatively inexperienced in government crisis communication. Of all the PAO staff, David has the longest tenure of nearly three years, and worked previously for the state department of transportation. Jack has been with SEMA for 19 months, Zahra for 16 months, Philip for 6 months, and Leslie for just 1 month. David is the only staff member who worked in public relations prior to joining SEMA, although Leslie and Zahra both have degrees in mass communication.

In sum, the PAO's small staff of three full-time employees and two part-time employees has modest experience in emergency management. Some of the staff expressed concern over the vagueness of their job descriptions. The next section discusses the work that the staff members do on a daily basis in the public affairs office.

Routine Public Affairs Tasks

For the public affairs office in this state's emergency management agency, a routine day is one in which there are no hurricanes, hazardous materials incidents, or terrorist threats. The day-to-day schedules are shaped around training, media inquiries, drills, preparedness campaigns, and current projects. Each day's schedule differs based on the tasks at hand, and

no two days are the same. "There are no set things," said Zahra, the PR writer. "I'm doing whatever project's on top of my pile, whatever deadline is coming up."

On my first day at SEMA, David held a staff meeting, the only one during my six-week observation period. The agenda covered several activities that would take place over the coming months, including a graded nuclear power plant exercise, the grand opening of the new state emergency operations center (EOC), the campaign for tornado preparedness month in March, and a Basic PIO course for local and state public information officers. David discussed the need to develop news releases, talking points, and other materials for these events, as well as upcoming training sessions for all local and state PIOs involved in the nuclear exercise. Although many of these activities occur regularly, most of the staff were hired since the last events were held, so David suggested that they check files from past years to see what needed to be done. Later that day, I attended the senior staff meeting with David. This weekly meeting offers a chance for all members of the agency leadership to report on current topics and learn what other divisions of the agency are working on. David gave an update on public affairs activities, highlighting preparation for the grand opening of the emergency operations center and PIO training for the nuclear exercise.

One function that takes place routinely is media monitoring, a strategy of issues management. Each morning, Leslie, the PR assistant, scans the state and national news Web sites and produces "Headlines," a collection of news clips related to state politics or emergency management issues, and distributes them by email to all SEMA employees. If Leslie is not in the office, Zahra is responsible for collecting and distributing the news clips. David, the director, usually arrives at work first, around 7:30 each morning. He does his own scan of the media to look for hot issues that may have a direct impact on the agency and

alerts the agency leadership. "If there's something in the news, I can do it before we get clips off," he said. "I let my bosses know that there's an issue out there or something that we need to be ready for."

Issues management is a priority for all of the PAO staff. In addition to watching the news and alerting agency leadership of potential issues, the PIOs also track media inquiries, emails to the agency Web site, and information posted on Web EOC, an online community that is used by emergency management personnel across the state. Everyone in the agency pays attention to signals from a potentially volatile issue – the weather. Employees from around the state distribute regional weather forecasts to all employees by email so that everyone is aware of potential weather threats and can prepare to respond if needed. SEMA employees anticipate that any change in the weather can create a problem for travel, public safety, or public services. Based on the information they receive from these sources, David consults with the agency leadership before deciding whether to generate news releases or media calls regarding hot issues.

In addition to monitoring the news, the public affairs staff also works to strengthen relationships with local and state reporters. The PAO relies on the media to communicate information to the public during an emergency, so the staff works to develop relationships with local and state media during routine times. For example, after a major hurricane, localities tried to contact radio stations at night to broadcast advisories for the public to boil all water used for drinking and cooking. No one was available to answer phones at the radio stations after hours, and the local and state PIOs did not have home contact information for station employees. David has been working with the state association of broadcasters since that event to develop contact lists for after-hours emergencies.

In sum, issues management and media relations quickly emerged during my observations as key routine public information practices. Staff perform these tasks on a daily basis. The next section discusses some of the long-term projects that I observed the PAO staff working on during my six-week visit.

Long-Term Projects

Most of the long-term projects that the PAO staff works on are seasonal preparedness campaigns that take place annually. Examples include severe winter weather awareness, tornado awareness, hurricane preparedness, and national preparedness month, which has a terrorism theme. Other long-term projects include agency special events, training development, and grant writing and research.

During my six-week observation the staff was organizing a special event, the grand opening of the new, state-of-the-art emergency operations center. No one on the SEMA public affairs staff appeared to be in charge of this project, and when the staff met to stuff envelopes for the event invitations, they discovered they had about 200 fewer invitations than they needed for the number of names on the mailing lists. Zahra became defensive and said that she ordered the number of invitations that she was told were needed, but as David thumbed through the labeled envelopes, he realized that many of the names were not on the original list. The PAO staff had been given printed sheets of labels from several departments within SEMA, and no one had checked for duplication or accuracy. David made the decision to have his staff order more invitations rather than delete the extra names. As a result, more people were invited to the grand opening than could reasonably fit at the location, forcing David and his staff to reconsider the schedule of events. The event took place one month

after my observations ended, so I did not have the opportunity personally to see the results. I followed up with Zahra about the event, and she said the staff was pleased with the results. Fewer guests came than they had projected, so there was ample room for everyone in the facility.

The staff also made plans for Tornado Awareness Week, which would take place in March. Once again, there appeared to be a lack of leadership on this long-term project. Philip, the outreach coordinator, would normally be in charge of these seasonal awareness campaigns. Because he was overwhelmed with planning for the EOC grand opening, Philip began to lobby for Zahra to take over the tornado week planning. David did not make any firm decisions about who was in charge, and Zahra indicated that she would work on the project, but that she was "not in charge." This event also took place after my observation period.

In sum, the public affairs staff is responsible for a wide range of routine projects, but there appeared to be some conflict among the staff regarding who was in charge of certain activities. Most of the projects relate to emergency preparedness efforts, which are detailed in the next section.

Statewide Preparedness Efforts

The public affairs office helps fulfill the agency's responsibility to train and prepare state agencies, local governments, and the general public for disaster preparedness through public information campaigns, news releases, information posted on the agency Web site, and training for PIOs across all branches and levels of government. The efforts made during routine times are intended to ensure that the response to future disasters will be cohesive and

organized. The public affairs staff works with PIOs from other state entities, such as the state

police, transportation, health, and agriculture, to reinforce the idea that emergencies are not

just managed by SEMA, but by the state as a whole. To succeed, all PIOs from state and

local agencies must share the same goal of working to protect citizens and their property

through coordinated emergency management. Intergovernmental relations is central to

SEMA's mission; as a coordinating agency, SEMA cannot respond to an emergency on its

own, but rather pulls together the personnel and resources of state and local agencies. David

explained how intergovernmental relations affect his day-to-day work:

> Everything we do within this agency is bringing other people together
> to work on these issues [emergency preparedness and response] because these
> issues are not single-agency kinds of things. They affect so many people at the
> state and local level. So we are constantly trying to bring people together and
> get consensus, and move things forward, and that's really how this agency
> operates. And then during a disaster or an emergency, we bring them in
> because they are the team that can make things happen; we just happen to
> manage the process in a lot of ways.

Inter-agency cooperation is not always successful, however. During my first week of

observation, David discovered that a major initiative to train state employees on terrorism

preparedness had launched about two months earlier. David said he knew that the program

was being developed but was not informed that the program had been finalized and that

classes were being held around the state. As a result, David felt it was too late to issue a news

release that would have generated positive press for the agency or to assist in promoting the

program to employees. David indicated that this was one of many lost opportunities that

occur when other departments or agencies overlook the public relations component.

During my six-week observation, the PAO staff as well as other state and local PIOs

participated in two formal training sessions related to the impending radiological exercise as

well as several informal training sessions to familiarize themselves with the new EOC. In

addition to training for specific exercises, SEMA offers a basic PIO course for all state and

local agency personnel who are interested in general public relations and media relations, and

many PIOs also take advanced courses in crisis management through FEMA. The PAO staff

also participated in a statewide terrorism drill in January that simulated a terrorist attack on a

university campus. PIOs from other state agencies were able to train in the new EOC for the

first time while practicing emergency response measures related to public information.

For most of January, the public affairs staff was busy coordinating the training and

preparation for all PIOs who would participate in the radiological exercise, which took place

in early February. The formal training for the radiological exercise included a session with all

state and local PIOs who would be involved and a tabletop exercise, or dry run, of all the

elements that would be required by FEMA evaluators. David, the PAO director, was

generally unprepared for the meetings and training sessions. David did not provide handouts

or notes and spoke off-the-cuff during the session, which had about 50 state and local

emergency management staff in attendance. When asked for a show of hands, about half of

the PIOs responded that they had never been involved in a nuclear station exercise. As a

result of David's unorganized presentation and the inexperience of his audience, questions at

the end of the 30-minute talk indicated that the PIOs had more questions and concerns about

the upcoming exercise. The questions included the following: How many FEMA evaluators

will be monitoring the exercise? What will they be looking for? Do I talk to them during the

exercise, or pretend they aren't there? Do I get to repeat a step if I make a mistake? How do

we make them aware of steps we are taking when the evaluator isn't looking? The confusion

was related more to the expectations of the drill rather than to the PIO duties. SEMA

employees from other departments who have participated in drills before stayed to answer these questions.

Preparedness and outreach efforts also include working closely with non-government organizations, often with mixed results. One example is the Business Outreach Committee, a group of nonprofits, businesses, and associations that work with SEMA to help small businesses develop continuity and disaster recovery plans. I attended one of its meetings while the committee was still in the early phases of development. In addition to the SEMA PIOs, the members included representatives from the local American Red Cross chapter, a law firm, an insurance company, and an association of continuity planners.[2] Working with such a diverse group of people did not prove easy, however. It quickly became apparent to me that each member had her own agenda for the committee's work. There was obvious conflict as the other members of the group disagreed with the PAO staff on developing logos and materials for the program. Each person wanted her area of interest highlighted in the materials, such as the importance of getting comprehensive business insurance or learning how to recover after a disaster. None of the other members were graphic designers or public relations writers, so the PAO staff became angry that the group did not value their expertise in making these decisions. For the duration of my stay, the committee continued to disagree on revisions, and the PAO staff began discussing the idea of dissolving the group because of its inability to make progress.

Statewide preparedness efforts require that the SEMA public information staff work with other government agencies, nonprofits, and private businesses to develop successful

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[2] In continuity planning, businesses develop strategies for recovering from a disaster while keeping interruptions to operations at a minimum. These plans may include provisions for payroll, data storage, and alternative office space until the business can resume normal operations.

campaigns that are salient to a variety of groups. The next section discusses some of the resources and procedures that the PAO staff use to accomplish their routine tasks.

Resources and Procedures for Getting the Work Done

With so many players involved in the statewide emergency management efforts, the PAO relies heavily on technology, such as BlackBerry wireless communication devices, text pagers, cell phones, and Web EOC, an online community for emergency management personnel across the state. During my observation, Philip, the outreach coordinator, was following the BlackBerry patent infringement lawsuit[3] and researching options for getting the same features from other devices should BlackBerry lose in litigation. He explained that without the devices, it would make it much more difficult to coordinate public information during an emergency.

The PIOs' reliance on technology, including BlackBerry devices, text pagers, and Web EOC, results in up-to-the-minute access to situation reports, news, weather reports, email messages, and reports from the field. Minutes from the agency senior staff meetings, reports from the 24-hour communications center at the state EOC, and regional weather conditions from emergency managers around the state are sent via email to every SEMA employee. The PIOs also recognized the importance of using technology to connect with people outside of emergency management. During my observation, David, the PAO director, and Jack, the Webmaster, started discussions on how to monitor weblogs, known as blogs, during disasters to collect information from the affected communities and make them aware of available assistance. David mentioned that blogs became a useful communication channel

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[3] The holder of the software patent for the BlackBerry wireless communication devices patent dropped a patent infringement lawsuit in March 2006, avoiding a court-issued disruption in service to millions of BlackBerry users (Austin, 2006).

for communities shut off from the rest of the world after Hurricane Katrina. The media noticed the blogs, and that attention, in turn, helped government agencies locate where help was needed. David realized that SEMA's awareness of blogs can also help address rumors and misinformation by relaying accurate information during a disaster.

Technology is also key to SEMA's media relations. The PAO maintains a media email list that allows the staff to select localities within the state to issue news releases and media advisories. They also post all news releases on their Web site and have a subscription listserv for news releases and electronic newsletters. David and Philip rotate being on-call after business hours, and reporters know how to reach them by cell phone or pager. Once again, the SEMA believes that the BlackBerry devices proved useful for sending documents or written statements to the media and also allow the PIO staff to route releases to David or Philip for approval when they are out of the office.

Although the public affairs office has the tools to communicate readily and efficiently, they still must adhere to agency procedures related to information release. The PIOs must go through a regimented approval process before distributing news releases or other printed materials or before answering media inquiries. Zahra, the PR writer, called the agency approval process "a nightmare." Zahra is the primary news release writer and the only writer for the agency's newsletter, which is distributed twice monthly by email. She explained that approvals extend from subject matter experts up to the agency leadership:

> I start off with a first draft and send it to all the stakeholders. Then you send back the edits, incorporate those edits, send it back out. I try to only do that once, but sometimes someone further down the chain will say, well, no, you need to include this, which starts that process all over again. So after that first tier of reviewers look at it, then it goes to David, and then to [David's boss].

This layered approval process also applies to the agency Web site. Jack, the Webmaster, must gain approvals on all new Web content. He also has to work with a 13-member committee at the agency when redesigning the Web site, a task complicated by the fact that many members were called away to respond to emergencies, thus delaying the process.

The SEMA public affairs office relies on other government agencies, technology, and formal approval processes to accomplish its mission. These resources become even more important during an emergency, as will be discussed in the following section on the transition to crisis.

Transition from Routine to Crisis

The state emergency management agency's primary mission is to protect lives and property in an emergency, therefore, the completion of routine tasks is dependent on a lack of a crisis. When a crisis emerges, the public information staff sets aside all daily tasks and long-term projects so they can concentrate on the emergency at hand. The PIOs made several references to how they distinguish routine working conditions from disaster response. David, the director, often referred to "disaster mode" as being different from routine operations in terms of staff roles, intensity, and even the location where the PIOs worked. The Webmaster, Jack, differentiated his workload as "regular mode" versus "disaster mode." All of the PIOs recognize a difference in job priorities when a crisis emerged.

"We pretty much ignore everything else that's going on and push it [routine work] to the back burner when something happens," said David. "I'll ignore emails I get from people that are about other issues because I am focused on [the crisis]. We've had to cancel events because of storms." Zahra, the PR writer, said, "In an emergency, everything goes off the

table, and I'm dealing with whatever press releases or information they need gathered."

Philip, the outreach coordinator who primarily works on long-term campaigns, explained,

"Oftentimes that work is largely eclipsed by whatever the crisis of the moment is, and that

crisis can be a real-world emergency like a Katrina, or it can be something that is more of a

work-related fire." Examples of Philip's work-related fires included event planning for the

grand opening of the new EOC, preparation for upcoming disaster exercises, and the recent

news that the Department of Homeland Security would change its process for awarding

grants. Philip described how the transition from routine to disaster mode is not always easy

for the PIO staff:

> The biggest challenge in a lot of people's jobs here is that we all have day-to-day duties that need to get done, but once an emergency flares up, that all goes out the window, and we all have to respond to that emergency. Responding to that emergency can take weeks, sometimes months, of your time. Once that emergency is over, those day-to-day duties that you've been neglecting still need to get done. All of those things can rise up and make the day-to-day preparedness outreach not always the front burner topic.

SEMA's level of authority increases when a crisis emerges, especially when

the governor declares a state of emergency. During routine times, the agency reports

to the secretary of public safety. During a disaster, however, the agency reports

directly to the governor, and the public safety agencies play a support role for SEMA.

The direct link to the state's highest executive office empowers the agency to make

decisions and recruit personnel and resources from other state agencies. For public

information, David has the authority to pull in PIOs from other state agencies to help

in the EOC or on the scene of the emergency. David becomes their manager for the

duration of the emergency, and the PIOs essentially work for the state as a whole

rather than their home agency.

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As the public information staff members shed their routine responsibilities and transition to disaster mode, they take on new roles. The next section discusses the organizational differences that emerge when SEMA activates a Joint Information Center.

The Joint Information Center

As the PIOs drop their daily responsibilities and transition to disaster mode, their roles and job titles also change. Each staff member has an assigned responsibility in the emergency operations center (EOC) and takes on new duties once an emergency is declared. Once a disaster exceeds the scope of a single local jurisdiction, the state can be asked to step in and assist. At this point, the PIOs from state and local government entities come together in a joint information center, or JIC, which becomes the public affairs component of the EOC (see Appendix V for a detailed description of the JIC concept). A JIC is typically located in the EOC facility, but may be positioned near the disaster scene as a primary or a satellite JIC if needed. The purpose of a JIC is to pool communication resources, coordinate the release of information for consistency, and create a single voice for the state to respond to a disaster, rather than many voices speaking for individual agencies. As demonstrated in the organizational chart (see Figure A1, Appendix V), a JIC structure has the potential to include dozens of individuals. A JIC can be as large or as small as the situation warrants. The five PAO staff members from SEMA cannot fill all of the roles on their own, so they call PIO reservists, as well as PIOs from other state agencies, to fill specific positions based on their knowledge and experience.

During my six-week observation of the SEMA public affairs office, there were no actual disaster events to which the staff had to respond. I was able to observe the staff as they participated in the next-best thing – an exercise for a radiological emergency that was graded by FEMA. The federal government mandates that all nuclear power plants in the United States practice this particular drill every other year, and with two nuclear stations in the state, this drill becomes an annual exercise for SEMA. The consequences for this exercise are high, as a poor grade could result in sanctions or even closure of the power plant. The public affairs staff responds to this exercise using the same JIC procedures and organizational structure that they would use for an actual emergency. During the radiological exercise, which is discussed in detail in the next section, the following roles were filled in the JIC: lead PIO, JIC coordinator, media relations, public inquiry center operators, internal liaison, external liaison, writer, administrative assistant, and field PIO.

David, the PAO director, wore many hats during the radiological exercise: lead PIO, JIC coordinator, and media relations contact. For smaller activations of the JIC, it is common for one person to handle multiple responsibilities. As the lead PIO, David advises the EOC leadership on public information matters, summons reservists and other state PIOs to join the JIC, and oversees all JIC activities and personnel. The JIC coordinator duties include management of logistics and work assignments. David's responsibilities as the media relations contact include fielding all calls from the media, initiating calls to the media when needed, and scheduling interviews. During an event of larger magnitude or greater duration, several people may fill these three roles.

The staff called in two SEMA reservists who have training and experience in answering calls on the disaster hotline to work in the public inquiry center (PIC), which was

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located in a customer service area at the power company's headquarters. The PIC operators provide information to the public, including the current status of the emergency or any evacuation orders. They also take note of the types of questions and comments that they receive from the public and identify trends in citizen concerns or rumors that the PIOs can address in news releases, press conferences, and media interviews. The two reservists kept in close contact with the PIOs throughout the exercise to share information.

The JIC also included one internal and one external liaison at the EOC. The internal liaison was a reservist who has experience in disaster response. He spent most of the day floating between the public affairs office and the EOC, listening in on discussions, and attending the status briefings. He would report to David any information that he felt was relevant to the public information function, and he also gave the JIC update during the EOC-wide situation briefings. A PIO from the state department of health filled the external liaison role. This exercise was her first introduction to the EOC. Her responsibility was to communicate with PIOs at the local level throughout the exercise to keep them informed, collect and review their press releases for message content and accuracy, and answer their questions or concerns. Much like the public inquiry center operators, the external liaison notified David of any rumors or consistent issues that she learned about talking with the local government agencies.

Zahra served as the JIC writer for the exercise. Aside from the frenzied pace, her responsibilities were very similar to her day-to-day duties at SEMA. Zahra prepared a set of news release templates in advance of the radiological exercise that covered nearly every possible scenario that they could respond to. During the exercise, she gathered information as the scenario advanced, consulted with David, and filled in the appropriate news release or

emergency alert system (EAS) message templates. Leslie, the administrative assistant, simulated the distribution of the news releases to the media, answered the phones in the public affairs office, and logged news releases and other vital information on Web EOC.

Philip, the outreach coordinator, served as the field PIO at the power company headquarters, which is about 20 miles from the state EOC. As the SEMA representative for media interviews and press conferences, Philip addressed any issues related to the state's response to the emergency at the nuclear power plant. He worked in conjunction with the power company's communication manager to collect information and maintained constant contact with his colleagues in the JIC. He also routed news releases to the communication manager for review by power company officials. Although the JIC does not require approval from the power company before releasing information, the PIOs follow this procedure follow during drills and emergencies to ensure accuracy and consistency of the information released to the public.

The team did not fill the Webmaster role during this particular exercise because that component was not graded by the FEMA evaluators, so Jack assisted the JIC team on several other tasks. He helped with writing, proofreading, research, and "gophering" between the JIC and the EOC leadership. He also recorded the broadcast message for the emergency alert system, a responsibility not listed in the SEMA PIO guide or in the JIC organizational chart. David indicated that this responsibility normally goes to the director of the EOC's communications center, but he was not sure why the public affairs group was asked to record the message for the exercise. He indicated that the PAO may formally take over that function.

Although a JIC was not activated for a real emergency during my stay with SEMA, my observations of SEMA employees responding to a contrived nuclear power plant disaster illustrate the roles that the PIOs assume during an actual crisis. The next section describes public information activities in crisis response.

Crisis Response in the Public Affairs Office

It's 8:35 a.m. at the State Emergency Management Agency. Suddenly there is a cacophony of chimes, buzzes, and beeps coming from employees' BlackBerry devices and text pagers.

Notification of unusual event. There has been an earthquake reported in the vicinity of the nuclear power station.

This is all the initial information they have, but the SEMA public information officers collect their radiological public information guides, state maps, and other materials they may need and await to be notified of the *alert level*, the next emergency action level for nuclear power station emergencies, that will signal their call to report to the state's emergency operations center.

This emergency was not unexpected. The PIO staff prepared for this graded radiological exercise for more than a month. During the next few hours, evaluators from the Federal Emergency Management Agency (FEMA) and the Nuclear Regulatory Commission (NRC) scrutinized the PIOs, other SEMA employees, local emergency management coordinators, and the private company that operates the power station as they simulate their response to a major disaster at the nuclear power plant.

Of all the PAO staff, only David had fully participated in a radiological exercise; Jack had just joined the agency during the last drill and was primarily an observer. This exercise also included PIOs from the state health department, SEMA reservists who are called in only during emergencies, city and county government personnel, fire and police department spokespersons, and employees from the privately owned power company that operates the nuclear station. Although all of the participants knew the date of the exercise, they did not know the scenario and consequent interactions in advance. For this drill, the players simulated a response to an earthquake that struck in the vicinity of the nuclear power station, damaging the facility and leaking radiation into the environment. The state and local PIOs, who were located variously in the state emergency operations center, the power company's headquarters, the power station, and various local government offices, had to adjust to the situation as it unraveled and maintain a coordinated response as they issued news releases, broadcasted emergency alert system (EAS) messages, and conducted press briefings, all under the watchful eyes of FEMA evaluators. All of my observations took place at the state EOC.

It was crucial for the PIOs to coordinate all information that was for public dissemination, so David activated the joint information center (JIC). He contacted three reservists and two state PIOs from the health and transportation departments and told them to report to the EOC. Inaccurate and inconsistent information, or poorly timed dissemination of accurate information, can have catastrophic results on a community that is struck by a disaster if the team members do not adequately coordinate their duties. For the radiological exercise itself, mistakes can have serious consequences on the state's and the power company's authorization to operate the nuclear power generation facility. David felt the

pressure on the public affairs staff to perform well during the exercise, saying, "This drill is much bigger for the public affairs office than any other division at [SEMA]. We have a much busier role in this exercise than anyone else, and are heavily scrutinized by the FEMA evaluators." David and his staff knew that any mistakes they made would reflect on the entire agency.

The PIOs also were aware that the response effort was much larger than their staff of five. No single agency can respond to a disaster like this earthquake scenario on its own, and the larger the crisis, the larger the team of public information officers that is called from the reserves and other agencies. SEMA does not get involved in a crisis until the situation gets too large for one locality to respond to and the local governments request state assistance. Once SEMA is activated, the political boundaries disappear, and the state as a whole responds to the crisis. David recognized the expertise that employees from other agencies, as well as the reservists, brought to the public information team, saying, "They bring different knowledge and capabilities depending on what agency they are from, and we use their skills." He relied on PIOs from the departments of health, transportation, public safety, and other responding agencies when he needed to consult with subject matter experts during the exercise.

This section described how the public affairs office initiated their emergency response mode during the radiological exercise. The following section explains the public information role during an emergency and the individual staff members' responsibilities.

Responding to a Radiological Emergency

Once the disaster scenario had escalated from *unusual event* status to the *alert level*,

which took about 15 minutes in this expedited simulation, all of the PIOs piled into waiting

state vehicles and made the seven-minute drive from SEMA's headquarters to the state

emergency operations center, which is located on the grounds of the state police headquarters

and training academy. By 9:00 a.m., the governor had already declared a state of emergency.

The PIOs checked in at the secured entrance to the EOC just after 9:00 a.m. and worked their

way to the public affairs office, where a FEMA evaluator waited for their arrival. As

illustrated in Figure 4.1, the public affairs office is across the hall from the EOC's bullpen,

where most of the work takes place, and in close proximity to the information and planning

room, the operations director's room, and the executive briefing room, where the governor

would be located. The EOC leaders make major decisions in these areas during an

emergency, and the PIOs have easy access to meetings and individuals for gathering and

confirming information. Figure 4.2 depicts the staff seating chart and equipment found in the

public affairs office in the EOC.

This emergency scenario was the first time that SEMA had used the recently

constructed EOC facility other than for training. This state-of-the-art facility has technology

designed to improve communications within the EOC, around the state, and with federal

entities, such as the Department of Homeland Security. Figures 4.1 and 4.2 depict many of

the technological features that the old EOC did not have, including flat screen television

monitors that receive news stations from around the state via satellite, two large projection

screens in the bullpen, and an eight-deck digital recorder station that allows the PIOs to

monitor and record news stories. All of the computers throughout the EOC are connected by

a network, and at any time, the communications center manager can display images from any of the computers on the projection screens for viewing. Other features include a microphone system that can broadcast into all rooms in the EOC so that everyone can hear important announcements or status reports, and electronic white boards that connect to the computer network. A surveillance camera mounted on the ceiling in the bullpen can send images of activity to other rooms, such as the public affairs office or the executive briefing room, and also can record video for distribution to the media. The PAO also has a hand-held, news-quality camera for recording footage for the media, and the media work room has camera jacks that connect to outside podiums for news satellite trucks.

Upon arrival at the EOC, the public affairs staff settled into their assigned cubicles and began to respond to the situation. They were joined by a PIO from the state health department and one reservist who each were assigned duties for the exercise. It was important for the staff to be constantly aware of which of the four emergency action levels (notification of unusual event, alert, site area emergency, and general emergency) they were responding to, as each step required specific actions by the public affairs team. The action levels were posted on Web EOC, which could be viewed on any computer in the EOC, projected onto the large screen in the bullpen, and sent to every SEMA email and BlackBerry account. For each level, the PIOs had to issue a specific news release, hold a media briefing, or broadcast an emergency alert system (EAS) message. For example, the team distributed a news release as the situation progressed through each level to explain what was happening in each phase. The *general emergency* news release would be accompanied by details regarding protective orders (i.e., related to contaminated food, water, or livestock) or evacuation orders. The PIOs also had to time the simulated calls to the governor's office, the local radio

stations, and the power company to coincide with the events in the scenario. All of the PIOs had a good understanding of the various alert levels and completed their responsibilities in a timely and accurate manner. In addition to monitoring the changes in alert levels, the PIOs simulated monitoring the newscasts from local television stations to ensure media reported accurate information, listened in on meetings in the executive briefing room and in the EOC bullpen, and stayed in constant contact with the EOC's operations director. The FEMA evaluator observed every action and read each news release to see that the team met all the requirements for each phase.

Each news release had to go through a lengthy approval process before distribution, and David oversaw each action made by his employees, often to the frustration of the PR writer. Zahra usually had the news releases written and ready for approval before David could tell her to do them, but his apparent lack of trust in her ability to get the work done quickly and accurately led to a brief shouting match between the two of them. Zahra later explained that she felt confident in her own ability to analyze and respond to the situation, and that David's micro-management slowed her down and prevented her from being able to manage the approval process efficiently.

Many of the PIO actions, such as the distribution of news releases and the broadcast of the EAS message, were timed and carried out under noisy and crowded conditions. The EOC's operations director stayed in constant contact with David, often consulting with him on what measures needed to be taken next. The scenario escalated from one emergency action level to the next in a matter of minutes, and the PIOs had to complete their responses for each level before the next one occurred.

Figure 4.1

Diagram of State Emergency Operations Center.

Kitchen

EOC Bullpen

Emergency
Support
Functions

Communications
Center

Information &
Planning

Ops.
Deputy
Director

Ops.
Director

Executive
Briefing
Room

Work
Room

Media
Work
Room

Lobby /
Media
Briefing Area

Public Affairs
Office

Leg.
Affairs
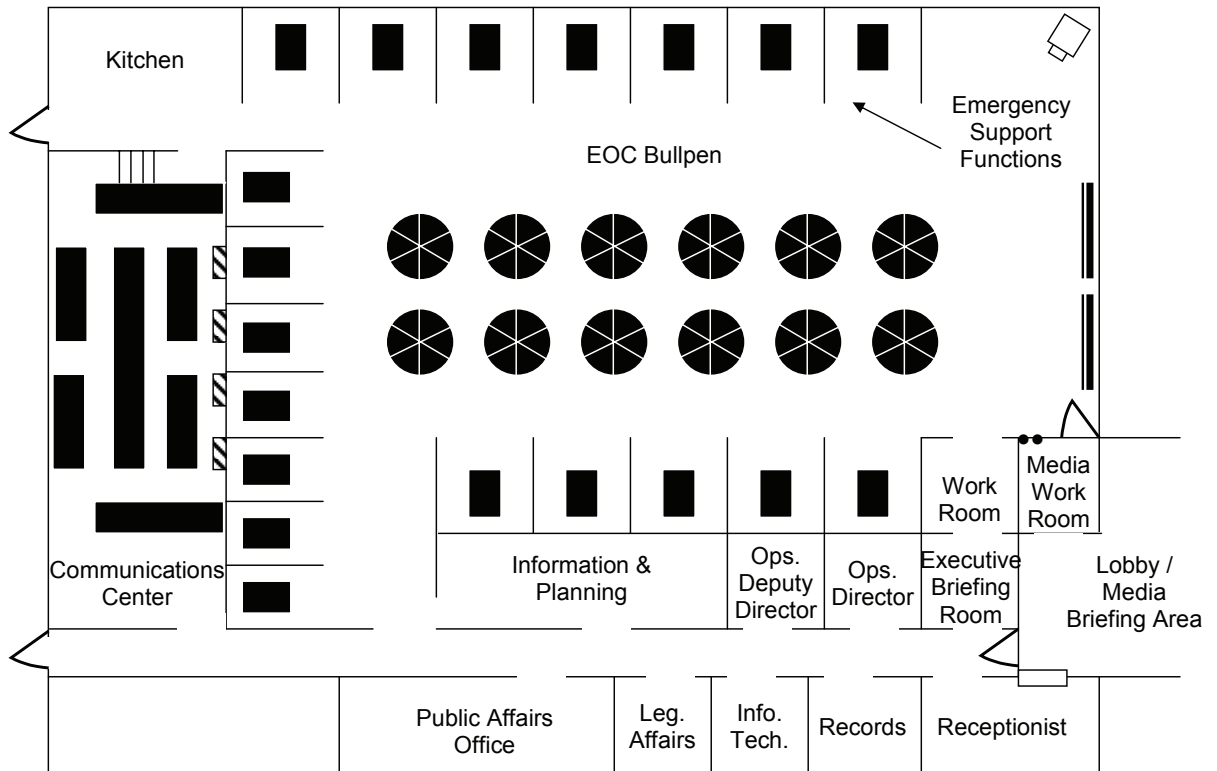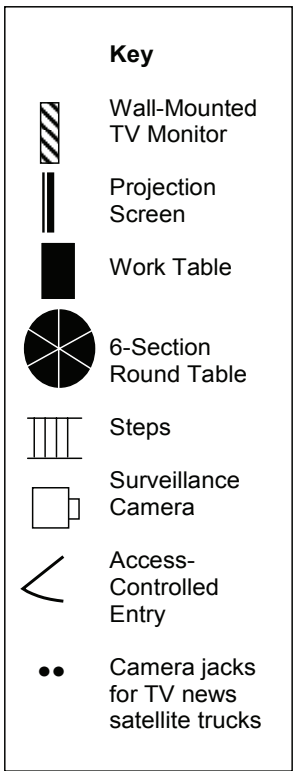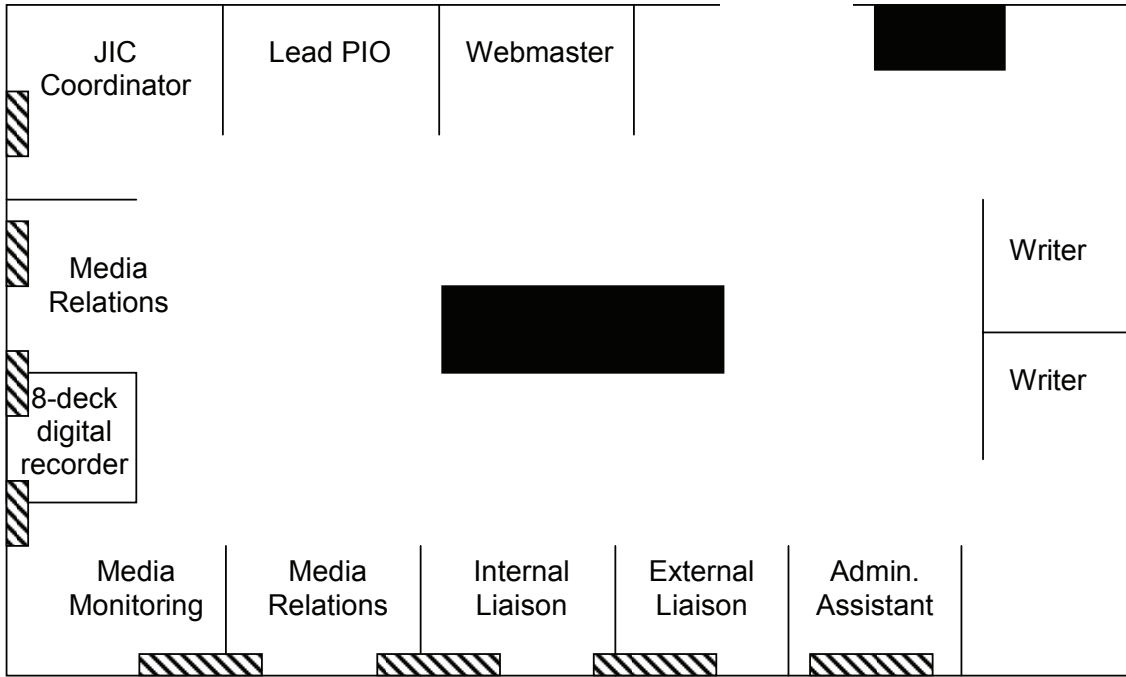
Info.
Tech.

Records

Receptionist

Figure 4.2

Diagram of Public Affairs Office with Key Joint Information Center Roles.

The exercise, which lasted about five hours, was fast-paced from beginning to end, leaving little time for the players to take a lunch break or reflect on what they had done. The need for accuracy, timeliness, and consistency of public information under volatile conditions is magnified as the situation escalates and lives are endangered. For example, when the governor recommended that farmers put dairy animals in shelters to protect them from the radiological fallout, the PIOs realized that they had not issued any recommendations for public safety up to that point and feared that citizens would think that the governor was more concerned with cows than people. The PIOs enlisted the help of the agriculture department to explain how dairy animals are more susceptible to long-term radiation contamination and that farmers needed to house their livestock before conditions worsened to the point that they needed to seek shelter themselves. Once the PIOs were able to satisfy the public safety concerns, they could express those in the news releases while staying on message with the current alert level.

After the final emergency action level, a *general emergency*, was declared, the sounding of the nuclear emergency sirens, the distribution of the press release, and the broadcast of the EAS message had to be done within 15 minutes and in the appropriate order. When residents in the vicinity of the nuclear power plant hear the sirens, they are to tune in to certain radio stations for instructions. Therefore, the team cannot broadcast the EAS message before the sirens are activated. As soon as David and Zahra learned the specific evacuation orders, Zahra immediately wrote the news release, using a template that contained all of the possible zones that surround the nuclear plant. After she completed the information and posted the zones that were identified for evacuation, which took a matter of minutes, she sent the draft by email to Philip, who was stationed at the power company's headquarters, for

the first round of approvals. Once Philip got back to her with a verbal approval, she gave a

hard copy to David, who passed it to the operations director for approval. In the meantime,

Zahra also wrote the EAS message for broadcast, and she gave the text file to Jack on an

external jump drive. They sent the EAS message from a computer in the communications

center and did not want to waste time trying to find the file on the network. David came back

into the public affairs room with signed approvals on the news release, and he and Jack

headed to the communications center while Zahra and Leslie, the PR assistant, posted the

news release on Web EOC and simulated distribution to the media.

When Jack, the Webmaster, and David, the PAO director, entered the

communications center, it was very crowded and noisy, as other SEMA employees had to do

their parts during this 15-minute, timed phase as well. For example, they had to inform all of

the local communities near the power station of the evacuation measures before they could

releases the EAS message, and the sirens had to be manually sounded after the EAS message

was released. All of these activities happened from the communications center. Jack loaded

the text message onto a computer and began to set up the software to send the text and the

audio recording to the first radio station on the EAS network, and David attempted to quiet

the chatter around him so he could start the recording. Using a small microphone, Jack

carefully recorded his message, while David and the operations director looked over his

shoulder to confirm the accuracy of each word. Then, with about four minutes remaining on

the clock, Jack replayed the message, and once everyone was satisfied that it was correct, he

sent the message to the radio station. Within minutes, the radio stations along the EAS

network sent back confirmations that they had received the message. Jack and David

breathed a sigh of relief that they completed the alert with time to spare, but then David

suddenly became concerned that all of the radio station employees may not have gotten the message that this was an exercise and that they should not broadcast the messages. The operations director chuckled at the thought of an Orson Welles-type event happening, but he quickly sobered at the thought of such a huge mistake. Jack, David, and the operations director were visibly nervous for the next few minutes until it became clear that the radio stations did not actually broadcast the evacuation orders to the public.

Throughout the morning, the PIOs were concerned with doing everything by the book, literally, as they following the radiological exercise manuals for each phase of the event. At times they double-checked with each other to make sure they were carrying out their respective responsibilities correctly. David, the PAO director, said that his anxiety was actually higher during an exercise than a real disaster, such as a hurricane, because of the faster pace and the constant scrutiny by FEMA evaluators. This evaluation added pressure to do everything perfectly in a timely manner created stress among the PIOs and gave the scenario a dose of reality. As the crisis evolved, rumors that people saw smoke and flames coming from the nuclear facility circulated among the local emergency management offices as well as the power company. As the PIOs received word of the rumors in the EOC, they checked with their sources in the field to confirm the facts, alerted the public inquiry center that takes calls from the community, and addressed the false rumors in media briefings. No matter how insignificant the rumors appeared to be, the PIO staff worked to squelch the misinformation to avoid panic and confusion among the media and the public. The PIOs committed a significant error early in the day, however, when they published incorrect public phone numbers for the disaster hotline in the first news release. No one had taken the initiative to call the phone number and verify it before publishing it in the release. Everyone

said they trusted the source of the phone number, and no particular person was in charge of verifying that information. Later in the day, an evacuation news release and the EAS message listed a city that was not slated for evacuation. The PIOs had taken the information from the operations director without comparing it to the maps posted in the executive briefing room, where the governor decided evacuation orders. Once again, the PIOs had relied on trustworthy sources of information and did not attempt to verify the facts.

The exercise guidelines allowed the PIOs to correct mistakes and repeat simulations of key procedures for the FEMA evaluator. After David discovered the mistake in the evacuation orders, Zahra quickly issued a revised news release, and Jack re-recorded the EAS message for distribution by radio stations. David assigned Jack the task of calling all phone numbers used in public documents to verify them, and Zahra wrote a revised news release that highlighted the corrected disaster hotline number.

By 12:40 p.m., the disaster scenario had advanced through all the emergency response phases, and the public affairs staff began to wonder how many more hurdles the FEMA evaluators would throw at them before the exercise ended. Within a few minutes, the acting governor left the EOC, signaling that the situation was under control, and the debriefings began. The PIOs seemed a bit exasperated that the exercise came to a halt without resolving some issues. Philip, who was serving as SEMA spokesperson at the power company headquarters, was still confused about the error in the evacuation news release and felt that he had not adequately corrected the situation on his end. Jack, the Webmaster, imagined the "thousands of people evacuating from around the power plant and being left stranded on the interstate," remarking that he thought the entire situation would have been resolved before the exercise concluded. Zahra said she was disappointed that David abruptly

left the JIC to attend leadership debriefings without first giving his staff feedback on their performance. After such a frenzied day, the team members were still pumped with adrenaline and suddenly had nothing to do. Zahra pulled a travel Yahtzee game out of her purse and said, "OK, everyone, let's play." The PIOs spent the next half hour unwinding and having some laughs until David returned and sent everyone back to the office.

The five-hour radiological exercise had a realistic feel because of the fast-paced simulations. The public affairs staff shined during some moments, including when they beat the clock while recording and distributing the EAS message, and they faltered during others, such as when they made significant mistakes in two news releases. The following section summarizes the feedback provided by the players as well as formal evaluation by the FEMA radiological emergency preparedness office.

Participant Feedback and Formal Evaluation

The day after the radiological exercise, I met with the PIOs to talk about the preceding day's events, ask questions, and verify some of my observations. The staff members were generally pleased with their performance and thought that they executed the exercise well. Zahra, the PR writer, said that the new EOC facility made it easier to contact the people she needed to talk to, and that the public affairs office was not as chaotic and crowded as in the old facility. She said that during a recent hurricane, eight PR staff members were crammed into a tiny office in the former EOC that only had two desks. One person opened up a file drawer and used it as a table for his laptop. Zahra said that the technology and organization of the new facility made her job much easier.

Jack agreed that the new facility was a factor in their success, but added that preparation was key for this complex drill. "Things went really well," he said. "I was surprised how calm it was. I think we were just really prepared." In the days before the drill, Jack had practiced the many steps involved in recording and broadcasting the EAS message. On the day of the exercise, he actually completed the message in less time than in practice, even though he worked under pressure in a noisy and crowded environment.

Leslie, the PR assistant, spent the days leading up to the exercise collecting names and contact information for the PIOs in the city and county government agencies. She said that some localities did not have a designated PIO, and that the contact information given to her by these localities changed on a daily basis. Up until the morning of the exercise, Leslie continued to receive corrections on the contact lists, which made her task of keeping the localities up-to-date throughout the exercise a difficult one. Leslie said that posting the news releases on Web EOC, rather than making hard copies or sending emails, was very efficient and created a history of events for anyone to follow throughout the day.

Philip, the outreach coordinator, spent the day of the exercise acting as the SEMA spokesperson at the power company headquarters, which was about 20 miles from the state EOC. He later explained to me that the separation from his colleagues during the drill was exacerbated by the fact that cell phones and other wireless devices did not work in the power company's emergency operations center, which was located in a basement. He had to leave the EOC area, go to another room, and borrow a computer to check his emails. He also called the PIOs at the state EOC constantly throughout the day to gather information. Philip said the lack of access to communication resources delayed his response time for approval of news releases, and when he held mock news conferences, he didn't always have the most up-to-

date information. Normally, he would have held the press conferences on the grounds of the state EOC, but the power company communications staff was nervous about participating in such an important drill in a brand-new, untested facility.

Philip said that the lack of contact with his colleagues not only delayed his receipt of vital information, but also led him to second-guess some of his decisions. These issues led to mistakes that FEMA evaluators noticed. One error resulted directly from the information delay between the two EOCs. Philip did not get a copy of the news release announcing protective actions that farmers should take with their dairy animals before he went into a news conference. As he started reading his prepared statements, someone handed him a copy of the release, but he did not have the time to read it and include it in his comments. Because of the fast pace of the scenario, he never had the opportunity to discuss the protective actions in his news conferences. Another mistake occurred when Philip second-guessed his own knowledge of radiological emergencies during a simulated interview with a reporter. The reporter, who was in reality was a radiological expert with the power company, asked Philip if the state was recommending that residents of nearby communities take "K1" to prevent radiation poisoning. The medication that is used to protect the thyroid from radiation is potassium iodide, or KI, not K1. Even though Philip noticed that the "reporter" used the wrong term, he assumed that the radiological expert knew what he was talking about, and referred to K1 in his answer. He later realized that he was being tested on his subject knowledge and should not have let the player's true credentials affect his judgment, especially on jargon that a reporter could have used incorrectly during an actual emergency. Philip believed that having closer contact with his colleagues during the drill may have

prevented these errors, and added that he looks forward to having all of the players located in the same building during the next radiological exercise.

David, the PAO director, restricted his comments to how they could change the public information procedures for future drills or disasters. He told the staff to notify the localities when they made changes in news releases, rather than simply sending a new version via email that they may not realize is different. He put Jack in charge of verifying all phone numbers printed in news releases and media advisories, and he told all staff to help confirm key information, such as evacuation zone numbers, before recording the EAS messages.

I accompanied David when he attended the public meeting that announced the results of the exercise. Although invited, no media or members of the general public attended, so the meeting served primarily as a post-exercise critique for the various players to get feedback from FEMA and the NRC. The FEMA exercise coordinator reinforced the importance of the radiological exercise, stating, "Any exercise helps us be more prepared for any emergency that comes along. Since 9/11, we have been raising the bar to be better prepared."

The exercise summary explained that there were 61 evaluators involved in the day-long exercise, judging 265 criteria observed from 47 locations. The event took place in multiple counties and cities, and included employees from the power plant, the power company headquarters, local fire departments and rescue squads, state police, hazardous materials (hazmat) teams, the governor's office, several state agencies, a trauma hospital, and SEMA. Overall, each performance area received high marks, and the FEMA exercise coordinator stated that the evaluation team found no significant problems related to health or safety issues. The coordinator praised the public information component for effectively

coordinating communication between the state EOC and the power company, although Philip

had indicated it had been a struggle to do so. The coordinator singled out PIOs for their

ability to handle the complex crisis response actions. The only area that received a poor grade

was the distribution of the erroneous EAS message, which the report noted was

redemonstrated successfully. Many of the errors that I had noted during the exercise,

including the two news releases that had errors and the mistakes that Philip had at the power

company headquarters, were not noted during the briefing. I was not able to see a final

written report, because the exercise team had not completed it before my research ended.

David seemed very pleased with his team's performance and received compliments from the

SEMA leadership after the meeting.

Overall, the public affairs team had a successful exercise. The staff members reflected

on the day's events, took note of what worked and did not work, and resolved to avoid the

same mistakes in the future. Although the PIOs committed some errors during the exercise,

the FEMA evaluators acknowledged that the staff corrected those errors to their satisfaction.

The public affairs staff celebrated their accomplishment only briefly, realizing that the next

disaster exercise was just a few months away.

<center>Summary</center>

I was able to observe the organizational attributes of SEMA's public affairs office

during both routine conditions and while responding to a disaster scenario during a

radiological exercise. Table 4.2 summarizes the observed characteristics. The categories that

emerged were organizational structure, accountability, relationships, priorities, resources and

training, and evaluation. These groups of attributes differed depending on whether the public

affairs office was operating under normal conditions or crisis conditions. Structurally, when SEMA goes into disaster mode, the public affairs team increases its number of personnel, its authority over other governmental entities, and its scope of responsibilities. The PAO experiences a change in physical location, job descriptions, authorization procedures, priorities, and in its relationship with other government agencies. During crisis mode, the team members are more prepared and detect and correct errors faster than in routine mode. In addition, evaluation, which was nonexistent during routine times, becomes an important element after a crisis. Many of these changes may result from the greater consequences of a crisis situation and to the greater visibility of the public affairs staff during a crisis.

The changes in attributes that result from the public affairs office transitioning into crisis mode are significant because they suggest that the organizational attributes from routine mode are insufficient for responding to a disaster situation. The organization, therefore, adapts and takes on new characteristics for the duration of the crisis response. The next chapter discusses the results of interviews with SEMA PIOs in five states and compares the results to the findings from my observations.

Table 4.2

Observed organizational attributes in SEMA's public affairs office.

Routine Mode	Disaster Mode
Structure	
SEMA PAO team has five staff members	The JIC potentially has dozens of team members from reserves and other agencies
PAO job titles are designed for general PR responsibilities	JIC job titles are designed for disaster management responsibilities
PAO is located in SEMA headquarters	JIC is located in EOC
Accountability	
PAO staff members have loosely defined responsibilities	PAO staff members have clearly defined responsibilities
SEMA reports to the secretary of public safety	SEMA reports directly to the governor
Approval process is slow and multi-tiered	Approval process is multi-tiered yet expedited.
PIOs have little individual autonomy	PIOs have little individual autonomy
Relationships	
PAO has strong relationship with media	PAO has strong relationship with media
PAO has strong relationship with other state, local, and federal agencies	PAO oversees other state and local agencies
PAO director is part of SEMA leadership, yet is ignored on some issues	PAO director is an important advisor to the EOC management, and the PIO role in crisis is highly visible
PAO works in collaboration with other state agencies to train and prepare for emergencies	PAO has access to other state agency personnel and resources and manages the statewide public information efforts
Priorities	
Everyday tasks can be interrupted and put on hold for "work-related fires"	Disasters take priority
Structured for issues management	Structured for issues management and rumor control
PIOs' workload is built around long-term projects	PIOs have short response times
Lack of preparation or attention to detail	Well-prepared and overzealous about details
Slow to discover and correct errors	Quick to discover and correct errors
Resources and Training	
Reliance on technology for communication	Reliance on technology for communication
Multiple channels for internal communication	Multiple channels for internal communication
Reliance on media for information dissemination	Reliance on media for information dissemination
Coordinates statewide preparedness efforts	Relies on statewide agencies for response
Training and rehearsal for a variety of emergencies	Every disaster response is a learning opportunity
Evaluation	
No formal evaluation	Formal after-action reports

CHAPTER V

RESULTS FROM INTERVIEWS

I interviewed five public information officers from different state emergency

management agencies (SEMAs) in February 2006. The interviews served as a means of

triangulating the results from my observations to look for discrepancies and similarities.

Based on what I learned from my observations, I developed categories for further exploration

with interviews. The interviews augmented my findings from the observations and provided

another method to continue studying this type of organization.

After conducting the five interviews, a common theme began to emerge: the response

to every crisis is the same. The five PIOs, to whom I assigned the pseudonyms of Isabella,

Mike, Gretchen, Lou, and Peggy, each has different stories to tell about their experiences in

emergency management and how their agencies respond to crisis. Although the agencies'

structures or duties vary, the SEMAs shared some organizational attributes as well as an

overarching goal of protecting lives and property from disasters and terrorist acts (see Table

5.1). In addition to slight organizational differences, the agencies report to two different types

of state entities. Three of the agencies report to their state's version of a department of public

safety, and two report directly to the governor's office. In all but one agency, the public

affairs office (PAO) reports to the agency director or to a departmental manager within the

agency. The lead PIO in one SEMA, Peggy, is a press secretary appointed by the governor

and assigned to manage the public information function for emergency management.

Because of this structure, Peggy has a much closer alliance with the governor and his staff

than with the SEMA director. The smallest PAO team has two staff members, three have

three members, and one has six members.

Table 5.1

Summary matrix of environmental and organizational characteristics in five SEMA public affairs offices.

Mode	Characteristics	Example	Significance
All Times	Reliance on technology	"We depend on BlackBerries for quick approvals of news releases. Our releases are never held up. Technology has made everything so fast."	PAOs' dependence on technology helps them communicate with other parties but can also be detrimental when communication systems fail.
	Reliance on the news media	Activities center around the media during a crisis; good relationships with media pay off in stressful situations.	SEMA PAOs do not have the resources to reach the public with preparedness or emergency messages on their own.
	Coordinating agency	"We're a support agency." "Our mission is to coordinate a response and establish control."	Disaster preparedness and response is larger than a single agency.
	Emergency Management culture	"It's a normal day (a gas explosion has just happened). There's always some knucklehead…"	Crises are not unexpected or disruptive for these PAOs.
	Reliance on internal review	Each PAO has established procedures that may include agency heads, the governor's office, and subject matter experts.	Multi-layered approval process can prevent timely release of information, but the approval process also helps ensure accuracy.

Table 5.1 *(continued)*

Mode	Characteristics	Example	Significance
Routine	Training and exercises	All PAOs participate in training and exercises.	The training and drills help the PAOs improve public communication.
	Job descriptions	Some PAOs have job descriptions that are related to areas of emergency management rather than technical function (i.e., Webmaster or writer).	These specific job responsibilities help PIOs develop relationships in the emergency management community and be prepared to quickly move into crisis mode.
Crisis	Reliance on intergovernmental relations	PAOs work closely with state, local, and federal agencies as well as non profits to respond to crisis events.	The PAOs learn about disaster preparedness and response from experts in other agencies.
	Reliance on reservists and PIOs from other agencies	PIOs from other agencies not only provide additional personnel but also create liaisons with their home agencies	PAOs do not have enough public affairs personnel on staff to manage a disaster event on its own.
	Strong chain of command	The SEMAs employ the joint information center (JIC) structure.	"The response is the same no matter what the disaster is."
	Change in responsibilities	"During a disaster we all go into disaster mode where we all know our jobs, and it's like a machine, and it works."	There is a clear distinction among the PAOs regarding disaster mode and routine mode.
	Change in priorities	Some PAOs drop routine tasks to address the crisis, but one state PAO must negotiate routine workloads during the crisis response.	The PAOs recognize the need to reallocate resources and personnel to the crisis response.
	Change in leadership	Some SEMAs routinely report to the governor, but others change from reporting to a state secretariat to the governor in an emergency.	All SEMAs use the "shortest line to the person in authority" while in crisis mode.

The following section discusses the organizational characteristics that I was able to discern from my interviews with the five SEMA public information officers. As in the previous chapter, the discussion is separated according to routine, transition to crisis, and crisis. These working conditions emerged from the participant observation research and were used to organize the interview results to generate comparisons.

Routine Public Affairs Tasks

I asked the five PIOs to describe to me what they did in a "normal" day. They were unanimous in saying that there is no "normal" day; however, at least one PIO said that a day full of emergencies is routine. I interviewed Peggy while a gas explosion was being investigated in her state, and she explained that the difference between a normal incident and a disaster is the scale of the event. "Today, it's a normal day," she said. "We always have some knucklehead trying to get into a nuclear power plant, or trying to blow something up every day. It just depends on how large it is." Gretchen said there is no typical day in her PAO. "No one day is like the other. You never know what's going to happen." Gretchen considers routine duties to be proactive, whereas a crisis response is reactive. "We are more proactive in preparing the community for a disaster," she said. "So we're encouraging people to have a disaster supply kit and raising public awareness." Other PIOs, however, suggested that their day-to-day work is more reactive as they respond to media inquiries and take on projects handed down from agency leaders or the governor's office. Routine responsibilities tend to include typical public relations tasks, such as publications, long-term projects, media relations, and news releases. All of the PIOs agreed that crisis conditions signify that the state

has activated its emergency operations center or an equivalent field location to form a concerted response to a major crisis or disaster event.

Daily public information tasks include media relations, Web site management, publication development, public awareness campaigns, responding to citizen inquiries, and writing speeches for agency leaders. Other duties that the PIOs mentioned are grant writing, video production, writing articles for local magazines and newspapers, planning annual public safety conferences, and participating in training sessions. All PIOs play a part in statewide disaster preparedness. Lou provided this description of what he considers to be a normal day at his agency:

> We respond to media on a variety of issues. That can include anything from a telephone conversation or interview to doing something on air, on camera, live, or recorded. I also work to get information out on our Web site and help coordinate any public things that we do. And I also work with our agency and other agencies to continue to prepare for if we have a big incident. (Lou, SEMA PIO)

Peggy, a press secretary, does more work for the governor's office than the other PIOs because she works directly for him as a political appointee. She writes talking points for the governor, prepares the agency's budget testimony for the senate and house committees, writes proclamations announcing various emergency preparedness weeks, and is planning a statewide homeland security conference. She and her deputy press secretary also do all the agency news releases, internal communications, and Web site maintenance. Peggy emphasized that she is the only person from SEMA who is allowed to talk to the media or do anything for public dissemination. Unlike some of the agencies that have more than one individual who is trained to serve as spokesperson, Peggy's agency has one individual selected by the governor to represent the agency to the media.

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In contrast to the two PIOs in Peggy's agency, Gretchen's agency has six employees in the public affairs office. Gretchen and her colleagues have more specialized job descriptions than the other agencies:

> Every person here in public affairs is dedicated to a different function. I do our publications; we have a quarterly magazine that goes out. I have a colleague that does the radiological preparedness [drills], so he goes down to the nuclear power plant exercises. We have a constituent services coordinator. She handles inquiries from the public and legislative people. We have a legislation liaison that works to develop legislation, we have a public affairs director, and a web coordinator who handles our web site. So we all have our specialties here. (Gretchen, SEMA PIO)

Gretchen said that this PAO structure helps them to develop good relationships with other agency divisions, state legislators, the governor's office, the media, and the public at large. Participants also identified planning statewide preparedness initiatives as a routine activity. These duties are described below.

Statewide Preparedness Efforts

Emergency preparedness initiatives are integral to the states' emergency management missions. Isabella explained that the primary mission of public affairs is to "provide information to the public that will help them be better prepared for emergencies and disasters." For all of the state PIOs, their primary responsibility during non-emergency times appears to be coordinating disaster preparedness programs. These include seasonal disasters, such as tornadoes, hurricanes, and flooding; geological disasters, such as earthquakes and mudslides; and manmade disasters, including acts of terrorism and "white powder" incidents that may or may not be a bioterror agent such as anthrax. Newly diagnosed transmittable diseases were a hot topic at the time of my interviews in at least one of the states. Mike was coordinating a pandemic avian influenza summit with the governor's office, and many of his

media calls were related to that topic as reporters worked to better understand the possible ramifications of this disease, should it reach the United States.

Lou emphasized the scope of the outreach programs that he and two other PIOs offer throughout his state. Lou's two colleagues primarily do presentations for businesses, churches, schools, and community groups on terrorism and natural disasters. In 2005, the PAO gave presentations to about 47,000 people. One of the PIOs has earned the nickname of "the earthquake lady" because she has become known for her earthquake preparedness lectures. "If we're going to have a 'Katrina' like event here, it's going to be an earthquake," said Lou. The other PIO on staff does a weekly radio show in a rural area of the state. "This guy is good at talking their language, so to speak, so it resonates with a lot of people in that part of the state," said Lou. "For us, it's a great bonus." Lou said that the PIO has developed a loyal following for his show, which focuses on personal and family emergency preparedness. None of the other states' PIOs whom I interviewed mentioned having a radio show as part of their outreach activities.

In addition to coordinating the earthquake and general emergency preparedness messages, Lou also manages the state's seasonal campaigns including flood, lightning, winter weather, and fire safety awareness weeks. For these campaigns, the PAO works with the National Weather Service as well as the governor's office to ensure consistent messages and statewide reach. Each PIO I interviewed mentioned similar involvement in seasonal preparedness campaigns. National Emergency Preparedness Month, sponsored by the federal Department of Homeland Security, offers states an opportunity to join in the national effort to increase public awareness of terrorism and natural disasters and explain how citizens can help themselves survive an event. Several PIOs said that they plan large-scale events and

media campaigns to take advantage of the nationwide publicity from DHS. Because these campaigns are scheduled annually, each PIO bases his or her annual planning around these events.

Each PIO had resources and procedures in place to accomplish his or her routine responsibilities. In the next section, interview participants discuss what they believe they need to get their jobs done effectively and efficiently.

Resources and Procedures for Getting the Work Done

The PIOs discussed several specific resources and procedures that allow them to do the daily public information tasks and outreach programs discussed above. This section describes how the SEMA PIOs use technology, how they get approvals for information dissemination, and how they get additional support when they need to supplement their full-time staffs.

Communication Technology

Technology was mentioned by all PIOs as an asset for getting their work done; however, the amount and types of technology varied among the agencies. Isabella uses email to distribute news releases, while Lou and Gretchen use an in-house Web-based system, and Mike and Peggy subscribe to commercial services such as PR Newswire to disseminate media information. Peggy stated that BlackBerry wireless devices have helped expedite the news release approval process and made her job much easier. "I can't live without [my BlackBerry]," she said. "I sleep with my BlackBerry – it's right next to me." Gretchen was

the only PIO who said that the technology afforded to the public affairs employees is

insufficient:

> I would say it always seems that public affairs is sort of the afterthought, I think, in terms of technology. Like we have pagers but we don't have BlackBerries and things like that. That's one area where we always seem to be lacking. We would like to be able to access our email and have our phone right there. But we do have – in terms of keeping aware of what's going on and the state communicating with our state EOC – we can do that pretty easily with our communications center. We can just call in, like I said we are each on call 24 hours a day at some point during the month, so we have to talk to them to find out what's going on. That helps keep us in the loop for things. We're just not cutting edge. (Gretchen, SEMA PIO)

Some of the state emergency management agencies also rely on Web-based

communications technology to communicate internally as well as externally with media.

Mike found that Web EOC, a Web-based software program used by many state and local

EMAs, is an effective tool for communicating with PIOs at a remote location. He said his

agency is currently testing Web EOC for posting news releases and taking questions from the

media. Lou said that his agency Web site has a media access page that is password-protected.

News outlets can register and log onto the site for routine information such as highway

crashes or for updates during emergencies.

Gretchen said her agency has a proprietary Web program that she called a "virtual

JIC" (joint information center; see Appendix V) that was developed with help from the U.S.

Coast Guard. "They (the Coast Guard) are a great resource to have to pick their brains and to

come up with different ideas because they really know PR and how to promote their agency,"

she said. Gretchen added that her agency also works with other federal entities, but that she

found the Coast Guard is the most media-friendly and understands their public information

needs the best. The final result is an online communications system that does not rely on a

single computer or an agency network and can be used anywhere. The virtual JIC has a

media database, a system for expediting news release approvals, and a public space where citizens can go for information. Gretchen and her colleagues put their virtual JIC to the test when a meeting of world leaders took place in their state. Prior to this meeting, the PIOs educated the media about the virtual JIC and encouraged them to register so they would have access to news releases, media advisories, and other information during the event. The PIOs took questions from the media online and posted frequently asked questions for all media outlets to see. Gretchen said this tool helped reduce the number of inquiries her office received during the prolonged international event.

In addition to technology support, the PIOs explained how they acquire news release approval in their respective agencies. The following section presents the advantages and disadvantages the participants see with their agencies' procedures.

News Release Approval Procedures

Because each SEMA has a slightly different organizational structure, the news release approval process varies as well. Isabella said that her agency's approval procedures are both a help and a hindrance to her work. "News releases must be approved by the division administrator and usually also by the governor's office," she said. "Simple information requests, such as those from the general public, do not need administrator or governor's office approval. However, if we are dealing with sensitive issues, we will have the administrator and/or governor's office sign off." Sensitive issues include controversial topics that the governor or his staff may want to address. She believes this process can slow communication with the public when the people who are required to sign off are not available, or when there "is disagreement among those in the approval process. Conversely,

the approval process that sometimes slows us down also helps us to get information out quickly [because] we always know who needs to see and approve before dissemination."

Lou believes that his approval process is fairly simple: he sends news releases to the division director before they distribute them to the press. As the press secretary, Peggy has direct contact with the governor's office and sends her releases directly to the governor's chief of staff or his press secretary. The governor's staff makes edits "for style" and then distributes it to the media. "Our press releases are never held up," said Peggy. "When I worked for the [previous] administration, we waited for hours. But now, technology has made everything so fast." Gretchen's priority is to keep the agency management and the governor's office informed, so she sends news releases primarily as a courtesy rather than for official approval. "They don't like surprises," she said. The governor's office approves releases during emergencies.

Mike said his agency has a pragmatic approach to news release approvals:

> I always like to make sure the director has a shot at it. If there's special subject knowledge involved, I make sure the person who's best able to review it for accuracy reviews it. If we are working with the governor's office, obviously they are involved in it, especially if he is quoted or we are talking about a governor's program. It doesn't make any sense to do a news release without a review process, just so it's accurate and doesn't miss anything.

Mike's no-nonsense approach comes in handy when he deals with obstacles that threaten to delay the release of information:

> I've been doing this so long that I don't tolerate delays, and if there's a delay I just go ahead without whatever's delaying things. You can't sit around and wait for bureaucrats to make sure that all the i's are dotted and the t's are crossed. I work directly with the director of the agency and the governor's press office, so whatever needs to be done gets done.

Mike suggested that his professional experience and his relationship with the leadership allow him to use his own judgment when necessary. An intolerance of

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bureaucratic obstacles was not evident in the other four interviews. No one else indicated that they have ever moved ahead on the distribution of information without official approval.

In summary, all five SEMA public information officers indicated they have routines in place for media release approval. Not all activities are routine, however. The next section describes how the PIOs shift their agency's resources, routines, and procedures discussed above to respond to a crisis.

Transition from Routine to Crisis

Each PIO has a different approach to the transition to disaster mode. Some PIOs work more from behind the scenes, while others are highly visible and work side-by-side with the governor. Most of the PIOs drop their routine duties during a crisis response, but one stated that his agency has to juggle daily responsibilities during a crisis. No matter how they approach a crisis, they all agree that there is a difference between "routine" and "disaster mode." For the SEMAs, disaster mode signifies that the states have activated an emergency operations center (EOC) to respond to a crisis situation. The following sections address aspects of disaster management, including activation of the EOC, recruitment of additional personnel, and the use of a joint information center (JIC).

Activation of State Emergency Management

According to respondents, state agencies technically cannot respond to an emergency until localities request help or the disaster reaches beyond the boundaries of several local jurisdictions. The SEMA PIOs can, however, offer their support early on. Gretchen said that she and her colleagues will contact counties, especially if they are small and may not have a

full-time PIO, and offer help responding to media inquiries, writing news releases, or posting information on the Internet. This early contact makes it easier to get up to speed later on when local officials request state disaster assistance. Peggy, however, said she is less likely to offer assistance until someone asks for it. As she explained, "Every disaster is local, and until the counties say to us, 'we need your help,' we're not in it. We are kind of hands off until you tell us you need us."

Isabella's agency is representative in the way that the PIOs drop everything and concentrate all their efforts on the disaster response. She explained that the PIOs have to be prepared for a long-term response that may keep them away from their routine duties for a long period of time.

> During a crisis situation all else is put on the backburner. Crisis situations range from those that are fairly small-scale, such as an incident where white powder is found at a business and we may work the issue for one or two days, to a larger-scale emergency or disaster, such as a tornado or flooding, that may last several weeks or months. Large or small, crisis situations usually invite a great deal of attention from the media, so our activities will center around taking media questions, setting up interviews or providing information, setting up news conferences, writing and distributing news releases, providing information to the public through the media and via our division Web site. (Isabella, SEMA PIO)

Lou's agency is unique in that the PIOs have responsibilities for areas beyond emergency management. The department he works in includes the driver's licensing office, state highway patrol, bureau of criminal identification (i.e., background checks and weapons permits), state crime lab, and the state police academy. When a crisis emerges, he and his two colleagues coordinate the workload so that the routine responsibilities are not neglected during an emergency.

When a crisis emerges, Peggy, a press secretary, has a hands-on role that surpasses what respondents referred to as typical PIO duties, such as writing news releases and fielding

media calls. She becomes personally involved in disaster assessment and advises the

governor on requests for federal assistance. She quickly sets up press conferences to give the

public an update on the situation as she learns it herself.

> Our typical disaster mode is, once there is a disaster . . . let's say
> flooding. If there's flooding in a certain area that's substantial, we then, once
> the weather dies down and we can get into the air, we go up and do flyovers.
> We do have satellite trucks; in the past we deployed our satellite trucks for
> video to shoot back to the governor. But in this case we took our camera crew
> with us, because we have our own internal camera crews. We just did one in
> April. . . . We went up in the helicopters with the governor, we did the
> flyovers first, we flew over, we ran the rivers, we looked at the damage, we
> shot the damage with the cameras, and took the footage. That's all done in a
> day. Then we can send an expedited request to the president. The governor
> can say, this is what I saw. This is what is going on in my counties, and we
> need your help. . . . That's how we shift into disaster. And sometimes if it's
> large enough we'll take the governor with us, it just depends on how big it is
> and what's going on. We can then land and do a press conference with him.
> At least it shows we're doing something, we're here to help. (Peggy, SEMA
> press secretary)

Although each state has a different procedure for gearing up for a crisis response, all

interviewees described similar needs to recruit additional personnel to handle the workload

brought on by a crisis.

Recruitment of Public Affairs Personnel

The SEMA PIOs believe the most vital resource for the public affairs office is

personnel. During a crisis, they need more than the handful of full-time employees that each

agency has dedicated to public affairs. Isabella said that she can pull in other department staff

or PIOs from other state agencies when needed. Mike mentioned that he can request

assistance from the governor's press office, but that PIOs from many of the other responding

agencies would work from their own agencies' emergency operations center, rather than

from a central EOC. Gretchen did not indicate that her agency brings in PIOs during a

disaster; however, her agency conducts statewide PIO training several times a year. Peggy said that once she decides to activate the JIC in her state, she brings in press secretaries from the agencies that are part of the response. Her state also provides crisis communication training for PIOs throughout the state.

Lou's agency had a unique approach to staffing the emergency operations center or field sites during an emergency. Lou coordinates a PIO association for his state, which is free for members of state and local government agencies to join. The association members meet on a regular schedule for training and networking. "It started out as mostly police and fire departments, but it's gradually expanded," said Lou. "We are seeing more city PIOs even and other agencies. So it's a pretty good group of people. It's a good way to coordinate and have some regular training and get to know the other PIOs that you might be working with in a big disaster." When a crisis emerges, Lou and his SEMA colleagues can send a request for help on the association listserv, but he has found that the members often call him first to offer their help. For example, after Hurricane Katrina, several hundred evacuees were sent to a military base in his state. Once the association members learned what was happening, they contacted Lou and volunteered to work at the joint information center at the site of the evacuee camp. Lou said he was so overwhelmed with offers of help that he had to turn away some PIO volunteers. Lou said that the PIO association has been so effective that he is developing a series of training sessions and exercises that will allow the members to test their emergency response capabilities.

Once the public affairs offices have secured the necessary staff for an emergency response, they have to organize the additional personnel in an effective manner. All of the

states follow the joint information center concept that is described below to coordinate the public information function.

The Joint Information Center

For many SEMA PIOs, activation of a joint information center by the lead PIO, either in the state EOC or in a remote field location, signals the beginning of disaster mode. Some states have their own terminology or guidelines for a JIC, but they all operate essentially the same way. Every public information function is accounted for in the organizational structure, such as news release writers, media monitors, graphic designers, photographers, spokespersons, translators, and administrative support. Members of a JIC may come from multiple state, local, and federal agencies. The goal of a JIC is to coordinate all public information during the disaster response and recovery phases to ensure consistency, accuracy, and timely dissemination.

Peggy said that roles and procedures are clearly spelled out during a crisis. "During a disaster, we all go into 'disaster mode,' where we all know our jobs," she said. "It's like a machine, and it works." For Mike, an EOC with a JIC is a critical element for intergovernmental cooperation in a disaster situation. "It's just a matter of recognizing that something is larger than a single agency and making sure that everybody is working together," he said. He also believes that this realization can be hard when each agency has a different role to play in the crisis.

> If you are at the department of the environment, and the media is [sic] calling, and you have 15,000 gallons of gasoline presumably spilling into a nearby waterway, that is your only concern. You know it might be a terrorism incident, it might be an accident. You are not trying to save lives, although obviously first responders are. You are not doing traffic back-ups. . . . You are thinking about your issue, and the same is true of any other agency that finds

itself in the middle of something like that. Only when you activate an EOC do you begin to bring that awareness into play. Nobody sees beyond their own responsibilities and concerns, and that is normal, but it has potential from a communications perspective to create problems. (Mike, SEMA PIO)

Gretchen said that when her office implements a JIC she and her colleagues staff it around the clock. She also stressed the importance of intergovernmental cooperation during the crisis response: "We are doing fact sheets, coordinating with the governor's office to keep them in the loop, working with our fellow state agencies, because you can't have a disaster in a bubble. . . . So we are all singing from the same page, but we're also aware of each other's [role] to be sure we don't step on each others' toes, but we all have the same message." The PIO responsibilities in the JIC also include coordinating dignitary visits and media tours of the disaster sites. They work closely with communications personnel from nonprofit emergency response agencies, such as the American Red Cross and religious organizations. Isabella said that, in addition to public information duties, her office usually gets assigned "special projects" during a crisis, such as making travel arrangements for visiting dignitaries, setting up a location for officials to meet, and arranging meals for state officials on site.

Once again, Lou's agency has a unique attribute that the other state PIOs did not mention. He chairs a JIC Committee composed of representatives from the departments of health, transportation, natural resources, and human services, as well as the National Guard. The JIC Committee works to promote the use of JICs throughout the state, keeps a database of resources that agencies may need in the event of a major disaster, and coordinates real-world exercises that allow the PIOs to practice emergency public communication. Because earthquakes are a viable threat in his state, Lou said the committee also keeps a list of alternate JIC locations in the event that the state EOC, where the JIC is normally housed, is

damaged. Lou and his colleagues used the database of resources during the Hurricane Katrina evacuations in 2005 to set up a remote JIC near the evacuee camp on a military base.

This section described how the public affairs offices in various state emergency management agencies initiate "disaster mode" and reorganize themselves into a joint information center. The next section gives examples of crises that the PIOs have encountered and illustrates how the SEMA PIOs function during a crisis.

<center>Crisis Response in the Public Affairs Office</center>

During my interview with Mike, he explained that he views a crisis situation as fitting in one of three categories: "the obvious emergency situation," such as a hurricane that can be predicted; "the exercise situation," such as a radiological drill; and "the suddenly-nobody's-sure-who's-in-charge-and-everybody-wants-a-piece-of-the-action situation," such as the terrorist attack on September 11, 2001. He said that the third category, chaos, offers the most potential for communication failures. The other PIOs did not break down crises into specific categories when they discussed examples of disasters that they face.

The following story, as told by Mike, describes a chaotic situation that he experienced that had several unknown variables. In this case, the various responding agencies did not communicate with each other, and as a result the media and the public received inconsistent, unsubstantiated information from multiple sources. Mike explained that he and his agency learned from this experience how to better coordinate emergency responses. This event, which took place after September 11, 2001, illustrates many of the issues that emergency management PIOs face when responding with other agencies to a serious incident.

> It wasn't a big emergency, but it was an incident and it was clear that a
> lot of people were busy working it from a communications side but were not

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necessarily talking to each other. It was a tractor-trailer hauling gasoline that went over a guardrail, over an overpass, and came down on [an interstate outside a large city], and obviously blew up. There was a big fire, and there were cars caught up in it. A lot of different agencies had a piece of it, like state police, environment, [SEMA], the governor's office, transportation, state highway administration, and it was uncoordinated for a while. No one – I don't think this will happen again; as long as I'm here it won't happen – no one stopped to find out who were the players involved here and how do we make sure we're all working together. It was one of those very unusual situations where it was possibly terrorism, there were environmental issues, the local jurisdiction was in charge, but the state highway administration had a piece, and the state police were involved. And it was interesting. (Mike, SEMA PIO)

Lou also addressed the difficulty that he has experienced when trying to coordinate a multi-agency response while working under chaotic conditions. "That can be a challenge when you are dealing with a complex issue, a complex disaster," he said, "and there are a lot of response agencies involved coming in with different perspectives and sometimes different, I don't think agendas is the right word, but viewpoints on those sorts of things." Lou added that many state and local agency PIOs were activated for a major sporting event a few years ago, and that the experience helped them learn how to work together. However, he said the cooperation is still not perfect.

Peggy experienced a near-disaster that would have allowed little or no time to warn the public. Her agency took a call from a foreign embassy claiming that a bomb was onboard a train that was heading toward the state capitol.

> The Secret Service and FBI were on the conference call with the governor, and I was on the call, and I was sitting there thinking, 'we're screwed, we're really screwed at this point.' What do you do? We were just looking at each other like, damn. At this point it was a threat, so we're just kind of figuring out…. They stopped the train so they could use sniffing helicopters, some kind of sniffing helicopters that can [detect] nuclear bombs and WMD; not sure what they are called. We were called back about 20 minutes later to say stand down, it's a non-threat. But for half an hour there, you are like, ooh. (Peggy, SEMA press secretary)

Even though it proved to be a false report, the situation became tense and chaotic while they tried to gather information. She felt fortunate that all of the agencies were able to cooperate while gathering the information they needed without terrifying the public. The next section describes how the leadership changes in some agencies when they respond to crises such as those described above.

Hierarchy in Disasters

Once the agency PIOs transition to disaster mode, they usually alter the routine approval process for information dissemination to include other government entities that may have an important role in the response, such as transportation or law enforcement agencies. Isabella, who routinely has her news releases reviewed by both agency and governor's office officials, is the only person who said that the approval process does not change during a crisis. For the others, there may be more players involved in the process, but they believe it has a faster turnaround time than under normal working conditions. For example, Peggy, a press secretary, normally sends her news releases to the governor's office for review, and they also send it to PR Newswire. During an emergency, when she often works after hours or needs to get information out quickly, Peggy can send releases to PR Newswire herself. Gretchen adds the governor's office to her approval routing, and Lou has a specific news release approval form he uses to ensure that all the appropriate parties review information before it is distributed.

During an emergency, Mike's agency switches from reporting to the military department to reporting directly to the governor. "It recognizes that you don't need layer upon layer of bureaucracy," said Mike, "or even if it's a good bureaucracy in an emergency,

you need the shortest line possible to the person in authority." Mike and his colleagues work

closely with the governor's press office on a routine basis, so the transition is generally

seamless for communications. By working directly for the governor's office, Mike and his

colleagues are able to get the resources and assistance they need to respond to a disaster.

Although Lou's department does not report to the governor, Lou said that SEMA has

a close relationship with him and his administration. During a disaster, this relationship

becomes an asset.

> The one thing that we have that I think helps us is our governor is very
> interested in our state's preparedness for a terrorist event or natural disaster.
> He is very keyed in to what is happening and wants our state to be prepared.
> As an example, he had been in office for maybe a week when we had the first
> presidentially declared disaster. So it was baptism by fire, and even before that
> happened he was in wanting to know what our response would be if
> something big happened. So that's definitely a bonus. It helps to have the
> governor of your state interested and tuned in to what's happening in your
> area. (Lou, SEMA PIO)

In most of the agencies, the altered hierarchy tends to flatten the management

structure and reduces the distance between the emergency responders to the governor and

other key decision makers. Many of the PIOs suggest that this helps to ensure consistent

messages from all government agencies that are involved in disaster response. The next

section describes how the PIOs work with the media during crises.

Media Relations in Disasters

For SEMA PIOs, a disaster is synonymous with media attention. As Isabella

observed, "Large or small, crisis situations usually invite a great deal of media attention."

Overall, the PIOs spoke of a cooperative relationship with the media, rather than an

adversarial one. They, and their agency leaders, recognized the importance of working with

the media to inform the public during a disaster situation. Many of the resources that the PIOs mentioned were designed to make it easier to communicate with the media, such as Web EOC, news release distribution services, and proprietary Internet-based information programs to which reporters may subscribe. The PIOs also provided training sessions for the news media to help them effectively cover the event. For example, Gretchen's agency held a meeting for all news assignment directors prior to a conference of international leaders to educate them about their public information resources and help them be more prepared for the upcoming event.

Lou believed that good relationships with the media can pay off during chaotic situations, and that the agency leadership's attitude toward the media can make a big difference in that relationship. "It helps that we have a commissioner and most of our directors that are media-friendly and understand the importance of maintaining a level of transparency and openness and responsiveness to the media," he said. "The media by and large understand that our policy is to be open . . . so that tends to help when you get in those stressful situations with tough stories and those sorts of things."

Respondents explained that the joint information center concept was developed around the need to inform the media with consistent, accurate, and timely messages. By having all of the PIOs in one location, they believe that reporters do not have to consult with multiple spokespersons and sort out the various information that they collect, especially when timing is critical. Lou said that for the JIC to be effective, all of the key players need to be part of it. When he learns that other agencies or organizations that he has not included in the JIC, such as a school board, begin to talk with the media independently, he works with them to get them to synchronize their messages. "What they say can impact what we are

doing as a government agency," said Lou. "So it's a challenge to be sure that all the different entities are on the same page."

Although he has a good relationship with media in his state, Lou said that reporters and editors do not always share SEMA's priorities. "I think it's a challenge trying to keep stories in the media focused on ways that are going to help the public get the information they need… or get [the messages] out accurately or not bury them in other stories that they are trying to do," said Lou. Lou said this can become especially difficult during a prolonged crisis when the media turn to other stories while the public still needs to know about post-disaster issues such as water quality or disaster assistance.

All of the PIOs indicated that they had a good relationship with news media and that they work to cultivate that relationship during routine times. At least one agency invests in that relationship by educating reporters on the media resources offered by SEMA. Although the PIOs rely on the media to disseminate public information during a crisis, they acknowledge that the media do not always share their goals.

Results Summary and Conclusion

This chapter detailed the results from my interviews with five public information officers who work for different state emergency management agencies. The PIOs offered a glimpse into the daily work of a SEMA public affairs office, explained how their offices make the transition from routine responsibilities to respond to a crisis, and described how they function organizationally during a crisis. Although there were some variations in their responses, one common theme emerged: The organizational response to a crisis is always the same, no matter the nature of the crisis.

Peggy and Lou provided examples of why they believe the response to all crises is the same. Peggy, a press secretary who works directly for the governor of her state, described how her agency brings together various PIOs to train for an annual radiological exercise. PIOs from other agencies who would not be involved in a power plant emergency often request to observe the exercise in action. Peggy explained that these PIOs use this observation as a learning experience, because, "The response is the same, no matter what the disaster is." PIOs in Lou's state rehearse using the joint information center structure for an annual chemical weapons stockpile emergency drill. Lou said that, although the exercise "is pretty specific to one topic, which is chemical weapons [accident] response, a lot of the procedures and a lot of the general philosophies for how to run a JIC can be translated to other incidents."

The common element in a disaster response is a joint information center, or a state's own version of the organizational structure for crisis communication. Each state has different numbers of full-time staff members, different projects that they do on a routine basis, and different chains of command. When these SEMAs transition into disaster mode, the PIOs tend to change their reporting structure, adjust their procedures for information dissemination, recruit additional personnel, and bring state and local PIOs from other agencies together into one team. This transition to disaster mode was the same whether it was for a power plant accident, an explosion on the interstate, a major flood, or a hurricane. They also used this structure during potentially chaotic times as well, such as for the major sporting event in Lou's state or for the world leaders' conference in Gretchen's state. The only elements that would prevent the PIOs from activating a JIC would be time and scale. During the train bomb scare, for example, Peggy said that the emergency was over within 30

minutes. Had the bomb threat been real, she would have activated a JIC as part of the response. Also, the PIOs said they would not activate a JIC for minor incidents, such as earthquakes that do not cause major damage or injuries, or a wildfire that does not threaten homes or businesses.

Table 5.2 summarizes the organizational traits that I was able to determine from the five interviews. The key categories of attributes, which also emerged in the results discussion from the participant observations, are organizational structure, accountability, relationships, priorities, resources and training, and evaluation. Similar to the observation results, the attributes derived from the interviews differed according to "routine mode" and "disaster mode." The public affairs teams must increase their staffs, their authority over other governmental entities, and the scope of their responsibilities to adequately respond to a public crisis. The PIOs work in a different location, follow new job descriptions, adjust their approval procedures, and take on new priorities. Once again, evaluation, which is nonexistent during routine times, based on remarks made in both the observations and the interviews, becomes an important element after a crisis. The differences between routine and crisis modes may be due to the greater consequences of an emergency situation and to the greater visibility of the public affairs staff during the response.

The fact that the organizational structure is either enhanced or altered to meet the demands of a crisis suggests that the routine structure is not adequate for emergency response. The greatest changes appear to occur after the crisis hits and the SEMAs activate an emergency operations center. The resulting organization looks very different from the organization in routine mode.

There are some differences between the results from my observations and the interviews. These differences may be due in part to the different methods of data collection. The phone interviews prevented me from being able to observe the nuances of organizational life, while the six-week participant observation provided me with rich data. The differences may also be the result of the variations in each department's structure. They are worth noting, however, to illustrate that although the various SEMA organizations are not identical, they all adapt to emergency situations in similar ways.

Most of the differences are found in the "routine mode" column of the organizational attributes charts (see Tables 4.1 and 5.1). The SEMAs who participated in the interviews appear to have more specialized job descriptions, tend to have more direct contact with the governor's office, and demonstrate more individual autonomy under routine conditions than the SEMA that I observed. The five SEMAs who I interviewed also reported more routine contact with media and more coordination of messages with other agencies. The SEMA that I observed demonstrated more attention to issues management and media monitoring, and paid more attention to long-term projects than the other agencies.

There are fewer significant differences in the "disaster mode" columns between the SEMA that I observed and the five SEMAs that participated in the interviews. Two of the PIOs I interviewed suggested that they have individual autonomy during crises, but this was not apparent during my participant observation. None of the PIOs I interviewed mentioned that rumor control is a large part of their disaster response, while it was a top priority for the SEMA that I observed. Otherwise, the SEMAs as a group shared most of the attributes of disaster mode. All of the SEMA organizations look very similar when fully engaged in a joint information center.

Table 5.2

Organizational attributes derived from interviews with five SEMA public affairs officers.

Routine Mode	Disaster Mode
Structure	
SEMA PAO teams have two to six staff members	The JIC (or a state's equivalent) potentially has dozens of team members from reserves, PIO associations, and other agencies
PAO job titles are designed for general PR responsibilities	JIC job titles are designed for disaster management responsibilities
Accountability	
Some states have specialized PAO positions, while others have more loosely defined roles	PAO staff members have clearly defined responsibilities
Two state SEMAs report directly to the governor, and three report to a department of public safety	One SEMA that normally reports to a secretariat reports to the governor during a disaster; the other four stay the same
News release approval procedures vary on whether they include the governor's office	One state adds governor's office approval on news releases, and one adds EOC management
Two PIOs demonstrate autonomy in their work	Two PIOs demonstrate autonomy in their work
Relationships	
PAO has strong relationship with media	PAO has strong relationship with media
PAO has strong relationship with other state, local, and federal agencies	PAO oversees other state and local agencies
All indicated close relationship with agency leadership or governor's office	All indicated close relationship with agency leadership or governor's office
PAO works in collaboration with other state agencies to train and prepare for emergencies	PAO has access to other state agency personnel and resources and manages the statewide public information efforts
Priorities	
For most states, priorities are dictated by the day's events or political requests	Disasters take priority, except in one state that juggles multiple priorities
Proactive in preparing communities for crises	Reactive in responding to crises
Responding to media inquiries is a top duty	Responding to media inquiries is a top duty
Coordinating messages with other agencies	Keeping the governor informed while coordinating messages with other agencies
Resources and Training	
Rely on technology for communication, although each state varies in the resources for PR	Rely on technology for communication, although each state varies in the resources for PR
Multiple channels for internal communication	Multiple channels for internal and media communication
Rely on media for information dissemination	Rely on media for information dissemination
Coordinate statewide training	Rely on statewide agencies for response
Training and rehearsal for a variety of emergencies	Every disaster response is a learning opportunity
Evaluation	
Little or no formal evaluation	Formal after-action reports

Figure 5.1 illustrates how a SEMA public affairs organization adapts its behavior as it

transitions from routine mode to disaster mode. As a public affairs office faces chaos, it can

adapt by changing its structure, processes, and routines. The attributes that allow it to

function in chaos are amplified as the organization converts from its routine structure to a

crisis structure, the joint information center (JIC). The JIC offers the most coherent form of

organization for a public affairs office to communicate during a disaster situation. As a result,

the PAO is able to respond to disasters and other crises in a coordinated manner. They would

not have these capabilities with the organizational structure found in the routine mode.

Figure 5.1

*The level of organizational adaptability as a SEMA public affairs office
transitions from routine to crisis mode.*
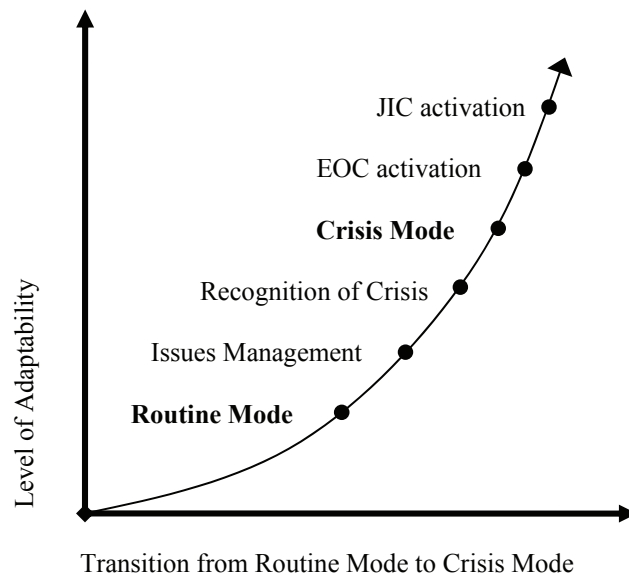
This chapter described the results of my interviews with the five SEMA PIOs and

compared those results with my participant observation. The six SEMA organizations

increase in similarity as they respond to a crisis stimulus. The next chapter examines the

theoretical application of the findings from the participant observations and interviews and

discusses the significance of these findings for crisis communication research.

CHAPTER VI

DISCUSSION AND CONCLUSION

The preceding chapters provided a description of my observations of a state

emergency management public affairs office and details from my interviews with public

information officers from five state emergency management agencies. This chapter compares

those findings to the theoretical framework offered by high reliability organizations (HRO)

and presents a new theoretical explanation of how crisis-mandated state agencies manage

crisis communication.

High Reliability in SEMA Public Affairs

The state emergency management agencies' (SEMA) public affairs offices (PAO)

displayed organizational characteristics that support those from HRO theory. Table 6.1 lists

the SEMA attributes discussed in Chapters IV and V and their corresponding HRO attributes.

As shown in the table, all of the primary elements of HROs are apparent in the six PAOs as a

group. The following section discusses the SEMA attributes that correspond to HRO

attributes.

Table 6.1

Comparison of organizational attributes from state emergency management public affairs offices and high reliability organizations. (HRO categories adapted from Roberts, 1990.)

Attributes Derived from Interviews and Participant Observation	Corresponding HRO Attributes	
Environmental & Organizational Elements		
Issues Management	Preoccupied with failure	*Mindfulness*
Rumor control	Reluctance to simplify	
Media monitoring Weather forecasts	Sensitivity to operations	
Learning from mistakes during exercises and emergencies	Commitment to resilience	
PAO managers part of upper management Consult with subject-matter experts	Deference to expertise	
Mission to protect lives and property	Consequences are catastrophic	*Issues*
A disaster is bigger than one agency Crises may span several jurisdictions	Scale	
Emergencies or exercises are fast-paced The unexpected is routine	High velocity environment	
JIC unifies governmental response	Common goals	
Relationship with media Reliance on technology Intergovernmental relations	Tight coupling	
Organizational Actions & Practices		
Basic PIO classes Disaster Response Exercises	Training and rehearsal	*Response to complexity*
Activate reservists Draft other state agency PIOs Call in PIO association members	Redundancy	
Approval process for information dissemination	Accountability and responsibility	
JIC roles are clearly described	Specified job functions	
Communication with leadership Agency-wide emails and alerts Public Outreach	Direct information sources	
Exercises for risk industries Exercises for terrorism preparedness	Exercise with baffling interactions	
JIC activates statewide PIOs	Redundancy	*Response to tight coupling*
PIOs are assigned specific functions	Job specialization	
Drop routine tasks to respond to crisis Approval process expedited for crisis JIC structure can be adapted to crisis	System flexibility	
SEMAs flatten hierarchy and report directly to the governor during crises	Hierarchical differentiation	
Juggle daily routines with crisis response	Bargaining/negotiation	

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After observing a SEMA public affairs staff in action and interviewing other state public information officers (PIOs), I realized that the organizations operate differently while doing daily, routine tasks, than they do while responding to an emergency. The policies, procedures, and routines that the staff followed while conducting normal public relations activities changed when a crisis threatened or emerged. In addition, I identified some HRO attributes in one phase but not the other, and I identified other organizational characteristics that are not explained by HRO theory. When a public affairs office was fully engaged in "disaster mode," the organization looked much different than the PAO in "routine mode."

The conditional differences in the SEMA organizational attributes are not made evident by a simple comparison of SEMA and HRO attributes. This realization required that I take another look at the crisis response process. Therefore, I separated the following discussion of organizational elements found in SEMAs according to routine and crisis.

HRO Environmental and Organizational Attributes
under Routine Conditions

Public affairs offices in emergency management agencies look much like the public affairs offices of most organizations. They produce typical public relations artifacts, such as publications, news releases, Web sites, and campaign materials. They respond to media inquiries, arrange interviews with reporters, and track stories about their organization in the news. When HRO attributes are applied to these routine responsibilities, however, a better understanding of their organizational structure emerges.

Mindfulness

David's agency practiced issues management on a daily basis. In addition to watching the news and alerting agency leadership of potential issues, the PIOs also monitor media inquiries, emails to the agency Web site, and information posted on online emergency management pages. Issues management supports the concept of *sensitivity to operations*, a strategy of mindfulness in HROs. In sensitivity to operations, personnel become aware of all of the activities going on in an organization so that they understand how their actions may affect other functions. Agency employees keep a close watch of signals from weather forecasts because SEMA employees anticipate that any change in the weather can create a problem for travel, public safety, or public services. Based on the information they receive from these sources, the PIOs consult with agency leadership and then may decide to generate news releases or media calls in response to hot issues. This constant watch of the weather supports another HRO strategy of mindfulness, a *reluctance to simplify,* because the staff members are aware that even small storms could produce flooding, damaging hail, and lightning (Weick & Sutcliffe, 2001).

While doing daily tasks and long-term projects, the PAO staff did not appear overly concerned about succeeding. David's lack of preparation for the radiological exercise training sessions and the simple mistakes made while organizing the EOC grand opening do not support the HRO concept of a *preoccupation with failure*. When mistakes were made, David or his staff corrected them, but they did not discuss how to prevent those mistakes from happening again. As illustrated by the above examples, the PAO actions do not support the concept of a *commitment to resilience* during routine times, which would imply that the staff would resolve to avoid those errors in the future. On several occasions, others

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overlooked or discounted the public affairs staff during decision making, such as when the PIOs were not informed of the launch of the state employee terrorism preparedness training. Therefore, the attribute of *deference to expertise* also was not supported by the research. This concept also applies to the PIOs seeking out experts, but this was rarely mentioned by any of the participants (Weick & Sutcliffe, 2001). Likewise, the interviews with state PIOs did not support the theoretical concepts of a preoccupation with failure, a commitment to resilience, or deference to expertise under routine conditions.

An explanation for a lack of these concepts under routine working conditions may be due to the absence of major consequences and the lower visibility of public affairs staff. The PIOs typically do not deal with life-and-death situations in their day-to-day tasks, unlike in disaster situations. Also, there is less media coverage of SEMA activities when there is no imminent crisis. It appears that these attributes may help the SEMA staff avoid some errors made in routine projects, and that a preoccupation with failure in particular may be an asset to stress the importance of the public affairs function during the emergency exercise training sessions. The next section will discuss the HRO issues that emerged during my research.

Issues

Four issues emerged during routine PAO activities that support HRO environmental and organizational characteristics: the issues of scale, common goals, tight coupling, and a high-velocity environment (Weick & Sutcliffe, 2001). Part of the SEMA mission is to prepare all state, county, and city government agencies for disaster prevention and response. They also work with other agencies, such as law enforcement and the health department, to educate the public about emergency preparedness. Hurricanes, earthquakes, and tornadoes do

not stop for jurisdictional boundaries, so several localities often have to cooperate on disaster response and recovery efforts. In addition to multiple political jurisdictions, disasters require a multi-agency response that may include the departments of transportation, natural resources, or forestry, among others. These agencies must learn how to work together before a disaster hits.

These findings support the HRO issue of *scale* as SEMA works with other PIOs to reinforce the idea that emergency planning is not only managed by SEMA, but by the state as a whole. Scale is an important concept in high reliability theory because an issue may appear much smaller, or conversely, much larger, than it actually is if individuals within an organization fail to understand the full scope of the event. Mike's story about the explosion on the interstate when the various agencies did not communicate with each other and only attempted to address their specific area of expertise supports the concept of scale. A second issue, *common goals*, is supported by the fact that to succeed, all PIOs from state and local agencies must *share the same goal* of working to protect citizens and their property through coordinated emergency management. This work is done through intergovernmental relations among other state and local government agencies, which supports the theoretical concept of *tight coupling*. Tight coupling implies that one function cannot operate without close coordination and cooperation with another function (Weick & Sutcliffe, 2001). For example, broadcast studios would be useless if television had not been invented and mass produced. The television producers depend on people to buy television before they can become viewers.

In addition to intergovernmental relations, several other examples of tight coupling occurred in routine public affairs duties. The PAOs rely heavily on technology, such as BlackBerry wireless communication devices, text pagers, cell phones, Internet news services,

and online emergency management programs. The PAOs also have a profound reliance on the media to communicate information to the public during an emergency, so the staffs work during routine times to develop relationships with local and state media. Finally, SEMA is bound to its mission to protect lives and property in an emergency; therefore, the completion of routine tasks depends on a lack of a crisis.

Peggy, the press secretary, said that crises occur daily for her agency, and that major crises happen on the average of once every 15 months. The other PIOs felt that the lack of a crisis and the resulting fast-paced response is what separates routine from chaos. Therefore, Peggy was the only PIO whose comments supported the concept of a *high-velocity environment* under routine conditions. A high-velocity environment implies that an organization must make decisions quickly to adapt to changes in the environment (Weick & Sutcliffe, 2001). Peggy's perspective may reflect the fact that as a governor's press secretary, she is exposed to a wide variety of issues that occur throughout the state. Also, she may have included threats in her estimation of crises, while other PIOs only included actual events. Because of this difference in perceptions of the routine environment, Peggy's comments deserve further research to develop a better understanding of all the environmental factors.

In sum, the findings from routine PAO activities supporting HRO environmental and organizational issues that emerged during routine PAO activities include the issues of scale, common goals, tight coupling, and, to a lesser degree, a high-velocity environment. The next section discusses the SEMA responses to these environmental issues as they relate to high reliability theory.

HRO Organizational Actions and Practices
under Routine Conditions

The HRO literature examines organizational practices in response to complexity and tight coupling. During routine times, the PAOs exhibited nearly all of the HRO responses to complexity, but only two of the responses to tight coupling.

Response to Complexity

In response to complexity, the PAO routinely conducts training and rehearsals, participates in real-world exercises, demonstrates accountability and responsibility, has specific job functions, and uses direct information sources. The PAO helps fulfills the agency's responsibility to train and prepare state agencies, local governments, and the general public for disaster preparedness through public information campaigns, information posted on the agency Web site, participation in disaster response drills, and formal and informal meetings with PIOs from across all branches and levels of government. The efforts made during routine times help ensure the response to future disasters will be more cohesive and organized. The preparation activities and exercises support the HRO activities of *training and rehearsal* and *exercises with baffling interactions*. The fact that the SEMA PIOs are in charge of coordinating all statewide preparedness activities supports the concept of *accountability and responsibility* in HRO theory; however, accountability of routine training was difficult to determine because the PIOs did not evaluate these activities. In addition, PIOs' routine work did not reflect individual autonomy. The PIOs are not encouraged to step out of their job descriptions to solve problems, and they cannot distribute news releases, printed materials, or respond to media calls without going through a regimented approval

process. Weick and Sutcliffe (2001) argue that a lack of autonomy can limit personal accountability and responsibility within an organization.

Gretchen's agency is unique in that the six PIOs have specific jobs that are related to a different function, such as constituent services, radiological preparedness, and legislative matters. The job descriptions are based on operations that are tightly coupled with SEMA, rather than on technical skills. The other PIOs' job titles suggest a focus on technical skills, such as an outreach coordinator, a Webmaster, or a writer. David's staff felt that their job descriptions for day-to-day responsibilities are inaccurate, vague, or useless. At first glance, it appears that the SEMA public affairs organizational structure for daily tasks has *specified job functions* that help the office operate in a complex environment (Weick & Sutcliffe, 2001). Upon closer analysis, however, most of the job functions are not tied to elements in the environment, with the exception being Gretchen's agency.

The PIOs' reliance on technology results in up-to-the-minute access to situation reports, news, weather forecasts, email messages, and reports from the field. In addition, many of the PIOs have a direct line of communication to the SEMA senior staff members. Peggy, the press secretary, reports to the governor and has the added benefit of close contact with the agency director. The prevalence of communications technology and contact with agency leadership supports the HRO concept of *direct sources of information*. As a result, the PIOs have current and reliable information from various SEMA units, the governor's office, and other agencies (Weick & Sutcliffe, 2001).

In sum, the following HRO attributes emerged from analysis of the organizations' response to a complex environment: training and rehearsal, exercises with baffling interactions, and direct sources of information. Two organizational practices, (1)

accountability and responsibility and (2) specified job functions, were noted but did not

strongly support the HRO theoretical concepts. *Redundancy*, a prominent element in the

HRO literature in which personnel and systems are backed up with duplications, was not

evident during analysis of routine mode activities (Weick & Sutcliffe, 2001). This may be

explained by the simple fact that redundancy is not required for completing their routine

tasks. The next section discusses the organizational responses to tight coupling that emerged

from the SEMA public affairs research.

Response to Tight Coupling

The last category of HRO actions and practices concerns the organizational response

to tight coupling. As discussed above, the PAO is tightly coupled with technology,

intergovernmental relations, the media, and the absence or presence of an emergency. The

SEMA public affairs personnel have the ability to adapt to changing conditions and learn

from past emergencies, which helps them improve their preparedness and disaster response

efforts. This adaptation can result in additional training, better communication with PIOs in

localities and other state agencies, improved media relations, and a revised organizational

structure. The specialized jobs in Gretchen's agency create knowledgeable liaisons from the

public affairs office who may work directly with the many agencies which with the SEMA

PAO collaborates. The other SEMAs do not have specialized jobs that relate to outside

agencies in this way. Therefore, during routine conditions, I observed two HRO attributes

that support the theory's expected response to tight coupling: *system flexibility* and *job*

specialization. Other responses to tight coupling were not apparent under routine conditions,

and thus did not support the concepts of *redundancy*, *hierarchical differentiation*, in which

the management chain can adapt to changes in the operating environment, and

bargaining/negotiation, in which personnel may collaborate with others within the

organization to adjust routines, resources, or procedures as needed. The absence of these

concepts may be explained by the fact that state emergency management agency public

affairs offices simply do not require duplicate personnel and systems, adjustments in

hierarchy, and bargaining for resources while operating under routine conditions. In other

words, SEMAs have all of the organizational attributes in place that they need to complete

routine public relations tasks. Alternatively, SEMA public affairs offices may not display

these attributes under routine conditions because they are under-resourced.

In sum, the research supports the existence of several HRO attributes in SEMA public

affairs offices under routine conditions (see Table 6.1). The absence of certain attributes from

some of the six agencies – a preoccupation with failure, commitment to resilience, deference

to expertise, redundancy, job specialization, and adjustments in hierarchy – surface when the

agency makes the transition from routine to crisis. The next section addresses the HRO

attributes that emerge when a public affairs office shifts to crisis mode.

<div align="center">

HRO Environmental and Organizational Attributes
under Crisis Conditions

</div>

Every PIO referred to "disaster mode" to distinguish emergency response from

routine responsibilities. When disaster mode surfaces in a public affairs office, the staff

members' work changes in terms of roles, intensity, and even location. Because of the

differences brought on by environmental conditions, I noted different attributes in disaster

mode than in routine mode. As in the above description of routine conditions, this section

<div align="center">

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</div>

reviews how the SEMA characteristics support HRO environmental and organizational attributes.

Mindfulness

The public affairs offices demonstrated all of the environmental and organizational characteristics of mindfulness found in HRO research under crisis conditions: a preoccupation with failure, a reluctance to simplify, sensitivity to operations, a commitment to resilience, and deference to expertise. Some of the same problems that faced the PAO staff during routine times, including difficulty verifying details and a lack of autonomy, were still apparent during the simulated radiological disaster with David's agency.

During the radiological exercise that I observed, the PIOs were concerned with correctly performing their tasks, at times double-checking with each other to make sure they carried out their respective responsibilities correctly. This attention to detail, however, could have been due to the fact that the exercise requirements are carefully orchestrated while under scrutiny by FEMA evaluators. David, the PAO director, commented that they have more "latitude" during a real crisis than during a graded exercise. The PIOs had a specific routing slip for news release approvals in the emergency operations center, and several additional people who are not part of the routine approval process had to review the releases. The PIOs who I interviewed also indicated that they have different approval procedures in place during crises, that they refer to checklists to ensure they complete all of their required actions, and that they involve people from outside of the public affairs office to help verify information. The measures that the PIOs took to avoid mistakes during the exercise support the HRO concept of *preoccupation with failure* (Weick & Sutcliffe, 2001).

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The PIOs followed up on all rumors during the simulated crisis and passed that information along to the leadership, the media, and the public inquiry center. The public inquiry center is also known as rumor control because the call takers pass on rumors to the PIOs while providing correct information to the public. The radiological exercise tested the PIOs' responsiveness when rumors that the nuclear power facility was burning circulated among the local emergency management offices. The staff could have assumed that one person manufactured the story about the fire and that no one else would hear the false information, but the PIOs were aware that one seemingly insignificant bit of erroneous information could explode and cause widespread panic among the residents of the surrounding communities. This example supports the HRO concept of a *reluctance to simplify*. In high reliability organizations, team members pursue all signals of a potential problem, no matter how small or improbable, until they are satisfied that the issue is resolved (Weick & Sutcliffe, 2001).

As the scenario escalated, all personnel understood what actions they needed to take at the time, including issuing a specific news release, holding a media briefing, or recording an emergency alert system (EAS) broadcast. Their actions were closely tied to other groups within the EOC, so they had to coordinate their efforts and time their communications to coincide with other emergency response activities. These actions demonstrate that the SEMA personnel exhibited a high level of *sensitivity to operations* throughout the exercise. While it is tempting to only focus on their assigned responsibilities, the team members must be aware of all operations so that they have an accurate picture of the entire response effort (Weick & Sutcliffe, 2001).

Although the PIOs made some mistakes, they made a determined effort to correct errors and prevent them from reoccurring. For example, David's staff quickly issued corrected news releases and re-recorded the EAS message once they discovered the errors. David then assigned staff specific tasks for verifying information in the future. These responses support the HRO concept of a *commitment to resilience*. During the exercise, the EOC's operations director stayed in constant contact with David, often consulting with him on what measures should be taken next. In turn, David recognized the expertise that employees from other agencies, as well as the reservists, bring to the public information team. The PIOs who were interviewed also mentioned reliance on experts to give media interviews and on experienced personnel to fill vital roles in the joint information center. The leadership regularly consulted some PIOs, such as Peggy, during a crisis. The examples support the HRO concept of *deference to expertise* as demonstrated by both the PIOs and the SEMA leadership.

In summary, analysis of the public affairs offices in disaster mode supported the presence of all of the HRO environmental and organizational characteristics of mindfulness: a preoccupation with failure, a reluctance to simplify, sensitivity to operations, a commitment to resilience, and deference to expertise. More mindful activities emerged during the disaster mode than in routine mode. The next section describes the HRO issues that surfaced during crises and how they supported the HRO theory.

Issues

The issues that are prevalent in HROs were far more apparent during the simulated nuclear plant disaster than during routine times. The issues I observed supported all the HRO

issues: catastrophic consequences, scale, a high velocity environment, common goals, and tight coupling during the day-long radiological exercise. As the scenario progressed, the issues were amplified, particularly tight coupling.

The public affairs role is crucial during an emergency. Inaccurate or inconsistent information, and even poorly timed dissemination of accurate information, can have devastating results on a community that is struck by a disaster. For the radiological exercise, mistakes can have serious consequences on the state's and the power company's authorization to operate the nuclear power generation facility. The other PIOs I interviewed stated that consequences also can include failure to secure federal disaster funding, the spread of rumors that cause panic among the public, or failure to alert the public of dangers that follow a disaster, such as impure drinking water. These findings supported the HRO issue of *catastrophic consequences* for PIO actions under crisis conditions (Weick & Sutcliffe, 2001). The consequences are much greater during a crisis than during routine operations.

All of the PIOs believe that the response effort is much larger than their full-time staffs could manage; any emergency that the state would respond to exceeds the reach of a single governmental entity. This awareness that disaster response is greater than one agency supports the HRO concept of *scale* (Weick & Sutcliffe, 2001). The SEMA operating environment reaches beyond its headquarters building and its full-time staff. The scale of the event also determines SEMA involvement in a crisis. The state emergency response agencies do not get involved in a crisis until the situation gets too large for one locality to respond to. Once SEMA is activated, the political boundaries disappear, and the state as a whole responds to the crisis. This finding is significant because the size of the organization, in this

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case an amalgamation of several governmental entities, swells to adapt to the scale of a crisis event.

The need for accurate, timely, and consistent public information is magnified as an emergency situation escalates and lives potentially are endangered. Therefore, a *high velocity environment*, which was not a prominent issue for all PAOs in routine operations, became obvious within analysis of the exercise and PIOs' stories. All of the PIOs share the overarching goal of protecting lives and property during disasters as well as the more immediate goal during the exercise of passing with few or no critical errors. This element, which holds all of the pieces together for the public information function, supports the HRO attribute of *common goals* (Weick & Sutcliffe, 2001). Although the PIOs would occasionally get caught up in different elements of the scenario, the common goals help them refocus priorities and consider how the public would receive the information they were releasing. All of the PIOs that I interviewed said that their agencies share the same goals of preparing the public, communicating during a crisis, and helping communities during the recovery.

The reliance on technology, other government agencies, and the media becomes much greater as the PIOs advance through the stages of a disaster response. This growing dependence supports the HRO attribute of *tight coupling* (Weick & Sutcliffe, 2001). Tight coupling was more problematic for the PIOs during a crisis than during routine operations. Without access to communications technology, these PIOs found it cumbersome and time-consuming to keep messages accurate, timely, and consistent. The level of intergovernmental relations also increases as PIOs work to coordinate efforts among various state, local, and federal agencies. Finally, the dependence on the media becomes more apparent during an emergency as radio stations carry the EAS messages and television stations display the

emergency messages in a crawl on the bottom of the screen. SEMAs would simply not be able to communicate quickly with the public during an emergency without the media.

In sum, HRO environmental and organizational attributes are more prevalent during a crisis than during routine times. Many of the HRO traits that were absent from day-to-day PIO tasks emerge when the staffs go into disaster mode. The next section details how SEMA PIOs are able to respond to complexity and tight coupling using actions and practices found in HROs.

<div align="center">HRO Organizational Actions and Practices
under Crisis Conditions</div>

As a crisis situation escalates, the public affairs office must respond to rapidly unpredictable changes while becoming more reliant on other government agencies, technology, and the media. These organizational changes support the manifestation in SEMA public affairs of HRO practices that respond to complexity and tight coupling. The practices in response to complexity include training and rehearsal, redundancy, specified job functions, direct information sources, and complex interactions. The practices in response to tight coupling include redundancy, job specialization, system flexibility, hierarchical differentiations, and bargaining/negotiation (Weick & Sutcliffe, 2001). All of the HRO practices that enable an organization to manage complexity and tight coupling during a crisis emerged during the interviews and observations.

Response to Complexity

All of the SEMAs that participated in this study are involved in exercises that test response capabilities for nuclear power accidents, chemical weapons emergencies, and terrorist attacks. Many of the PIOs noted that since September 11, these exercises have

gained importance and have become more complex to imitate real-world disaster conditions. During exercises as well as actual crises, every emergency management agency relies on PIO reservists, recruits from other agencies, or volunteers from a PIO association to provide the personnel needed to sustain a complex or long-term disaster response. Therefore, *training and rehearsal, exercises with baffling interactions,* and *redundancy*, which are all important features of HRO theory, were supported in the results of this research (Weick & Sutcliffe, 2001). I did not find evidence of these attributes in the analysis of SEMAs in routine conditions.

During an activation of the emergency operations center or the joint information center, the SEMA PAO managers are in charge of all PIOs and reservists who are called in to support the effort. SEMA's legislated mandate to coordinate the statewide response to disasters means the agency is held responsible for the actions of all agencies and localities involved in the response. PIOs maintain their news release approval processes but often involve additional reviewers with a faster turn-around time. The research supports the HRO concepts of a*ccountability and responsibility* in the PAO, which is amplified during a crisis or exercise. As I discovered during routine times, individual staff are not granted autonomy to act on their own even if warranted, something that personnel are encouraged to do in the organizations that HRO researchers observed (Weick & Sutcliffe, 2001). While individual accountability may be lacking, organizational accountability is high.

PIOs post up-to-the-minute incident logs on Web EOC for all emergency personnel in the state to follow during crises or exercises. Interpersonal communication within the EOC is highly effective as the PAO staff can simply walk into a nearby office to talk to decision makers and gather information. Many of the PIOs also have direct contact with the

governor's office during a crisis. The various means of direct communication make the public information function reliable and efficient, even as a crisis escalates. While the PIOs need to stay informed, they also reciprocate by providing information to other agency divisions and by communicating directly with the media. Therefore, the HRO concept of *sources of direct information* is augmented during a crisis.

When an EOC is fully operational, the PAO activates a joint information center (JIC) that allows SEMA to coordinate the public information efforts and messages across all involved agencies and jurisdictions (for more information on the JIC concept, see Appendix V.) The JIC has highly specialized job roles that are designed to address all of the public information functions needed during a disaster. A JIC is not always used, however, if the situation is not large enough or does not last long enough to require the benefits of a JIC. If a situation escalates to the point that a JIC is needed, the structure eliminates confusion by addressing complexity, specifying roles, assigning a chain of responsibility, and providing sources of direct information. Everyone has an assigned role in the JIC that may not be the same role that they have in their routine jobs, and they have all been trained for that role prior to being summoned to join the JIC. Therefore, the most-apparent difference between routine and disaster modes is the change in the HRO concept of *specialized job functions* as evidenced in the activation of a joint information center. Specialized job functions leave no doubt as to team members' responsibilities and are designed to address all of the needs of the organization while operating in a complex environment (Weick & Sutcliffe, 2001).

In summary, the prevalent HRO concepts in response to complexity are training and rehearsal, redundancy, specified job functions, direct information sources, and exercises with baffling interactions (Weick & Sutcliffe, 2001). These attributes are more prevalent during

crisis mode than routine mode, which would be expected as the level of complexity in the environment increases. The next section discusses the organizational attributes that emerged from analysis of the response to tight coupling.

Response to Tight Coupling

As a crisis escalates, SEMA organizational practices and actions in the PAO become more tightly coupled with other systems that are responding to the emergency. During my observations and interviews, the PIOs indicated that they employed all but one of the HRO attributes for responding to tight coupling, as opposed to only one attribute found during routine times. I noted redundancy, job specialization, system flexibility, and hierarchical differentiations. The last HRO attribute of bargaining and negotiation was only apparent in one agency.

Once again, redundant technology is an asset for the PIOs. They can send messages simultaneously to BlackBerry devices, text pagers, and email accounts. The additional PIOs who are called in from state agencies not only provide extra personnel but also reflect attributes that support the concept of tight coupling with other state agencies. These PIOs become liaisons with their respective departments by easing communication flows and speeding up approvals and decision making. In many cases, the personnel from other agencies also have delegated authority to make decisions on the scene. Therefore, the HRO attribute of *redundancy* is a key factor in managing tight coupling with other groups during crises and exercises (Weick & Sutcliffe, 2001).

The joint information center structure brings together people from many different agencies to work as one unit for the state. The JIC also provides clearly defined roles for all

of the PIOs, meaning that reservists, PIOs from other state agencies, and the SEMA PIOs

have clear expectations of their duties when they are called to the EOC. The confusion and

irritation that many of the PIOs in David's agency expressed about their routine

responsibilities did not emerge while they were part of the JIC. Finally, the JIC supports tight

coupling with local government PIOs who are actively involved in the radiological exercise.

An external liaison in the JIC maintains close contact with all of the city and county PIOs by

sharing information, reviewing their news releases, and ensuring that the timing and content

of news releases are consistent. Therefore, the JIC provided SEMA with the HRO attribute of

specialized jobs that are required for public information during a disaster. Of all the SEMA

processes and activities, the JIC structure most closely resembled HROs in the manner that it

addresses the issues of a volatile environment where the consequences can be catastrophic,

the scale of the problem is beyond the scope of a single organization, the response is made in

a high velocity setting, all of the players share common goals, and tight coupling is the norm.

The JIC structure provides for all of the attributes found in HROs: mindfulness, responses to

complexity, and responses to tight coupling (Weick & Sutcliffe, 2001).

When a disaster strikes, SEMA PIOs drop their routine assignments so they can

devote their full attention to the crisis response. They are given the flexibility to resume those

tasks, or even to cancel some projects, once the crisis has been resolved. The approval

process for news releases is simplified and expedited during a crisis, while it can take hours

or days for approval on routine topics. The joint information center structure is also very

flexible and can be adapted to specific conditions. For example, the JIC organization chart,

found in Appendix V, represents a full activation of every role in the JIC system. As Figure

4.2 illustrates, however, the SEMA only activated a fraction of those roles for the

radiological exercise that I observed. This flexibility makes the JIC system a valuable tool for emergency response. Therefore, the HRO concept of *system flexibility* was more strongly supported in analysis of crisis conditions than routine conditions (Weick & Sutcliffe, 2001).

Most of the emergency management agencies routinely report to another department or a secretariat one level removed from the governor. Once the governor declares a state of emergency, some of the SEMAs report directly to the governor's office. Even in the states where the agency already reports to the governor, the SEMA has more administrative authority during a crisis. This change in leadership gives SEMAs the authority to call in state personnel and resources needed to respond to an emergency, and also expedites requests for activation of interstate mutual aid or requests for federal disaster assistance. The HRO concept of h*ierarchical differentiations* is absent from routine conditions but becomes apparent once an agency enters disaster mode (Weick & Sutcliffe, 2001). Within the public affairs function, the management hierarchy changes as the PAO staff members assume their new roles in the JIC, and the PAO director supervises all staff who are called to work in the JIC. Agency loyalties are put aside as everyone works for "the state" during a disaster.

Not every participant in this study worked solely for emergency management. Lou said that the PIOs in his agency work with several departments besides the emergency management unit, including the driver's licensing and weapons permit agencies. Therefore, when a crisis emerges, he and his colleagues must ascertain who will staff the EOC and who will maintain the routine workload associated with the other departmental responsibilities. Unlike the other PIOs that I interviewed, Lou was the only one who couldn't simply drop routine projects to respond to a crisis. Therefore, the final response to tight coupling during a

crisis, *bargaining and negotiation*, was only supported in one agency (Weick & Sutcliffe, 2001).

Table 6.2

HRO attributes noted in six SEMA public affairs offices as a group
(categories adapted from Roberts, 1990).

Environmental & Organizational Characteristics of SEMA

Mindfulness	Preoccupied with failure	Reluctance to simplify	Sensitivity to operations	Commitment to resilience	Deference to expertise
Routine	X	X	X		X
Crisis	X	X	X	X	X
Issues	Consequences are catastrophic	Scale	High velocity environment	Common goals	Tight coupling
Routine		X	X	X	X
Crisis	X	X	X	X	X

Organizational Actions & Practices

Response to complexity	Training and rehearsal	Redundancy	Accountability and responsibility	Specified job functions	Direct information sources	Exercise with baffling interactions
Routine	X		X	X	X	X
Crisis	X	X	X	X	X	X
Response to tight coupling	Redundancy	Job speciali-zation	System flexibility	Hierarchical differentia-tion	Bargaining/ negotiation	
Routine		X	X			
Crisis	X	X	X	X		

In sum, as the crisis becomes more complex and tightly coupled, SEMA's public affairs team takes on more HRO attributes to respond to the evolving situation. Table 6.2 summarizes the HRO attributes that were noted during routine and crisis times. The proximity of all of the decision makers in the state EOC, the support from other state agencies, and the use of the joint information center structure facilitate the PAO's propensity

to adopt HRO characteristics as the staff continue to respond to the disaster. Therefore, there are more HRO attributes found in crisis mode than in routine mode, but HRO theory does not account for all of the organizational attributes of state emergency management agencies. The next section discusses those gaps and presents a new theory to explain how the SEMA public affairs offices manage crisis communication.

<center>Generating a Model of Crisis Adaptive Public Information</center>

By definition, a nuclear power plant is a high reliability organization (Weick & Sutcliffe, 2001). No one, however, has explored the communication function related to a nuclear power operation, or for that matter, the state emergency management agency that would have to respond to a public safety issue at the plant. The power facility would not respond to a meltdown on its own; a crisis of that magnitude does not take place in a bubble. Although the power plant has its own experts to repair the physical damage and decontaminate the area, the plant operators do not have the power to issue evacuation orders for the surrounding communities, hand out doses of potassium iodide to protect residents' thyroids from radiation, or stop all air traffic in the immediate vicinity. An HRO such as a nuclear power generation facility still relies on government agencies in a crisis, especially when it comes to public communication.

High reliability organization theory offers an explanation of the organizational practices in state emergency management public affairs offices. It is not a complete explanation, however. First, HRO theory has been applied to organizations that routinely operate under dangerous, chaotic conditions, but not to organizations that have both a routine mode and a disaster mode. HRO theory does not explain the fact that an organization can

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have a very different structure after a crisis emerges. This theory also does not address the dual roles that PIOs demonstrate in routine and disaster modes. Finally, this theory does not address a major discrepancy found during my interviews and observations. HROs are found to be most reliable while performing day-to-day tasks, even if under volatile conditions, but the public affairs offices appeared to be less reliable in their day-to-day responsibilities than during a crisis response. In other words, the consequences of failure during a disaster are much higher than during routine times. During a disaster the consequences may include loss of life and property, while during routine matters the consequences may include a missed deadline or an underestimated budget.

To address these issues and create a more thorough explanation of organizational practices in state emergency management public affairs offices, I propose a new model: Crisis Adaptive Public Information (CAPI). CAPI addresses many of the organizational attributes offered by high reliability theory but also accounts for the metamorphosis that the SEMA public affairs offices experience when they enter disaster mode. This model is specially suited to the unique environment of government public information offices and is mindful of the fact that PIOs must perform dual roles in emergency preparedness and emergency response. The CAPI model provides a foundation for building a theory of crisis communication that is specific to the public sector.

Figure 6.1 illustrates the prevalence of HRO attributes in organizations. These organizational traits are the most evident under routine conditions and precipitate the use of issues management (mindfulness) to identify and respond to a crisis. The attributes level off once an organization has reached a crisis peak. On aircraft carriers, for example, this mindfulness would represent the constant scanning for potential dangers on the deck while

jets take off and land. If a danger was discovered, such as a hand tool that could be sucked into the jet's engines, sailors would call a halt to all flight operations until the danger could be removed from the deck. The HRO theorists themselves admit that high reliability has not been tested during, nor was it intended for, wartime scenarios (Weick & Sutcliffe, 2001). For an aircraft carrier, routine operations are quite dangerous on their own, but a crisis would be engagement in battle. Note that the representation of HRO attributes in Figure 6.1 does not include the activation of an emergency operations center or a joint information center because an HRO would not generate a new structure in response to a crisis.

Figure 6.1

The prevalence of High Reliability characteristics as an organization transitions from routine to crisis operations.
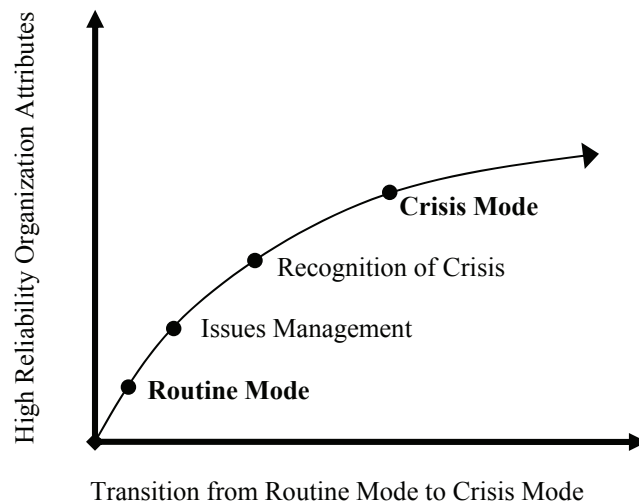
On the other hand, Figure 5.1, described in the previous chapter, illustrated how the level of adaptability increases significantly from routine mode to disaster mode. As a public affairs office faces with chaos, it can adapt by changing its structure, processes, and routines. The attributes that allow it to function in chaos are amplified as the organization converts

from its routine structure to a crisis structure: the joint information center (JIC). As discussed above, the JIC offers the most reliable form of organization for a public affairs office to communicate during a disaster situation. As a result, the public affairs office is more reliable during a crisis than during routine times.

A pure HRO explanation for how a public affairs office in a state emergency management agency conducts crisis communication ignores the fact that in HROs the adaptive attributes level out as the organization approaches chaos. Therefore, a better explanation is needed of the PAOs' transition from routine to crisis modes. The concept of morphogenesis supplies the missing theoretical elements, as discussed in the next section.

Morphogenesis

The key component that is missing from HRO theory is morphogenesis. Koehler et al. (2001) use this term to explain how an organization breaks down its previous form of order and reorganizes in response to a substantial stimulus, such as a disaster. The authors argue that an emergency management organization cannot effectively adapt to a chaotic system unless it goes through this metamorphosis. This concept explains what happens to a SEMA public affairs office when it transitions from doing routine public relations work to managing crisis communication.
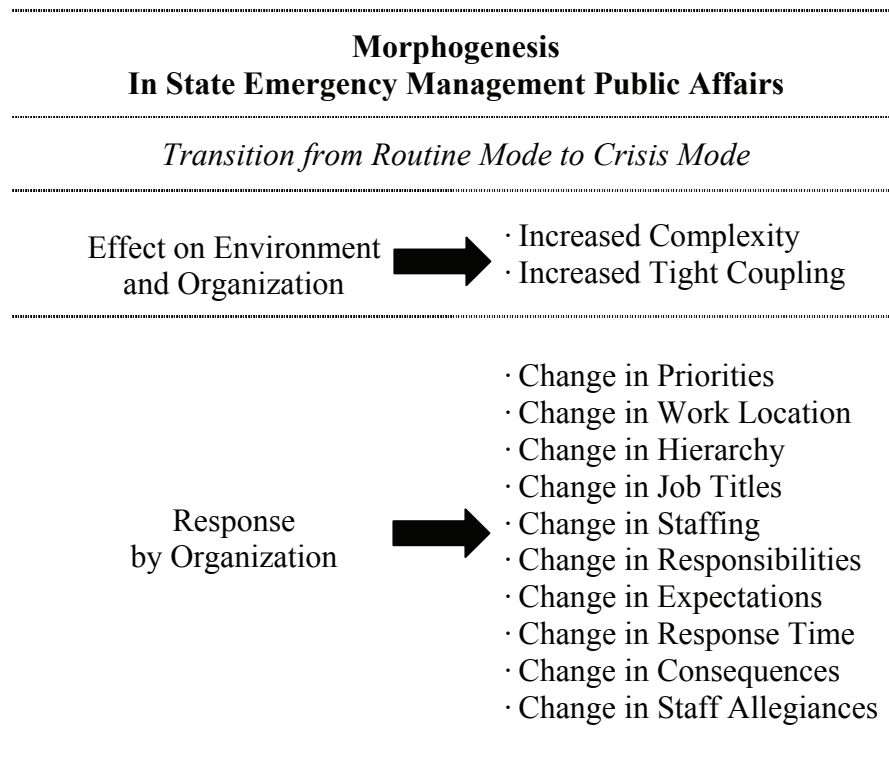
For the SEMA PIOs, everything changes when they activate for a disaster. They may report to a new manager, work in a different office, have a new job title, have different job responsibilities with new hours, and be evaluated for a different set of job skills. The physical organizational structure transforms as the joint information center is initiated. Figure 6.2 illustrates morphogenesis in a state emergency management public affairs office. The

organizational changes are the direct result of increased complexity and increased tight

coupling that is generated by the emergence of a chaotic system: a public safety crisis.

Morphogenesis is, therefore, an important theoretical element that fills gaps left by

HRO theory in the explanation of SEMA public affairs. The next section introduces a model

that was specifically developed to inform crisis communication in emergency management

agencies based on the results of the participant observations and interviews with SEMA

PIOs.

Figure 6.2

Organizational changes that occur as a SEMA public affairs office
transitions from routine to crisis modes.

Morphogenesis
In State Emergency Management Public Affairs

Transition from Routine Mode to Crisis Mode

Effect on Environment
and Organization ➡️ · Increased Complexity
· Increased Tight Coupling

Response
by Organization ➡️ · Change in Priorities
· Change in Work Location
· Change in Hierarchy
· Change in Job Titles
· Change in Staffing
· Change in Responsibilities
· Change in Expectations
· Change in Response Time
· Change in Consequences
· Change in Staff Allegiances

The Crisis Adaptive Public Information Model

This new model of crisis communication in state emergency management agencies is a blend of HRO theory and morphogenesis with a focus on public relations in the public sector. The Crisis Adaptive Public Information (CAPI) Model (see Figure 6.3) takes into consideration the wide range of responsibilities that SEMA PIOs have as well as their dual roles in public relations and emergency management. The model assumes the environmental constraints and opportunities found in the public sector, as discussed in Chapter One. It also explains how the public affairs offices adapt to a chaotic system.

During routine mode, the PIOs conduct traditional public relations tasks. By paying attention to the environment through issues management, the PIOs notice potential crises and begin preparations for a response. As a crisis emerges, the level of complexity and tight coupling in the public sector environment increase. The crisis becomes a bifurcation point, and the public affairs office responds to this change in the environment by going into disaster mode, in which PIOs drop routine public relations responsibilities and engage in crisis communication. Once in disaster mode, the organizational structure has transformed into a joint information center, and the public affairs office no longer resembles its routine structure. The disaster mode is sustained as long as the level of complexity and tight coupling remains high. Once a crisis is resolved, the level of complexity and tight coupling decreases, and the JIC structure is disbanded.

The SEMA public affairs members respond to a chaotic system by reorganizing itself into a new entity that is capable of managing the crisis. In much the same way that a chaotic system transforms itself through multiple iterations, the public affairs organization transforms itself to allow it to compensate for deficiencies in its routine structure that are

necessary for disaster response. During a disaster, the consequences of failure are much greater than under routine conditions, and the organization must change to meet the higher standards. The resulting organization looks much different from its original form; however, its components, or fractals, are still recognizable. As the chaos is brought under control, the organization responds by returning to its previous form, albeit altered by its experience.

Figure 6.3

The Crisis Adaptive Public Information Model
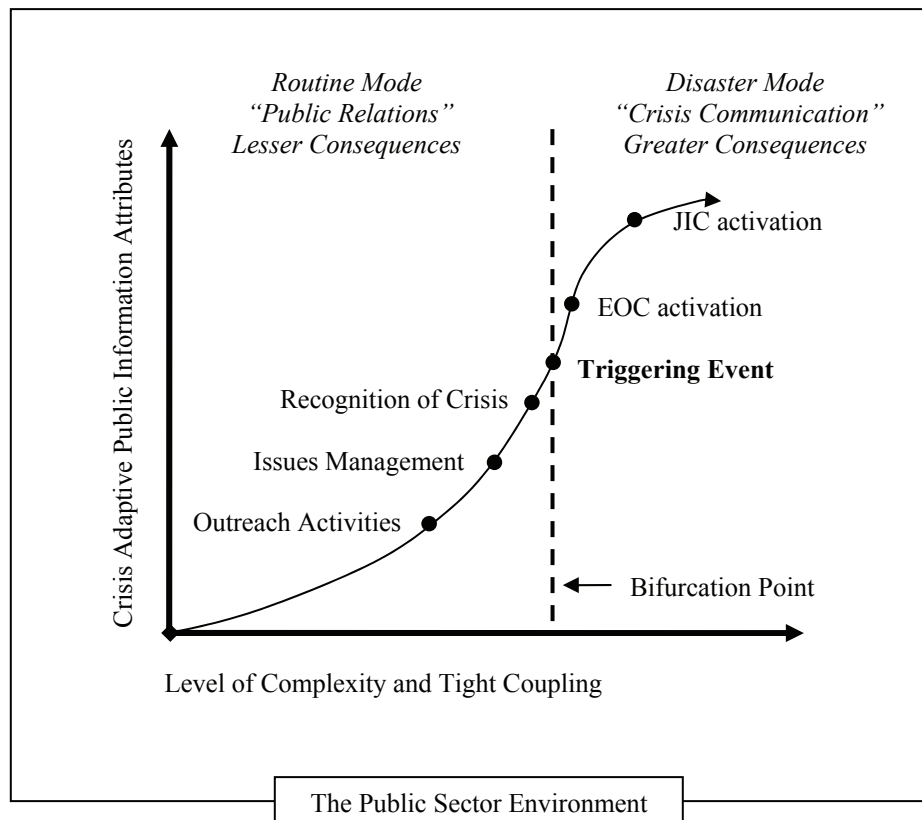
Future Research

The findings in this dissertation present a theoretical foundation for future research. The results of additional observations and interviews would help refine the Crisis Adaptive

Public Information model and determine its suitability for use at the local and federal level, as well as in other countries. The CAPI model lends itself to the creation of an index to quantitatively assess the organizational attributes of emergency management agencies. Agencies would be rated based on the prevalence of specific attributes in their organization, such as use of a joint information center during a crisis. Comparative studies can then be conducted to gauge the differences among the jurisdictional levels of emergency management agencies within the United States and in other countries. The model can also be further developed through its application to non-governmental emergency organizations, such as the American Red Cross, or to for-profit organizations that offer disaster response services.

Real-time observations may also lend additional data that may not emerge from interviews after the fact. While observing a SEMA during a radiological exercise was informative, observations of an actual disaster response would provide rich data that is not available under simulated conditions. Future research also would benefit from analysis of agency crisis communication manuals and other artifacts that were not used in this study. Government agencies produce scores of documents related to public information before, during, and after a crisis that would further inform the CAPI theoretical framework.

It is important to note that this research did not judge the effectiveness of the communication practices that are part of the CAPI model. Evaluation of state government crisis communication practices would be an important next step in this research. Actual disaster events, such as Hurricane Katrina, could be explored for prevalence of public information attributes found in the CAPI model and then evaluated for their effectiveness.

After all, whether or not an organization is truly "reliable" depends on the results produced by its organizational practices.

Finally, this research presents new opportunities for public relations pedagogy. As explained throughout this dissertation, existing crisis communication guides and case studies that faculty use in the classroom are based on a corporate model. The concepts presented by CAPI offer new strategies for teaching crisis communication with a focus on government, nonprofit organizations, and emergency management. The consequences of failure differ greatly in the corporate crisis communication models than in the CAPI model. Students of public relations would be better prepared for a variety of occupations if they understood the different leadership qualities and skills sets that are needed for corporate public relations and public sector public information.

Summary and Conclusion

The results presented in this research and the resulting theoretical framework answered the three research questions that were posed in Chapter Three.

RQ1: What are the organizational characteristics of a particular state emergency management agency's public information office?

Through a six-week participant observation, I was able to study one SEMA under both routine and crisis conditions. The results show that the agency operates differently after it transitions to disaster mode. Some of the SEMA organizational characteristics supported the concepts from high reliability organizations. There were additional characteristics, however, that refute HRO theory. The concept of morphogenesis, in which an emergency management organization must undergo a transformation before it can respond to a crisis, explains why SEMAs have different organizational attributes before and after a crisis. The

crisis, therefore, becomes a bifurcation point marking the agency's change in behavior as it attempts to adapt to a chaotic system.

RQ2: Do emergency management agencies in other states demonstrate similar characteristics?

I interviewed public information officers from five state emergency management agencies to triangulate my findings from the observations. The findings confirmed the fact that a SEMA changes its structure when it transitions into disaster mode. The results also showed that the six SEMA agencies that participated in this study were more dissimilar in routine mode than in crisis mode. The resulting organizational structure found in crisis mode was very similar in all six emergency management agency public affairs offices. Had I only conducted the participant observation, the extent of the transformations into crisis mode and the fundamental differences in the pre-crisis stage may not have emerged from this research.

RQ3: How well does High Reliability Theory explain the organizational characteristics and behaviors of state emergency management agencies' public information offices as they respond to chaotic situations?

The final chapter applied the theoretical framework of high reliability to the results of the observations and interviews in state emergency management public affairs offices. Although HRO theory helps explain many of the organizational practices in SEMA PAOs, it leaves some gaps and questions that remained answered. As a result, a new theory is presented based on the research that addressed those gaps and accounted for the transition that PIOs experience when they encounter a crisis situation. Crisis Adaptive Public Information is a middle-range theory that provides an explanation of SEMA public affairs

practices as the agencies shift between routine and crisis conditions. It advances a neglected area of public relations research and offers a wealth of additional research opportunities.

State disaster management planning has increasingly come under scrutiny since the terrorist acts in September 2001. A 2006 study done by the Department of Homeland Security determined that only 10 states had sufficient plans in place for responding to disaster. The evaluation criteria included planning for crisis communication (Jordan, 2006). The theoretical framework offered by the CAPI model may gain additional significance as new federal regulations for disaster management, known as the National Incident Management System (NIMS), are adopted across the country. NIMS is a comprehensive, all-hazards approach to disaster management that is intended to coordinate response efforts at all levels of government. The public information system provided by NIMS includes the joint information center structure that has been discussed at length in this dissertation. As explained in the NIMS regulations, "The public information system will ensure an organized, integrated, and coordinated mechanism to perform critical emergency information, crisis communications and public affairs functions which is timely, accurate, and consistent" (Department of Homeland Security, 2005). Many of the participants in this study said that their state was already in compliance with the regulations outlined in NIMS, which is required by October 2006. States that are not fully in compliance by that time may lose federal funding for their homeland security projects. As demonstrated in this research, the various SEMA public affairs offices had many organizational differences under routine conditions, but once they transitioned into disaster mode and activated a JIC, they became much more similar. The additional attention placed on the public information function by

NIMS requirements and nationwide evaluation efforts will offer more opportunities to

explore this vitally important component of disaster management.

APPENDIX I: Interview Guide

Question 1: What do you do in a "normal" day in the public affairs office?

Question 2: What do you do in an "abnormal" day in the public affairs office?

Probes:
1. How do you do <u>that</u>?
2. What is the approval process like for items such as news releases or information requests?
3. In what way are the procedures different, if at all, during a crisis situation?
4. Which staff assists you in communicating with the public?
5. Do you work with others outside of the public affairs office but within your agency? If so, with whom?
6. Do you work with others outside of your agency? If so, with whom?
7. What are some of the limitations, if any, to your being able to communicate quickly with the public?
8. What are some of the things that help you do your job in communicating with the public?
9. May I see an organization chart?
10. What is your office's annual budget, excluding salaries?
11. Do you have a crisis communication plan? If so, may I have a copy?
12. What are the most common crises your office responds to? Most unusual?
13. What is the primary mission of public affairs in your agency?

APPENDIX II: Behavioral Institutional Review Board Approval

THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

OFFICE OF HUMAN
RESEARCH ETHICS

BEHAVIORAL INSTITUTIONAL
REVIEW BOARD (IRB)

BANK OF AMERICA BUILDING   T 919.962.7761
SUITE 600   F 919.843.5576
CAMPUS BOX 3378   http://ohre.unc.edu
CHAPEL HILL, NC 27599-3378

TO: Lois Boynton *and J. Suzanne Horsley*
DEPARTMENT: School of Journalism and Mass Communication
ADDRESS: CB # 3365
DATE: 03/19/2005
FROM: Joyce J. Hamlett
                 Behavioral Institutional Review Board
IRB NUMBER: JOMC 2005-018
APPROVAL PERIOD: 03/19/2005 through 03/18/2006
TITLE: Crisis Communication in State Government: An Analysis of Public Relations in
                 Crisis-Mandated Agencies
SUBJECT: Expedited Protocol Approval Notice--New Protocol

The above research study has been reviewed and approved by the Behavioral IRB Chair or Co-Chair, on an
Expedited basis, Category ____7____, as a

[✓] new approval   [ ] renewal approval   [ ] modification approval

Please note that, if checked, the following Federal regulations are applicable to this research study:

[ ] 45 CFR 46.404 -The IRB finds that no greater than minimal risk to children is presented, and that
adequate provisions have been made for soliciting the assent of the children and the permission of their
parents or guardians, as set forth at 45 CFR 46.408.

[ ] 45 CFR 46.117(c)(2) - Waiving the requirement for documentation of signed consent.

[ ] 45 CFR 46.116(d) - Approval of a consent procedure that does not include all of the elements of
informed consent.

[ ] 45 CFR 46.116(d) - Waiving the requirement to obtain informed consent.

The above Approval Period informs you of the date that IRB approval expires for this research study. You
will be notified in advance of this date to submit an application for renewal or termination of IRB approval.

Please note that IRB approval is required prior to any modifications being made to this research study.

If you have any questions or concerns about your study's approval, please contact the IRB Office at 962-
7761 or e-mail the office at aa-irb-chair@unc.edu.

Thank you.

Approved by:

_____   3/19/05
Behavioral IRB Chair or Co-Chair   Date of Approval

APPENDIX III: Sample Contact Letter for Observation Study

THE UNIVERSITY OF NORTH CAROLINA
AT
CHAPEL HILL

J. Suzanne Horsley   School of Journalism and Mass Communication
Roy H. Park Doctoral Fellow   CB 3365 Carroll Hall
Voice: (919) 923-2882   Chapel Hill, NC 27599-3365
E-mail: horsley@unc.edu

[Date]

[Name
Agency
Address]

Dear [public relations manager]:

I am a Ph.D. student in the School of Journalism and Mass Communication at UNC-Chapel Hill. As a former PIO in Virginia, my research interest is in government public relations. I am conducting a research project and would like to ask you and your public information office for your help.

I am researching how state government agencies communicate with the public during both routine and crisis situations. I believe that [name of agency] would offer a variety of public relations opportunities to research. For my study, I would like to conduct an initial interview with you and then observe your department for [amount of time]. After my observation is complete, I will conduct a follow-up interview with you or other members of your staff.

You can be assured that the names of your staff members and the department itself will be anonymous in my research. I will only identify your department as "a public information office in one state's emergency management agency," and I will assign pseudonyms for anyone I speak with during the study.

Each interview should last about one hour. During the observation portion, I will be taking notes and asking questions as they come along, but I will attempt to be as unobtrusive as possible and not interfere with the work of the office.

I will be contacting you in the next couple of days to answer any questions you have and to provide more details on my research project. If you would like to contact me before then, feel free to use my email address or phone number listed below. Thank you for considering my request.

Sincerely,

J. Suzanne Horsley
Roy H. Park Fellow, Ph.D. Student
919-923-2882
horsley@unc.edu

University of North Carolina-Chapel Hill
Consent to Participate in a Research Study
Adult Participants
Social Behavioral Form

IRB Study # JOMC 05-018
Consent Form Version Date: 2/28/05

Title of Study: Crisis Communication in State Government: An Analysis of Public Relations in Crisis-Mandated Agencies

Principal Investigator: J. Suzanne Horsley
UNC-Chapel Hill Department: School of Journalism and Mass Communication
UNC-Chapel Hill Phone number: 919-962-1204
Email Address: horsley@unc.edu
Co-Investigators:
Faculty Advisor: Dr. Lois Boynton
Funding Source: pending

Study Contact telephone number: 919-923-2882
Study Contact email: horsley@unc.edu

What are some general things you should know about research studies?
You are being asked to take part in a research study. To join the study is voluntary.
You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?
The purpose of this research study is to learn about how state government agencies communicate with the public during both routine and crisis situations.

How many people will take part in this study?
If you decide to be in this study, you will be one of approximately 20 people in this research study.

How long will your part in this study last?
Each interview will take approximately one hour. You may be contacted for a second interview, which would take place over the phone. If you are part of the observation study, you may be asked questions intermittently over a four-week period. There will be an additional week for follow-up. All scheduling will be done in advance with your full knowledge.

What will happen if you take part in the study?

Interviews:
　　　For the interviews, you will be asked questions relating to your agency's public relations function, policies, and procedures. You will be asked to provide examples of both routine and non-routine activities that involve communicating with the public. You may also be asked to provide documents, such as brochures, newsletters, and press releases, that you would distribute to the public. Follow-up interviews will take place over the phone. The researcher will ask permission to record the interviews.

Observation:
　　　For the observation study, you will be asked to conduct your job duties as usual with as little interference as possible from the researcher. You will be asked questions about your job duties occasionally, or asked to clarify specific job responsibilities. You will be asked to allow the researcher to observe staff meetings, planning sessions, press conferences, media tours, and any other activities that pertain to public relations responsibilities. You will be asked for your permission to record these meetings and conversations. The follow-up observation will take approximately one additional week.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study. However, public relations personnel at government agencies such as yours will benefit from this new knowledge about how agencies communicate with the public during crises.

What are the possible risks or discomforts involved from being in this study?

There are no known risks to participating in this study.

How will your privacy be protected?

Participants *will not* be identified in any report or publication about this study. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies for purposes such as quality control or safety.

Your identity will be removed from tapes and replaced with pseudonyms prior to transcription. The tapes and digital audio files will be stored in a locked office and on a secure network, and will be destroyed after a minimum of three years. The function of your agency will be identified, but the state will not (i.e., "One state's Department of Emergency Management"). Only the primary investigator will have access to any identifiable data. Identifying notes, which will be protected from outsiders in a locked office and on a secure, password-protected network, will be destroyed after the data collection process has been completed and there is no further need for follow-up interviews or observations. There will be no identifying information in the resulting write-up. You may request that I turn off the audio recording at any time.

Will you receive anything for being in this study?
You will not receive anything for taking part in this study. You will be offered a copy of the executive summary from the final report.

Will it cost you anything to be in this study?
There will be no costs for being in the study

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions, or concerns, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research participant?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare.   If you have questions or concerns about your rights as a research participant you may contact, anonymously if you wish, the Behavioral Institutional Review Board at 919-962-7761 or aa-irb@unc.edu.
- -
Participant's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_____   _____
Signature of Research Participant   Date
_____
Printed Name of Research Participant

_____   _____
Signature of Person Obtaining Consent   Date
_____
Printed Name of Person Obtaining Consent

APPENDIX V: The Joint Information Center (JIC)

The second volume of *A Governor's Guide to Emergency Management* (Beauchesne, 2002, p. 24) offers the following instructions for governors facing a crisis:

- · develop a communications strategy
- · prepare to answer questions from the public
- · develop effective media relations
- · define the role of the governor and key aides; and
- · establish a Joint Information Center

The joint information center (JIC) is a critical element of a state emergency operations center during a response to a disaster or terrorism. Public information officers (PIOs) from all agencies (state, local, and federal) that have a role in the response convene in the JIC and form a new work unit. The lead PIO from the state emergency management agency becomes the manager for all JIC staff. Once in the JIC, PIOs leave agency allegiances behind and work for one entity, the State. The PIOs would have trained for a specific role before being activated in a JIC. If warranted, representatives from non-profit organizations such as the American Red Cross also may be members of a JIC. Staffing in the JIC is flexible and can be adapted to suit the magnitude and duration of the crisis response. The chart shown in Figure A1 represents a full staffing of a JIC, but for most events, the staff is much smaller.

The purpose of a JIC is to provide consistent, accurate, and timely information to the public and the media during the disaster response and recovery. Primary duties include writing news releases and fact sheets, responding to media inquiries, updating information on the Internet, generating talking points, and monitoring news coverage. The staff also manages the public inquiry center (disaster hotline), coordinates information with PIOs in local jurisdictions or field locations, keeps the EOC leadership apprised of public information activities, and communicates regularly with the governor's communication staff.

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Figure A1: A Sample Structure for a Joint Information Center

External Affairs
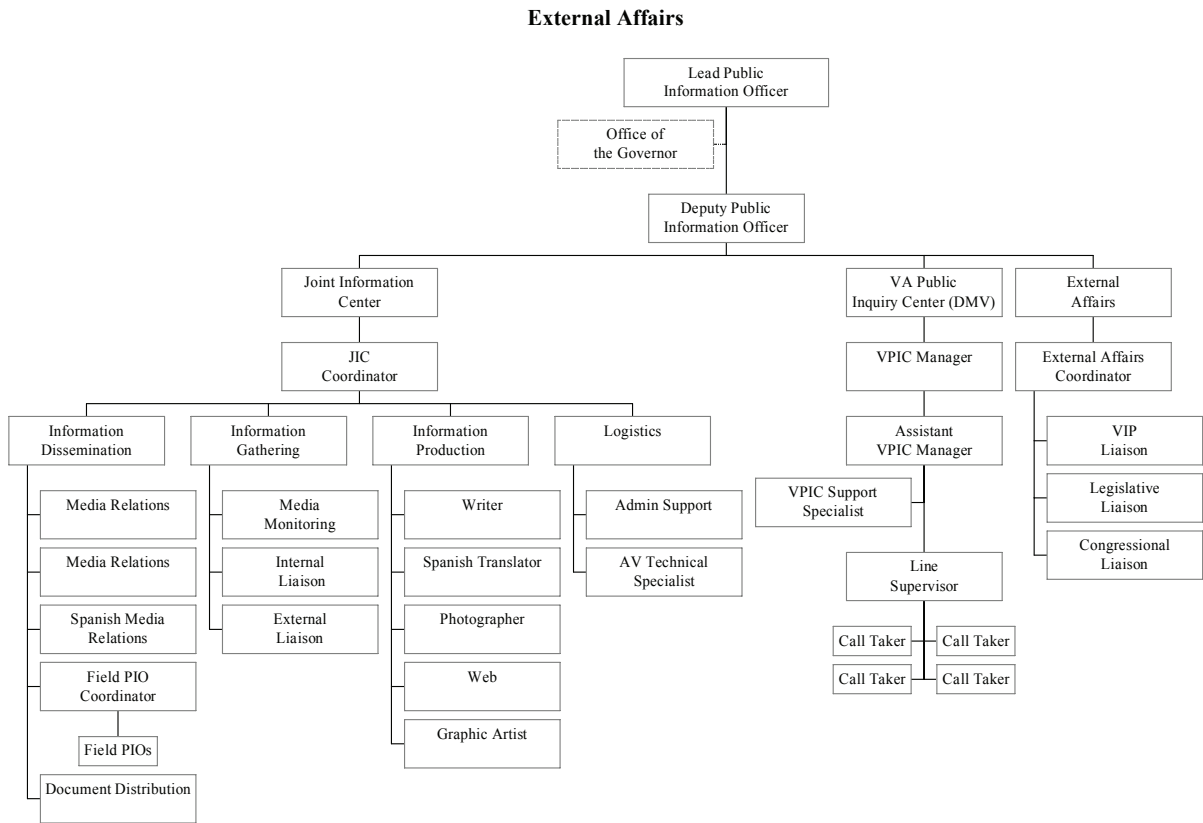
APPENDIX VI: Analytic and Theoretical Memos

DATE: January 11, 2006

LOCATION: SEMA Headquarters

RE: Emerging Organizational Characteristics

I'm beginning to see from all the training sessions that the public affairs office makes a

significant transition when it goes into crisis mode. It appears that the PAO would look like

an entirely different organization during a crisis, so this is something I need to consider

during the upcoming radiological exercise. So many things change when the PIOs respond to

a crisis, much more than I had previously realized. It's more than just reporting to the EOC.

The PIOs take on new job responsibilities with new titles. They can double, or even triple,

the size of the staff, depending on what the crisis requires. This means that the group of five

PIOs has new colleagues that they have to work with in the EOC, which would potentially

change the dynamics of this group. I am interested in seeing how the additional PIOs that

come in for the power plant exercise fit in with this group, and if they share the same culture

that I am observing in the SEMA public affairs office.

APPENDIX VII: Preliminary Charts

DATE: February 7, 2006

RE: Preliminary model of SEMA public information

As the PIOs move into disaster mode, it appears that their actions become more reliable.
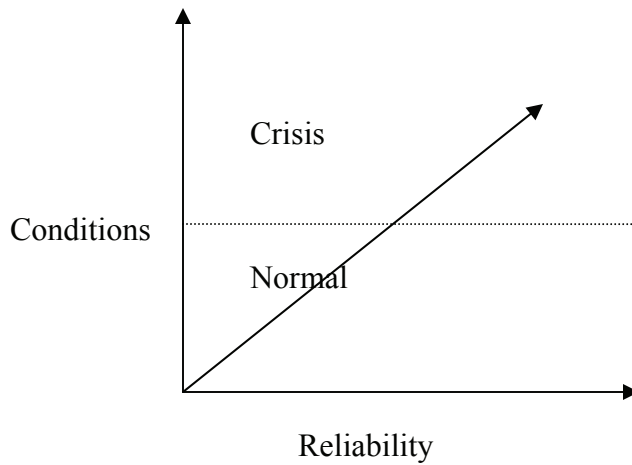

Table of Organizational Differences between Routine and Crisis Modes

Routine	Crisis
Outreach Activities	
Training	
Media Relations	Media Relations
Office at HQ	JIC at EOC
Work for Secretary of Public Safety	Work for the Governor
Technology Issues	More Technology Issues
Internal Communication Channels	More Internal Communication Channels
State Job Titles	JIC Job Titles
Collaborate with other State Agencies	In Charge of Other State Agencies
Long-Term Projects	Fast Turn-Around on Communications
Part of Agency Leadership	Part of EOC Leadership
Staff of five PIOs	Staff of 10 or more PIOs
Low Consequences	High Consequences
Lack of Preparation	Lots of Preparation

APPENDIX VIII: Notes to Self

DATE: January 20, 2006

LOCATION: State EOC

RE: Reliability in Day-to-Day Matters

Why don't the PIOs all work from the same place – the EOC – all the time? Why change

physical locations and go to the EOC when a disaster emerges when you could be "at the

ready" all the time? They certainly have enough dedicated space and the equipment at the

EOC, and it just sits there unused until the EOC is activated. Would that improve reliability

during the routine and disaster modes? Ask David if he has ever thought about this, and if

any other states routinely work from their EOC.

APPENDIX IX: Theory Memo

DATE: February 6, 2006

LOCATION: SEMA Headquarters

RE: Reliability in Day-to-Day Matters

Today, Zahra asked for my help with stuffing envelopes for the upcoming EOC grand

opening celebration. Zahra, Jack, and David were working in the small conference room

when I arrived. As they worked, David noticed that there were more sheets of address labels

than invitations. He became angry, told everyone to stop, and starting counting labels. Jack

and Zahra appeared uncomfortable during the silence. Zahra kept trying to explain that she

had ordered the amount that she was *told* to order, but David shushed her and continued

counting. He said there were 200 more labels than invitations. Zahra looked stunned and

started looking under the table and chairs for a missing box of invitations that wasn't there.

She repeated that she ordered the number of invitations she was told to order, implying that

David gave her the wrong numbers. David said that the labels contained names that weren't

on the invitation list, but then he muttered that he really wasn't sure. He told Zahra to order

more invitations, even though that introduced new concerns about having enough space for

all of the guests at the event. The lists of names had been provided from several departments

within the agency, and no one was in charge of verifying names or checking for duplicates. I

thought that this would have been be a simple task for a group of people who are accustomed

to excelling in more complex activities. This makes me question whether high reliability only

exists during crisis, and not during the more mundane activities. In some ways, that's the

opposite of HRO theory – HROs are reliable while doing routine tasks in volatile conditions.

APPENDIX X: Glossary of Terms and Acronyms
Used in Emergency Management[4]

After Action Report – formal evaluation completed after a disaster or an exercise.

CEM – Comprehensive Emergency Management; an integrated approach to managing
emergency program for all four phases (mitigation, preparedness, response, and
recovery), for all types of emergencies and disasters (natural, manmade, or terrorism),
and for all levels of government (local, state, and federal). (Farazmand, 2001)

DFO – Disaster Field Office; An office located near the scene of a disaster to support the
response and recovery operations.

DHS – Federal Department of Homeland Security

Domestic Terrorism – "Domestic terrorism refers to activities that involve acts dangerous to
human life that are a violation of the criminal laws of the United States or of any
state; appear to be intended to intimidate or coerce a civilian population; to influence
the policy of a government by mass destruction, assassination, or kidnapping; and
occur primarily within the territorial jurisdiction of the United States." (Federal
Bureau of Investigation Counterterrorism Division, 2001)

EAS – Emergency Alert System; A voluntary network of broadcast stations that carry
emergency messages issued by state, local, or federal emergency management
agencies.

Emergency – Any event, or threat of an event, natural or manmade, which may result in harm
to the public or damage to property or natural resources and requires a government
response.

EOC – Emergency Operations Center; a state or local management center from which
disaster response and protective action orders are coordinated.

ERT – Emergency Response Team; composed of representatives from each agency that has a
response role in a disaster.

ESF – Emergency Support Function; specific areas of disaster response that augment state
and local response efforts. Examples include law enforcement, animals and
agricultural issues, transportation, military support, and public information.

FEMA – Federal Emergency Management Agency

International Terrorism – "International terrorism involves violent acts or acts dangerous to
human life that are a violation of the criminal laws of the United States or any state,
or that would be a criminal violation if committed within the jurisdiction of the

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[4] Unless otherwise noted, the definitions were obtained from state emergency management agency materials.
The exact sources are not disclosed to preserve the confidentiality of study participants.

United States or any state. These acts appear to be intended to intimidate or coerce a civilian population; influence the policy of a government by intimidation or coercion; or affect the conduct of a government by mass destruction, assassination or kidnapping and occur primarily outside the territorial jurisdiction of the United States or transcend national boundaries in terms of the means by which they are accomplished, the persons they appear intended to intimidate or coerce, or the locale in which their perpetrators operate or seek asylum." (Federal Bureau of Investigation Counterterrorism Division, 2001)

JIC – Joint Information Center; The primary location for coordinating media relations during a disaster response. (See Appendix V)

KI – Potassium Iodide. A medication that helps reduce the effects of radiation on the human thyroid gland; given to disaster response workers and residents of areas located in the pathway of the radioactive release.

Major Disaster – Any natural catastrophe that is determined by the president of the United States to be of sufficient severity and magnitude to warrant federal disaster assistance.

Mutual Aid Agreements: Formal or informal agreements between jurisdictions that promise assistance during a disaster.

NEMA – National Emergency Management Association

NIMS – National Incident Management System; A federally mandated incident management system used by localities, states, and the federal government for integrated prevention, response, and recovery efforts.

NRC – Nuclear Regulatory Commission

NRP – National Response Plan; An all-hazards plan for policy making and coordination of domestic emergency response at the federal level.

NWS – National Weather Service

PAO – Public Affairs Office

PAR - Protective action recommendations; recommendations for public safety during an emergency, including sheltering in place or evacuating.

Phases of disaster management – Mitigation, preparedness, response, and recovery

Phases of a radiological emergency – Notification of an unusual event, alert, site area emergency, and general emergency.

PIC – Public Inquiry Center; also known as rumor control or disaster hotline.

PIO – Public Information Officer

Shelter-in-place – Orders to seek shelter in an enclosed building rather than evacuating to another location.

SMA – Statewide Mutual Aid; assists cities and counties to more quickly and efficiently provide assistance to each other in response to a major disaster.

Tabletop Exercise – As part of training for a disaster exercise, the players talk through the actions that they would take in the response rather than act them out in a simulation.

he started we had exercises going on. When ▬▬▬ started we had Katrina, and so
for ▬▬ we are due something any time. And when I started, two months later we
had Isabel. Actually we had the first ▬▬▬ I was involved in. so generally they hit
the ground running.

When ▬▬▬ started, she had been here a month, and we had floods out in western
▬▬ so she was working like her first week or two she was already out at the dfo.
It's just kinda been the way it's been. So we haven't had a formal, this is what we
do, we've had discussions around it.▬▬▬, who's most recent, I talked to her about
importance of building the distribution list. that's her priority and learning how
the use the software we have to build the media list and we need to update the
local pio distribution list and things like that.

The transition is sometimes difficult because we don't know how big it's going to
be in some cases. Like some things will start out small here, like a flood in ▬▬▬,
we don't go to the eoc for it because by the time it happens and it's done with we
never get to the eoc. It rains a lot and it stops and then we get flash flooding out
there and there's no reason to eoc anymore, but we end up getting calls from that.
And we may end up going to the dfo and have to man it for several weeks or
months from that. So we may never open the eoc but we go into disaster mode,
sometimes it depends, and then.. like a terrorism angle, none of us have
experienced that. In ▬▬▬ we've had things happen, the anthrax, tularemia, that we
were coordinating here usually with our counterparts at doh or at the federal level
sharing information and working together but it's been a challenge because we are
all divided and split into different offices and things like that and so we haven't
come together in a jic concept at that point. And so it makes it very difficult and
challenging to coordinate when we are not at that point yet. That's the things with
terrorism that makes the jic concept difficult because it happens so quickly that
you really haven't had time to do that at some point you will have to. And a lot of
these things are maybe it's something and maybe it's not. So we don't know how
big of a thing it is yet and whether we need to set up a jic. And if we set up a jic
and it's happening in ▬▬▬, we can't set up here realistically. There's always been
this concept that there is only one jic and that would be near the eoc. Well, reality
is you have to be closer to where the action is. That is an area we haven't fully
addressed yet. But that's something we are going to have to get beyond because
we can't have the jic here with the eoc in most cases.. … so we might have a jic
closer to the scene and a smaller one here communicating and coordinating but
we haven't really fully experience that. We kinda did that a little around the
tularemia threat where they had a false positive. We were waiting for one more
test and if that was positive then we definitely had it but if it was false it was
nothing. And so we sent up ▬▬▬ to get to the jic up there to be ready because it
was positive it was going to blow big, so up in ▬▬▬ they set up a jic sent her up
there, I was still coordinating things here. So that would have been.. that was
bringing together feds and locals and everyone at there. Here we were still been
developing some stuff for the governor or whatever but we never had a chance to
test it out because it ended up being negative and that jic was only up there for,
that's where they did most of the communications from for a couple of days to
communicate what had to happen. But we haven't really been able to test that out
fully on how that would work if there was a jic up there but we still needed to
have some kind of a jic here.

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