APPLYING AN ETHICAL FRAMEWORK TO ASSESS ORGANISATIONS' DECISION MAKING PROCESSES IN LARGE-SCALE DISASTER: THE CASE OF KATRINA

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Abstract

This study applies an ethical framework to test the decision-making process that took place during the Katrina disaster. Building on assumptions and concepts drawn from ethical theories, decision capacity, and the discourse analysis perspective, the validity and effectiveness of decisions issued by the local, regional, and federal governments were assessed. A number of official committees' reports, which were published by the U.S. government in the wake of the Katrina disaster, were used as the primary sources of data for an instrument that was developed from Soliman's ethical framework in 2010. The findings in this study indicate significant discrepancies in decision making for both the planning and response phases during the Katrina disaster. Four major ethical concepts; which are responsibility, accountability, transparency, and decision capacity were found to be violated, resulting in an exacerbation of suffering for the disaster survivors. This study recommends that concerning any disaster, officials and decision makers review and integrate ethical standards when developing programs and activities in order to protect citizens' legal and personal human rights.

Keywords: Katrina disaster, ethical framework, decision capacity

Introduction

Over the last 15 years, organisations working in the field of disaster planning, recovery, and mitigation have struggled to face the challenges caused by large scale disasters. These challenges include structuring of payment and compensation to survivors (Davis, 2015), identifying adequate resources, i.e. shelters (Luo, 2014; Rahill, Ganapati, Calixte, Anuradha, Ganapati, Clerisme, Mukherji, 2014), establishing clear and appropriate responses to survivors' needs (Shughart & William, 2011), enhancing community and organization resiliency (Ashford & Thomson, 2007; Czerwinski, 2012; Weick, 2016), and resolving confusion over the recovery process and the multiple impacts of disasters (Islam & Walkerden, 2014).

Typically, large scale disasters disrupt the lives of people and citizens around the world, causing destruction of homes and properties (Nurdin, 2015), long and short term financial and economic impact (Zapata, 2009), social suffering and the displacement of thousands of residents (Aijaz & Panjwani, 2015; Perera-Mubarak, 2013), and physical, mental, and psychological distresses (James, Noel, Favorite, & Jean, 2012; Gul & Andsoy, 2015).

Types of disasters have been varied, including hurricanes (Pizzi, 2015), earthquakes (Dogulu, Karanci, & Ikizer, 2016), floods (Gaillard, Pangilinan, Cadag, & Masson, 2008; 2009; Okazumi & Nakasu, 2015; Soliman, Lingle, & Raymond, 1998), and tsunamis (Lindgaard, Iglebaek & Jensen, 2009).

Although efforts to face the aftermath of these disasters involved many levels of organisations and agencies, including local (Kim & Jung, 2016), state (Bucher, Human, & Simpson, 2014), national (Ainuddin, Aldrich, Routray, Ainuddin, & Achkazai, 2013), and international (Katoch, 2006), the evaluation of such efforts still focused only on the impacts, magnitude of involvement (Du, Liu, Wang, Zhang, Chen, Chen, & Liu, 2012; Jenkins, Lambeth, Mosby, Van Brown, 2015), and the nature of recovery work, including planning and implementation (Berke, Cooper, Aminto, Grabich, & Horney, 2014). Little work has been conducted to establish the ethical and moral standards needed to guide assessment and evaluation of intervention following massive disasters (Geale, 2012).

The purpose of this study is to evaluate the ethics and moral justification in the decision-making process, strategies, and policies surrounding Hurricane Katrina by utilizing an ethical structure (Soliman, 2010). Such an analysis can be helpful in understanding what is the most effective decision making process

during disasters, which should consider both the rights of citizens and the best interests of society. In this context, a study question was formulated as follows: "what are the ethical standards that influenced the decision-making process during the Katrina disaster?"

The Katrina Disaster and Organizations' Involvement

Over 10 years after the Hurricane Katrina disaster of 2005, there is a need to re-examine the incident by using a different analytical approach to establish a clear understanding of the ethical assumptions related to the organizational decision making process during the disaster. The Katrina disaster is an excellent example of how organizations can be a part of the complexity and overextension of reactions and involvement in a large-scale disaster. However, as many organizations on the local, state, and federal levels took part in the recovery process following the catastrophe, assessing the effectiveness and contribution of these organizations represents a difficult task.

Most studies conducted following disasters tend to investigate specific factors, such as environment and infrastructure (Derthick, 2007), politics (Young, 2006), society (Moyo & Moldovan, 2008; Quinn, 2006), psychology (Natha & Daiches, 2014), and human rights and racial equality (Carmalt, 2014; Dyson & Preston, 2006; Forgette, King, & Dettrey, 2008; Stivers, 2007). Other studies considered the technological issues that caused the disaster and the decision-making process before or following the disaster (Cox, 2012, Schneider, 2005), or the coordination among various entities and organizations that participated in the aftermath of the disaster (Ink, 2006; Koliba, Mills, & Zia, 2011).

The Katrina disaster has provided evidence of shortfalls (Cooper & Block, 2006; Gottlieb, 2006), confusion (Cooper & Block, 2006; Gottlieb, 2006), population displacement (Tuason, Guss, & Carroll, 2012), and a lack of effective responses and recovery (Boin, Hart, McConnell, & Preston, 2010;). In short, Hurricane Katrina, which was one of the most devastating disasters in the modern United States history (Menzel, 2006; Young, 2006), has caused a wide range of reparations that were not limited to an impact on physical and infrastructure (Menzel, 2006), also affecting the general public on the local, regional, and federal levels (Wyatt-Nichole & Abel, 2007).

One of the critical points in the Katrina disaster was the failure of numerous agencies and experts to forecast or anticipate the disaster (Gottlieb, 2006), as well as the inability of leaders to come up with effective decisions that

would result in the execution of sound and proficient plans and actions (Kettl, 2005). Initially, specialized institutions were involved in identifying the direction of the hurricane, calculating its direction, and predicting where it was going to touch-down. Accordingly, many decisions were made by local, regional, and federal authorities, organizations, and agencies to develop recovery plans and methods of action. However, studies declare that these decisions lacked accountability (Koliba, et al., 2011; Wyatt-Nichol & Abel, 2007). More specifically, the organizations and authorities that were involved in the recovery phase have engaged in confrontation, blame exchanging, and leadership failure, which resulted in the intensification of disaster mismanagement (Young, 2006).

Literature Review

In general, organisations that experience large scale disasters tend to review their contributions and responses to them. These reviews occur because of the need to assess the abilities of the organisation and the processes, plans, and procedures they used to address the disaster. In most cases, these organisations utilise models to evaluate and test their policies and procedures to revise, establish, or create new forms of action. However, agencies and organisations also understand that a review and evaluation of their experience cannot be adequately done without addressing the policies that guide their missions and tasks.

Following the Katrina disaster, federal committees were assembled to conduct a thorough review of the catastrophe (Townsend, 2006; U.S. Government Accountability Office (GAO), 2006; U.S. House Select Bipartisan Committee, 2006). These reports have identified some problems related to the ways the disaster was handled. Policies, strategies, and decisions used to address the particular issue of a disaster should be based on scientific bases since problems can arise when they only focus on a narrow input and an expectation of what the outcomes should be.

Accordingly, plans and strategies for disaster recovery should be prepared and reviewed, as well as documentation that specifies what should be done, when, why, and by which group or office. The analysis of the Katrina events, which was one of large-scale disaster, has shown that these decisions were, on many occasions, inappropriate, ineffective, and in most cases caused many groups of citizens to suffer physically (Joseph, Mathews, & Myers, 2014), emotionally (Merdjanoff, 2013), and mentally (Adeola, & Picou, 2014; Constans, Vasterling, Deitch, Han, Tharp, Davis & Sullivan, 2012). Those decisions did not

take into account the critical interests of particular groups of people, which has extended and intensified vulnerabilities among poor and impoverished population groups (Oni, & Okanlawon, 2013).

Disaster, Community and Citizens' Rights

Throughout history, people have faced many types of disasters and calamities that force them to sustain various forms of suffering, vulnerability, and victimisation (Zakour & Gillespie, 2013). Looking at the events that took place during the Katrina disaster, it is important to realize that due to the lack of a well-articulated disaster policy that took into account all the cultural, historical, and environmental factors that many people suffered, their rights as citizens were violated (Cohen & Bradley, 2010; Hernandez, 2011). Thus, because efforts to prepare react, and respond to disasters are typically beyond families' and communities' abilities, the responsibility of the judiciary and executive branches of the government should be clearly delineated.

What exists right now in terms of addressing citizens' needs is in the hands of local, regional, and federal institutions that developed specific criteria, requirements, and guidelines for providing services and care for disaster victims (GAOa, 2006). To express the dynamics of disaster, Cox states:

> *"...when disasters strike, compassion moves us to rush to help victims, regardless of blame or calculation about whether the optimal precautionary investment was made. This creates a degree of moral hazard, in which potential victims expect that others will help when and if needed, even if expensive precautions and mitigation measures were not purchased in advance"*

(2000, p. 1920).

Taking into account the complexity of plans and programs that are set up to help communities recover from the impact of disasters, it is critical to focus on reducing the effects of such impacts and help communities recover faster. Nonetheless, most research indicates that although plans and policies are usually prepared and developed in concurrent and comprehensive ways, there are always gaps and problems when implementing them (Sapat, Yanmei, Mitchell, & Esnard, 2011). For this reason, victims and survivors of disasters tend to express their concerns regarding the process and plans for disaster response and recovery (Tierney, & Olive-Smith, 2012).

Regarding the victims' rights to receive adequate care following a disaster, Soliman (2010) indicated that according to the United States constitution there are no specific mandates for the limits, roles, and responsibilities of the government towards its citizens. Instead, federal laws have put specific guidelines into place that led to the establishment of the Federal Emergency Management Authority (FEMA) as an organisation that works under federal legislation to provide support to victimised communities, contingent on government approval. This procedure has placed the destiny of these communities at the mercy of the officials and decision makers who have the authority to interpret policies and influence the future of disaster-affected communities (FEMA, 2006). This practice allows for errors in decisions and assessments regarding disaster planning and responses to needs of the victims that can extend the impact of the disaster, resulting in the exacerbation of suffering for people (Moyo & Moldovan, 2008).

Therefore, the need for community, state, and federal assistance is expected if a disaster's impact extends beyond an individual's capacities and abilities. Furthermore, administrators, officials, and policy makers have the responsibility to decide how to assist communities at all levels, including preparation, mitigation, response, and recovery. Soliman (2010) argues that "in terms of legal obligations and citizenships rights, the U.S. constitution does not specify the rights of citizens to receive adequate support from the government during disasters and calamity" (p. 228). However, both the legislative and executive branches have issued laws and established federal agencies to assume responsibility for supporting citizens facing the consequences of disasters (Soliman, 2010; Webb, 2007).

A review of disaster experiences in recent history has indicated that the adequacy of laws and the performance of established organisations when addressing the impact of disasters were not successful in ensuring safety and reimbursing survivors for their protection and the fulfilment of their essential needs (Legerski, Vernberg & Noland, 2012). It is important to recognise that the establishment and implementation of policies, regulations and programs to address disaster planning and recovery are, to a significant degree, influenced by the integrity and accuracy of decisions and practices maintained and supervised by specific officials (Danielsson & Alm 2012). On occasion, these decisions lack moral grounds, which compromise the types of services an individual can acquire, leading to grave violations of citizens' rights (Soliman, 2010).

Theoretical Framework

Ethical theories, principles, and standards towards citizens provide critical assumptions on viewing the accuracy and validity of specific practices and behaviour. In contemporary usage, researchers believe that ethics should be concerned with the question of which actions are morally right and how things ought to be (Dolgoff, 2012; Asghar, Alahakoon, & Churilov, 2008). It also applies to moral obligations owed by an individual, group, or organisation to the well-being of people who relate to the system by virtue of relationship, affiliation, or membership.

Theorists consider ethics is a branch of philosophy. It is the moral philosophy or philosophical thinking about moral judgment and the view of the right course of action when considering a number of alternatives (Frankena, 1973). For example, normative thinking includes two major theories: deontological and teleological. While deontological thinking focuses on the rightness or wrongness of certain actions regardless of the consequences, teleological thinking views the rightness of measures based on the implications that they will produce (Reamer, 2013).

The teleological theory contains two major schools of thoughts: egoism and utilitarianism. The distinction between these views is seen in the opinion of the common interest in decisions. For example, egoism reflects the tendency of individuals facing conflicting situations to choose the one that helps them maximise their benefits and promote self-interest. On the other hand, utilitarianism advocates for decisions that produce the greatest good for the general community, regardless of individual interest.

Additionally, the term "distributive justice" was introduced by Frankena (1973). In his view, comparative justice can be judged on specific criteria: a) dealing with people according to their merits; b) treating human beings as equals in the sense of distributing good and evil equally among them; and c) treating people according to their needs, their abilities, or both (Soliman, 2010, p. 228).

This study also utilises assumptions from decision theory that explain the critical assumptions that influence an individual or an organisation to choose a course of action among a number of choices to address a specific concern. Decision making during a major disaster or catastrophic events can be very difficult and challenging. Part of the difficulty in decision making has

to do with the nature of these developments, which Cox (2012) views as "hard-to-envision or hard-to-describe acts or consequences."

Another challenge is seen in the type of theoretical framework that should guide the organisation when articulating a decision-making process. Normative decision theory has suggested, "new primitives such as cooperation, coordination, organisation, responsibility, trust and trustworthiness of individuals and institutions within the community" (Cox, 2012, p. 1920). These primitives are different from what was traditionally emphasised in normative models of decision making, such as individual preferences, beliefs, and risk attitudes. As officials, administrators and politicians are required to make decisions concerning all activities related to disasters, i.e., preparation, response, recovery, and mitigation. The accuracy and appropriateness of these decisions are hard to achieve and, sometimes, to evaluate.

The need to rely on new views and ways of thinking for decision making became apparent in the latest experiences with large scale disasters, i.e. the Tsunami of 2004 and Hurricane Katrina of 2005. Reliance on old beliefs and thought processes has produced many flawed and inadequate disaster recovery plans and interventions. For example, Cox (2012) states that:

> *"Traditional normative decision science does not provide clear concepts for defining what the "best" risk management decision is. Principles such as unanimity, or Pareto-consistency of group preferences, may have to be replaced to develop a more useful approach to collective decision-making about how to defend against uncertain hazards"*
>
> (p. 1929)

Individuals can make poor decisions about catastrophic disaster management due to many well-documented psychological, organisational, and economic reasons (Michel-Kerjan & Slovic, 2010; Thaler & Sunstein 2008). The normative models of decision risk management analysis can be identified as 1) overconfidence in the ability to control adverse outcomes, 2) indecision and procrastination, 3) distorted incentives to care, 4) imperfect learning and social adaptation, 5) distributed responsibility and control in planning, coordinating, and implementing disaster preparedness measures and response, and 6) difficulty in forecasting disaster risk (Cox, 2012).

Finally, Asghar (2008) presented the importance of defining disaster support needs, which should precede any form of emergency decision for response and recovery. Accordingly, disaster support needs are divided into the following: 1) environmental, which includes vulnerabilities, hazard assessment, and disaster impact; 2) disaster dependent, which focuses on the identification of disaster event, forecasting of disaster, selection of mitigation measures, development of disaster preparedness plans, and risk assessment and management; and 3) common needs, which consist of the integration of disaster-related data, communication and collaboration between agencies and authorities, and education and training of different disaster agencies (p. 130). This perspective is evident on the importance of defining disaster needs before decisions can be established and implemented.

Both ethical and decision-making theories address how disaster planning, responses, and recovery should be based on explicit assumptions to avoid making major mistakes that can jeopardise members of communities during major catastrophes. However, when analysing the Katrina disaster, it may be helpful to add another perspective to strengthen the argument and the analysis, thus reaching a better understanding of the responses during the Katrina disaster.

The discourse analysis framework provides a different line of thought when discussing decision making processes. Wyatt-Nichol and Able (2007) assert the need to identify and articulate a process for exploring specific concepts that help reveal ambiguity, principles, and categories, or a contradiction in our discursive regimes. This process is significant when identifying biases in our accepted processes of thinking and determining what counts as knowledge, facts, or truth.

In other words, the attempt to apply an ethical model to analyse the decision making, motives, and perspectives that surrounded the Katrina disaster would be strengthened by examining the specific discourse of thought that was undermining such a process. The views regarding disaster planning and recovery can be defined differently by various entities, depending on their philosophy and perception of interest.

It is clear that we should expect some variation and, sometimes, conflicting views and understanding of the concept of disaster. A policy maker may not entertain the same thoughts on what should be done to decrease variability among residents in emergency situations as a city manager, FEMA administrator, or first responder. Accordingly, this variation could influence

perception and, hence, the decision-making process for those individuals. Therefore, an analysis of decision making should identify the discourse adopted when forming decisions relevant to disaster management.

Method

Source of data and the analytical framework

A number of theoretical and analytical frameworks have been used to analyse aspects of disaster management. For example, Wyatt-Nichol and Abel (2007) used discourse analysis to assess disaster responsiveness as it is influenced by power and political struggles. In their view, discourse analysis was an effective tool to explore the ambiguity of the concepts, principles, and categories, as well as identifying the bias of accepted processes of thinking. Such an analysis led the researchers to state that the process of the Katrina disaster management was contaminated by incompetency that existed in the formal agencies and organisations that took part in the disaster (Feinberg, 2006).

This study will review four important reports that were issued following the disaster. These four reports represent critical information as they were products of:

1) Department of Homeland Security, "A performance review of FEMA disaster management activities in response to Hurricane Katrina," 2006;
2) The White House, "The federal response to Hurricane Katrina - Lesson Learned," 2006;
3) House of Representatives, "A failure of initiative," 2006; and
4) United States Senate, "Roundtable Discussion: Hurricane Katrina," 2005.

These reports were the products of panels, fact-finding committees, and bi-partisan committees formed by federal agencies and the United States House of Representatives to construct a comprehensive review of the plans, strategies, and processes surrounding the Katrina disaster, including planning and service provisions that were implemented by the various agencies, organizations, and offices that participated in dealing with the catastrophe.

Instrument

Table 1: Ethical and Moral Framework for Disaster Management

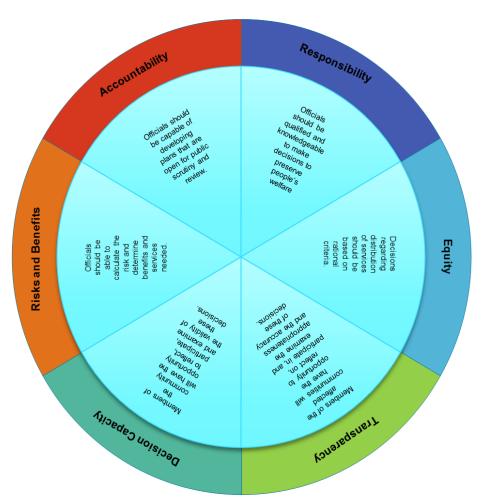| CONCEPT	ETHICAL AND MORAL PERSPECTIVE
Accountability	Individuals assume those in decision-making positions are capable of developing plans that are open for public scrutiny and review. Example Question: *Do people have access to review the validity of decisions and projects intended to protect them from expected disasters?*
Responsibility	During disasters, individuals who assume certain positions are qualified and knowledgeable enough to make informed decisions that intend to preserve people's welfare. Example question: *Do plans intend to produce positive outcomes for all the targeted groups?*
Equity	When resources are limited and not adequate to meet the survivors' needs, decisions regarding the distribution of services should be based on rational criteria. Individuals get help according to their conditions not according to other unknown or unclear criteria. Example Question: *Do actions and activities planned and implemented build on the principle of fairness to everyone?*
Transparency	Decisions that would affect the public should be developed in such a way that members of the affected communities will have the opportunity to reflect on, participate in, and examine the appropriateness and the accuracy of these decisions. This stems from the principle of people's rights to know. Example Question: *Were people encouraged and invited to participate in the decision-making process and was their feedback acknowledged?*
Decision Capacity	Decisions that would affect the public should be developed in such a way that members of the community will have the opportunity to reflect, participate, and examine the validity of these decisions. Example Question: *Did people have the right to participate in the decision-making process?*
Risks and Benefits	Within a disaster context, it is expected that the responsible party should be able to adequately calculate the risk and determine benefits and services needed. Example Question: *Are decisions made based on a clear process to determine people's level of suffering?*
Confidentiality	In the process of planning and implementing services decision makers and service providers should be aware of people's rights to protect their personal information. Example Question: *Does the process of service delivery provide assurance for people to express their own feelings, opinions, personal views without being penalized?*

A section of the ethical and moral disaster framework articulated by Soliman (2010) was considered as the study tool to review all the materials in the reports and assess the validity of the information in relation to the ethical standards. The original framework included definitions and questions designed to reflect on two major sections, moral and legal.

The legal component of the structure would not serve a purpose in the study, and therefore will not be a part of it. The moral section was drawn from basic human rights and the expected ethical responsibility of society toward its citizens. Specifically, the moral part of the framework addresses the nature of the duties and obligations set on administrators, officials, and decision makers towards the citizens in their care.

The original moral and ethical section consists of seven concepts: accountability, responsibility, equity, transparency, decision capacity, risk and benefits, and confidentiality. However, due to a lack of accurate information in the reports about the process of protecting the confidentiality of the disaster's survivors, the concept of confidentiality was eliminated.

The six remaining concepts were viewed through the ethical and moral perspective specified by the model. For example, the first concept, "Accountability," is reflected in a specific question: "Do people have access the information needed in order to review the validity of decisions and projects intended to protect them from expected disaster?"

By applying this framework, with its concepts and its relevant questions, this study will focus on identifying the types of limitations in decision making that occurred during the Katrina disaster. The model will also help explain the nature of ethical violations during the disaster. It is expected that the application of the model will determine the level of adherence to ethical standards in disaster management. Eventually, this discussion will help people learn how to implement efficient and valid strategies and plans in the future, which would reduce the suffering of the people facing disasters.

Graph 1: Adjusted Ethical and Moral Framework for Disaster Management

Analysis

Due to a significant amount of data, the analysis will be divided into six sections: accountability, responsibility, equity, transparency, decisions capacity, and risk and benefits (Soliman, 2010). In conjunction with the framework, the data will also be analysed through discourse analysis, which focuses on exploring the meaning of specific concepts by revealing their ambiguity and identifying principles, contradictions, and inherent biases.

Discourse analysis also focuses on thinking processes, as well as representing what counts as knowledge, facts, or truth (Wyatt-Nichol & Able, 2007). A content analysis method is used to address the capacity and relevance of decisions made and policies implemented by using the information presented in the reports. By identifying the statements in the reports that reflect specific meanings relevant to Katrina disaster, the results of this study

will be able to help determine the adherence to the ethical standards selected from the model.

Finally, an argument will be developed to address issues and weigh facts and information in order to reach a definite conclusion on the validity and the effectiveness of the process of decision making during disasters.

The analysis section will focus on the information and findings in the reports, produced in hearings and fact-finding committees, and how these data reflect the major concepts and principles in the adopted ethical framework.

Accountability

According to Soliman's framework, accountability can be reflected in one question: Do people have access to the information needed in order to review the validity of decisions and projects intended to protect them from expected disaster?

The review of the reports on the Katrina disaster has identified some issues where responses and decisions made during the catastrophe were not abided by accountability. For example, the report from the White House (2006) states that *"Performance assessment and accountability, however, must not to be blamed"* (p. 80). Additionally, the report also says:

> "It is time that United States House of Representatives, the Executive Branch, and all of our homeland security partners develop consensus regarding a reasonable balance of accountability, responsibility and authority at all levels"
>
> (White House, 2006, p. 80)

However, the United States House of Representatives report clearly stated that most decisions and plans during the disaster reflect a lack of adherence to accountability: *"our investigation revealed that Katrina was a national failure, an abdication of the most solemn obligation to provide for the common welfare"* (United States House of Representatives, 2006, X). To explain more about accountability deficiency, the House of Representatives found that:

> "The failure of imitative was also a failure of agility. Response plans at all levels of government lacked flexibility and adaptability. Inflexible procedures often delayed the

response. Officials at all levels seemed to be waiting for a disaster that fit their plans, rather than planning and building scalable capacities to confront any disaster"

(United States House of Representatives, 2006, p.1).

To further identify the lack of accountability, the report by the United States House of Representatives (2006) indicated that:

"Emergency management professionals said the degraded readiness of FEMA's national emergency response teams impacted the effectiveness of the federal response to Hurricane Katrina. This diminished readiness of the national emergency response teams has been attributed to a lack of funding for training and purchasing of equipment"

(p. 152)

Responsibility

The concept of responsibility in disaster refers to the public expectation of decision makers to make informed decisions that intend to preserve the well-being of the survivors. Regarding citizens' rights, responsibility assumes that individuals, who occupy offices, whether as executives or politicians, are able to consider the rights of survivors by providing services that protect and ensure their dignity and integrity (Soliman, 2010). Therefore, the concept of responsibility in a disaster can be recognised in one question: Do plans intend to produce positive outcomes for all the targeted groups?

The reports and investigations following the Katrina disaster found unclear boundaries as to who should assume responsibility for a mass disaster that tremendously impacted several states and thousands of citizens. For example, the report issued by the United States House of Representatives said:

"Not a plan that says Washington will do everything, but one that says when all else fails, the federal government must do something whether it is formally requested or not, not even the perfect bureaucratic storm of flaws and failures can wash away the fundamental governmental responsibility to protect the public health and safety"

(United States House of Representatives, 2006, p. x)

The question can be raised on the clarity of limits of responsibility between local, state, and the federal government. As indicated, the federal government may interfere and assume responsibility if local and state levels show inadequacy in handling the disaster. This has also been reported in the White House report:

> "The United States has long operated on the general premise that government exists to do those things that individual, alone or in fee and voluntary association (e.g., families and charities), are not best positioned to do for themselves such as ensuring public safety and providing law enforcement"
>
> (White House, 2006, p. 11)

The discrepancy in drawing the limits of responsibility in disaster response and recovery was evident, as the United States House of Representatives report puts the blame on local and state governments for making inappropriate decisions, saying:

> "In fact, the New Orleans mayor's office operated out of a Hyatt Hotel for several days after Hurricane Katrina's landfall, unable to establish reliable communications with anyone outside … This meant that the mayor was neither able to command the local efforts effectively, nor was able to guide the state and federal support for two days following the storm"
>
> (United States House of Representatives, 2006, p. 37)

Furthermore, review of the reports indicates a shared responsibility of the failure of the Katrina disaster: "It has become increasingly clear that local, state and federal government agencies failed to meet the needs of the residents of Louisiana, Mississippi and Alabama" (United States House of Representatives, 2006, p. xi).

The failure of the US government offices to assume power and utilise resources to handle the Katrina disaster has been documented. The Homeland report states that:

"FEMA had not adequately defined the roles, responsibilities, expectation for deliverables, or performance measures for contractors. A lack of coordination and communication also existed between the housing area command and operational elements in all affected area"

(Homeland, 2006, p. 95)

Accordingly, "FEMA was not adequately prepared for a catastrophic event in terms of staffing, training, planning, exercise, and the remediation of lessons learned during previous events" (Department of Homeland Security, 2006, p. 109). The United States House of Representatives report has an accurate assessment of the government's inability to address the disaster, saying:

"Indeed, much of the recriminations over the Hurricane Katrina response came because government authorities apparently failed to have a plan in place to assist in evacuating individuals without transportation. Nor did they appear to have an adequate sheltering plan in place"

(United States House of Representatives, 2006, p. 83)

Equity

In Soliman's framework (2010), the concept of equity states that *"...when resources are limited, decisions regarding the distribution of services should be based on rational criteria"* (p. 236). It implies that the process of benefits distribution should recognise the principles of justice in which all people have equal opportunity to request and acquire services. All actions and activities in the context of disaster recovery should be built on the principle of fairness. The review of the Katrina disaster presented by the federal reports identified some problems that made the implementation of the equity principle tough. These challenges were stated as conditions and hurdles, causing survivors to struggle to receive needed services based on specified criteria.

For example, the White House report says that "*Despite reforms that encourage a proactive, anticipatory approach to the management of incidents, the culture of our response community has a fundamental bias towards reaction rather than imitative*" (White House, 2006, p. 79). In the Homeland report, evidence of insufficient methods of assessing the survivors' needs and developing the mechanism for delivering these services was identified:

> "During Hurricane Katrina, FEMA remained unable to track most state requests through to order fulfilment. Staff compiled reports manually with paper tracking forms and ad-hoc spreadsheets."
>
> (Department of Homeland Security, 2006, p. 133)

Serious problems in the management of a specified unit to oversee the survivors' needs and determine the process of fair distribution was seen, as:

> "In addition to the problems with establishing and maintaining a unified command with Department of Defence (DOD), FEMA struggled to create a unified command with other organizations within Department of Housing Services"
>
> (United States House of Representatives, 2006, p. 190)

Housing was the most essential need for Katrina survivors, but the United States House of Representatives reported countless difficulties when addressing it, stating:

> "Locating temporary or long-term housing for Hurricane Katrina evacuees presented significant challenges for federal officials. The supply of temporary housing in the disaster area, such as hotels and apartments were quickly depleted, while FEMA's effort to provide trailers to evacuees submerged due to inadequate planning and poor coordination"
>
> (United States House of Representatives, 2006, p. 50)

Pictures of survivors crowded in the New Orleans Superdome were televised across the country. While some residents were trapped in their homes, facing death and risks, the residents who found shelter at the Superdome were not treated fairly. The United States House of Representatives report (2006) has documented such treatment as follows: *"Those who were in the Superdome or those that found shelter and high ground but other locations suffered horrible conditions."* (p. 104). Additionally, the Department of Homeland Security report (2006) has confirmed such chaos, saying:

 "The unexpected large number of evacuees arriving at the Superdome and other locations within the city was not anticipated nor adequately planned for by state and local authorities. The limited commodities quickly became depleted; people with special needs were not addressed"

(p. 11)

Transparency

In disaster planning and recovery, the transparency concept emphasises that people who will be influenced by organisations' decisions should have the opportunity to reflect on, participate in, and examine the appropriateness and the accuracy of these decisions (Soliman, 2010). This implies that the process that decisions go through should also include all the representatives that have contributed to the process of issuing and the implementing these decisions. On the contrary, the reports on the aftermath of the Katrina disaster highlight a lack of transparency:

"Time and time again, government agencies did not effectively coordinate relief operations with NGOs. Often government agencies failed to match relief needs with NGO and private sector capabilities"

(United States House of Representatives, 2006, p. 64)

Accordingly, the recovery process severely suffered from the vagueness and lack of clarity in sharing information and data:

"It seems no federal, state or local entity watched over the integrity of the whole system, which might have mitigated to some degree the effects of the hurricane"

(United States House of Representatives, 2006, p. 97)

The impact of a lack of transparency was felt by the citizens and contributed, to a great extent, to the expansion of suffering. Some residents of New Orleans believed that a mandatory evacuation should have been called earlier and that the government needed to assist people to evacuate. New Orleans citizen and evacuee Doreen Keeler testified:

"If a mandatory evacuation [order] would have been called sooner, it would have been easier to move seniors out of the area, and many lives would have been saved"

(United States House of Representatives, 2006, p. 111)

In this context, the report states that "Despite the New Orleans plan's acknowledgement that there are immobile residents, the city did not make arrangements for the evacuation" (United States House of Representatives, 2006, p. 113). Additionally, the lack of transparency was a major part of confusion, loss of control, and inability of survivors to provide self-care, as a report says:

"However, due to the relocation and movement of Hurricane Katrina evacuees, location information on the website was not always complete, current or correct"

(Department of Homeland Security, 2006, p. 40)

Finally, one report directly addressed the outcomes of inadequate transparency in the Katrina disaster, stating:

"The select committee believes Katrina was primarily a failure of imitative... the reasons reliable information did not reach more people quickly are countless, and these reasons provide the foundation for our findings"

(United States House of Representatives, 2006, p. 1)

Decision capacity

In disaster planning and recovery, it can be assumed that the issuing of a decision is not the key to successful implementation, but the quality of such a decision is the most critical criterion. As the model indicates, decision capacity means that members of the community will have the right to assess the validity of decisions (Soliman, 2010). This can be achieved through the right of the survivors to inquire, examine, and determine the quality of these decisions and their anticipated outcomes.

Assessments of decision capacity can be misleading and hard to determine. For example, officials who make decisions regarding evacuation of disaster survivors may state that they issued a decision based on the best of

their ability and the information available to them at the time of the catastrophe. This statement can be accepted, since disaster can be volatile, changing its direction, volume, and magnitude hour by hour and sometimes, in the case of an earthquake, minute by minute. However, reports on preparation for Katrina had shown some hesitation and insufficient determination prior to the disaster, as the report by the United States House of Representatives (2006) indicates:

> "Despite the declaration of a mandatory evacuation on Sunday before landfall, New Orleans officials still did not completely evacuate the population. Instead, they opened the Superdome as a 'shelter of last resort' for these individuals"

(p. 103)

The report went further, highlighting that particular decisions on the local level were extremely dangerous and counterproductive. For example, the report stated that the City of New Orleans mayor had failed to order timely mandatory evacuations, which caused tremendous pain and struggle to thousands of residents. These findings provide evidence of an inadequate decision-making process that was embarked upon by the city as an organisation. The accuracy and validity of decisions can be questioned when certain biases, subjectivity, and/or favouritism are involved:

> "Second, the report faulted management practices noting that the system show strong preferences for which teams it chooses to deploy and that these preferences were based not on readiness, but on low connected the teams were to those making the deployment decisions"

(Round, 2005, p. 401)

On the ground, survivors can also question the reason for any decision and find illogical and inadequate premises behind some of them. For example, the United States House of Representatives report stated:

> "Having failed to anticipate these needs, poor communication that hampered situational awareness, hours of service limits, security needs, and logistical problems further delayed the deployment of buses to evacuate the city"

(United States House of Representatives, 2006, p. 123)

Additionally, officials may ignore certain facts and focus on their views, which may not be justified, causing survivors to suffer:

> "We need anything and everything restricting superintendents and school boards power at the state, federal and local levels to be suspended during this time of crisis, and at times, FEMA public statements regarding the provision of assistance were confusing or incomplete."

(United States Senate, 2005, p. 17)

Risk and benefits

A: Potential and actual risk

In general, disasters create a condition that represents risks for the public at large in various forms and levels. However, in disaster recovery, it is assumed that the benefits are designated, allocated, and delivered to diminish the impact of risk. Accordingly, an adequate ethical decision in disaster management should be based on an accurate calculation of risk and benefits.

Two types of risks have been identified in Katrina's reports: material and human. In terms of material risk, the United States House of Representatives report identified various dangerous situations associated with the Katrina disaster. Prior to the catastrophe, evidence has shown that potential risks for flooding had existed and debates about how to address it were extended for many years without final decisions. During the disaster, suspicion and expectation of the volume of risk became a reality, as according to the report:

> "State and federal investigators say that a leak may have been an early warning sign that the soil beneath the levee was unstable and help explain why it collapsed. They also say if authorities had investigated and found that a leak was undermining the levee, they could have shored it up and prevented the catastrophic breach"

(United States House of Representatives, 2006, pp. 92-93)

When considering the factors contributed to the levee's condition, the report states:

"Possible causes of the levee breaches include a design not appropriate for the actual application (including shared deficiency), storm conditions supply too overwhelming for the designed levees to withstand (indicating an act of nature); levee walls not secured deeply enough into the soil otherwise improperly constructed (indicating a USACE deficiency); or a combination of factors"

(United States House of Representatives, 2006, p. 97)

Following the disaster, the estimated amount of damage was measured:

"Hurricane Katrina's damage was extensive. The storm destroyed so many homes, buildings, forests, and green spaces that an extraordinary amount of debris was left behind – 118 million cubic yards all told. The storm devastated the regional power infrastructure. In Louisiana, Mississippi, and Alabama, approximately 2.5 million power customers reported outages"

(United States House of Representatives, 2006, p. 8)

With regard to human risk, reports have provided ample evidence to justify the complication of the disaster's outcomes. The report by the United States House of Representatives (2006) states that:

"The biggest failure of the federal response was that it failed to recognize the like consequences of the approaching storm and mobilize federal assets for the post-storm evacuation of the flooded city"

(p. 135)

Initially, the officials' failure to estimate human risk was a major problem. The report indicated that senior officials in the Department of Human Services failed to acknowledge the scale of the impending disaster, as they lacked the experience and knowledge to assume critical roles and responsibilities in protecting the public (United States House of Representatives, 2006). Across three states; Alabama, Mississippi, and Louisiana, thousands of people were killed or injured and had to wait for days to receive adequate help. That increased the level of vulnerability among residents, as no immediate plans for service or support were ready to be

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implemented. In this context, the report by the United States Senate (2005) indicated that:

> "Health centres serve about 15 million people who are medically underserved all across the country yearly. Approximately 6 million of our patients are underserved or uninsured, and we do expect that to go up as people move, they are displaced, they are without their jobs. We expect the number to go up markedly"

(p. 33)

B. Benefits and services

The benefit of decision capacity in the event of a disaster is reflected in how the disaster management and services processes were developed and implemented, ideally in a way that members of the community were saved from experiencing hardships and calamities. In other words, decisions made before or during disasters are effective if they lead to successful coping with the disasters. The search for evidence in the reports that would help identify benefits did not reach to conclusive information.

However, the review of the reports did present certain indicators and lessons learned from assessing decisions during disasters, hence, preventing a repeat of such errors or mistakes in the future. For example, the Homeland Report referred to a lack of coordination among represented agencies prior to the Katrina disaster, which had affected pre-disaster decision making. The report also indicated that many survivors had faced difficulties in applying online for services. The web portal was not operational, and the report by the Department of Homeland Security (2006) says:

> "During the application process and applicants could not tell whether the application was completed, sent, or received by FEMA. Some registered, again and again, creating duplicated applications"

(p. 91)

Furthermore, it is evident that in specific parts of the recovery process, the system was inadequate:

> "The system was not adequately tested before its release and lacked sufficient infrastructure to avoid duplicate

> efforts on the part of applicants and additional work for NPSC staff"
>
> (Department of Homeland Security, 2006, p. 92)

Many participants struggled with information as well, since "The contractor was not able to provide FEMA with verification data as early as anticipated. Also, FEMA had not explored or developed contingencies should the information be untimely or incomplete" (Department of Homeland Security, 2006, p. 103).

Discussion

The review of the Katrina disaster through an ethical framework provides a solid explanation of problems in organisational decision making before and following the disaster. Disasters involve many local, regional, and federal entities and institutions, whose efforts to address the event are moderated by the existing laws, procedures and guidelines. Since each disaster is a specific case with different materialistic and social characteristics, the interpretations and explanations of these policies are determined by the individuals who assume managerial, leadership, and political roles (Boin, Hart, Stern, & Sundelius, 2005). Therefore, decisions that result in certain interpretations may be abided by the particular philosophy, expertise, and experience of the individual(s) responsible for these decisions. In disaster management, it is expected that services and actions are addressed based on how well they meet the survivors' and communities' needs.

It is critical to identify and evaluate the ethical standards and explicit assumptions that justify the decisions made by those responsible for disaster relief. It is also important to state that Katrina was a difficult historical moment through which the world has watched the suffering of US citizens, finding that many assumptions about the rights of citizens in democratic societies for protection had been violated. As an example of the consequences of the inadequate decision making by organizations in response to the disaster, Young (2006) states, *"…it was the image of people deserted on cut-off bridges and overpasses for days, exposed to the baking sun without water or medical care, which dominated and still does public perception of the disaster response"* (p. 711). Therefore, reviewing the ethics and the morals involved in policy development and decision-making in disasters stems from responsibility and accountability rationales.

This study has identified areas where decisions during the Katrina disaster failed concrete concepts of the ethical framework (Soliman, 2010). These ideas include responsibility, accountability, transparency, and resolution capacity.   Regarding responsibility, this study identifies many areas where officials made decisions that were not based on valid assumptions that stemmed from either humanistic or scientific theory. It can also be stated that decision making did not follow specific guidelines or procedures to determine the line of responsibility in the Katrina disaster. Boin et al., (2010) state, *"...when a crisis occurs; something or somebody must be blamed for causing the crisis, failing to prevent it or inadequately responding to it*" (p. 706). Based on a review of the reports and studies published, "Hurricane Katrina is a prime case for studying political leadership and post-crisis blame game. The preparedness and performance of politicians, administrators and public institutions at all levels were criticized and blamed for the slow and ineffective response" (Boin, et al., 2010, p. 707).

Finally, the lines between the various levels of government were vague. The fighting between the city mayor, the governor of Louisiana, and federal government offices, such as the White House and other institutions, i.e. FEMA, over who should take responsibility for the disaster was presented, live, on television. This performance of the individuals assuming the power in the involved organisations did not match the expectation of the responsibility concept, identified in the model, which should protect the rights of citizens.

Based on the analysis of the reports, this study found that during the Katrina disaster, no particular agency or office was identified as accountable for the whole of the processes, actions, and plans that were developed and implemented. This specific ethical standard in decision making reveals a critical deficiency in disaster response and recovery phases. Koliba et al., (2011) state, *"Hurricane Katrina exposed some of the biggest breakdown of governance network in modern history, and highlight the need for further theoretical and empirical development of analytical tools to identify and assess how and where failure of accountability lead to failures in performance"* (p. 210). In other words, survivors did not know what authority they could rely on or contact, and what particular course of action should be taken by the local, regional, or federal authority.

Transparency in disaster management requires decision makers to involve members of the community when developing and formulating plans for disaster preparation and recovery. The exchange of information within some social systems should empower and help community members

understand the impact of the catastrophe and develop their personal goals. In other words, a lack of transparency in the process will prevent members of communities from taking part in the process, as they feel that they were not represented in any shape or form in the development, formulation, and execution of those decisions. The process of integrating those members within services, projects, and activities was not clearly defined, leaving members to take the role of the service recipient to activities that may not reflect their priorities of services needed. A lack of transparency was very apparent in the evacuation plans. The reports issued by the identified fact-finding committees indicate confusion, disorganisation, and conflict in decisions made by local authorities on the plan, direction, and timing for evacuating survivors from the city of New Orleans.

Within emergency management, frustration can be viewed as a challenge to communication, which may cause difficulties when implementing services and activities (Legerski et al., 2012). As members of the organisation consider setting plans for an emergency response, a lack of information on how other organisations react and prepare activities may, to a great extent, delay the agency from developing its plans.

Finally, as decision capacity was reviewed as part of the ethical framework, it may be safe to state that this study identifies serious problems in making accurate and efficient decisions during the Katrina disaster. The reports reviewed and analysed in this study imply that no specific patterns or mechanisms were identified during the Katrina disaster. Instead, decisions were made by numerous agencies and offices that lacked both a scientific background and a basic understanding of the capacity of the disaster.

Conclusion

In the absence of clearly defined human and constitutional rights to protect citizens from the effects of disasters, victims may be vulnerable to different forms of risk and loss. Disasters are characterised by wide-spread impacts and sudden occurrences, and they require immediate responses from individuals, groups, organisations and governments. These reactions intend to minimise damages, reduce impacts, and help members of affected communities cope and adapt to the material and social changes following a disaster.

Although policies, regulations, and protocols are issued and placed in emergency offices and local governments, immediate decisions when addressing the unique impacts of the disaster are still expected (Ashgar &

Churilov, 2008; Cox, 2012). However, since these decisions can be reflected in services support programs (Bovbjerg, 2007), evacuation (Legerski et al., 2012, and curtaining certain communities, which will have great impacts on the community's ability to recover (Storr & Stefanie, 2012), this study has found that decisions during the Katrina disaster were reactive, unpredictable, and lacked consistency (Schneider, 2005). Therefore, it is safe to advocate that all decisions related to disaster planning, response, and recovery be ethical and moral.

The use of the ethical framework (Soliman, 2010), decision theory (Cox, 2012) and discourse analysis (Wyatt-Nichol & Able, 2007) to assess the decision-making process following the Katrina disaster has shed the light on the reasons for failure in the Katrina disaster's processes of planning, response, and recovery. For example, discourse analysis helped examine certain assumptions that were considered accurate in viewing the disaster and were found to be problematic. From an ethical perspective, when applying deontological thinking to the Katrina disaster, we can review two different discourses. At first, the local government of New Orleans requested additional funds to strengthen the levee systems. The second frame of thinking was supported by a technological position, in which spending money on that system may not be effective, especially with studies that predict the increasing risk of flooding that the city is facing in the future (Fischetti, 2001).

Since both arguments are based on specific beliefs, disaster management and recovery should address the facts as well as integrate the core values, assumptions, and cultural and historical reality into disaster planning and recovery policies and programs. Therefore, this study argues that while organisations and members of government offices should review disaster decisions, such reviews should be based on the consideration and understanding of ethics, human rights, and the citizens' best interests.

Since mass disasters are considered a worldwide problem that inflicts many forms of suffering on citizens of many countries (Nurdin, 2015, Zapata, 2009), it is important to review the decision-making process of various levels of organisations that are developed and assigned to protect citizens and maintain their well-being. Consequently, a successful review of these decisions can be helpful for agencies/institutions and program managers to learn how to make decisions that are scientific and human.

Reviewing the decisions related to disaster management through an ethical framework (Soliman, 2010) can also help in reducing the opportunity

for problems during implementation, which may save survivors' lives and reduce damage and suffering. Furthermore, such a review can be helpful in raising the likelihood that these decisions will be influential in achieving success with those programs. Based on the results of this study, managers, politicians, and administrators who formulate policies, programs, and assessment of disaster management should be aware of the ethics that guide the decisions and actions related to each disaster. When disagreements arise among different units about the validity and practicality of specific actions, a review of ethical framework could be helpful in deciding which action should be followed and adopted.

Finally, due to the overwhelming demands and needs created by disasters (to face massive disasters (Oni & Okanlawon, 2013; Zakour & Gillespie, 2013), policies and plans developed for disaster planning and recovery may not guarantee full protection or successful rehabilitation, and citizens' rights may be compromised. Complicated rules and regulations regarding disasters are frequently influenced by the interpretations of policy makers, administrators, and disaster managers, which may leave them, open for errors and mistakes in implementation. Furthermore, assigning disaster management to one national agency, FEMA, may not be appropriate, especially during a large and massive disaster that can impact an entire region. Coordination is the key to disaster management, but it should also allow for collaboration and division of authority. Forms of communication should be clear.

Considering the studies that focused on the vulnerability of members of communities and their inadequacy, it is important to realise that present and future of disaster survivors rely on an accurate and valid decision-making process. It is safe to say that according to this study's findings, most decisions and plans developed by organisations during disasters may be produced by inadequate policies (Shughart, 2011), which tend to underestimate the importance of integrating the cultural, historical, economic, and social characteristics of the impacted communities.

Additionally, these decisions should also be assessed on the principles of ethics and morality as a way to protect citizens' social and moral rights. Finally, agencies and organisations that participate in disaster planning, mitigation, and recovery represent different levels of mandates that tend to rely on their philosophy, mission, and policies, which in many cases can be drastically different (Ashford, & Thomson, 2007). This can create difficulties in communication, collaboration, and coordination. The existence of a basic

outline and guideline, such as ethical standards in disaster, can help to promote a common language and accepted parameters that most organisations can adopt and follow.

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