EXPLORING THE IMPLEMENTATION OF NEW PUBLIC SERVICE ROLE WITHIN DISASTER MANAGEMENT

Andrew T. Ranck
Montana State University
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Abstract

Disasters, both natural and manmade, can occur throughout the world at any given time and are caused by numerous different types of events. Communities that experience disasters often must utilize contingency plans to manage the direct and after affects carnage of the disasters. Many survivors of disasters must rely on aid from the international community to begin the revitalization process of the community. The international community acts under its own accord doing what it thinks is the best following the aftermath of a disaster within a community. This research project demonstrates the use of the New Public Service model to give local communities the ability to begin the revitalization of the community without the assistance of the international community. By being a part of the community revitalization, the community is able to have a direct impact on the outcomes that will affect the community and its future generations. The new public service model also influences the organizational dynamics, leadership, and coordination of the community in the event of a disaster. This paper demonstrates how New Public Service can be implemented within a disaster stricken community and how it shapes organizational dynamics helping to revitalize the community.

Executive Summary

This case study focuses on the Explosion in Downtown Bozeman, Montana. The purpose of the case study is to exemplify the need to reformulate the mitigation process of any disaster or emergency scenario. Recently, there have been many large scale disasters including Hurricane Katrina and the earthquake in Haiti which have demonstrated the need for a change in the overall system which is used for the mitigation and revitalization process. These types of disasters and emergencies leave the community broken socially and in complete chaos. What

this case study posits is that the aftermath of a disaster or emergency does not have to follow this pattern. Through community involvement and investment, the community is able to rebound and adjust by working together to formulate the appropriate method of how the entire community should move forward. To establish a community involvement initiative, the case study investigates the explosion in downtown Bozeman, Montana through purposive interviews by interviewing the emergency responders, community organizations and the victims of the exploded buildings. Through these initial interviews, the author of this case study was able to find other interviewees giving a snowball sample group. The interviews were digitally recorded and transcribed using transcription software. The transcriptions were then analyzed using NVIVO 10 to code each interview establishing important patterns and information. The codes were then organized due to their similarity into coding clusters. The literature review focused on community involvement, leadership at the organizational level, improvisation, and education. Through the literature review and the interviews, the findings demonstrate that community involvement is a mechanism which can be used to increase the robustness and resiliency of the mitigation process through direct participation by establishing new methods to actualize the entire emergency response system.

Introduction

On January 12, 2010, an earthquake measuring a magnitude of 7.1 devastated the country of Haiti on the island Hispaniola. The earthquake destroyed the country's capitol Port au Prince, along with the surrounding region. This left people homeless, and often trapped in the rubble of the buildings, and desperate for assistance. The immediate issue immediately after the earthquake in Haiti was not the lack of supplies, or the lack of foreign aid workers

needed for medical and search and rescue operations; but rather, a breakdown of individual roles on an organizational level. The Haitian government all but disappeared immediately following the disaster. Even the president fled from the public and left the public to suffer the aftermath of the disaster without any kind of assistance. The only assistance came from the international community around the world. The government collapsed and the leadership structure weakened, leaving the community unable to cope with the disaster (Weick, 1993, p. 637).

While the government vanished from sight in Haiti, it is highly probable that they would have been unable to provide any benefit. The amount of devastation was unimaginable. The level of destruction affected nearly citizen within the earthquake zone. Without a central government in place, the country would have undoubtedly descended into chaos if the international community had not arrived. This scenario was caused by a lack of preparedness by the local government. Situations such as this one in Haiti, where the central and local governments are completely broken, demonstrate the importance of leadership and community involvement in the event of a disaster. Without any sort of leadership or plan, the community disintegrates into chaos, unable to help itself.

In many regards, leadership is the most important factor in coping with a disaster. Denhardt and Denhardt (2007) believe that leadership is doing the right things for the community. What exactly is leadership in this context? Leadership as described by Denhardt and Denhardt (2007) is a process within the organization, not just a position in the hierarchical structure. This idea of leadership demonstrates the importance of community involvement as a function of leadership. Leadership becomes the deliberation process that generates an

outcome the majority of the community accepts. Using Denhardt and Denhardt's (2007) definition as a form of leadership proves to be quite provocative within the concept of disaster management. The issue becomes how this definition of leadership should be applied. The concept of leadership will be further explored in the literature review of this research project.

Another scenario which had just as dire implications as the earthquake in Haiti was the Hurricane Katrina disaster which hit New Orleans damaging the levies, which in turn, led to massive flooding. The Problem in New Orleans had very important implications for how the international disaster relief agencies assist disaster stricken communities. There seemed to be too little effort to assist the people which came well after the Hurricane left the New Orleans area. The area was completely flooded, leaving many residents clinging to their roof tops to wait for assistance. The residents who were stranded were mainly minorities, especially black people. During that time, a general concept had formed leading the American people to believe that the American government's inaction was centered on the fact that the people who were stranded happened to be poor black people, as a "report investigating the evacuation process found that no transportation out of the city had been provided (CNN Headline News, 2005, September 6). As a result, the 28% of New Orleans residents who live below the official poverty line (United States Census Bureau, 1999) had no means to leave" (Napier, Mandinsodza, Andersen, and Jost, 2006, p. 58). Even if the inaction by the government is never proven, the fact remains that people were not assisted quick enough given the dire situations in the disaster area. Dire situations need quick resolve to assist people in communities who have just been struck by some sort of disaster.

The Purpose of this Research

The purpose of this paper is to examine how to help a community struck by a disaster to immediately organize, and take action to begin to revitalize the community. Both Hurricane Katrina and the Haitian earthquake cases exemplify the necessity for the disaster-affected communities to be able to begin the process of revitalization using only the disaster-affected communities' means. These cases show that the reliance on the international community to supply, organize, and assist the community are many times not in the best interest of the community often the aid comes too late after the initial impact of the disaster. The ability to revitalize the disaster-affected community must come from within the community itself. This is not to say the aid from the international community is not important; but rather, it should assist the community with revitalization efforts already in process. In order to revitalize a community struck by a disaster the New Public Service model should be implemented and tailored to the disaster specifically by using improvisation, education, and preparedness.

Literature Review

Leadership Part I--New Public Service

Lasker, MacDonald and Hebert (2009) wrote the article, *Fixing the fatal flaw in emergency planning*, which addresses the problem communities face when "emergency response plans are developed without incorporating the knowledge of the people who need to be protected" (Lasker, MacDonald, and Hebert, 2009, p. 661). The authors (2009) believe that problems are clearly created by ignoring the specific needs of the community. The problem the authors (2009) note is how to involve the community in the decision process when the community is occupied with everyday life priorities. The challenge as the authors (2009) state,

"is to provide communities with incentives and supports to put such a process into practice—before people suffer and die unnecessarily in the next disaster" (Lasker, MacDonald, and Hebert, 2009, p. 661). What the authors argue for is community involvement in the decision making process which is one of the building blocks important to the New Public Service model.

Even with these basic building blocks in place, it does not fully explain what form citizen participation must take to be effective. The key elements for citizen participation are "…focus, commitment, trust, and an open and honest discussion" (King, Feltey, Susel, 1998, p. 320). The key to these four elements is to provide every citizen a chance to participate equally (King et al., 1998). By giving every citizen equal opportunity to participate, no one is excluded, thus allowing more ideas to be exchanged in a public forum or other public form of meeting.

Denhardt and Denhardt's *The New Public Service: Serving Not Steering* (2007) examines the importance of bringing the community into the decision-making process in regards to the implementation of laws and needs of the community itself. The New Public service (NPS) emphasizes the necessity of the community to help in the decision-making process as "citizens would do what citizens are supposed to do in a democracy—*they would run the government* Denhardt and Denhardt, 2007, P. 31). Citizen participation is also an important definition of what a citizen must do (Denhardt and Denhardt, 2007, p. 47). The basic foundation of Denhardt and Denhardt's argument is that the community citizens should be involved in the decision-making process in much the same way as involvement is a constitutional obligation of the American People. By involving the general public in the decision-making process, the community has a voice in what or at least how laws and the needs of the community are implemented and carried out within the context of a disaster.

In the event of a disaster, the New Public Service Model can be implemented as a general response system where the government and the local community are able to correspond and react to many different types of disasters. Researchers Ravindra Pande and Rajnish Pande demonstrate a possible approach to implementing the New Public Service Model in their Article: *A Model Citizen's Charter for Disaster Management in Uttaranchal (India) (2007).* This article centers on the New Public Management strategy as a citizen-centered focus. Pande and Pande's (2007) article places certain expectations on the citizens in the Uttranchal region of India. These expectations of citizens include: "[be] More aware about rights and duties; more aware about Contingency Relief Fund (CRF) norms; and develop the habit of a disaster management and safety culture" (Pande & Pande, 2007, p. 758). The article also creates a Citizen's Charter of Disaster Management model to demonstrate the role of government for the citizens and defines the rights of the citizens. A key role this article gives is "choice and consultation" (Pande & Pande, 2007, P. 756) to the citizens which gives the citizens an active role in deciding what needs to be done. "A second purpose is to create a pair of synergistic and invincible forces—government and people—that interact to bring about a reduction in the impact of natural hazards in Uttaranchal" (Pande & Pande, 2007, P. 755).

While Pande and Pande's article uses New Public Management to place the citizenry at the focus of attention in the event of a disaster, it does not define the roles citizens and the government should employ relative to the implementation of disaster relief management in the event of a disaster. The article states it is citizen centered, but it seems to demonstrate that this is not fully the case. The government seems to use a centralized program where citizens select what is best for them only after the government has determined a few possible

procedures the citizens can choose from. The article does show that citizen participation is possible even if the participation is designed as selecting a governmentally defined choice. The government still seems have the control over the people even if the citizens are given choices.

Implementation of the New Public Service Model within the realm of disaster management gives citizens who are affected by the disaster control over their own fate. This is not to suggest that there is no need for leadership in the form of public administrators; but rather to demonstrate the necessity for public administrators to work with citizens to define the wants and needs of the community in the event of a disaster. NPS does exactly that, as it exemplifies the importance of the public administrator to guide citizens in the decision making process.

Denhardt and Denhardt (2007) examine the roll of the public administrator as a figure who helps the citizens in the decision making-process. This role focuses on the concept that the public administrator is not a part of the hierarchy suggested by Luther Gulick (1937, p. 82). Gulick believes the hierarchy model must contain a "single directing executive authority" Gulick, 1937, p. 82). This executive authority is in charge of coordinating work throughout the organization. The model Denhardt and Denhardt adhere to is a model where the administrator helps citizens make the decisions by providing education, a guided structure in the decision making process, and actually participate in the decision making-process.

Denhardt and Denhardt's hierarchy model is relatively flat. The public administrator gives structure the citizen participation process by assisting where and how citizens should focus their attention to in order to decide what the community wants to do. This is very

important to disaster relief management as it allows individuals to make decisions based on what the community deems the best course of action during the event of a disaster.

The role of the public administrator has changed from making the decisions for the community to a position where the public administrator leads the discussion with the community partakes. Even though the administrator does not have rule over the community, the public administrator has accountability. "The New Public Service differs from both the Old Public Administration and the New Public Management in its emphasis on elevating the importance and centrality of citizenship and the public as the basis for accountable and responsible public action. Put simply, the source of public administrators' authority is the citizenry" (Denhardt and Denhardt, 2007, P. 134). The public administrators are leaders of the decision making process where the citizenry engages in what is best for the community.

Education

A very significant role the public administer accepts under the New Public Service model is as an Educator (Denhardt and Denhardt, 2007). The role of educator is also a constitutional obligation to the citizens (Cook, 1996, P. 57). More importantly education helps by '"Creating opportunities for people to participate…It is all about access to skill building and to information"' (King et al., 1998, p. 324). It includes educating the citizenry through the dispersion of information and helping the citizenry understand the key issues.

An article by Koichi Shiwaku and Rajib Shaw (2008) focuses specifically on the role of disaster education effectiveness. "One of the emerging issues was the need to strengthen the community bonding and enhance civil society initiative (Shaw and Goda, 2004)" Shiwaku and Shaw, 2008, P. 183). Shiwaku and Rajib focus on the development and implementation of an

"Environment and Disaster Mitigation Course (EDM course)" (Shiwaku and Rajib, 2008, p. 188). The goal of the EDM course is to teach the students the importance of contributing in the event of a disaster; to understand the natural phenomenon of disasters and how they affect society; and to cultivate the initiative in students to be able to act independently (Shiwaku and Rajib, 2008, P. 190). The importance of disaster education in the EDM course educates students to be able to act, "leading to sustainable disaster management" (Shiwaku and Rajib, 2008, P. 196). These students learn how to take actions independently based on their knowledge of the "relationship between disasters and human society" (Shiwaku and Rajib, 2008, p. 189). A key goal for the EDM courses is to get the students to stop thinking like victims and start assisting the community when needed.

The role of education Shiwaku and Rajib (2008) greatly influences the importance of community to the students. Both education and decision-making implementation are the corner stone to the New Public Service and are necessary to proceed in utilizing community involvement. Without knowing how to proceed in the event of a disaster, individuals may cause more problems by placing themselves in harm's way. The importance of education is obvious, it helps people make good decisions which keep them safe as well as helping people make the best decisions based on the community's needs.

LEADERSHIP II Preparedness & Improvisation

In order to understand how organizations respond to crisis situations, it is important to understand how an Organizational Crisis is defined: "An organizational crisis is 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" (Pearson & Clair, 1998, P. 60). A few theories about organizational crisis management stem from the article, *Reframing Crisis Management;* by Christine M. Pearson and Judith A. Clair (1998). This article reframes crisis management through existing theories in the psychological, social-political, and technological-structural arenas (Pearson and Clair, 1998, p. 59). One benefit to establishing an overall theory for these four areas is transferability of ideas from one area to another. By being able to transfer ideas from one discipline to another, the theory becomes generalizable. The problem with generalizability is the possibility that many ideas and concepts will not be applicable to an overall arching theory.

The social-political section seems to lack a lot of substantive concepts as "…a crisis arises when shared meanings, which previously served a community well, break from the reality of a particular situation" (Pearson and Clair, 1998, p.63). This view seems to be too narrowly focused as many crises arise and the community shares the same reality of the definition of a crisis. There seems to be a distinction made by Pearson and Clair (1998) that the Social-Political view of a crisis only exists on the organizational or cultural level. In the case of a natural disaster, the crisis is of a physical nature. One prime example of this is the Haitian earthquake. This example demonstrates both a physical crisis as well as a social-political crisis. The point here is the fact that a physical crisis, such as an earthquake, can have social-political implications even though there was no break from reality. Implications could be something as simple as developing preparedness systems to enhance the outcome of a possible crisis in the future. The Social-Political view must include a wider definition to encompass the array of concepts in both social and political fields of study.

Even though the Social-Political view of a crisis is limited, the article, *Reframing Crisis Management* (Pearson and Clair, 1998), identifies the necessity to study crisis management from using multiple methodologies to better understand the entirety of what is crisis management. One very important aspect which Pearson and Clair (1998) identify is "…the social –political perspective suggests that crisis management is unlikely to be successful without a reformation of organizational leadership and culture" (Pearson & Clair, 1998, p.64). This is vitally important to maintaining an organizational structure by adapting and learning current and previous experiences. By learning about these experiences, it may give the organization a "tool" to effectively deal with the situation, which may decrease the possibility of the organization's collapse.

One article, *The Collapse of Sensemaking in Organizations: The Mann Gulch Disaster* by Karl Weick (1993) demonstrates the importance of having the correct "tools" to accomplish the task. "Tools" are the working knowledge to effectively cope with the crisis. The crisis Weick (1993) describes was located near Helena, Montana in 1949. A crew of 16 hot shot smokejumpers were called into action as a fire started from a lightning strike the evening before (Weick, 1993, p.628). The smokejumpers went in, but found themselves in a dire situation where the fire burning extremely quickly, causing the smokejumpers to panic. The fire killed 13 of the 16 smokejumpers (Weick, 1993).

Weick (1993) further describes this event as an organization's collapse caused by the organization's cessation to follow orders given by Dodge, an experienced smokejumper and leader of the group. The reason for this organizational collapse was not the fact that the Smokejumpers did not have the "tools" for the job; but rather, the organization lost its identity.

Incidentally, this was also caused by Dodge as he "…told the retreating crew "throw away your tools!" (p. 226). A fire crew that retreats from a fire should find its identity and morale strained. If retreating people are then also told to discard the very things that are their reason for being there in the first place…" (Weick, 1993, p.637) role confusion is created role on the part of the smokejumpers following Dodge's order. A break with the organization's constructed reality occurred demonstrating Pearson's and Clair's (1998) Social-Political theory of a crisis. The smokejumpers stopped being fire fighters and became unattached people fleeing a quick moving fire.

Weick's article also explores the role of the organization's structure, to improvisation and bricolage. The organization was structured similar to the military, and even had 12 smokejumpers with previous military experience (Weick, 1993, p.628). This type of military structure helps to maintain a bond amongst the individuals involved. As soon as the smokejumpers were instructed by Dodge to "throw away your tools!" (p. 626), this bond between the smokejumpers effectively dissolved.

Even though Dodge took away the smokejumpers' identity, he also improvised a way to escape the dangers of the fire. By using improvisation and bricolage, Dodge told everyone around him to set a backfire or an "escape fire" (Weick, 1993 p. 638) creating an area where the main fire was unable to burn very easily as most of the fuel would be utilized by the escape fire. The problem with this idea was it came after Dodge gave orders to the crew to drop their tools. No one listened to Dodge. Dodge lit the fire, lied down in the ashes and narrowly escaped the main fire (Weick, 1993). The crew he gave the orders to, all perished as they disobeyed his command (Weick, 1993). "The collapse of role systems need not result in

disaster if people develop skills in improvisation and bricolage…Bricoleurs remain creative under pressure, precisely because they routinely act in chaotic conditions and pull order out of them. Thus, when situations unravel, this is simply normal natural trouble for bricoleurs, and they proceed with whatever materials are at hand" (Weick, 1993, p.639).

The importance of improvisation is also established in the article, *Organizational Improvisation and Learning: A Field Study* by Miner, Bassoff, and Moorman (2001). These authors study the implementation of improvisation while observing business organizations. Miner, Bassoff, and Moorman document what type of learning is implemented when improvisation succeeds in developing products clients want. "Product development represents an important process through which organizations adapt to –and, in some cases, help to create—their own environments (Miner, Bassoff, & Moorman, 2001, p.306). The data obtained by the authors was based on observations and interviews at two different organizations. One organization was a firm producing technology products while the other was in food sales (Miner et al., 2001). Three types of products were identified from improvisation, "…here we describe the range of new behaviors (behavioral productions), physical structures, (artifactual productions), and new interpretive frameworks (interpretive productions) improvised by the organizations" (Miner, et al., 2001).

The outcome of the authors' study was the technology products firm would typically use improvisation to satisfy its clients' needs. "In some instances, improvisational activity seemed to replace more formal experimentation, as when the Fast Track team members debated whether to improvise a prototype in the absence of drawings or to wait for the drawings so that they could set up tests and experiments" (Miner et al., 2001, p.322). The important aspect of

improvisation in this article shows improvisation as a normal function of an organization. The question is, when does improvisation cease if it is determined that the regular functions of an organization have ceased, and has been taken over by improvisation? The organization seems to adapt continuously to implement new products, ideas, and methods to sell old ideas. What the authors describe are the companies' manufacturing original pieces.

When improvisation is applied using Miner et al.'s., (2001) approach into organizational dynamics coping with a disaster, improvisation may not function well. Improvisation is a great tool which should be used only when it is necessary within the scheme of disaster management. Imagine that a local community was just stricken by an earthquake, and in order to assist people who are trapped, or injured, the community has developed protocol. If everyone is also taught to use improvisation a means to cope with the aftermath of a disaster, then there would be no need to develop protocol for a disaster event. Training would have no relevance. The protocol must be implemented in the planning phase of a disaster so everyone knows what to do during an emergency. Maintaining protocol may require a division of labor or specialized individuals who provide a specific ability or service to the entire community in the event of a disaster. Improvisation may deter individuals from performing their perspective roles appropriately.

The key to improvisation is how it is used. The improvisation techniques must consider the entire community in a New Public Service style of government. The community must accept improvisation as a means to achieve the ends the community wishes. Even though improvisation should be limited, it is still necessary to be able to use it to compensate for unexpected scenarios. An example of improvisation showing how it could be considered a very

important source is in the Mann Gulch fire when Dodge found a way to survive as the fire rushed towards him (Weick, 1993).

Another approach using improvisation developed is *A Cognitive Model of Improvisation in Emergency Management* by Mendonca and Wallace (2007) who demonstrate the necessity of improvisation in the event of an emergency. The argument that Mendonca and Wallace (2007) make is that specific responses are planned given a specific type of emergency, but when the emergency does not correspond to the specific types of emergencies imagined, the emergency management team must improvise to correspond with the unique emergency (Mendonca and Wallace, 2007, P. 548). The improvisation techniques used during an emergency are similar to the improvisation performed by jazz musicians (Mendonca and Wallace, 2007, P. 548). Jazz uses a "blueprint or "skeleton" as a basic structure for playing music (Mendonca and Wallace, 2007, P. 551). This structure gives the jazz musicians a basic order that can be modified to meet their mood or style which they wish to convey through music. This style of improvisation could be adapted to emergency management teams assisting the community in the aftermath of a disaster. The emergency management teams use procedural knowledge to act and improvise to the situation. "Procedural knowledge is implemented as a decision logic that practices paraphrase improvisation by inferring a referent from a planned course of action and then providing alternative realizations of the referent" (Mendonca and Wallace, 2007, P. 554). The goal of using procedural knowledge is to fit the correct course of action to the specific emergency. Improvising a plan that contains the basic "blueprint" for an emergency and modifying it to fit the specific emergency, which leaves the emergency management team is in a better position to assist the community. Mendonca and

Wallace (2007) also believe that emergency teams should learn how to improvise effectively in the event of an emergency. By learning how to improvise in the event of an emergency, the emergency management team would increase its capability in dealing with many different types of emergencies.

The benefit of incorporating Mendonca and Wallace's version of improvisation to emergency management is that it increases stability along with the application of the blue print or skeleton structure as the basic strategy for emergency any situation. Improvisation in Mendonca and Wallace's (2007) version is relatively constrained, allowing for the improvisation, but still maintaining the standard protocol. The community has a better chance of maintaining its cohesion using Mendonca and Wallace's version of improvisation compared to Miner et al (2001).

The work of Rudolph and Repennig, called *Disaster Dynamics: Understanding the Role of Quantity in Organizational Collapse* focuses on an area completely different than improvisation and bricolage. Rudolph and Repenning identify the causes of organizational collapses. An interesting observation which is explained as "a significant insight emerging from the literature is that major disasters often do not have proportionately large causes. Theorists increasingly recognize that small events can link together in unexpected ways to create disproportionate and disastrous effects (Weick, 1993a; Perrow, 1994; Vaughan, 1996; Reason, 1997)" (Rudolph and Repenning, p.1, 2002). Rudolph and Repenning believe that novel events are central precipitating crisis (Rudolph & Repenning, 2002, p.2). The reason why the novel events incur disastrous results is the fact that novel events are usually obscure (Rudolph & Repenning p.2,

2002). The example used in this article is the O-ring performance in the space shuttle Challenger disaster (Rudolph & Repenning, 2002, p.2).

One method of viewing how these crises evolve is through Perrow's Normal Accidents theory which follows a chain reaction (Rudolph and Repenning, 2002, p.1). The case study demonstrating this theory in the article took place in Spain's Tenerife airport in 1977. Two Bowing 747s crashed killing 583 people (Rudolph and Repenning, 2002, p.5). Perrow's Normal Accidents theory starts out with the plane on the runway originally diverted from Las Palmas airport due to a terrorist attack. Every plane that day which was scheduled to land at Las Palmas had been diverted and caused numerous delays. One plane captain on the runway gave himself clearance to take off as he was already late getting to Amsterdam. Unfortunately, a low level cloud obscured a plane landing on the same runway at the same time where the self-ruling plane captain began to take off. A major collision ensued (Rudolph & Repenning, 2002, p.5). Given incidents such as this disaster, Rudolph and Repenning modeled the interruptions leading up to the disaster in order to demonstrate how these disasters occur due to the buildup of stress. For this case non-novel interruptions were charted. The focus on non-novel interruptions helps to demonstrate the cognitive process leading up to the incident (Rudolph & Repenning, 2002, p.6). The process of charting interruptions showed in figures1-8 was "the basic stock and flow structure of interruptions in organizations" (Rudolph & Repenning, 2002, p.7). The importance of this chart demonstrates the flow of the interruptions going into the organization, and then pending, and finally, the resolution of the interruptions. The importance of this shows how stresses buildup due to building interruptions, which are not resolved quickly enough creating conditions where individuals reach a threshold, and make poor

decisions, such as clearing oneself for takeoff. "Even more problematic, when people recognize an impending crisis, attempt to implement an alternative response which can often make the situation worse rather than better" (Rudolph & Repenning, 2002, p.25). In a sense, this reflects the improvisation failures in Miner, Bassoff, and Moorman's article where improvising may cause costly mistakes.

Lastly, a book by Timothy D. Wilson titled, *Strangers to Ourselves: Discovering the Adaptive Unconscious* stems from a psychological perspective and is about the function of what is the unconscious. The importance of the unconscious helps individuals make decisions based on their senses alone. The unconscious interprets information in the form of stimuli and is a big factor in decision making. The adaptive unconsciousness acts on the stimuli with extreme speed and efficiency. By acting on the stimuli with such speed, "the adaptive unconscious can choose a different goal from the one we would choose if we thought it through consciously" (Wilson, 2002, P. 34). The adaptive unconscious is capable of making decisions in the event of a disaster with efficient outcomes. The processes are adaptive to help individuals make decisions without consciously thinking about the actual decision. An example of the adaptive unconscious making a decision would be when an object like a tree branch breaks and falls to the ground. An individual standing under the tree branch, hears the branch break, looks up and sees the branch falling. The individual automatically moves out of the path of the branch falling, and thus is saved by his or her adaptive unconscious without consciously thinking about how to escape the falling tree branch.

The adaptive unconsciousness has the ability to make decisions quickly, but it does not mean that the decisions are always the best decisions made. "A disadvantage of a system that

processes information quickly and efficiently is that it is slow to respond to new, contradictory information. In fact, we often unconsciously bend new information to fit our preconception, making it next to impossible to realize that our perceptions are wrong" (Wilson, 2002, P. 54,55). The concept of bending new information to fit our normal mental patterns could be applied to the Mann Gulch disaster. Dodge and his crew had the preconceived notion that the fire they were jumping into was similar to all the other fires they had previously fought. This fire was different as it was in the grasslands where the fire spread quickly. Normally Dodge and his crew probably fought forest fires where the trees themselves would act like barriers between the fires and the firefighters. The smokejumpers in the Mann Gulch disaster ignored the fact that the circumstances were different compared to other fires they fought, and were unable to compensate appropriately. Dodge's team of elite smokejumpers disintegrated into individuals making decisions which may have been based on their adaptive unconsciousness that later cost the majority of the smokejumpers their lives.

SYNTHESIS

To demonstrate how Denhardt and Denhardt's New Public Service (2007) is linked to the role of leadership in disaster and emergency management is not immediately evident. New Public Service is linked to leadership through preparedness and education of the community. New Public Service also allows the community to list what actions or outcomes the community wants in the event of a disaster.

Organizational dynamics must be incorporated in disaster and emergency management in terms of the entire community's response to a disaster. The community is organized within the process of disaster mitigation using the New Public Service model where the community decides to implement the best methods to revitalize the community itself in the event of a disaster. By implementing the New Public Service model into disaster management, the community organizes, shifting toward an organization able to assist in the revitalization process. The community is not entirely in control, but dictates the preferences the community has in the course of a disaster. The public administrators are there to guide the conversation within the community giving structure to the process. Leadership in the event of a disaster or emergency uses preparedness to implement a system to help the community, but may also improvise on the basic preparations to meet the needs of the community given the uniqueness of the disaster. The leadership adheres to what the community has defined as priority actions immediately after a disaster or emergency strikes. The leadership interprets the disaster and makes necessary decisions to cope with the disaster situation. Improvisation is implemented to adapt to unique disasters which pose a problem when basic models of disaster management are not able to alleviate the issues faced by the community.

QUESTIONS

Most of the articles used in the literature review do not demonstrate the use of New Public Service in disaster management. In fact Hurricane Katrina and the Haitian earthquake disasters show how most communities rely on the international community to restore the community. The international community begins to act under its own accord to stabilize the community. These communities are subject to if, when, or how the international community

will assist them. Therefore, my research asks, how can the New Public Service model be implemented in disaster management within local communities to enhance community participation and community involvement with the revitalization of the community after a disaster event? And what types of organization dynamics are manifested in these communities?

METHODOLOGY

To best address the research questions, this study will use a qualitative research strategy within a case study design. This case study explores the explosion in downtown Bozeman, Montana that occurred early in the morning on March 5, 2009. The explosion left a dark cloud hovering above downtown Bozeman as a break in the natural gas line spewed a continuous fireball into the air. Emergency response services in Bozeman quickly quarantined the area by evacuating everyone within a two block radius around the disaster's epicenter. The explosion destroyed one building and damaged other buildings severely. Even worse, the disaster left one person dead and many people who lived in the vicinity became homeless until the emergency response services were able to shut off the flow of natural gas, thus putting out the fire. Even though this disaster is not equivalent to the sheer magnitude of devastation witnessed by Hurricane Katrina and the Earthquake in Haiti, the explosion downtown demonstrates the same response concept. The explosion is considered a disaster or a crisis as "Turner (1976) asserts that a crisis arises when shared meaning, which previously served a community well, break from the reality of a particular situation" (Pearson and Clair, 1998, p.

63). Even though the explosion only affected a small portion of Bozeman, the event still shocked the community as the crisis caused a break in reality of a normal weekday morning.

There are a number of very important reasons to study this disaster: Access to possible interviewees in the region is relatively easy. The event is local where many individuals can easy to be located. City commissioners and emergency response agencies within the city of Bozeman are accessible, and the researcher is very familiar and understands the norms and culture of this university town. Equally important is that the government system in Bozeman as it is a commissioner based system with a mayor who does not have a very strong executive position as well as employing a hired city manager. This is important because the best form of government for citizen participation is a city manager/professional administrator form of government (Ebdon and Franklin, 2005, p. 169). Bozeman has this basic form of government even though the city includes a mayor. By using the explosion in downtown Bozeman as a case study, the results of this study will be important to show important because the city governmental structure is open to citizen participation much more than other cities possible.

A qualitative strategy is used in this research. The sampled population includes individuals who were a part of the study were a part of the disaster management, the citizens who lived within the evacuation zone surrounding the disaster, and the Business owners whose businesses were directly impacted by the explosion. The sample is a convenience sample "a convenience sample is one that is simply available to the researcher by virtue of its accessibility" (Bryman, 2008, P. 183) A snowball sampling was used as some of the citizens who lived within the evacuation area moved over this last year. Since the sample is a snowball sample the findings cannot be generalized to any large extent.

The data in this research project are interviews completed by the convenience sample and snowball sampling. Every interview was recorded via a digital recorder using a semi-structured interview process in person. Data collection was completed using semi structured interview questions preferably in person. These interviews were conducted until data saturation levels had been met, which was originally predicted to represent approximately 20 individuals. Three questions are open ended questions asked to address issues about the emergency including: personal experiences during the entire disaster event; whether or not the city was effective in assisting the individuals in the aftermath of the disaster; and what can the community do to improve with the assistance of individuals who experience disasters. These open questions "…allow unusual responses to be derived. Replies that the survey researcher may not have contemplated (and that would therefore not form the basis for fixed choice alternatives) are possible" (Bryman, 232, 2008). These questions will help determine the true nature of the events involved with the explosion in downtown Bozeman. Other important questions would be closed questions which are questions that are easily comparable between the interviewees (Bryman, 2008, p. 235).

These interviews then were recorded and transcribed using transcriber software into transcripts. These transcripts were open coded using Nvivo 10 software to identify the findings of the interviews. These codes were mutually self-exclusive categories, and must cover all possibilities as possible responses (Bryman, 2008, p. 233). The codes were nodes which were segments of speech categorized into themes. These nodes were be used to analyze various interviews to demonstrate similarities or dissimilarities between interviewees' experiences. These interviews were then analyzed by exploring the relationships between the nodes. A

professional research paper was written based on the output of the analysis of the interviews and the nodes. The findings of these interviews could lead to recommendations on how and if a New Public Service model could be implemented.

An additional source of information which may be a pertinent source of information is newspapers. Newspaper coverage using newspapers from around the state may provide an alternative view on the explosion in downtown Bozeman.

Convenience and snowball sampling are a not random sample which also means that the research does not demonstrate repeatability. Finding a snowball sample that would give the same information could prove to be very challenging. This research does demonstrate validity as it focuses on interviewing individuals about their personal experiences during the aftermath of the explosion in downtown Bozeman. External validity in this case study cannot be representative more generally to other cases (Bryman, 2008, p. 55); however, the case may be an exemplifying case as it could '"…capture the circumstances and conditions of an everyday or commonplace situation'" (Yin 2003: 41). In other words, this research project could demonstrate applications that can be used in many different disasters.

This research project seeks to use the explosion in downtown Bozeman, Montana to verify the applicability of New Public Service within disaster management. By implementing New Public Service into disaster management, citizens are able to participate in the decision making process that would affect their lives in the case of a disaster. Just as important is how the organizational dynamics are construed within the community of which the organizational dynamics are apart. By understanding organizational dynamic from the implementation of the New Public Service model into emergency management, a possibility arises to form effective

disaster management groups that adhere to the needs of the community through preparedness, improvisation and leadership.

Findings from the Interviews

After coding all interviews and extracting the nodes, eight specific areas emerge formulating the ground situation defining the emergency response and outcomes. The codes used are as follows:

- Alternative and innate knowledge
- City Meetings- Meetings for responders and city for mitigation purposes
- Community--non-profit or non-governmental organization assisting with aide.
- Community Involvement (–)-Negative view on community participation in the mitigation process
- Community Involvement (+)-Positive view on community participation in the mitigation process
- Devastating-The disaster in general AND business owners financially/livelihood
- Emergency Response-The actual response or responders
- Emergency Response Problems-issues that arose during the response
- Great help-view of the emergency response and responders as doing a wonderful job
- Improvisation-Emergency responders improvising standard protocol to mitigate the situation
- Information Session-City informing the public of the mitigation process
- Lack of Assistance-property owners who felt they had a lack of assistance in dealing with the aftermath
- Legal issues-Legal problems with insurance companies and City Laws
- MAC-Mutual Aid Agreement for outside agencies to respond to the disaster (outside help)
- Media-internet, TV News papers getting the word out about the situation and need for help
- NEW-Northwestern Energy
- Post Traumatic/ Negative Health Implications-Health side effects from the blast (mainly to business owners)
- Preparedness-Steps the city government/Emergency Responders took before the explosion to prepare for a disaster of this scale
- Professional Assistance-Perception of City and Emergency Responders' quality of assistance-positive

- Professionals Only-Only professionals should be allowed to participate in the mitigation
- Red Tape Bureaucracy-process the city made the property owners go through to reestablish the businesses/rentals
- Special Information-Theory-Theories pertaining to classes in PA
- Strict Protocol-Follow the mitigation process by the legal written law
- unable to work-Business owners out of work

Extracting the data from these nodes throughout all interviews led to the following pattern or clustering of nodes by similarity. The clusters listed below are how the Nvivo 10 program correlated and extracted similar threads from the nodes and combined the nodes:

- Cluster 1
    - MAC and Alternative forms of knowledge

- Cluster 2
    - Red Tape Bureaucracy, Strict Protocol, Legal Issues, unable to work, Community Involvement (-), and Post Traumatic/negative health implications

- Cluster 3
    - Professionals Only, and Lack of Assistance

- Cluster 4
    - Emergency Response, Great Help, Community, Community Involvement (+), Professional Assistance

- Cluster 5
    - Devastating, Information Session, and Northwestern Energy

- Cluster 6
    - Improvisation and Special Information-Theory

- Cluster 7
    - Media and Preparedness

- Cluster 8
    - City Meetings and Emergency Response Problems

Cluster 1 data are specifically designed to annotate all information corresponding to Weick's improvisation, close working relationship with your co-workers; and the main theme of *Grout: Alternative Kinds of Knowledge and Why They Are Ignored* by Mary Schmidt. Cluster 1 identifies knowledge gained over many years of experience with "intimate knowledge" (Schmidt, 1993).

The major implications Cluster 2 brings are the suppression of community from participating in a discourse with city officials to influence the mitigation process. The issue with this cluster is the fact that it also slows the process of streamlining the process for business owners to get back to work.

Cluster 3 was an interesting phenomenon which only was mentioned a few times in regards to having community participants excluded from assisting in any way as there could be legal and potential danger to the community through participation. Often enough this thread was pared up with a lack of assistance as many invested community members felt as they had little or no influence over holding organizations accountable for the disaster and a feeling that their ideas were not implemented due to the city government taking control of the area and "We really felt, us personally that the city management in particular was in bed with Northwestern Energy and tried to protect their image" (Interview 43, 03/12).

The one specific area which no interviewee disputed was the type of emergency response by the emergency responders. The attention to the focal area of the disaster (this area is also code named Ground Zero for the emergency responders) received was in the words of one interviewee, "As far as the emergency services, they were there very quickly. We

perceived them to be extremely professional, very sympathetic" (Interview 40, question 2, 01/2012). All interviewees including city administrators, emergency responders and business owners responded the same way to question 2 (see Appendix A). Cluster 4 represents the professional attitude the city emergency responders and community participants who assisted to improve conditions for the business owners and residents directly affected by the explosion and fire caused by the ruptured gas line.

One node within Cluster 4 identified a rather significant part of the aftermath of the explosion. The node Community identifies the out pouring of support offered to citizens. The community largely organized its own ideas of relief through the Downtown Business Association (DBA). Most of this support was in the form of donated goods for emergency responders, displaced residents, and business owners. In general Cluster 4 represents the predominant theme of great assistance for the entire downtown community.

Even though Cluster 4 signified the superb benefit the city received from the assistance, there is also a negative response to some areas where people felt there was more the community could do to assist the victims of the explosion. Cluster 5 represents the negative view point from the destruction that took place from the explosion to the perception that business owners had, that there was a lack of accountability on the part of Northwestern Energy had the ruptured gas line.

Cluster 6 represents an area which is fascinating to focus on as a part of research in any emergency or disaster scenario. In general, improvisation largely is not considered a part of the game plan of mitigating a scenario as improvisation is usually not controlled. In the interviews,

there were only a handful of identified areas of improvisation. Improvisation in this scenario may have vastly decreased the scale of the emergency.

The other area which helped stabilize the situation is represented in the nodes making up Cluster 7. In this cluster the emphasis of preparedness and communication helped the mitigation process at Ground Zero flow relatively unrestricted and without a duplication of efforts.

Cluster 8 represents the emergency response by the city administration. It also includes the problems with the response as problems arose long after the emergency had been mitigated and the cleanup and reconstruction was underway.

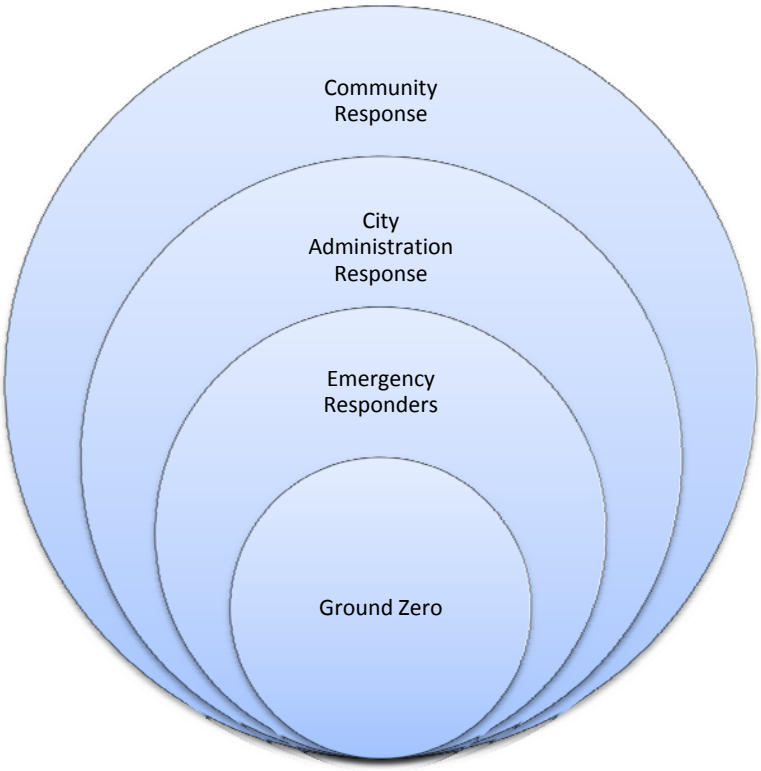
Each cluster represents a significant dynamic in the response to the explosion. The following section will demonstrate the interplay between the nodes via actual events identified in the interviews as well as theoretical applications used by the emergency responders, city officials, and potential applications for citizen involvement in the response to a disaster or emergency.

Analysis

First and foremost it is important to emphasize that the explosion in downtown Bozeman, Montana was centrally located and affected a minor part of the city itself. It is important to understand the difference between a large scale disaster where the entire community is affected vs. a scenario similar to the explosion downtown. In a large scale disaster such as Hurricane Katrina, the earthquake in Haiti or the most recent tsunami in Japan,

the levels of destruction on the entire community are significant. The emergency response in itself is hindered due to the inability of the community to effectively provide enough resources to mitigate the disaster. In Japan, some communities vanished from the shoreline altogether leaving no one from the community to revitalize the township. These incidents require national and international aid.

Due to the size of the explosion in downtown Bozeman, Montana, it is easy to track and research the interplay between the emergency responders, the city of Bozeman, and the community response to the scenario. These three levels can be illustrated as a diagram.



Ground Zero is the area which was destroyed by the explosion and fire. Emergency Responders are the professional response dealing only with the fire, explosion, and treating the

area like a crime scene. The City Administration Response represents all aid the city government provided through all its departments to the emergency responders and the victims of the disaster. The Community Response demonstrates the assistance that community personnel gave to emergency responders and victims of the disaster.

The diagram represents a mutually exclusive relationship between Ground Zero and Emergency Responders. The City Administration has access to the Emergency Responders and is an access point for the community to volunteer services to the Emergency Responders and victims. The City Administration does not have access to Ground Zero in general. The Community Response is on the periphery of the scenario and only has access to the scenario via the city administration. This diagram generally represents this information; however, there are a few examples specifically discerned in Cluster 6 which demonstrate the contrary.

A very important view point from the Emergency Responders is represented by Cluster 3. Cluster 3 is regarded as the synthesis of mitigation by the Emergency Responders and it does not allow for the community to assist in the mitigation process. There was a theme throughout the cluster demonstrating a "professional's only" point of view. In this point of view, the professionals believe they are the only organization capable of mitigating the disaster. In interview # 42 Response, one aspect became apparent immediately: In large, the community was not able to be a part of the response as "the nature of the situation, the law does not allow them to be in there. The governor got kicked out of an investigation meeting he tried to manage. He is not a cop he does not have security clearance. He was not a part of the investigation" (Interview 42, 2011). The law in Montana seems to be very specific as to who is

allowed to respond to an emergency/disaster type of situation. Even the governor of the State was not allowed to participate as he did not have the appropriate credentials.

Given the legal stance Montana has taken with the response to an emergency, there is little action a person is able to perform in regards to mitigation. One benefit to the emergency responders in this this: the law gives the emergency responders a form of legitimacy to perform their job in a professional manner without outside influences. The law keeps people out of the area that could hinder or even possibly complicate the emergency response and potentially endanger the lives of everyone on the scene. In many ways the law is important for the safety of everyone responding to the incident. The incident in this case was already complex enough as the gas lines were very difficult to turn off, the buildings up and down the block from the initial explosion had windows blown out due to the percussion from the explosion. The gas lines in the downtown area were shut off except for the gas line that kept feeding into the broken pipeline, leaving no heat in the buildings on a very cold day. This created the potential for water lines to freeze and burst. Given all these circumstances, it would have been very difficult using today's mitigation techniques to actively utilize community participation in an effective manner.

The system which has been implemented in the Emergency Management System is called the National Incident Management System or NIMS. NIMS is largely based on the Incident Command System which was developed for the purpose of mitigating forest fires in the United States. The NIMS system was adapted from the Incident Command System in an attempt to mitigate terrorist attacks after 9/11 (ICS 100, 2010). NIMS and ICS were both grafted from the military type system with a hierarchy type structure. The hierarchy structure

is one of what public administrators call the Old Public Administration (OPA). In general the OPA envisions the administrator as the person in complete control of the scenario; in this case an emergency situation where the administrator knows what is best to mitigate the emergency. The OPA system in large utilizes the Man of Reason where there is a best method to mitigate the scenario leaving the community at large rendered useless. The problem with this model is the fact that there is no room for assistance; people who have an intimate knowledge of a specific dynamic are unable to assist even if their skills of the specific dynamic far exceed that of the administrator.

The organizational system NIMS is the essence of the One Master concept described by Gulick in *Notes on the Theory of Organization* (1937). The One Master concept stresses the importance of having only one supervisor for a workman orders can be carried out efficiently (Gulick, 1937). By having a structure where a workman is able to listen and follow orders given by their direct supervisor, the end result is efficiency, responsibility, and no confusion regarding the orders to be carried out (Gulick, 1937, p. 83). The NIMS systems uses the Chain of Command and Unity of Command which is exactly the same as the One Master concept as it specifies the emergency responders are to "report to only one ICS supervisor" and "avoids confusion by requiring that orders flow from supervisors" (IS 100, 2010). The consequence to the One Master concept is the process of doing things right, not necessarily doing the right things for the community. Blindly following orders allows the mitigation process to proceed in an efficient manner to respond to and control the emergency scenario.

There are many reasons why it is important to move away from the OPA Man of Reason model to a model where synthesis of the complexity of the emergency is taken into account. In

many ways, the Man of Reason model represents a concept of control in a situation where, in all actuality there is no possible way to have control. Control in the Man of Reason model should be defined as "To restrain or limit something. To limit or restrict somebody or, something, e.g., in expression, occurrence, or rate of increase" (Encarta Dictionary, 2012). Given this definition, it is possible to understand why emergency management with its authoritative structure has this connotation built inside the entire mitigation process. The concept that is conveyed in emergency management is the identity of the expert who has complete control over the situation.

As soon as the emergency scenario is viewed from a different point of view moving away from the Man of Reason model, a new way to interpret a disaster and all its complexities becomes possible. In the article *Grout: Alternative Kinds of Knowledge and Why They are Ignored* the author suggests, Social Rationality as a more appropriate method as

> "Because of our different perspectives and limited abilities, we need each other. In working together, we enrich our view of the world and increase the possibilities of solving problems. For such reasons, Perrow sees the limits of rationality in decision making not as a liability but as an asset, for it points to our need for interdependence and suggests a broader concept, which he labels 'social rationality' (p. 321)" (Schmidt, 1993, p.530).

In a complex scenario such as the explosion in downtown Bozeman, Montana, it becomes apparent that the situation was far too complex for one individual to possess all the required knowledge. It should be pointed out that Emergency Management personnel do have an intimate knowledge of their profession especially when considering some personnel have been working in the field of emergency management for many years.

Due to the complexity of any emergency scenario, the emergency responders not only deal with the critical mitigation process, they often deal with non-emergency actions which

could be delegated to people who possess that sort of intimate knowledge. The example from this particular case study is the construction workers. The construction workers knew they had the knowledge and skill to board up all the broken windows quickly. Because the construction workers were able to help in this facet, the emergency management personnel were able to directly mitigate the actual emergency.

Many examples from the case study have the potential to be examined in a similar manner as how the construction workers were able to assist in the mitigation process. The question should now be focused on not if the community can participate; but rather, how important was community involvement in the mitigation process of the explosion in downtown Bozeman, Montana? For the emergency responders, the community aid in the mitigation process was an invaluable form of community involvement. The three areas exemplified as community involvement from the interviews are as follows:

- Donated goods for both emergency responders and victims of the explosion.
- Communication avenues to notify the community of the emergency situation and to keep the public up-to-date on the mitigation process.
- Direct citizen involvement in mitigation efforts.

Each area will be explored in the following paragraphs.

As soon as the entire community realized the effect of the explosion in downtown Bozeman, Montana on the Business owners and the tenants of the buildings, an outpouring of support ensued. In the majority of interviews it was noted that the community donated food for the emergency responders as many of them had been working over a 12 hour shift. The community in this instance was mainly business owners throughout the city of Bozeman. These business owners donated food and sent it to City Hall which became a clearinghouse for donated food and other goods.

One particular area in which business owners really improved the moral of the emergency responders was the donation of socks. For most people the donation of socks does not seem that important, but during this incident the firemen sprayed a total of over four million gallons of water to keep the fire from spreading. The water had nowhere to go except for down Main Street. Before too long the emergency responders were standing in six inches of water. One interviewee explained, "Warm socks, they even brought us warm socks, because our feet were so wet. Standing in water that was a big deal that night. I know my feet were frozen. That was a cold day" (Interview #54 & 54, 2011).

In general, the community really supported the mitigation efforts simply by knowing what was needed. The Incident Commander noted:

> "From our perspective for this, for me as the incident commander, there was no community [involvement]. Where the community really got involved, was taking care of us. They probably don't know directly like I said the socks, the food, and the Salvation Army van that was cooking us hot meals. It was 10 above, and guys that fought fires for 12, 14 hours and basically we started pulling guys out. We started taking them down to Salvation Army for feeding them and getting them warm. So as the incident, as big as it was, it started scaling down for us, it started to escalate for the community to help. You know the donation of food, and of course I was too busy, I never made it over to city hall, there were just tables and tables of food and drinks. I mean the ply wood was donated. The labor was donated. That is where they really got involved" (Interview 54 & 55, 2011).

The area where the Incident Commander specified there was simply was no community involvement as far as direct efforts to mitigate the disaster, is general correct. No community member outside of emergency management assisted with the firefighting efforts, but it should be emphasized that even if the community members are not in the Incident Command Post, it does not mean that their response was not a part of the overall emergency response. The support of the community really assisted in every individual affected by the explosion.

A significant area where there was plenty of community involvement was when the Downtown Business Association (DBA) became a significant communicator between the city administration, the business owners/tenants, and the overall community. The DBA posted information on their website about the explosion and reached out to the media to communicate the emergency situation at ground zero (Interview #45, 2011).

During the interview with the one of the employees from the DBA, the role of media became apparent as the interviewee stated, "I think that the media's involvement with these sorts of things is important because everyone wants instant information, instant updated details, what have you, and we can in a lot of ways get that from emergency responders" (Interview #45, 2011). Currently technology has become a key factor in any emergency response scenario as the flow of information is almost immediate. The explosion in downtown Bozeman demonstrated the use of media in a positive manner as the DBA communicated the needs of those affected by the explosion. To the community this included the need for donated goods and services to assist the emergency responders. In a large part, the DBA took on the role normally reserved for city administration as the DBA utilized the media as an outlet to influence the community to act and assist the emergency responders by communicating their needs.

Another area where the DBA and the community became involved was in regards to assisting the victims of the disaster. A few banks and other business owners coordinated an effort to donate money to the employees of the businesses destroyed in the explosion (Interviews # 41, 43, 46, 2011). Many of the employees were part-time employees as they were students at Montana State University who were not eligible to receive the unemployment benefits. The donations became very important for their livelihood (Interview #41, 2011).

Given all this information on the outpouring of community support and aid the city decided to investigate implementing a system to integrate community involvement and aid with the mitigation process. The development of the program is through the Fire Department. In one interview with an emergency responder, he stated, "I believe one thing that [name of responder] has been working on since then is some sort of process for volunteers who are coming forth on a big incident who want to help and have different things to offer " (Interview #49, 2012). The author of this case study also interviewed the emergency responder referenced in this interview. As far as getting some sort of plan together for community involvement, it seems somewhat superficial.

During the interview process with the person referenced in Interview #49 was asked one of the standard questions in the interview, "do you believe citizens should be allowed to participate in the decision-making process after an emergency like the explosion downtown" (Interview #42, 2011)? The response from the interviewee stated, "On the restoration process? Private property is private property. They can do whatever they want. As far as public property, that is why they have elected officials and everything. So it has become the representatives' job to on their behalf. That is why they were elected. That's how I look at it" (Interview #42, 2011).

Given the information by the interviewee in Interview #42, it seems very unlikely that there is a real chance of developing a substantive form of community involvement in emergency management. He simply does not believe the community should be involved with various aspects of the mitigation and revitalization process. For now it appears that if there is another significant explosion or disaster scenario, the same problem will face the Bozeman community as there is no mechanism to implement community involvement.

While interviewing this same responder another issue became relevant with integrating community aid as a part of the response. In large it depends on who volunteers for assistance

as “it is hard to use volunteers unless you do a background check on them. There are confidentiality issues. If there are any children in the area and stuff like that. You can't just pluck somebody off the street and have them work in a shelter around small kids. You don't know who they are. They may have a child molesting background or something like that” (Interview #42, 2011). The argument this emergency responder brings to bare is the safety of vulnerable populations may be put into jeopardy by introducing the population to potential criminals. This paper will not focus on this issue as it is largely outside the scope of the research, but the issue does have merit and should be accounted for if a community response is ever developed.

Besides these concerns listed in Interview #42, there is still a potential for community involvement in a disaster or emergency response type of scenario. One aspect which has not been neglected was the fact that there were community participants who helped change the outcome of the explosion in a very positive manner. While interviewing the last group of interviewees, there was an incident which could have saved many lives. Immediately after the explosion the Deputy Chief from Fire Station 1 explained, “I actually had a plumber form Williams plumbing saying, "I am shutting down all the gas meters down the alley, is that okay?" I said excellent, thanks a million; I appreciate it because I didn't want a secondary explosion. At that point we didn't know what we had” (Interview #54 & 55, 2011). By shutting off the meters in the alley, there was far less of a chance a secondary explosion would occur on the same block. All interviews overlooked this fact except for Interview # 54 & 55, but in all actuality the knowledge the plumber had could have prevented a further emergency escalation to an already

lethal scenario. The Deputy Chief knew the benefit of shutting off the gas meters and instead of giving orders to clear out of the area, he allowed the plumber to do his job.

The other group of people who assisted in the mitigation process was the carpenters who wanted to assist by boarding up the windows that were blown out due to the repercussion of the explosion. As the perimeter around the incident began to collapse and shrink, other personnel besides emergency responders were able to access the area and assist. The carpenters came down and assisted with boarding up the windows. The Incident Commander stated, "We literally had, I can't give you a number, of carpenters and just laborers, hauling ply wood off the semi down Main Street, guys are cutting it and putting it up. It was an unbelievable sight to be able to watch when I had a chance" (Interview # 54 & 55, 2011). Even though the carpenters were not a part of the emergency response team, their job was to help stop further damage from occurring inside buildings. The other main problem was the environmental factor. During that day the explosion occurred the temperatures reached a high of 20 degree F. With the gas meters and other lines throughout the area cut off, there was no heat to keep the water pipes from freezing. The carpenters helped board up the windows to keep as much heat in the buildings as possible insulating the broken windows with Plywood.

Given both of the examples of community participation in the mitigation process, it is important to understand why people are beginning to want to be a part of the decision-making process. Denhardt and Denhardt quote, " 'Leadership…will become an increasingly intricate process of multilateral brokerage…More and more decisions will be public decisions, that is, the people they affect will insist on being heard' (1992, 311)" (Denhardt and Denhardt, 2007, p. 140). Far too often in the United States, the new media depicts disasters and emergencies

where the citizens are frustrated with the lack of a beneficial response. We have all seen the images from Hurricane Katrina and Haiti after the earthquake. By becoming a part of the decision making process the communities affected by disasters and emergencies are able to decide what is important and then enact a mitigation plan to benefit the entire community.

In the aftermath of the explosion in downtown Bozeman, Montana the idea of community involvement was very minor compared to the possibilities. One type of forum the city used as a part of the revitalization process was city meetings open to the public. In one of the interviews the business owner noted "You know I would say we were able to voice our opinion...Did they listen? No" (Interview #43). The city attempted to have a community dialogue, but the outcome of the dialogue did not really help the situation in any way. The impression from this interview was the city only held meetings as a part of protocol, not to develop an ongoing dialogue to help the businesses and victims of the explosion. To corroborate the information conveyed in Interview #43, the City of Bozeman Minutes were searched to find any evidence of community involvement. On December 15, 2009, the *Downtown Tax Increment finance* minutes Indicated the City of Bozeman secured The Save America's Treasures (SAT) grant for $150,000 to repair the historic properties involved in the March 5, 2009 explosion in downtown Bozeman, Montana (City of Bozeman, 2009). Another $974,000 in appropriations from the Housing and Urban Development Department had been given to the city as well (City of Bozeman, 2009). Northwestern Energy also donated $50,000 to the Downtown Enhancement Fund (City of Bozeman, 5/2010). It seemed like the city of Bozeman was actually helping out as much as they possibly could. The funds were to be distributed to the property owners for rebuilding purposes and an alley paving and

enhancement project, but the problem with the funds is that they required what is called and Environmental Assessment (City of Bozeman, 5/2010). One business owner declined the funds as he would have had to cease construction for at least 60 days (City of Bozeman, 5/2010). Another business owner was not eligible due to "extenuating financial circumstance involving his properties at the blast site" (City of Bozeman, 5/2010). This same business owner still had plywood on the building. The city came up with a "No Plywood" Policy to make the business owner repair the busted out windows (City of Bozeman 4/2010). This particular business owner was not eligible for funds and yet the city made him fix the damages. Even another business owner declined the funds as she had already moved her business down Main Street (City of Bozeman, 5/2010). Part of the funding was used to improve the alley way that was destroyed in the explosion including "repave entire alley, replace bridge railings, construct/install dumpster enclosures, install employee bike racks" (City of Bozeman, 5/2010). Besides the alley way improvement, the appropriated money seemed to really benefit no one. In every minute there was no public comment listed which conveys a lack of the ability or ta lack of effort to have community involvement.

Besides the financial implication, there are other reasons to have community involvement. Part of the reason to have the community partake in a dialogue about courses of action the city should take is to learn from the experience and change what does not work well. In another interview a different business owner conveyed:

> "We've never outside of this interview and media you know, people calling for a news story and ask us question on how we felt, how things happened and all this. I have never been approached by a government entity or a city entity and said "Hey would you like to sit on this board, or you know be a part of this think tank that wants to be more prepared god forbid, something like this might happen. I do think it would be valuable" (Interview # 41).

What is important to take away from these interviews is the belief that the business owners' input was very valuable as they went through this long process of restoring their businesses. During the process they gained important experience that could potentially lead to improved mitigation and restoration processes.

From the business owners' point of view the overall process of mitigation and revitalization was largely disjointed between all organizations involved. Every interview noted that the emergency response was absolutely professional and the emergency responders did their job well. The city administration on the other hand muddled through the recovery process. That is not to say the city administration did not care about the victims' situation, but rather the process did not really assist the victims with the exception of getting business owners loans and processed their building permits rapidly (Interviews #43 and #52). Largely the damage sustained in the explosion was private property so as soon as the report came out that the explosion was not a criminal act; the scene was turned over to the insurance companies. In one particular interview the interviewee noted, "everybody had compassion and wanted to do the right thing but you really felt like the city was fighting with our insurance companies. And we felt like we could trust our insurance companies more than we could the city at that point in time. Not the firemen that came out or the police that came out now, but the city administration" (Interview #43). Given statements like this one, it is apparent that the city administration needed to listen to the business owners instead of leaving this disjointed process and having the insurance companies came in, and take over for the city administration.

The entire scenario can be viewed through this disjointed process where there are a lot of areas in the entire response process that must undergo restructuring to build robustness and

resilience in the community. By restructuring the entire response, it will help to excel the revitalization of a disaster area like the explosion in Downtown Bozeman, Montana. In order to build robustness and resilience three applicable areas must be explored through the scope of community involvement including improvisation, virtual roles system, education, and leadership. Each of these subsequent areas must be explored to formulate how they can be folded into the mitigation process.

IMPROVISATION

Improvisation is a key component to the mitigation process itself as improvisation can be used to change the normal patterns of response to meet the needs of the community affected by the disaster. It has already been pointed out that improvisation was used in the mitigation process by allowing the plumber to shut off all the gas meters along the alley way next to the exploded area. The construction workers were also able to help emergency response personnel by boarding up windows to prevent water pipes from freezing. Even though the community believed the emergency responders did a fabulous job mitigating the process of putting out the fire and keeping others out of harm's way, emergency responders do not have all the expertise to respond to every type of environmental condition which could change the scenario drastically. The plumber had knowledge about the situation and knew exactly what to do by turning off the gas meters near the explosion. By working with people who would normally be considered outside the role of emergency management, there is a possibility of a more robust response as every emergency response has different environmental factors which may need expertise in other areas.

Improvisation should be a part of the actual revitalization process as it can change how the community rebuilds. Many business owners commented on how the city government, state and federal emergency assistance had to meet explicit financial/damage thresholds to receive funding. The explosion was in a very centralized area and affected only a few different buildings making it very difficult to qualify for the threshold. The thresholds became roadblocks stopping any sort of assistance. The key to this explosion is that it was considered an accident which did not originate in any particular business space, but the thresholds kept the business owners from being able to accomplish anything. The end result was the implementation of low rate loans the business owners had to pay to rebuild. Legally the government did not owe it to the business owners to assist in any way, but given the nature of the disaster; from the business owners' perspective there could have been more dialogue to help the business owners (Interview #41, 2011). Improvisation could have helped the entire community by setting up some sort of special board which could have generated new possibilities. The board would have been outside the normal peripheral of the mitigation process. The area which exploded had special significance to the entire community as a historical area in downtown Bozeman, Montana meaning the community had a special interest in seeing the restoration and revitalization of the area. By improvising and creating a special board to be a "think tank" searching out other alternatives to revitalize the buildings and businesses, more possibilities arise. Establishing special boards is a way to create resiliency in the aftermath of an explosion like the one in downtown Bozeman, Montana.

Improvisation is a vital method of any emergency response system as improvisation allows for a method to change the normal structure of the emergency response system to

accommodate all environmental factors. In every disaster or emergency scenario the environmental factors are different and no single emergency response system outline can effectively mitigate an emergency without varying the system to meet the needs of the community. The effect of improvisation in a disaster or emergency scenario helps to implement the community in the decision-making process.

VIRTUAL ROLE SYSTEMS

Along with improvisation, virtual role systems are an important avenue which must be explored in any large scale emergency event. What this case study proposes is that there is a method to implement virtual role systems not only between individuals responding to large scale emergencies, but also between entire organizations itself. Weick (1993) offers a concept of how an individual constructs the virtual role system for his or her self as the implementation of social construction in an ongoing emergency event. "Social Construction of reality is next to impossible amidst the chaos of a fire, unless social construction takes place inside one person's head, where the role system is reconstituted and run" (Weick 1993, p. 640). Using this concept a person is able to develop a method to implement the entire role system of the emergency response system. The concept of virtual role system can then be grafted onto the organization at the organizational level. An example of this scenario occurred in the mitigation process of the explosion in downtown Bozeman, Montana. The DBA stepped into the role of communicator between all the different community organizations. The role of communicator was left as a void due to the fact that the city administration was extremely occupied with getting the message out to the community about the explosion. Largely the city administration sent out the message updating the community about the situation at Ground Zero. The city

allowed for only one-way communication traffic to the community. The DBA took on the role of communicator to communicate also in the same fashion as the city, but also become a type of rely between the city administration, the business owners, and the community as well.

The DBA knew communication between organizations was a vital key to a successful revitalization process. The role of the DBA in general was always that of communicator. The DBA could be considered in many ways as an expert in the communicator role and knew exactly how to get the message out to the community about the needs of the emergency responders and the victims of the explosion. Even though the DBA normally does not deal with emergency response or mitigation in any way, the communication aspect was still the same in getting the message out to the community. The DBA being well established in its role as communicator, it improvised this role to fit the emergency management response and mitigation. Surowiecki (2005) equates the role of expert to the accomplished chess player. "The great player sees the board differently, he processes information differently, and he recognizes meaningful patterns almost instantly" (p. 32). Because of their expertise in this role as communicator, the DBA instantly filled the void which was left vacant and communicated between all parties involved in the explosion.

By having organizations like the DBA fill the voided role of communicator the mitigation process seemed flawless as there was no breakdown of communication. In essence, the DBA built in a type of redundancy into the mitigation process that was necessary. Redundancy is often necessary in the event of an escalating disaster or emergency scenario as many times emergency responders are shrouded in their primary roles of stopping the initial disaster from escalating further. Redundancy has the same effect as virtual role systems on the

organizational level as organizations are able to change roles to mitigate a disaster or emergency scenario.

In a large scale incident where the organizations are taxed their full ability to be of service to the community and still there is a need to have more assistance, there would be a void to fill at both levels of individual and organizational response. A great method to fill these voids is to use the community in general as a way to backfill them, creating a redundant system. In the explosion in Downtown Bozeman, Montana the community organized itself mainly through the DBA asking for donations and other services to assist emergency responders and the victims of the disaster. Without the community assistance, more organizations would have been needed to mitigate the emergency. Many community members have expertise in areas that could be applied to many different scenarios. By implementing the community into the mitigation plan, the overall emergency management of the community becomes much more robust and is able to mitigate and adapt far better.

The whole purpose to instill virtual role systems into the emergency response system is to build in robustness and redundancy. Robustness helps to increase the types of responses in a disaster or emergency scenario by including community participants who have expertise in areas where the normal emergency responders may not have. Redundancy increases the likelihood of having enough people with skills to mitigate the disaster or emergency scenario through integrating other organizations and personnel into the emergency response system. If there is ever a breakdown in the emergency response system due to such issues as a lack of personnel, the other organizations and the community in general are able to fill in to mitigate the scenario effectively by understanding the different roles necessary to mitigate the disaster

or emergency scenario. Organizations have the ability to implement and take over for other organizations in the case of a long and continuous mitigation plan. Knowing how the responding organizations function in an emergency response system, other organizations can take over or fill the necessary voids. In the case of the Explosion in Downtown Bozeman, Montana, the DBA filled the role of communicator between the community, business owners and the city administration.

EDUCATION

The process of having the community as a part of an emergency response system has a twofold implication. In general the emergency response is more robust and resilient. It also builds investment within the community itself. Shiwaku and Shaw state, "Several studies pointed out that a strong community with higher social capital succeeded in rescuing each other promptly and implementing a satisfactory recovery and reconstruction process through participatory decision making, strong leadership, and effective negotiating with the local government (Nakagawa and Shaw, 2004)" (Shiwaku and Shaw 2008, p. 183). An effective mitigation process and revitalization must begin with the community through participation.

How are community members able to become responders in the event of an emergency? Education becomes the cornerstone of any community based system. There are two types of general education perspectives which are very valuable to a disaster or emergency scenario. The first type of education is that of a Narrow Focus. The Narrow Focus deals with the individual level and teaches the individual what to do to safeguard one's own life and property. The information that should be included in this type of education is as follows:

- Defining appropriate locations for community members to go to for safety.

- Teach appropriate skills to safeguard their own life in a potentially volatile scenario
- And "the aim is to bring up individuals who can take actions independently" (Nakagawa, and Shaw, 2008, p. 189).

By learning about emergency scenarios independently, people are much more aware of what to do and are less likely to be a victim of the disaster or emergency scenario.

The second type of Education is learning about emergencies at the organizational level. This type of education helps community members understand the different organizational structures inside an emergency response organization. In the United States NIMS is the current system in place and the roles and organizational procedures can be easily conveyed to the community in general. The community would have the knowledge of how the emergency response functions and could receive training to fill the roles within the NIMS system.

When the two types of education are combined in an individual, the individual can easily become a part of the emergency response, knowing what measures are necessary to safeguard the community member from injury in the initial emergency. The individual then could become more than just another victim of a disaster or emergency and be integrated into the response mechanism along with all their skills and assets.

Education can help community members from being victimized by a disaster or emergency scenario by giving community members the appropriate building blocks to be a part of the mitigation process. Education also helps to build robustness and redundancy by giving the pertinent knowledge of emergencies and the systems that are used to mitigate these emergencies to the community members. The community members are less likely to become victims and are able to fill vacant roles in the emergency response system.

Leadership

The concept of the professionals only in an emergency response must be reevaluated if the community is going to become a part of the emergency response system in general. Being a part of the system does not necessarily mean that the community members will be fighting fires, but rather they can fill one of the numerous roles within the NIMS system. Firefighting should not be ruled out of the community's ability either as in the Bozeman area there are a few rural fire departments who actively recruit volunteers annually. For many reasons, community members should be included in the emergency response system. One such reason is the fact that emergency responders are a very homogeneous group. "Homogeneous groups become cohesive more easily than diverse groups, and as they become more cohesive they also become more dependent on the group, more insulated from outside opinions, and therefore more convinced that the group's judgment on important issues must be right" (Surowiecki, 2005, p. 36, 37). In an organization like the fire department, the firefighters begin to see things from their narrow point of view and act within that view only. By adding outside people to that point of view, there is a possibility to synthesize other alternatives because the group will have an array of different points of view.

The other area where emergency management can become more effective is through the process of decentralization. Generally, the incident commander(s) delegate authority to the rest of the emergency response organization. Dreyfus in the article *What Could Be More Intelligible Than Everyday Intelligibility? Reinterpreting Division I of Being and Time in the Light of Division II*, equates the expertise, as "…the competent performer seems gradually to decompose the class of situations into subclasses, each of which shares the same decision,

single action, or tactic. This allows an immediate response to each situation" (Dreyfus, 2004, p. 268). The expert and in this case, the incident commander has the ability to use his or her intimate knowledge from experience to mitigate a disaster or emergency scenario. Even though the incident commander may not have had experience dealing with an explosion like the one in Bozeman, but the situation was similar enough to a fire that the same basic principles were used to mitigate the scenario. The explosion fit a subclass of a fire event.

The idea of a single authoritative figure who knows best is a false idea as in any emergency no one single person could possibly possess all the knowledge necessary to mitigate the entire emergency. As Schmidt points out, "indeed everyone has cognitive limits and special skills, some with numbers, others with words, still others in visualization" (1993, p. 530) They are the experts in the emergency scenario and ideally should know everything about the situation. "But experts are much like normal people: they routinely overestimate the likelihood that they're right" (Surowiecki, 2005, p.33). Incident Commanders are like everyone else, they are people with the ability to know a limited amount of information at a single time and view their abilities as greater than what they actually are. This is not to say that experts are poor at their jobs, but "It does mean that however well informed and sophisticated an expert is, his advice and predictions should be pooled with those of others to get the most out of him" (Surowiecki, 2005, p.34). Experts do have a type of knowledge that exceeds most of the general public in their particular area, but because the experts are limited to the amount of information they know about an emergency situation at any given time, decisions should be made as a group as pooling advice together with community members enhances the likelihood the group will make the best decision. Groups in general have a better ability to come up with

the best possible solution as “the idea of the wisdom of crowds is not that a group will always give you the right answer but that on average it will consistently come up with a better answer than any individual could provide” (Surowiecki, 2005, p. 235).

Knowing that the group generally out performs an individual expert within decision-making, it becomes necessary to decentralize the entire emergency response organization where community members are able to make decisions. As noted in the preceding paragraphs, a heterogeneous group will think in a very broad manner with multiple different points of view to give potential ideas as a suggestion to mitigate an emergency scenario. Decentralization would allow for better ideas and an increase in communication. Decentralization in the decision-making process lends key support to the entire process from mitigation to revitalization. The reason why it is important to add community members to the decision making process is in an emergency event like the explosion in Downtown Bozeman, Montana, complexity of any emergency scenario is impossible for one single person to comprehend fully. The decision-making process can overlook various aspects which could put emergency responders and the community at risk. Decentralization is a sort of redundancy built into the decision-making process. By using a group to help make important mitigation decisions, there is less of likelihood to make the wrong decision.

The revitalization of a disaster or emergency scenario becomes an important process as soon as the emergency begins. The revitalization process must undergo the decentralized decision-making process as a form of community involvement. The reason why community involvement becomes so important in the revitalization process is the fact that today community members want to be able to make decisions regarding their community. Community members know

what is important to the overall community and what revitalization avenues should be explored first. In the explosion in downtown Bozeman, Montana, the area which was destroyed was a historical part of town that had a lot of meaning to the community. To not be involved in the process of how to revitalize the area, the meaning of the area would be vastly diminished.

Community involvement in many regards is the key to success in an explosion event like the one in downtown Bozeman, Montana. When the scenario is examined using improvisation, virtual role systems, education, and a decentralized form of leadership, the emergency response program is strengthened building in resilience, redundancy and robustness. In the aftermath of the explosion it was certain that the community wanted to do anything possible to help the entire process form donating food to the emergency responders and victims to giving their labor as a part of their community service.

Conclusion

In the most recent major disasters including Hurricane Katrina and the earthquake in Haiti there is a sense of total loss and a vast breakdown of roles at the organizational level. All the images that were broadcast into the homes of millions of Americans throughout the nation of disasters such as these, left many people believing that there is a better way to handle the disasters and help the communities affected. In many ways, the national and international emergency response services left these community as victims. Victims are not able to be of any kind of service even though they have intimate knowledge of what the community needs. In any disaster or emergency scenario, the community is necessary to effectively rebuild. Besides the benefit of being a part of the decision-making process there are truly beneficial outcomes if the community's involvement is a part of the entire process.

This case study focuses on a rather isolated event in the explosion in downtown Bozeman, Montana, but the concepts regarding a small isolated explosion are the same as a large disaster area like hurricane Katrina and the earthquake in Haiti. By focusing on the mitigation and revitalization process the case study reveals that there is an area which still needs improvement. The area where the community is a part of the process must be considered a direct benefit to the entire community, not a hindrance to the emergency response efforts. In every one of the interviews there were comments stating the outpouring of support from the community had a beneficial impact on the business owners and emergency responders. The current system in place has no formal mechanism to organize and familiarize community members in an emergency scenario. The community did what was right for the people who were affected by the disaster and became involved with the mitigation and revitalization process despite no formal mechanism to do so.

In a large scale disaster or emergency scenario the process must change to also include community involvement in the mitigation and revitalization process as a formal part of the emergency response process. Due to the complexity of a large scale event it is impossible for one person to make the best decisions for an entire community. There is just too much information outside the expert's role to make the best decision for every community member. Through the research in this case study, having a decentralized process, which allows for the community to help decide the best methods for the mitigation process there is a direct correlation to not only do things right but to do the right things for the entire community involved in the disaster or emergency scenario. Improvisation allows for the mitigation process to accommodate various environmental factors such as in this case study, the boarding up of

windows to alleviate the possibility of water lines breaking in buildings due to the lack of heat. Improvisation helps to diminish the escalation of an emergency scenario by changing the response to enable more beneficial outcomes. Virtual role systems are used in the mitigation process to build robustness and resiliency by allowing for community members to backfill any area in the emergency response system which is not filled. Virtual role systems can be utilized at the organizational level allowing for the interchangeability of entire organizations in the mitigation process.. Lastly, education is a tremendous method to help in any disaster or emergency scenario. Education through the Narrow Focus gives the community member the ability to survive by conveying what methods are best suited to various types of disasters or emergencies and gives the individual the tools to act independently. Education at the organizational level is a different type of education which emphasizes the necessity to learn about the current emergency response system so the individual can become a part of the response itself. By incorporating all these concepts into a type of community involvement in a disaster or emergency scenario, the outcome of the entire process becomes more resilient and robust.

Appendix A

Interview Questions (Business & property owner Questions)

Question 1: How did the explosion in downtown Bozeman, Montana affect you personally?

Question 2: In what manner did the local government respond to your needs in the immediate aftermath of the disaster?

Question 3: How were you informed about the processes the government implemented to help the public?

Question 4: Were you satisfied or dissatisfied were you with the role the government played in assisting you?

A. Please explain your response.

Question 5: Was it possible to express your opinion(s) about courses of action the local government should take to alleviate the problems caused by the emergency?

Question 6: To your knowledge, was there any citizen involvement in the decision making process to fix the problems caused by the emergency?

A. Why or why not?

Question 7: Do you think you should be a part of the decision making process after an emergency event like the explosion downtown?

A. Why or why not?

Appendix B

Interview Questions (Responder Questions)

Question 1: What was your official role during the explosion downtown?

Question 2: Were there any coordinating issues between the various responding agencies responding to the explosion?

Question 3: How did the local government respond to the needs of the citizens affected by the disaster?

Question 4: Generally, were the individuals affected by the disaster satisfied by the services they received from the local Bozeman government?

A. Please explain your response to the last question.

Question 5: How were the citizens allowed to participate in the decision making process regarding the explosion downtown? (OMITTED)

Question 6: Were citizens allowed to participate in the emergency efforts in the immediate aftermath of the disaster?

A. Please explain response to the last question.

Question 7: To your knowledge, were the citizens who were directly affected by the explosion allowed to participate in any form of decision making process on the efforts to restore the area to today's outcome?

Question 8: Do you believe citizens should be allowed to participate in the decision making process after an emergency event like the explosion downtown?

A. Why or why not?

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