The Leadership Process During an Organizational Crisis

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ABSTRACT: This article reports results of a qualitative study that examined the leadership process during an organizational crisis in the Brazilian electrical sector. The studied organization is a company involved with the generation and distribution of electric energy, which faced a crisis because of the rupture of electricity-distribution cables that affected the energy supply chain for a whole city, during approximately 52 hours. In this context, the authors analyzed the crisis' stages and the organizational crisis management phases, in order to identify the leadership tasks adopted by organizational leaders during the crisis response. The major challenges brought with the crisis were identified and it was analyzed the leadership tasks used to address challenges: sensemaking, decision making, meaning making, terminating and learning.

Keywords: Crisis leadership, crisis management, crisis response, critical infrastructure breakdown, organizational leadership.

1. INTRODUCTION

During the past years, many scholars have conducted conceptual and empirical studies on the topic of organizational crises (Boin et al., 2005; Boin et al., 2010; Hale, Dulek, & Hale, 2005; Hermann, 1963; Lagadec, 2009; Pearson & Clair, 1998; Pearson & Mitroff, 1993; Shrivastava, 1987; Smart & Vertinsky, 1977; Weick, 1988; Weisæth, Knudsen Jr, & Tønnessen, 2002). Firstly, Hermann (1963) identified that the occurrence of crises is frequent in the organizational quotidian, making possible the research of an important means of change in organizations: the crisis itself. Understandably, specialized research presented different definitions and types of organizational crisis (Mitroff, 2004; Pauchant & Mitroff, 1992). One definition affirms that "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" (Pearson & Clair, 1998). These unique features showed the importance of being prepared for organizational crises and introduced the study of crisis management (Fink, 1986). It can be defined as "a systematic attempt by organizational members with external stakeholders to avert crises or to effectively manage those that do occur" (Pearson & Clair, 1998).

Recent studies proved that a crisis can strike a company that is not prepared for the constraints brought with it (Hart & Boin, 2001; Barton et al., 2015; Bazerman & Watkins, 2004; Boin & Gralepois, 2006; Boin & Rhinard, 2008; Kovoor-Misra, Zammuto, & Mitroff, 2000). As pointed by Mitroff (2004), a crisis in one locale can swiftly escalate into a crisis for an entire organization, justifying the need for appropriate structures to focus on crisis management. Then, people in relevant corporate roles should be concerned with the prevention, response and recovery of crises. This reality corroborates with Smart and Vertinsky (1977). These authors suggest that key decisions in crises are often made by a small, tightly knit group of individuals. Besides, recent studies concluded that crisis and leadership are closely intertwined phenomena (Boin & Hart, 2003; Boin et al., 2005; Hannah et al., 2009; Mitroff, 2004). People in organizations experience crises as episodes of threat and uncertainty, that requires urgent action (Rosenthal, Boin, & Comfort, 2001). In such distress, it is a natural inclination to look to leaders to "do something" and solve all the problems while the organization is stretched to its limits.

The literature about crisis and leadership suggests that times of crisis may significantly affect the relationship between leaders and followers (Halverson, Murphy, & Riggio, 2004; Hannah et al., 2009; Hunt, Boal, & Dodge, 1999; Pillai, 1996). Probably, the changes in this relationship is related to the fact that a crisis involves something new, which demands an ability to learn, as previously learned experience may come up short when the ordinary steady state of the organization is disrupted (Moynihan, 2009; Weisæth et al., 2002). Leadership researchers call this situation as the "disequilibrium dynamics", when the current knowledge owned by the organization cannot solve the crisis' constraints. In this way, organizational actors may mobilize to produce a new solution and promote the necessary adaptation for the company (Heifetz & Linsky, 2002; Heifetz, 1994; Heifetz, Grashow, & Linsky, 2009).

Besides, the leadership challenge of mobilizing people during a crisis becomes even more difficult because the crisis stretches the company to the limits, while concepts of uncertainty and risk are very present. Despite this situation, little attention has been paid in the literature to leadership processes during organizational response to crises and extreme contexts (Hannah et al., 2009; Silveira-dos-Santos, 2012). Mobilizing people during a crisis involve a lot of questions that are not being asked on the researches about crises. Although many papers focus attention on charismatic leadership in crisis situations (Beyer & Browning, 1999; Bligh, Kohles, & Meindl, 2004; Halverson et al., 2004; Pillai, 1996), the researchers do not pay particular attention to the leadership process itself. While there are many approaches to crisis preparedness and the leaders' charismatic behavior (Fink, 1986; Halverson et al., 2004; Mitroff, 2004; Pauchant & Mitroff, 1992), there are few researches on how the leadership processes are developed. In fact, leadership processes required to react a crisis involve key aspects that are not taken into account, such as technical, organizational, cognitive and temporal factors.

It is very important to understand the ability of organizational systems to maintain the desired levels of work when a crisis arrives. Will the organizational structure and process remain the same during the crisis? Are the decisions taken with the needed speed? It is also important to understand how organizational leaders understand the crisis and how they communicate these meanings to all stakeholders. As the crisis involves new circumstances, a sensemaking process occurs (Weick, 1988; Weick, 1995). So, it is important to investigate the leadership capabilities to manage

sensemaking processes. In the same way, the role and perception of time in organizations under extreme circumstances can change completely.

Driving the present study is the absence of published research examining the questions above. As a first step into a better understanding of crisis leadership processes, this study tries to focus on the leadership challenges presented during organizational crisis response. It is at the response stage of a crisis that its characteristics of short decision time, complexity and ambiguity surface (Bouillette & Quarantelli, 1971). Because of that, it is at the response stage that the leadership challenges are better represented. Nevertheless, empirical studies about leadership processes during extreme contexts are rare (Hannah et al., 2009; Silveira-dos-Santos, 2012). This paper's aim, then, is to analyze an organizational crisis in the Brazilian Electrical Sector, focusing the leadership challenges and identifying the crisis leadership tasks used to address each challenge.

With more than 8.5 million square kilometers and a great hydrographic basin, Brazil has one of the largest energetic potential in the world. The installed capacity of the Brazilian energy matrix reached more than 141.680 MW on january 2016 (Brasil, 2016). These numbers demonstrate that the Brazilian Electrical Sector is a large industry in the country, reflecting an important and strategic sector for the Brazilian Economy.

This study, then, is structured in four major sections. Firstly, the main theoretical background in organizational crisis, crisis management and crisis leadership are presented. After that, it is shown the methodological assumptions that guided the research. Then, the main findings are presented, followed by a theoretical discussion to present the main contributions of this study.

2. THEORETICAL BACKGROUND

Crises come in many shapes and forms. Human conflicts, man-made accidents, economic problems or natural disasters shatter the natural order of societies and all of these events could be defined as crises. Fink (1986) affirms that a crisis is an unstable time or state of affairs in which a decisive change is impending, either one with the distinct possibility of a highly undesirable outcome, or one that can result with an extremely positive outcome. Nevertheless, the negative connotation of the word *crisis* often prevails and when a crisis occurs, people auto-

matically think that it arrives as a barrage of urgent, unexpected and unpleasant events, allowing little time to organize or plan appropriate responses, and making people and organizations to operate at their extreme. In this context, the organizational leaders' behaviour and decisions will be decisive to the results achieved after the crisis period. At this section, the subjects of organizational crisis, crisis management and crisis leadership will be explored.

2.1 Organizational Crisis

Any crisis that affects one or more organizations could be called an organizational crisis. For Pearson and Clair (1998), 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". This is a wide-ranging definition, which covers some common elements that are present in different kinds of organizational crisis, like breakdown of key equipment, major plant disruption, product tampering, decline in major earnings, hostage taking, terrorism, natural disasters or other kinds of organizational crises.

Specifically, previous research has proved that organizational crises: (1) are highly ambiguous situations where causes and effects are unknown (Boin et al., 2005; Pearson, Roux-Dufort, & Clair, 2007; Quarantelli, 1988), creating a sensemaking process that is carried out while the crisis unrolls (Laere, 2013; Patriotta & Gruber, 2015; Weick, 1988); (2) have a low probability of occurring, although pose a major threat to the survival of an organization (Bazerman & Watkins, 2004; Roux-Dufort & Lalonde, 2013) and to organizational stakeholders (Alpaslan, Green, & Mitroff, 2009); (3) offer temporal constraints, giving little time for the leaders to make decisions and respond to the crises (Boin & Smith, 2006; Shaw et al., 2007); (4) disrupt the organizational *status quo*, presenting a dilemma in need of decision that will result in change for better or worse (Fink, 1986; Sommer & Pearson, 2007); (5) change the existing relationships between leaders and followers, as the followers become more easily influenced by their leaders under the crisis stress (Halverson et al., 2004).

This is, of course, an academic shortcut on the way toward understanding organizational crisis. Boin *et al*. (2005) show that, in real life, it is not always clear when exactly organizations experience a situation

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in terms of crisis. Some situations seem crystal clear and others are clearly debatable. In this way, the definition of a situation in terms of organizational crisis is the outcome of a political process. Crises, then, are the result of multiple events, which interact over time to produce a threat with devastating potential. But this result will only be considered a crisis if organizational leaders and/or stakeholders perceive the threat and impute "meaning" to the unfolding crisis. Of course, the earlier one situation is identified and considered as a crisis, the higher are the chances to prevent the crisis threats (Mitroff, 2004).

a. Distinct phases of a crisis

If it is possible to draft a time *continuum* for a crisis, it would have, at least, three major phases: the incubation period (Turner, 1976), the critical period (Stein, 2004) and the aftermath (Boin, McConnell, & Hart, 2008). First of all, the incubation period, which can be also referred as the precrisis stage (Shrivastava, 1987) or the prodomal crisis stage (Fink, 1986), corresponds to the period of time where the organization is on its steady state and no danger or threats are identified. It corresponds to the organization's ordinary state, with the normal structure and current activities running on. Fink (1986) affirms that the prodromal stage is the warning stage, when the leaders should improve the organizational abilities to identify any kind of signal that can demonstrate the escalation of a crisis. Mitroff (2004) calls these abilities as "Signal Detection" and Weick & Sutcliffe (2001) call it "Mindfulness". In this way, Fink (1986) says that it is easier to manage a crisis in the prodromal stage, because if the organization is able to identify and act on the crisis escalation signals, the leaders have the opportunity to avert the crisis. It is also important to remember that if the leaders recognize these signals but are unable to dispose of it for whatever reason, just having a sense of what is about to happen will help the organization to prepare for the critical period.

The critical period begins with the "precipitating event" (Turner, 1976) or "triggering event" (Shrivastava, 1987; Weick, 1988) that leads to the crisis. The triggering event marks the turning point (Fink, 1986) and represents the onset of a qualitatively different period. Whereas the incubation period generally occurs over a lengthy period of months, years or even decades, the critical period is usually the much briefer time of the minutes, hours or days of the crisis itself. Fink (1986) call this phase as the acute crisis stage and it is usually the stage which most people have in mind when they speak of a crisis. If the prodromal phase alerts to the fact that a hot spot is brewing, the acute crisis phase tells that the worst has erupted. It is in this phase that the negative aspects of the crisis appears, all at once: (1) the information flows faster and intermittently (Boin et al., 2010; Smart & Vertinsky, 1977); (2) the options of communication channels reduce (Hale et al., 2005; Wester, 2009); (3) all the stakeholders became involved (Acquier, Gang, & Szpirglas, 2008; Alpaslan et al., 2009; Pearson & Mitroff, 1993); (4) time is limited (Boin et al., 2010; Hannah et al., 2009); (5) decision making must be quick and effective (Santella, Steinberg, & Parks, 2009; Sommer & Pearson, 2007). One of the major difficulties in managing a crisis during this phase is the speed and intensity in which a series of constraints appear, leading the organization to the aftermath period.

Also known as the chronic crisis stage (Fink, 1986), the aftermath is a period of recovery, where the organization tries to respond to the constraints presented in the earlier stage. The chronic stage can linger indefinitely and it ends when the crisis is resolved. When the aftermath is over, organizations reached their new ordinary state, which can be equal or different to the steady state that prior to the crisis. Some authors say that the crisis cycle begins again and the organization reaches a new prodromal stage, for future crises (Chekkar-Mansouri & Onnee, 2013; Elliott, 2009; Fink, 1986).

b. Crisis Management

Crises can happen in any kind of organizations and every crisis will cross the stages presented above. According to Fink (1986), sometimes all phases may occur within a very short space of time. At other times, there is an extended, long-fused prodrome stage. However, it is very important to identify the crisis signals in the incubation period, trying to avoid the occurrence of the triggering event or, at least, to prepare the organization for the critical period. It is important to remember that a crisis, like other organizational events, is a fluid, unstable, dynamic situation and the recurrent happenings are in a state of constant flux (Shepherd & Sutcliffe, 2015; Weick & Sutcliffe, 2001). In this context, the operative word is recognize. An organization must *recognize* any kind of evidence that can point to an unrolling crisis, in order to intervene proactively (Fink, 1986).

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That is the reason why Mitroff (2004) affirms that signal detection is at the heart of crisis management. According to this author, all crises send out a trail of early warning signals. If these signals are picked up and acted upon, then a crisis can be prevented in the precrisis stage, preserving the organization and the stakeholders. According to Mitroff (2004), early signal detection is vital because crises expand quickly. In the same idea, Weick and Sutcliffe (2001) demonstrates that the secret under the high rates of success of High Reliable Organizations (HROs) is their capacity to act *mindfully*, what means that HROs strive to maintain an underlying style of mental functioning that is distinguished by continuous updating and deepening of increasingly plausible interpretations of what the organizational context is, what problems define it, and what remedies it contains.

These are the same practices recommended by crisis management researchers (Boin et al., 2005; Fink, 1986; Pauchant & Mitroff, 1992; Pearson et al., 2007; Roe & Schulman, 2008). According to Pearson & Clair (1998), organizational crisis management is a systematic attempt by organizational members with external stakeholders to avert crises or to effectively manage those that do occur. Crisis management consists of three distinct phases: crisis prevention, crisis response and recovery from the crisis (Fink, 1986). The crisis prevention occurs in the prodromal stage of the crisis, when the organization tries to identify crisis signals and act upon them with the aim to avert the crisis occurrence. The response stage is entered when avoidance efforts fail and events trigger a crisis. At this point, organizations shift their resources and efforts to minimizing damage to the environment, the organization and the stakeholders. Then, the recovery stage involves attempts to learn from the event and implement the changes needed.

Traditionally, crisis management involves management at staff level in a situation characterized by a critical period of time, in which leadership decisions will, for better or worse, determine the future of the organization (Barton et al., 2015; Weisæth et al., 2002). In this way, organizational leaders have a special responsibility to help safeguard the organization and its stakeholders from the adverse consequences of a crisis. Leaders who take this responsibility seriously would have to concern with all crisis' phases and with all crisis management's stages (Boin et al., 2005), as will be commented in the next section.

c. Crisis Leadership

Northouse (2007) affirms that leadership is a process whereby an individual influences a group of people to achieve a common goal. By this definition, it is implied that leadership is a process where a leader affects and is affected by followers. It emphasizes that leadership is not a linear, one-way event, but rather an interactive event, which would not happen without influence. Following the same ideas, Yukl (2006) says that leadership is the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives. After defining the term leadership, it is important to say that this paper will adopt the premise that any leadership attempt during a crisis, in order to implement crisis management practices, can be called crisis leadership.

According to Mitroff (2004), what characterizes crisis leadership is the continuous responsibility to influence individuals in order to manage four key factors during all stages of a crisis. These factors are: (1) crisis types; (2) crisis mechanisms; (3) crisis systems; and (4) crisis stakeholders. For crisis types, it is understood the particular set of crises that an organization chooses to prepare. Then, crisis mechanisms include early warning signals detection, damage control systems and business recovery systems. The crisis systems covers the mechanisms by which a crisis unrolls and the crisis stakeholders are all of the various parties, institutions, and even societies, that affect and are affected by a major crisis. In this way, what differentiates crisis leadership from crisis management is that the first recognizes the need to manage these four factors *before*, *during* and *after* a crisis, addressing these factors by the adoption of the crisis management practices (Mitroff, 2004).

Boin *et al*. (2005) define crisis leadership as the set of strategic tasks that encompasses all activities associated with the stages of crisis management. These authors defend that crisis leadership involves five critical tasks: sensemaking, decision making, meaning making, terminating and learning.

Sensemaking means that organizational leaders must recognize from vague, ambivalent, and contradictory signals that something out of the ordinary is developing. The critical nature of these developments is not self-evident and the leaders have to "make sense" of them (Boin et al., 2005; Patriotta & Gruber, 2015; Weick, 1988). In other words, this first

task means that leaders must appraise the threat and decide what the crisis is about. The second task of crisis leadership is decision making because crises bring various pressing issues to be addressed. In crisis circumstances, the situation remains unclear and volatile, shortening the time to think, consult and gain acceptance for decisions. In this way, crises force organizations to confront issues they do not face of a daily basis, involving tough value tradeoffs and presenting a challenge for leadership (Heifetz, 1994; Heifetz et al., 2009). The next task is related to meaning making because a crisis generates a strong demand from stakeholders to know what is going on and to ascertain what they can do to protect their interests. In this context, leaders are expected to reduce uncertainty and provide an authoritative account of what is going on, why it is happening, and what needs to be done (Boin et al., 2005; Maitlis & Christianson, 2014; Maitlis, 2005). This means that, after the two previous tasks, when leaders have made sense of the events, arrived at some sort of situational appraisal and made some choices for action, they must get others to accept their definition of the situation, imputing "meaning" to the unfolding crisis in such a way that their efforts to manage it are enhanced.

The first three tasks of crisis leadership are related to understanding and acting upon crisis constraints. After that, the next two tasks are related to finishing the crisis and learning with it. In this way, the fourth task is terminating the crisis. According to Boin et al. (2005), a sense of normalcy will have to return sooner or later. So, it is a leadership task to make sure that this happens in a timely and expedient fashion. Crisis termination is two-fold because it is about shifting back from emergency to routine; and it requires some form of downsizing of crisis operations at the same time of rendering account for what has happened and gaining acceptance for this account (Fink, 1986). When this process is completed, the crisis has terminated and the ordinary state of the organization is back. After that, it is time for the fifth task, learning something with the crisis and making organizational lesson drawing. Of course, the crisis experience offers a reservoir of potential lessons for contingency planning and training for future crisis. In this way, as a crisis situation involves something new, it demands an ability to learn during and after the crisis as the previous learned experience may come up short (Boin et al., 2005; Deverell, Hansén, & Management, 2009; Elliott & Smith, 2007; Moynihan, 2009).

3. METHODOLOGICAL APPROACH

As an initial investigation of leadership processes during an organizational crisis, this study was designed to discover and organize concepts. A qualitative research approach immersed the researchers in the data and encouraged their objectivity and openness to new findings. The qualitative research is an effort to understand situations in their uniqueness as part of a particular context and its interactions. This understanding demonstrates that this kind of research does not attempt to predict what may happen in the future. Although, it aims to understand the nature of the studied phenomenon and its settings – what it means for participants to be in that setting, what their meanings are, etc. (Merriam, 1998). The same author explains that the qualitative research assumes that meaning is embedded in people's experience and that this meaning is mediated through the investigator's own perceptions.

In such a way, the researcher is the primary instrument for data collection and analysis, which creates the demand for the investigator to physically go to the organization in study (the fieldwork) and interview its stakeholders (Merriam, 1998). So, the methodological procedures of this research range the selection of an organization, interviewing its stakeholders and the analysis of the interview's transcriptions, as follows.

a. Sample

In order to reach the research's aims, the Brazilian Electrical Sector was selected because of its turbulent context in the recent years, caused by several organizational crises, such as lack of energy for the industry demands, insufficient raining to mobilize the hydroelectric power stations and predictions of an electrical collapse in the recent future. In this context, it was selected a company involved with the generation and distribution of energy that has recently faced organizational crises. As the research was mainly conducted in the Brazilian state of Santa Catarina, and there is only one company allowed to distribute energy at that state, the company CELESC S.A. was chosen to be studied. It is important to say that the company was formally consulted and agreed with this research.

After identifying the organization and with its approval for this study, the researchers listed the recent crises in which the company was engaged. The criteria for chosing a crisis episode for study

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were the following: (a) a crisis that reached at least 50.000 consumer units; (b) was solved after at least 48 hours; and (c) happened during the last 15 years, in order to make possible contacts with people that was directly involved in crisis response activities. As a result, 5 crises with big proportions were listed and one crisis was selected.

The chosen crisis was a blackout in the city of Florianópolis, capital of Santa Catarina state. The rupture of one energy transmission line inside a bridge caused a huge power outage and the electricity supply was interrupted for the whole city, wich is an island, affecting more than 135.000 consumer units, for more than 55 hours. This crisis was unique because it affected an important city, capital of Santa Catarina state, for more than two days, bringing great constraints inside the company and for the whole community. It was the first time during the last 50 years that the city ran out of energy for more than 48 hours uninterruptedly.

The other 4 crises that were identified happened in smaller cities, which were not a state capital. Besides that, an important difference between them must be commented. The other 4 crises were related to natural phenomena, such as hurricanes, floodings or waterloggings. Because of that, the organization already had a protocol to respond to the crisis and the leaders pursued the response activities that should be conducted on those situations. On the other side, the Florianópolis' blackout was caused by an infrastructural collapse that the organization did not understand the reasons. Then, the leaders had to learn about the crisis and develop new mechanisms and leadership processes to solve the crisis.

This characteristic was favorable to this research's design and the Florianópolis' blackout was selected because of its dimensions, the need to grasp the crisis until it unrolls and because it mobilized a great amount of employees to work on crisis response. So, the leadership processes would emerge naturally and could be explored with more emphasis.

After identifying the crisis that would be studied, the research participants were recruited and selected to represent the leaders and followers involved in the crisis response. They were identified with a snowball sampling strategy and a total of 1 executive and 3 managers were selected. All of them were directly involved in the crisis response, in different hierarchical levels.

b. Data gathering

Data were gathered through extensive interviews with the research participants described above and through detailed reviews of secondary data sources. The use of interviews in the qualitative research is a justifiable and legitimate means of gathering information for additional insights and theory development (Seidman, 1998; Spradley, 1979; Strauss & Corbin, 1998). This approach, its execution, and the drivers behind its use are consistent with arguments that qualitative methods derive from a combination of interpretivist sociological traditions and symbolic interacionism (Godoi, Bandeira-de-Mello, & da Silva, 2006).

A multitude of organizational documents and reports was consulted, and one researcher performed participant observation inside organizational routines for aproximately 6 months, in order to understand organizational structure and culture. With this contact, the company's Director of Operations, an executive position, was interviewed and indicated three managers that worked with him during the Florianópolis' blackout episode. Three interviews were conducted with each informer, totalyzing 12 formal and semistructured interviews, whith more than 600 minutes of dialogue. All interviews were recorded, transcribed and confronted with organizational reports, local observations and media coverage about the studied crises. All data was collected approximately four years after the crisis and all respondents still work in the company.
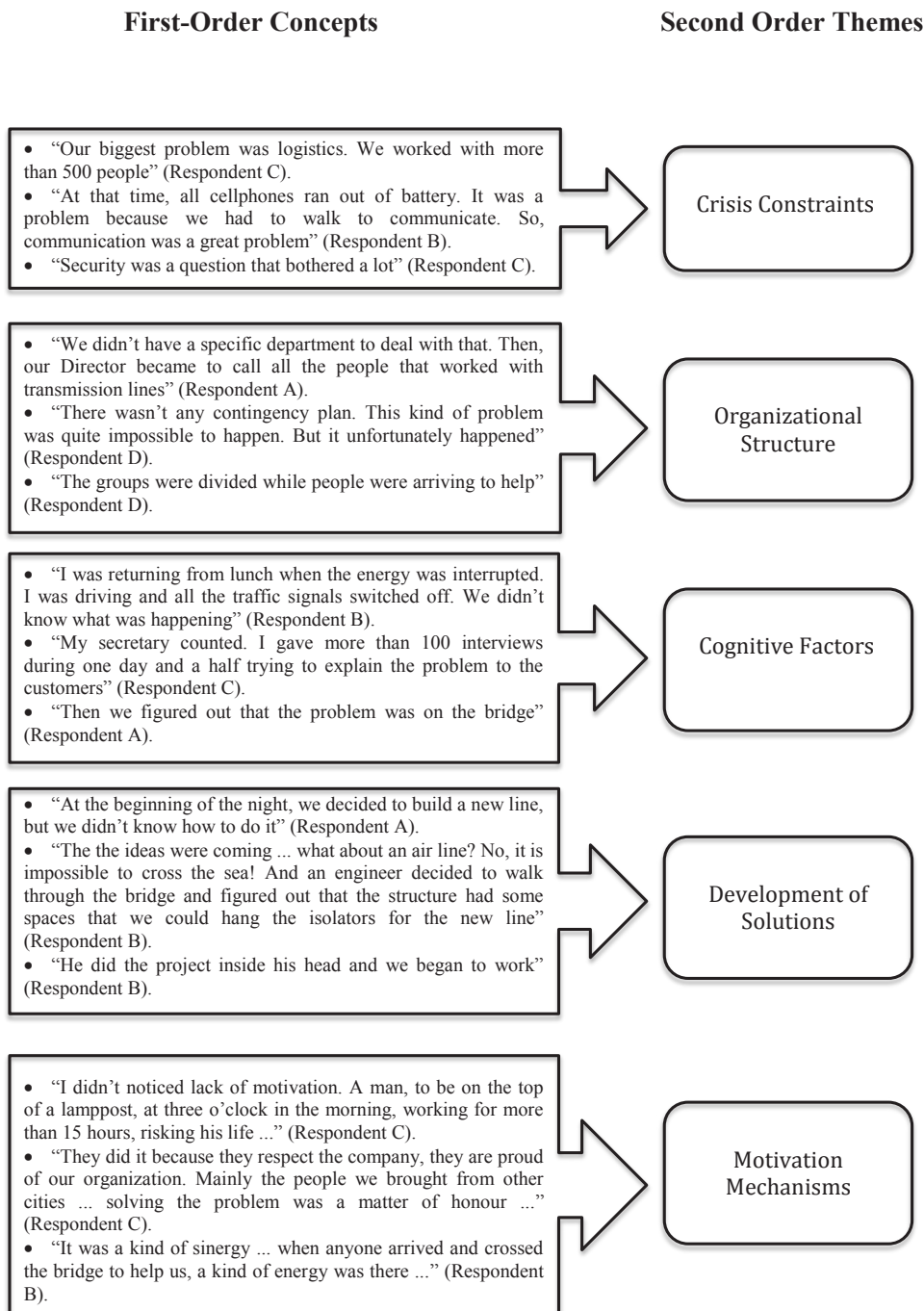
c. Data analysis

Data analysis steps were conducted with the help of Atlas.ti software, in search for codes. Data coding followed an inductive approach (Strauss & Corbin, 1998), with the codes emerging after data collection. All transcript elements related to the leadership processes during the crisis response were assigned with a code. Each stage of codification was accompanied by empirical validation on data and happened in cycles until theoretical saturation was reached. Then, five core categories emerged from the data and were identified after data analysis processes, such as follows:

a) crisis constraints (kinds of problems caused by the crisis);

b) organizational structure (social coalitions designed to solve and communicate specific problems);

c) cognitive factors (sensing and identifying problems, establishing priorities and learning mechanisms);

d) development of solutions (kinds of strategies created to solve problems); and

e) motivation mechanisms (how the leaders motivate their followers).

From this coding scheme, patterns emerged, which were validated and qualified across the crisis situations described in the interviews. The media coverage for the studied crisis was also very important to validate the categories that resulted from data analysis. Figure 1 exemplifies the data analysis structure, showing the first order concepts identified during the interviews and the second order themes that emerged from the data and were considered the main categories for data analysis.

Figure 1: Example of data structure from concepts to themes

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4. MAIN FINDINGS

Through the researchers' immersion in the data (i.e., through repeated iteration between interview sessions, fact finding in secondary literature sources, and data analysis), came a set of models used to describe how the leadership processes unfolded during the examined organizational crisis. Below are brief descriptions of the research findings across the five categories that emerged in the data analysis.

a. Crisis Constraints

> *"[…] then we realized that it would take long. It was impossible to fix or restore it with all that fire in there. So, until we could fully understand and realize what was going on, there was nothing to do. Let's assume that, if only one of the lines had been reached, we would have some alternatives. But no, the two transmission lines were irreparably affected, they had no recovery. Something like that was quite impossible to happen. The city was without energy and we had no plan. Can you imagine what could happen?" (Respondent B).*

Having in mind that the examined crisis caused the lack of energy in a whole town during approximately 52 hours, a set of problems arose during the crisis response. The leaders decided to build a new transmission line and restore the electricity supply chain and delivery in the city. During the creation of the new structure, a lot of constraints emerged and became a challenge to the leaders, as follows:

- Social Pressures: the inhabitants organized protests and sent communications to the media claiming for the electricity back in their homes;

- Security Problems: as the city had no electricity, some thieves tried to assault homes, shops and citizens;

- Time Restriction: the energy delivery had to be restored as quick as possible;

- Technical Restriction: build a new transmission line in a few hours was not easy. This kind of job, when done as usual, takes months. During crisis response, the company needed to make it in a couple of days. As a result, a lot of technical problems arose, such as lack of the adequate equipment or the absence of appropriate projects;

- Physical Restriction: as there was time restriction, the employees worked more than 16 hours, uninterruptedly, in order to restore the energy delivery. As a result of the extreme work conditions, the employees became tired, what could generate accidents;

- Organizational Communication: as they had no energy in the whole city, communicating by phone or e-mail was impossible, once they could not charge their computers or cell phones during the new supply chain creation;

- Decision Making: the decision making processes to solve the crisis were very complex because the communication between executives, managers and operators was very difficult and the flow of information was slow and sporadic;

- Leadership Stress: as there were severe constraints during the crisis, and the leaders should deal with all of them, there were psycho-physiological implications on them, bringing different emotions as the crisis unfolded.

b. Organizational Structure

"We didn't have a contingency plan or a different structure to follow in cases like that ... to make these decisions, call this guy, call that guy ... we didn't have that. After this episode, we made a contingency plan and we know exactly who should be called. But during that time, we didn't have such structure." (Informer A).

> *"And this decision was taken here, within this informal structure. Then they decided to call people, and they delegated a lot of things when a new person arrived there. For example, someone started to look for the needed items in the stocks, someone kept in touch with the guys who were designing the projects out there, on time, and so on." (Informer D).*

In order to consider all information about the crisis, the organizational structure has changed. Although the company had no crisis mobilization plan, a group of executives and managers was randomly structured to decide how the organization would respond to the crisis. The company stablished the address of an electricity substation that was near to the involved bridge as the Crisis Response Head Quarters and a lot of engineers went there to help the company. In this way, an informal coalition was

formed to make the strategic decisions. It is important to say that two of the research informers made part of this small group of people that made important decisions, such as the decision to build a new transmission line and the directions that this new line would have. Then, the new supply channel was divided in four parts, and it was randomly designed one manager for each part.

During the operational tasks to build the new transmission line, the company respected the organizational formal structure of directors, managers and employees. So, the organizational structure was adapted to better respond to the crisis. The first engineers that arrived at the Crisis Response Head Quarters formed a group to make strategic decisions about the crisis and its response. Then, four engineers were designed to manage the services at different places. Each manager had employees that already work with transmission lines and they followed power relations due to their formal position and hierarchy in the company.

c. Cognitive Factors

"This cable was different because it was an underground facility, the only one that the company had at the time. It has a very small vulnerability exactly because it is under the bridge structure, so it is not susceptible to any kind of collision, it is not susceptible to anything, it is a quiet line there. So, it was completely unpredictable and we didn't believe it was hapening. We had to understand what caused the fire and the explosions and we had to learn how we could solve that " (Informer A).

As the crisis unfolded, different people, either from the studied organizations or other institutions, conducted the sense giving processes. When the subject was the new supply channel as a whole, the priorities were established by the board of directors and the social coalition formed in the Crisis Response Head Quarters, near the locale of the cable rupture. On the other hand, when the problem sensing and identification was linked to one specific part of the supply chain that was being constructed, the sense giving was conducted by the specific manager related to the identified problem. This distinction on conducting the sense giving was not formalized and its equilibrium was found during the crisis, in an emergent manner.

d. Development of solutions

"The ideas that emerged ... well, let's try to make an electric transmission airline, because inside the bridge is not possible. And of course, first thing that comes to mind of an engineer, it is certainly impossible to do this, how do we make an airline, right, let's assume that normal distances between the bridge towers, they oscillate between 200, 250, 180 meters on average. There, we have a 700 meters distance to connect lines. For a conventional airline of 700 meters, we would have to provide a structure of, at least, 100 meters of high on each side. Where we get that? Then the other idea, let's try to make a line by another bridge, the oldest one. This idea did not progress due to the civil defense authorities ... " (Informer B).

The company was not prepared for this kind of crisis and there was not any kind of plan to avert and respond to crises. As a result for this improper crisis management, without crisis prevention and signal detection, the vast majority of decisions and strategies created were emergent (Mintzberg, 1987), without any kind of previous deliberation. As the problems were identified, someone tried to create a possible solution until the constraint was solved. The needed knowledge to respond to the crisis was provided for a vast number of people and the solutions were being made at the same time as the crisis was being unfolded.

e. Motivation Mechanisms

"When people crossed the bridge and went over, a kind of energy was there, coming from ... I don't know why ... and the person had that spirit, it was built from ... what I see now, is that it was a very strong, interesting meaning, everyone made a choice, I will be part of this story, but well, I'll give my blood too. There was a guy here, who climbed a lamppost of those, he worked straight up there, we sent him a glass of water, apple, banana, he ate everything there and kept working. The guy did not came down until he finished his job over there." (Informer C).

The research participants revealed that the employees kept all the time motivated, in spite of the long work journeys, without being necessary any kind of motivation mechanisms, such as financial payments,

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promotions or others. According to the informers, solving the crisis and restoring the energy delivery was a question of honour for the company and its employees. In this way, they kept motivated all the time, in order to restore the normality for the citizens as soon as possible. As a result, the participants made clear that the company solved the problem and the employees became more united and friendly to each other after the crisis.

5. DISCUSSION

In order to analyse the leadership process during the selected event, it is important to understand why the lack of electricity in the town was considered a crisis.

a. Crisis definition

It is important to perceive that all the crisis characteristics were present in the studied case, as the cable rupture was a low probability event that brought high consequences for the organization and for a great number of external stakeholders, the citizens included. The situation brought with it a lot of constraints that imposed a severe pressure for quickly resolutions, as commented above, and gave great challenges for the organizational leaders. In accordance with Boin et al. (2005), it was not clear that the crisis was unfolding and the organizational leaders and stakeholders only perceived the threats after the occurrence of the triggering event, the cable rupture. Besides, the definition of the situation as a crisis was only decided after the whole city became out of energy. At this point, the organizational leaders perceived the major problem, the power outage, and decided to randomly create a crisis group that got together near the rupture point to start the sensemaking process, discover the causes of the event and impute "meaning" to the unfolding crisis. The definition of the situation as a crisis was a political process (Boin et al., 2005), developed by the leaders and employees that were together in the Crisis Response Head Quarters.

b. Crisis stages

About the crisis stages, the three major phases were evident. The precrisis stage (Fink, 1986) can be represented by the whole period of time prior to the cable rupture, in which no crisis signals were detected and no crisis prevention procedures existed. In this way, the organization did not act mindfully (Weick & Sutcliffe, 2001) and the incubation period of the crisis (Turner, 1976) was not recognized, as no crisis signals were identified. So, the organization had no "signal detection mechanisms" (Mitroff, 2004) and had no abilities to identify any information that could demonstrate the critical stage of the existing electricity-distribution system and the escalation of the crisis. Maybe the crisis could be averted if the organization had such mechanisms.

The critical period (Stein, 2004) started with the triggering event, the rupture of the cable rupture. This stage, also known as acute crisis stage (Fink, 1986), remained for the first 6 hours after the precipitating event. A lot of contingencies became relevant and, in accordance with Hale et al. (2005), the communication's channels options reduced immediately after the cable rupture. At the same time, all stakeholders, internal and external, became involved, in accordance with Pearson & Mitroff (1993), including the citizens and the media. Because of the social problems, time became relevant and the decision making should be done as quick as possible. So, this stage existed for 6 hours, until the main decisions were made and the leaders agreed in the causes of the crisis and what should be done.

The chronic crisis stage (Fink, 1986) started when the leaders decided what to do and finished when the new transmission line was ready. This period, when the city was out of electricity, also can be considered the crisis aftermath (Garland, 1998).

c. Crisis Management

In the studied event, the majority of crisis management practices were situated in the crisis response stage (Boin et al., 2010; Hale et al., 2005; Leidner, Pan, & Pan, 2009). The crisis prevention stage could not be observed, as the company had not any kind of plan to avert and respond to crises. Incubation processes thus remained latent and undiscovered. Although, the recovery from the crisis could be observed as the participants mentioned the creation of a contingency plan after the crisis, in order to prepare the organization for future crises. This means that the organization is trying to learn from the crisis and has developed a kind of "plan for action" for future problems.

This paper focused in the response stage because the majority of crisis leadership tasks were related to this crisis management phase. As the studied crisis developed, a number of constraints appeared and the leaders should have focused their attention

to them. These unfolding circumstances were presented to the leaders as challenges to act upon. After the data analysis, five main categories emerged to link these, as shown in the figure 1.

In this way, the crisis leadership tasks assumed by the leaders were realized in order to address these five main challenges.

d. Crisis leadership

All the crisis leadership tasks presented by Boin et al. (2005) were present in this study. Sensemaking processes were necessary to understand the causes and the consequences of the electricity-distribution cables. In this occasion, leaders and employees that were together in the rupture point, after the triggering event, grasped the crisis as it unfolded. The sensemaking task took place at the same time that the decisions were being made. These two tasks, sensemaking and decision making, took place together and, as the crisis "sense" was being made, the leaders discussed the possible reactions to the crisis events, creating the decisions in an emergent manner. After deciding what to do, the meaning making task took place and the crisis explanations were distributed to internal and external stakeholders by the communication channels still available. Finally, when the crisis constraints were controlled and the organizational ordinary state was back, the terminating task ended

and gave place to the learning task, when the organization started to make a contingency plan based on the lessons learned with the crisis.

Besides, it is important to comment that the followers were more easily influenced by their leaders during the crisis, as the employees were more likely to acquiesce to their leaders and agreed to keep working for long periods. These results are in accordance with Halverson et al. (2004), whose work discussed that followers are more likely to acquiesce to their leaders under stress and are more receptive to information provided under stress. For this reason, it was not necessary to develop any kind of motivation mechanisms, such as financial payments, promotions or others. According to the managers interviewed, solving the crisis and restoring the energy delivery was a question of honour for the company and its employees. In this way, they kept motivated all the time, in order to restore the normality for the citizens as soon as possible. This fact demonstrates that the meaning making task was successful.

In the crisis context, the five crisis leadership tasks – sensemaking, decision making, meaning making, terminating and learning – were developed to address the five leadership challenges that took place in the crisis response – crisis constraints, organizational structure, cognitive factors, development of solutions and motivation mechanisms – as summarized in Table 1.

Table 1 – The crisis leadership tasks through the crisis response's leadership challenges.

Crisis Response's leadership challenges	Crisis phases	Crisis management stages	Related leadership tasks
Crisis Constraints	Critical Period and Chronic Crisis Stage	Crisis Response	Sense making Decision making Meaning making Terminating Learning
Organizational Structure	Critical Period	Crisis Response	Decision making Meaning making
Cognitive Factors	Critical Period and Chronic Crisis Stage	Crisis Response and Recovery Stage	Sense making Meaning making
Development of Solutions	Critical Period and Chronic Crisis Stage	Crisis Response	Decision Making Learning
Motivation Mechanisms	Chronic Crisis Stage	Crisis Response	Meaning Making Terminating

e. Responding the crisis constraints

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Beyond the lack of electricity problem, the crisis brought a lot of constraints that the leaders had to respond immediately. The main problem, allied to these constraints, forced the leaders to practice all the five crisis leadership tasks together, for each constraint. In this way, for each separate problem, the leaders had to understand what was going on, decide what to do, convey the internal and external stakeholders that it was the correct decision, act upon the problem and learn with it for the future. The leadership tasks related to the response to the crisis constraints took place during the critical period stage and the chronic crisis stage.

f. Adapting the organizational structure

The crisis leadership tasks related to the organizational structure were only two, decision making and meaning making. The first strategy adopted by the leaders was to randomly select some employees, forming a technical group to deal with the crisis. This decision divided the organizational structure for decision making in two: an informal structure for strategic decisions related to the crisis and a formal one to deal with operational decisions related to the construction of a new transmission line. The leadership tasks related to the organizational structure took place only during the critical period.

g. Dealing with cognitive factors

Dealing with cognitive factors was at the heart of the crisis response. Creating a "meaning" to the crisis – sensemaking – and propagating this meaning through all the stakeholders – meaning making – were not easy tasks. It is interesting to remember that these two crisis leadership tasks were conducted by different people. When the subject was the new supply channel as a whole, the priorities were established by the board of directors and the social coalition formed near the locale of the cable rupture. On the other hand, when the problem sensing and identification was linked to one specific part of the supply chain that was being constructed, the sense giving was conducted by the specific manager related to the problem identified. The leadership tasks related to dealing with cognitive factors took place during the critical period and the chronic crisis stage.

h. Creating and developing solutions

The decision making task was always in the centre of the crisis response stage. Unfortunately, the company was not prepared for the crisis and it had not any kind of crisis management plans. Because of that, the decisions were taken so far as the sensemaking processes were developed. This is true for the major crisis, the lack of energy, and for the numerous crisis constraints that unfolded with the crisis. In this way, the vast majority of decisions and strategies created were emergent (Mintzberg, 1987). To address this leadership challenge, it was used the decision making task during the critical period and the chronic crisis stage. After the solution of the constraints, the leaders tried to learn with them in order to avoid similar problems in the future.

i. Developing motivation mechanisms

To address this leadership challenge, the leaders used two crisis leadership tasks: meaning making and terminating. By communicating the crisis "meaning" to the employees, the leaders could stimulate a culture where restoring the energy delivery was a question of honour for the company and its employees. For each constraint that was resolved, the employees had become more united to resolve the other problems. So, disseminating the correct "meaning" and warranting the termination of the constraints were enough to keep the employees motivated, in spite of the long work journeys, without being necessary to create other motivation mechanisms, such as financial payments or promotions.

6. FINAL CONSIDERATIONS

This paper analyzes an organizational crisis in the Brazilian Electrical Sector, focusing on the leadership challenges during the crisis response and identifying the mechanisms used to mobilize people and respond to the crisis. As a result, it was possible to identify that, prior the studied crisis, the company had not any kind of crisis management preoccupation. Then, the crisis got the organization unprepared. Happily, the company responded successfully to the crisis, although in an improper manner. So, the importance of being prepared to an organizational crisis was demonstrated. Besides, it was documented the leadership challenges brought with crises and a five categories model was developed to analyze the crisis leadership tasks during the crisis response.

Unfortunately, the occurrence of crisis leadership

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tasks during the crisis prevention stage could not be observed, as the organization had no signal detection mechanisms to identify and avoid possible crises. In this way, the precrisis stage was not analysed. On the other hand, the critical period and the chronic crisis stage were observed and it was possible to analyse the crisis management's response stage as a whole, focusing the leadership challenges presented by the crisis, such as the crisis leadership tasks used by the leaders to respond to the crisis and lead the organization back to its ordinary state. So, the leaders used the five crisis leadership tasks presented by Boin et al. (2005) – sense making, decision making, meaning making, terminating and learning – to address the challenges brought with the crisis. According to each challenge, the leaders used different crisis leadership tasks, as summarized in table 1.

This study brings important theoretical contributions, as it corroborates with previous research on crisis management and crisis leadership, such as Smart & Vertinski (1977), Fink (1986), Pearson & Mitroff (1993), Halverson et al. (2004), Boin et al. (2005) and Hale et al. (2005), showing that: (1) key decisions were made by a small, tightly knit group of individuals; (2) all stakeholders, internal and external, became involved; (3) the communication's channels options reduced immediately after the precipitating event; (4) the relationship between leader and followers has changed, as followers were more likely to acquiesce to their leaders under stress and were more receptive to information provided under stress; (5) the leaders used five crisis leadership tasks to respond to the crisis; (6) it is more difficult to grasp and react to a crisis after the critical period. Besides, it illustrates the leadership processes that were undertaken in order to respond to an organizational crisis.

On a practical basis, it was important to present a descriptive case study, which showed real problems, faced by an organization during the response of a huge crisis. The main categories that emerged from data are important to help other companies to plan crisis management systems and procedures. However, it is important to say that this study was restricted to observe one crisis episode. As a suggestion for future research, other crisis events can be studied in order to validate these contributions and observe if the main categories of this research will also be present.

Finally, it was possible to observe practically the paradoxical nature of crisis (Nathan, 2000), as there were positive and negative outcomes to the stud-ied event. In one hand, the negative aspects of the crisis were present because of the lack of energy in the whole town and with all the constraints brought with the crisis and already discussed in this paper. On the other hand, a very positive outcome was achieved, as the employees became more united and friendly to each other after the crisis. This fact demonstrates that a crisis can have positive outcomes if the organizational leaders use the correct leadership tasks during the crisis response. In this way, facing a crisis situation may not be so bad if the organization is well prepared.

7. REFERENCES

Acquier, A., Gang, S., & Szpirglas, M. (2008). From stakeholder to stakeholder management in crisis episodes: A case study in a public transportation company. Journal of Contingencies and Crisis Management, 16(2), 101–114.

Alpaslan, C. M., Green, S. E., & Mitroff, I. I. (2009). Corporate governance in the context of crises: Towards a stakeholder theory of crisis management. Journal of Contingencies and Crisis Management, 17(1), 38–49.

Barton, M. A., Sutcliffe, K. M., Vogus, T. J., & DeWitt, T. (2015). Performing under uncertainty: Contextualized engagement in wildland firefighting. Journal of Contingencies and Crisis Management, 23(2), 74–83.

Bazerman, M. H., & Watkins, M. (2004). Predictable surprises: The disasters you should have seen coming, and how to prevent them. Leadership for the common good. Boston: Harvard Business School Press.

Beyer, J. M., & Browning, L. D. (1999). Transforming an industry in crisis: Charisma, routinization and supportive cultural leadership, 4(3), 483–520.

Bligh, M. C., Kohles, J. C., & Meindl, J. R. (2004). Charisma under crisis: Presidential leadership, rhetoric, and media responses before and after the September 11th terrorist attacks. The Leadership Quarterly, 15, 211–239.

Boin, A., & Hart, P. (2003). Public leadership in times of crisis: Mission impossible? Public Administration Review, 63(5), 544–553.

Boin, A., Hart, P., Stern, E., & Sundelius, B. (2005). The politics of crisis management : public leadership under pressure. Cambridge, UK: Cambridge University Press.

Boin, A., & Gralepois, M. (2006). Organizing for future crises: The case of integrated risk management in French cities. International Journal of Emergency Management, 3(1), 91–97.

Boin, A., Hart, P. 'T, McConnell, A., & Preston, T. (2010). Leadership style, crisis response and blame management: The case of hurricane Katrina. Public Administration, 88(3), 706–723.

Boin, A., McConnell, A., & Hart, P. (2008). Governing after crisis : The politics of investigation, accountability and learning. Cambridge, UK: Cambridge University Press.

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ISSN: 1984-3046 • Journal of Operations and Supply Chain Management Volume 9 Number 1 p 94 – 109

Boin, A., & Rhinard, M. (2008). Managing transboundary crises: What role for the European Union? International Studies Review, 10(1), 1–26.

Boin, A., & Smith, D. (2006). Terrorism and critical infrastructures: Implications for public-private crisis management. Public Money and Management, 26(5), 295–304.

Bouillette, J. R., & Quarantelli, E. L. (1971). Types of patterned variation in bureaucratic adaptations of organizational stress. Social Inquiry, 41, 39–45.

Brasil. (2016). Boletim de monitoramento do sistema elétrico relativo ao mês de janeiro de 2016. Brasília: Ministério de Minas e Energia.

Chekkar-Mansouri, R., & Onnee, S. (2013). Towards a theoretical. Understanding of the recurrence of crises embracing the issue of organizational learning: An illustration with the case of two hostile takeover bids faced by société générale (1988, 1999). Journal of Contingencies and Crisis Managementcies, 21(1), 56–68.

Deverell, E., Hansén, D., & Management, C. (2009). Learning from crises and major accidents: From post-crisis fantasy documents to actual learning in the heat of crisis. Journal of Contingencies and Crisis Management, 17(3), 143–145.

Elliott, D. (2009). The failure of organizational learning from crisis: a matter of life and death? Journal of Contingencies and Crisis Management, 17(3), 157–168.

Elliott, D., & Smith, D. (2007). Voices from the terraces: From "Mock Bureaucracy" to "Learning From Crisis" Within the UK's Soccer Industry. In C. M. Pearson, C. Roux-Dufort, & J. A. Clair (Eds.), International Handbook of Organizational Crisis Management. Thousand Oaks: SAGE Publications.

Fink, S. (1986). Crisis management : Planning for the inevitable. New York, USA: American Management Association.

Garland, C. (1998). Understanding trauma: A psychoanalytical approach. Tavistock Clinic series. New York, USA: Routledge.

Godoi, C. K., Bandeira-de-Mello, R., & da Silva, A. B. (2006). Pesquisa Qualitativa em Estudos Organizacionais: Paradigmas, Estratégias e Métodos. São Paulo: Saraiva.

Hale, J. E., Dulek, R. E., & Hale, D. P. (2005). Crisis response communication challenges: Building theory from qualitative data. Journal of Business Communication, 42(2), 112–134.

Halverson, S. K., Murphy, S. E., & Riggio, R. E. (2004). Charismatic leadership in crisis situations: A laboratory investigation of stress and crisis. Small Group Research, 35(5), 495–514.

Hannah, S. T., Uhl-Bien, M., Avolio, B. J., & Cavarretta, F. L. (2009). A framework for examining leadership in extreme contexts. Leadership Quarterly, 20(6), 897–919.

Hart, P., & Boin, A. (2001). Between crisis and normalcy: the long shadow of post-crisis politics. In U. Rosenthal, A. Boin, & L. K. Comfort (Eds.), Managing Crises: Threats, Dilemmas, Opportunities. Springfield: Charles C. Thomas.

Heifetz, R. A. (1994). Leadership without easy answers. Cambridge, Mass.: Belknap Press of Harvard University Press.

Heifetz, R. A., & Linsky, M. (2002). Leadership on the line: staying alive through the dangers of leading. Boston, Mass.: Harvard Business School Press.

Heifetz, R., Grashow, A., & Linsky, M. (2009). The practice of adaptive leadership: Tools and tactics for changing your organization and the world. Boston, Mass.: Harvard Business School Publishing.

Hermann, C. F. (1963). Some consequences of crisis which limit the viability of organizations. Administrative Science Quarterly, 8(1), 61–82.

Hunt, J. G. J., Boal, K. B., & Dodge, G. E. (1999). Crisis-responsive charisma on followers: An experimental examination of two kinds of charismatic leadership, 10(3), 423–448.

Kovoor-Misra, F., Zammuto, R. F., & Mitroff, I. I. (2000). Crisis preparation in organizations: Prescription vs. reality. Technological Forecasting and Social Change, 63, 43–62.

Laere, J. (2013). Wandering through crisis and everyday organizing: Revealing the subjective nature of interpretive, temporal and organizational boundaries. Journal of Contingencies and Crisis Management, 21(1), 17–25.

Lagadec, P. (2009). A new cosmology of risks and crises: Time for a radical shift in paradigm and practice. Review of Policy Research, 26(4), 473–486.

Leidner, D. E., Pan, G., & Pan, S. L. (2009). Journal of strategic information systems the role of IT in crisis response : Lessons from the SARS and Asian Tsunami disasters. Journal of Strategic Information Systems, 18(2), 80–99.

Maitlis, S. (2005). The social processes of organizational sensemaking, 48(1), 21–49.

Maitlis, S., & Christianson, M. (2014). Sensemaking in organizations: Taking stock and moving forward. The Academy of Management Annals, 8(1), 57–125.

Merriam, S. B. (1998). Qualitative research and case study applications in education (2nd ed.). San Francisco: Jossey-Bass Publishers.

Mintzberg, H. (1987). The strategy concept .1. 5 Ps for Strategy. California Management Review, 30(1), 11–24.

Mitroff, I. I. (2004). Crisis leadership: Planning for the unthinkable. Hoboken, NJ: Wiley.

Moynihan, D. P. (2009). From intercrisis to intracrisis learning. Journal of Contingencies and Crisis Management, 17(3), 189–198.

Nathan, M. (2000). The paradoxical nature of crisis. Review of Business, 21(3/4), 12–16.

Patriotta, G., & Gruber, D. A. (2015). Newsmaking and sensemaking: Navigating temporal transitions between planned and unexpected events. Organization Science, 26(6).

Pauchant, T. C., & Mitroff, I. I. (1992). Transforming the crisis-prone organization: Preventing individual, organizational, and environmental tragedies. The Jossey-Bass management series (1st ed.). San Francisco: Jossey-Bass Publishers.

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ISSN: 1984-3046 • Journal of Operations and Supply Chain Management Volume 9 Number 1 p 94 – 109

Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management. Academy of Management Review, 23(1), 59–76.

Pearson, C. M., & Mitroff, I. I. (1993). From crisis-prone to crisis-prepared. Academy of Management Executive, 7, 48–59.

Pearson, C. M., Roux-Dufort, C., & Clair, J. (2007). International handbook of organizational crisis management. Los Angeles: Sage Publications.

Pillai, R. (1996). Crisis and the emergence of charismatic leadership in groups: An experimental investigation. Journal of Applied Social Psychology, 26(6), 543–562.

Quarantelli, E. L. (1988). Disaster crisis management:A summary of research findings. Journal of Management Studies, 25(4), 373–385.

Roe, E., & Schulman, P. R. (2008). High reliability management: Operating on the edge. High reliability and crisis management. Stanford, Calif.: Stanford Business Books, an imprint of Stanford University Press.

Rosenthal, U., Boin, A., & Comfort, L. K. (2001). Managing crises: Threats, dilemmas, opportunities. Springfield, Ill.: Charles C Thomas.

Roux-Dufort, C., & Lalonde, C. (2013). Exploring the theoretical foundations of crisis management. Journal of Contingencies and Crisis Management, 21(1), 1–3.

Santella, N., Steinberg, L. J., & Parks, K. (2009). Decision making for extreme events: Modeling critical infrastructure interdependencies to aid mitigation and response planning. Review of Policy Research, 26(4), 409–422.

Seidman, I. (1998). Interviewing as qualitative research: A guide for researchers in education and the social sciences (2nd ed.). New York: Teachers College Press.

Shaw, D., Hall, M., Edwards, J. S., & Baker, B. (2007). Responding to crisis through strategic knowledge management. Journal of Organizational Change Management, 20(4), 559–578.

Shepherd, D. A., & Sutcliffe, K. M. (2015). The use of anthropomorphizing as a tool for generating organizational theories. The Academy of Management Annals, 9(1), 97–142.

Shrivastava, P. (1987). Bhopal: Anatomy of a crisis. Ballinger series in business in a global environment. Cambridge, Mass.: Ballinger Pub. Co.

Silveira-dos-Santos, R. A. (2012). Uma teoria substantiva do processo de liderança em momentos de crise organizacional: O caso das empresas de distribuição de energia elétrica. Universidade Federal de Santa Catarina, Florianópolis.

Smart, C., & Vertinsky, I. (1977). Designs for crisis decision units. Administrative Science Quarterly, 22(4), 640–657.

Sommer, A., & Pearson, C. M. (2007). Antecedents of creative decision making in organizational crisis: A team-based simulation. Technological Forecasting and Social Change, 74(8), 1234–1251.

Spradley, J. P. (1979). The ethnographic interview. New York: Holt, Rinehart and Winston.

Stein, M. (2004). The critical period of disasters: Insights from sense-making and psychoanalytic theory. Human Relations, 57(10), 1243–1261.

Strauss, A. L., & Corbin, J. M. (1998). Basics of qualitative research: Techniques and procedures for developing grounded theory (2nd ed.). Thousand Oaks: Sage Publications.

Turner, B. A. (1976). Organizational and interorganizational development of disasters. Administrative Science Quarterly, 21(3), 378–397.

Weick, K. E. (1988). Enacted sensemaking in crisis situations. Journal of Management Studies, 25(4), 305–317.

Weick, K. E. (1995). Sensemaking in organizations. Foundations for organizational science. Thousand Oaks: Sage Publications.

Weick, K. E., & Sutcliffe, K. M. (2001). Managing the unexpected: Assuring high performance in an age of complexity. University of Michigan Business School management series (1st ed.). San Francisco: Jossey-Bass.

Weisæth, L., Knudsen Jr, Ø., & Tønnessen, A. (2002). Technological disasters, crisis management and leadership stress. Journal of Hazardous Materials, 93(1), 33–45.

Wester, M. (2009). Cause and consequences of crises: How perception can influence communication. Journal of Contingencies and Crisis Management, 17(2), 118-125.