Factors that Influence Crisis Managers and their Decision-Making Ability during Extreme Events

Connie White, Jacksonville State University, USA
Murray Turoff, New Jersey Institute of Technology, USA

ABSTRACT

This paper reviews crisis literature, identifying factors that most challenge decision makers during extreme events. The objectives are to understand the environment in which the emergency manager is working; isolate factors that hinder the decision maker’s ability to implement optimum solutions; and identify structures that best fit the problem type. These objectives are important because extreme events are not well managed. Extreme events are best characterized as wicked problems. Stress, information overload, bias, and uncertainty create an environment that challenges even the best decision makers. Factors must be better understood so that policies, systems, and technologies can be created to better fit the needs of the decision maker. The authors discuss ongoing research efforts and describe systems being designed and implemented that provide a variety of web based collaborative tools, as well as solutions to these wicked problems.

Keywords: Crisis Management, Crisis Managers, Decision Makers, Emergency Response, Web Based Collaborative Tools

INTRODUCTION

The objective of this article is to examine the emergency and disaster literature in order to identify the factors that challenge crisis managers over the course of a catastrophic event. Characteristics of an extreme event are identified and found to match the same characteristics that define wicked problems. “An emergency is by definition a unique and unpredictable event, and it is seldom possible, even in retrospect, to assess what the outcome of an emergency response would have been if alternative measures had been followed” (Danielsson & Ohlsson, 1999, p. 92).

Responding to the needs of an emergency depends on the severity of the event that has occurred. On one extreme of the scale, there is the routine every day emergency. This includes responding to a car wreck, a heart attack, or to a local flood. These types of problems are structured, occur frequently and protocols exist to
mitigate the situation. More severe emergencies, like 100 year floods, earthquakes, and tornadoes, occur less frequently and pose a greater challenge to crisis managers. These are defined as ill-structured problems and can eventually be tamed into a series of structured sub-problems that can be managed (Turoff & Hiltz, 1982). The most severe crisis are catastrophic events like the 1974 Super Outbreak where 148 Tornadoes touched down over a two day period across the United States, the 1980 eruption of Mount St. Helens, the 2004 Asian Tsunami and in 2005, Hurricane Katrina. Extreme events occur rarely, have not been experienced before by crisis management and have no clear solutions to problems. Extreme events are best characterized as wicked structures problems.

The literature reveals that extreme events do have particular characteristics with common themes reappearing throughout scientific literature. Carl Von Clausewitz offers a cohesive observation of the characteristics plaguing extreme events. He wrote:

“A commander must continually face situations involving uncertainties, questionable or incomplete data or several possible alternatives. As the primary decision maker, he, with the assistance of his staff, must not only decide what to do and how to do it, but he must also recognize if and when he must make a decision” (Clausewitz, 1976, p. 383).

This research is important because the needs of crisis managers must be identified from the literature found within the emergency domain. Too often, systems are designed, policies are created and plans are written that don’t consider the ground level decision maker. For disasters to be managed so that the solutions are a good fit to the problem, the systems, policies and plans need to be created by asking:

➢ Who is the decision maker?
➢ Under what conditions are these decisions being made?

It is important for the results of studies confirming the task type, needs and considerations of the practitioners themselves to be observed so that technology, systems, policy and procedures can be developed to support the needs of decision makers to facilitate a rapid response and recovery given a catastrophic event has occurred. The literature clearly revealed a number of influences that can be managed better if systems are designed to meet those needs.

BACKGROUND

Stressors

Decisions are time critical and can be emotionally stressful when life and death triage type decisions must be made. Crisis managers are confronted with additional stressors that challenge the best decision makers. Simple creature comforts are nonexistent and that affects a human’s decision making ability without taking into account, the numerous other stressors that are ongoing. A lack of sleep, personal issues (family, home), proper nutrition, hygiene, and transportation are characteristics of the environment in which the decisions are being made.

After the great Deluge of New Orleans when the levees broke flooding 80% of the city, many first responders’ had lost their own homes, their own family members, had no food, no place to sleep and were every bit as much victims as the people they were to help rescue and protect. Responders reacted in a number of ways; most notorious were a small percentage of the police force who abandoned their roles, and a handful who abused their authority (Kushma, 2007). This contradicted the expected roles they represented. These environmental, mental and physical influences were beyond their control and clearly affected their rational decision mak-
SimEOC: A Distributed Web-Based Virtual Emergency Operations Center Simulator for Training and Research
www.igi-global.com/article/simeoc/142940?camid=4v1a

An Efficient GIS Concept for Disaster Management in Developing Countries Based on Virtual Globes
www.igi-global.com/article/efficient-gis-concept-disaster-management/37524?camid=4v1a