

MINDFUL LEARNING IN CRISIS MANAGEMENT

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All crises emit warning signals. And yet, organizations do not typically see the warnings in time to learn and adapt to prevent a crisis. This conceptual analysis bridges a theoretical gap by connecting current crisis management literature to rhetorical theories that identify barriers to organizational learning. Two connecting models are introduced to outline the barriers to learning, propose the inclusion of learning throughout the crisis cycle, and encourage the adoption of a mindful culture. Previous crisis models are described and an explanation of the similarities between Burkean philosophy and crisis research is presented. The Mindful Learning Model demonstrates how, if barriers are overcome, learning can not only lessen the impact of a crisis but also potentially prevent a crisis from occurring. Contentions of this analysis are detailed and a research agenda to extend mindful learning is outlined.

Keywords: *crisis communication; crisis management; organizational communication; organizational learning; mindfulness*

In every crisis situation there is an element of surprise. Despite the hours top level officials spend in risk assessment meetings, when crisis strikes, the first reaction is “How could this happen?” It stands to reason that if we saw the warning signals of an impending crisis, necessary steps would be taken to avert the crisis or at least lessen the destructive impact. A common cliché echoed in crisis response analysis is “hindsight is 20/20.” The warning signals that lead to a crisis are obvious after a crisis has occurred. So if warning signals of an impending crisis are evident, why are they, in most cases, not seen in time to prevent a crisis?

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Despite the recent surge of research in risk and crisis management, particularly following 9/11, there remains a gap in the knowledge detailing the barriers to recognizing warning signals as a crisis evolves. This conceptual analysis bridges the theoretical gap by connecting current crisis communication literature to rhetorical theories that identify barriers to learning. Two connecting models outline the barriers, propose the inclusion of learning in each stage of the crisis cycle, and encourage the adoption of a mindful culture. First, previous crisis models are described. Second, an explanation of the similarities between Burkean philosophy and crisis management research is presented through the proposed *Learning Barrier Model*. Third, the *Mindful Learning Model* is introduced to demonstrate how, if barriers are overcome, learning can not only lessen the impact of a crisis but also potentially prevent a crisis from occurring. Finally, the models are reviewed to outline future research.

LEARNING IN CRISIS MODELS

The word *crisis* invokes feelings of apprehension as we picture lawsuits, picket lines, and the doors of an organization closing for the last time. Historically aligned with impending devastation, crisis is often viewed as the last stop before the end of an organization's lifecycle. Crisis is defined as "a specific, unexpected, and non-routine event or series of events that create high levels of uncertainty and threat or perceived threat to an organization's high priority goals" (Seeger, Sellnow, & Ulmer, 1998, p. 233). Researchers characterize crisis as an unexpected turning point in an organization that can have a negative or positive outcome (Fink, 1986; Gottschalk, 1993; Lerbinger, 1997; Mitroff, 1988; Ray, 1999; Seeger et al., 1998; Seeger, Sellnow, & Ulmer, 2003; Sellnow, 1993).

Case studies examining crisis are abundant in both management and communication literature (Baum & Oliver, 1992; Brinson & Benoit, 1999; Dacin, 1997; Englehardt, Sallot, & Springston, 2001; Hearit, 1995a; Ice, 1991; Massey, 2001; Ruef & Scott, 1998; Seeger et al., 1998). Although it is true a crisis situation can cause disruption, crisis will not always obliterate an organization. In fact, crisis, when viewed as an opportunity to learn, can actually benefit an organization. Mitroff (2005) offers a framework of seven lessons that can help an organization emerge stronger from a crisis including the emotional, creative, social and political, integrative,

technical, aesthetic and spiritual development that occurs in a crisis. "If organizations embrace the opportunity to acquire new knowledge and to enact new strategies, they can emerge from crises with renewed vitality" (Seeger et al., 2003, p. 266).

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Crisis models acknowledge the opportunity to learn from crisis. However, where included, learning is the last step in the crisis model and not an ongoing aspect of the crisis management process. In addition, although recognition of warning signals is discussed to prevent future crises, crisis models to date do not explain why these warning signals are overlooked. Crisis cycle models are described here to identify the gap in the literature.

Fink (1986) was one of the first to develop a crisis model. Crisis is described through the metaphor of a medical illness with four stages: (a) *prodromal*, when warning signals of a potential crisis emerge; (b) *acute*, when trigger event and ensuing damage of the crisis occur; (c) *chronic*, when lasting effects of the crisis continue and clean up begins; and (d) *resolution*, when the crisis is no longer a concern to stakeholders. Fink (1986) describes crisis with a starting and stopping point, yet distinguishes that warning signals emerge before the onset of a crisis.

Mitroff (1994), who examines crisis management as a cyclical process, suggests there are opportunities to interrupt the crisis lifecycle. The approach focuses on prevention, and learning is specifically labeled in the five-stage crisis management process: (a) *signal detection*, when warning signs can be identified and acted upon to prevent a crisis; (b) *probing and prevention*, when organization members should be searching for known crisis risk factors and working to reduce potential harm; (c) *damage containment*, the onset of crisis during which organization members try to limit the damage; (d) *recovery*, working to return to normal business operation as soon as possible; and (e) *learning*, reviewing and critiquing the crisis management process. Gonzalez-Herrero and Pratt (1995) extended Mitroff's

work to include learning as a continuation of the recovery phase that will improve signal detection at the start of the cycle.

Drawing from emergency preparedness and the work of Fink and Mitroff, Coombs (2007) describes the crisis lifecycle through four interrelated factors: (a) *prevention*, detecting warning signals and taking action to mitigate the crisis; (b) *preparation*, diagnosing vulnerabilities and developing the crisis plan; (c) *response*, applying the preparation components and attempting to return to normal operations; and (d) *revision*, evaluating the crisis response to determine what was done right or wrong during the crisis management performance. Coombs, like Mitroff before him, incorporates learning into the revision stage in which the crisis management process and performance are evaluated.

The three-stage approach is most commonly used to separate the events surrounding a crisis (eg., Birch, 1994; Guth, 1995; Mitchell, 1986; Richardson, 1994; Seeger et al., 2003): (a) *precrisis* includes crisis preparation and planning, where the organization remains until a crisis is triggered; (b) *crisis* includes the trigger event and ensuing damage; and (c) *postcrisis* includes learning and resolution, which then informs the precrisis stage. Until another crisis occurs, the organization continues in the precrisis stage. This macro approach to crisis management furthers the notion of a crisis cycle. If an organization survives the stages of precrisis, crisis, and postcrisis, it will once again find itself in the stage of precrisis, only better equipped to prepare for another crisis (Coombs, 2007). Although the cycle returns to precrisis, if the organization learned from the crisis, there should be a different mindset in preparing for crisis following the experience of a crisis (Figure 1).

The three-stage crisis cycle is offered as all encompassing, yet the details that need to be addressed to prevent crisis are often overlooked. Mitroff (1994) and Coombs (2007) both acknowledge warning signals can be acted upon to prevent crisis; however, they do not describe why these details are often overlooked, and learning is only included in the models as a process of improving the crisis response after the crisis has occurred. Although learning can always be beneficial, analyzing a crisis after it has passed can lead to hindsight bias in which “the use of knowledge about outcomes to edit reconstructions of the antecedents of those outcomes, should lead people to learn the wrong things” (Weick & Ashford, 2001, p. 726). As Weick and Ashford explain, “In hindsight there appears to be one best way and nothing much to learn” (p. 726).

Mitroff and Anagnos (2001) state that “far in advance of their actual occurrence, all crises send out a trail of early warning signals” (p. 40). Boin,

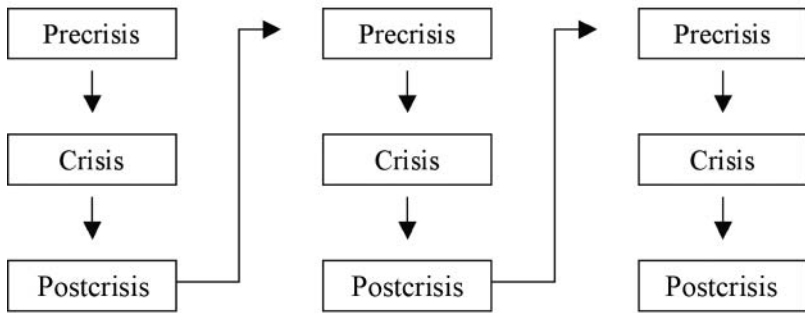


Figure 1. Three-Stage Crisis Cycle

Note: In the three-stage crisis cycle, postcrisis learning informs precrisis preparation so the organization should be assessing the potential crisis differently than before the last crisis.

t'Hart, Stern, & Sundelius (2005) make a similar statement but note that the warnings are recognized only after the crisis: "hindsight knowledge always seems to reveal strong signals of the impending crisis" (p. 19). Due to hindsight bias, organizations may conjure warnings postcrisis to better make sense of what happened (Fischhoff, 1975; Weick & Ashford, 2001). Still, if signals are revealed postcrisis to help make sense of how the crisis occurred, why is the potential for signals to lead to crisis not seen before the crisis strikes? And, even if an organization cannot act to prevent a crisis once in motion (such as an impending natural disaster or even economic recession), recognition of warning signals and vulnerabilities would allow for planning to minimize the consequences of the event when triggered. Boin et al. (2005) contend that "it is virtually impossible to predict with any sort of precision when and where a crisis will strike," and yet, they too suggest that improved systems of evaluation "may help to spot emerging vulnerabilities before it is too late" (p. 19). They suggest that recognition of warning signals depends crucially on both the capacity of operators within the organization and the organization's system of signal detection. Unfortunately, "operators often fail to observe that their system is failing" (Boin et al., 2005, p. 20).

In sum, the crisis management process, as defined at this point by the models in research literature, does not take the additional step in evaluating what led to the crisis in the first place. To overlook the events that led to a crisis only opens the door for a similar, possibly more devastating or even deadly crisis to occur. The gap in the literature requires an analysis

of why warning signals are seen after, but not before, a crisis strikes. By identifying the barriers that inhibit our ability to see warning signals in time to learn and prevent crisis, this analysis fills that gap.

Pearson and Clair (1998) argue for a multidisciplinary approach to crisis management. In fact, they assert that a “lack of integration has kept research on organizational crises at the peripheral of management theory” (p. 59). Shrivastava (1993) refers to the multitude of single disciplinary frames studying crisis as creating a “Tower of Babel” in which “there are many different disciplinary voices, talking in different languages to different issues and audiences” (p. 33). This conceptual analysis bridges the literature across disciplines. Similarities are drawn between current crisis management literature and the early rhetorical and philosophical work of Burke to show how rhetorical barriers inhibit our ability to see warning signals in time to learn and prevent crisis. The models presented next are not meant to replace crisis cycle models but to depict the barriers and opportunities to learn throughout the crisis cycle.

LEARNING BARRIER MODEL

The Learning Barrier Model (Figure 2) denotes how individuals and organizations move to success or failure without seeing warning signals of potential crisis in their routine process. If warnings and even failures are overlooked without learning, a crisis can incubate until the crisis forces the organization into a state of learning. Barriers to recognizing the warning signals of potential crisis exist in our rhetorical understanding of the world. The rhetorical barriers of *classification with experience*, *reliance on success*, and *trained mindlessness* provide paths that lead to failure or crisis before providing an opportunity to learn. The rhetorical barriers will first be described followed by a discussion of the potential to learn from failure and the incubation of ignored warnings.

Rhetorical Barriers to Learning

Past research connecting crisis communication to rhetorical theories and methods has focused primarily on the organizational rhetoric surrounding a crisis. According to Heath and Millar (2004), “a rhetorical approach to crisis explicitly acknowledges that the responsibility for the crisis, its magnitude, and its duration are contestable” (p. 5). Concentrating on the communication cycle in the immediacy of a crisis, Hale, Dulek, and Hale (2005) depict

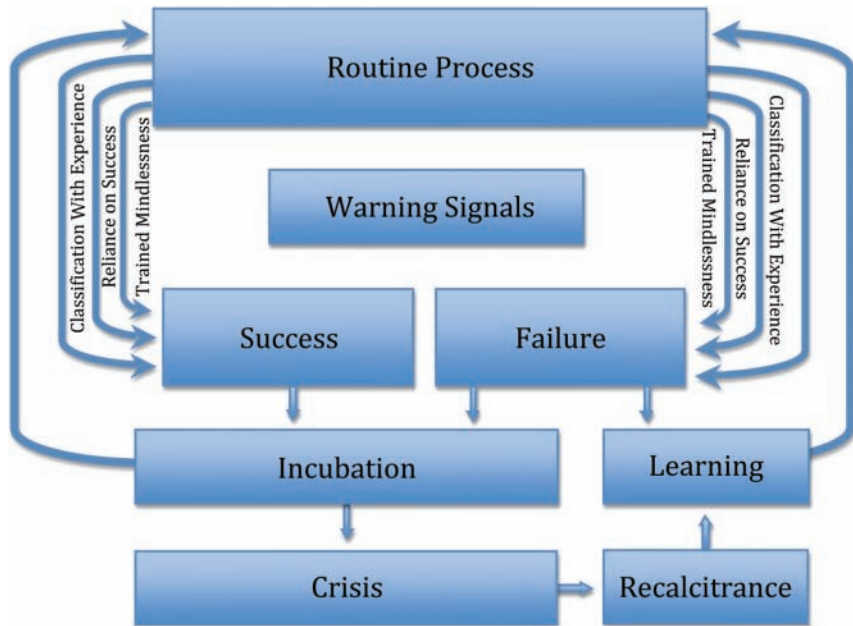


Figure 2. Learning Barrier Model

Note: The Learning Barrier Model shows how rhetorical barriers inhibit individuals and organizations from seeing warning signals in time to prevent failure or crisis. Learning only occurs following failure or the recalcitrance of a crisis. Learning is likely to be single-loop or double-loop and the cycle of missing warning signals will continue.

crisis response as a spiral of observation, interpretation, choice, and dissemination. The response to each message must be observed and interpreted before deciding on and delivering the next response message.

Since crises often necessitate the deliverance of apologia (Burke, 1970; Hearit, 1994; Scott & Lyman, 1968; Ware & Linkugel, 1973), and these statements can affect which crises end up in a courtroom (Patel & Reinsch, 2003), researchers have also concentrated on the postcrisis rhetoric and the image restoration of the individual or organization involved (Benoit, 1995a, 1995b, 1997, 2000; Dionisopoulos & Vibbert, 1988; Hearit, 1994, 1995a, 1995b, 2001). A Burkian view of crisis incorporates the pentad: scene, act, agent, agency, and purpose (Burke, 1969) to evaluate the situation and the rhetorical options following a crisis (Heath & Millar, 2004).

Despite the reliance on crisis and postcrisis communication as a foundation for rhetorical studies in crisis management, Heath and Millar (2004)

contend that studying precrisis communication entails at least two key functions: “looking for and reducing the likelihood that a crisis will occur; and communicating with key markets, audiences, and publics to prepare them for a crisis so that it can be framed and addressed when it occurs” (p. 6). According to Heath and Millar, “Messages, in this context, may be used to alert persons to the signs of a crisis so they can recognize it and take emergency response measures to reduce its likely consequences for them” (p. 6). Heath and Millar do not, however, address why, in most cases, signs of crisis are not recognized in time to adopt changes that prevent the crisis. Rather than employing Burke’s (1969) pentad to examine a past crisis case, this next section connects Burke’s (1954) analysis of terministic screens to the concept of mindlessness (Langer, 1989) to identify the barriers to recognizing the warning signals of an impending crisis (Figure 2).

Classification with experience. The first barrier depicted in the model is *classification with experience* (Figure 2). Our inability to see past our own experiences to recognize crisis warning signals makes the learning process in the precrisis stage of the crisis cycle challenging. As “members of a symbol-using species,” we only understand reality through the symbols we recognize (Burke, 1954, p. lvi). “The Symbol is the verbal parallel to a pattern of experience” where our perception of the world is created by the symbols to which we have been exposed (Burke, 1953, p. 152). These symbols create our window to the world. Since we view the world based on our pattern of experiences, all past experiences influence how we will view future experiences. Our exposure to symbols may come in the form of personal experience or secondhand experience. Heath and Millar (2004) acknowledge that by interpreting and evaluating information, the media frames the rhetorical situation. Negative publicity has been proven to damage an organization’s perceived reliability, expertise, and attractiveness (Renkema & Hoeken, 1998). Because crises are newsworthy events, how the media frames the situation can affect how an individual understands or experiences the crisis.

While those with similar backgrounds and experiences may relate to each other, no two people can have exactly the same thought process. Burke (1953) notes, “there will be as many different world views in human history as there are people” (p. 52). We view the world through our motives or the contexts of our past experiences (Burke, 1954). A group of people can face the same situation and respond differently because of the context with which they view the situation. Motives are not why we do things but why we look at the world the way we do. Our motives are ever changing,

as we are influenced by the symbols we are exposed to throughout our lives. If an individual is not exposed to a symbol or experience because of noise, lack of capacity, or another reason, the motive will be unchanged.

We see the world based on our motives, but our interpretation of the world is filtered through terministic screens built by the symbol systems to which we have been exposed (Burke, 1954). These screens filter out information that does not match our understanding of the world. In Burke's terms, the screens filter out reality that does not match our motives. If information does not fit our pattern of experiences, it will not be seen through our terministic screens, and we will be blind to its impact. The screens are essentially our classification system for information. All new information is classified with a past experience. What does not fit the classifications already in place is ignored or simply unnoticed. Burke suggests that because we are a species that can classify, we do. How we categorize the information in order to interpret it depends on our motive. So, in effect, how we respond and what we respond to directly correlates to our classification system.

Langer (1989) posits that our point of view has a profound influence on our capacity to interpret information. According to Langer, "we experience the world by creating categories and making distinctions among them" (p. 11). Mindlessness occurs when we act from a single perspective and respond automatically to categories without recognizing what does not fit into our classification system. This automatic behavior causes us to "take in and use limited signals from the world around us" without allowing subtle or emerging signals to "penetrate us as well" (p. 12). When we engage in automatic behavior, we recognize only what we expect to see and respond in a routine fashion.

These predetermined behaviors of classification and response are coping mechanisms that allow us to deal with information we cannot interpret or do not understand. Perrow (1999) explains that "we construct an expected world because we can't handle the complexity of the present one, and then process the information that fits the expected world, and find reasons to exclude the information that might contradict it" (p. 214). Burke (1954) suggests that people categorize information because "labeling comforts them by getting things placed" (p. 8).

Research has shown that the experience of repeated success creates screens that are particularly blinding in an organization (Tompkins, 2005). The Learning Barrier Model (Figure 2) depicts reliance on success as a separate barrier because of the additional influence the experience has in limiting the potential to see and share warning signals and failures.

Reliance on success. An organizational culture that focuses solely on past success can hinder future success by blinding the organization to potential failure. Because crisis can build slowly, organizations that do not seek out failure are oblivious to the warning signals that do not align with the accepted culture of success. Organizations seek to achieve articulated goals, not to avoid potential risks. “This preoccupation with achievement rather than avoidance has implications for the capacity to detect crises” (Boin et al., 2005, p. 20). Success leads to persistence at the expense of adaptability (Levinthal & March, 1981; March, 1978) and “shunning or denying a failure stunts organizational learning” (Seeger et al., 2003, p. 150). Nystrom and Starbuck (1984) suggest that “organizations succumb to crises largely because their top managers, bolstered by recollections of past successes, live in worlds circumscribed by their cognitive structures” (p. 57). Organizations that do not recognize failure and focus on past success to defend a current process miss warning signals indicating potential crisis. Weick and Sutcliffe (2001) maintain that “arrogance and hubris breed vulnerability” (p. 9).

Tompkin’s (2005) analysis of the NASA program demonstrates how an organization can be thrown into turmoil when failures stem from a culture dependent upon success. In his book, *Apollo, Challenger, Columbia: The Decline of the Space Program*, Tompkins describes a subculture of managers who were less concerned about safety than bureaucratic procedures and finances. The managers intimidated engineers who became second-class members of the organization due to their cautious and conservative nature. After all, there was no reason to be cautious. NASA could not fail. The most devastating element of the NASA case is that the perilous culture ignoring the potential for failure was identified following the *Challenger* explosion but was not addressed in time to prevent the *Columbia* tragedy. The goal of eliminating failure is not reprehensible. However, not acknowledging failure inhibits an organization from learning from smaller failures in time to prevent major crises.

Trained mindlessness. Even without experience in the industry or organization, individuals can be trained to ignore warning signals. The third barrier identified in the model is trained mindlessness (Figure 2). By being taught the best way to complete a task, individuals are actually trained to fit Langer’s (1989) definition of mindlessness. To be mindless is to be indifferent to the contexts, perspectives, and categories surrounding a situation (Langer, 1989). This insensitivity occurs when individuals follow the same routine simply because “that is the way things have always been

done around here.” The goal is to “get the job done,” even though there are warning signals that require attention and better ways available to complete the task. Because new employees are often anxious about their prospective role in the organization, they tend to accept the lessons taught by existing organizational members in order to seek approval (Ashforth & Fried, 1988). New employees are eager to learn how things are done, not to contribute to how things could be done differently.

Langer (1989) suggests that individuals who follow the same routine every day without change become “mindless experts” who concentrate on the end result and pay little attention to the process (p. 20). “Expertise is attained by successfully ignoring more and more of the particulars of the task” (Langer, 1979, p. 307). Individuals functioning mindlessly are not attentive to the task environment, and consequently, do not notice things out of the ordinary. When acting mindlessly, individuals are less receptive to signals or, if noticed, tend to interpret such stimuli, not as crises, but as minor malfunctions (Perrow, 1999). The infrequency of stimuli signaling a need for action causes workers to (a) expect an absence of signals and (b) feel cognitively fatigued, inducing them to “go on automatic” and detach themselves from their work (Ashforth & Fried, 1988).

Burke (1954) introduces Thorstein Veblen’s concept of “trained incapacity” as “the state of affairs whereby one’s very abilities can function as blindness” (p. 7). Using the example of chickens conditioned to interpret the sound of a bell as a food signal, Burke points out that when the bell is rung to assemble the chickens for punishment, they still come together thinking the bell signals food. Veblen, an economist, used the term to refer to the inability of trained individuals to understand certain issues they would have understood had they not been trained (Burke, 1954). Training potentially inhibits our ability to see solutions outside the framework in which we have been taught to think. To think beyond this training would be to capture the eluding quest of “thinking outside the box.”

If we only see what we expect to see within our box, we are blind to conditions that do not fit inside. A writer can read a manuscript dozens of times without seeing jarring typographical errors on the first page. When another set of eyes glance over the paper, the mistakes are instantly seen. Even though the same words were staring up from the page, the writer could only see what was supposed to be on the page, rather than what was really there. Along the same line, an engineer can often only see the use for which an item was designed. The ever-abundant lawsuits and correlating warning labels attached to products demonstrate the ability of others to see additional, potentially dangerous, uses for the engineered item.

In organizational literature, Bartunek and Moch (1987) pull from cognitive sciences to suggest that meaning is guided by organizing frameworks—or schemata. Schemata are described as “data reduction devices” that allow individuals to grasp concepts instead of being overwhelmed by the vast amount of information they are faced with everyday. “Schemata therefore guide people as they attend to some aspects of their experiences and, by implication, ignore others” (p. 485). Unfortunately, organizational members often continue to use schemata that are outdated and no longer lead to constructive solutions (Nystrom & Starbuck, 1984). Argyris, Putman, and Smith (1985) further suggest that individuals will continue to engage in the same unproductive behaviors that lead to negative consequences rather than question the governing beliefs that drive the unproductive behaviors.

The rhetorical barriers brought in to crisis management literature through the Learning Barrier Model (Figure 2) are evident in past crises and have been alluded to by crisis researchers through the concept of sensemaking.

Making Sense of Rhetorical Barriers

Using the classic crisis example of the Chernobyl explosion, all three rhetorical barriers can be seen in the actions of the operators who removed the safety functions from the nuclear reactor. The operators were mostly electrical engineers from coal and gasification plants and had little or no experience with nuclear technology. While an explosion at a thermal power station will no doubt cause destruction, the devastation will not continue to be found in cancer-causing radioactive particles for literally hundreds of years after the explosion. Gould (1990) explains that little shared knowledge exists between electrical engineers and atomic engineers. In addition, operators were hired and promoted not based on their knowledge and ability to work with nuclear technology but by their standing in the party and past experience with the station director at thermal plants (Medvedev, 1991). So, operators were trained that to “succeed” at Chernobyl, you followed the orders of your superiors in the party, even when the instructions require removal of safety protocol. The operators worked under a trained mindlessness of following orders and because of their classification with experience, they had little knowledge as to the devastation lax safety protocols could inflict.

Operators also had little knowledge of the possibility of failure. All incidents were filtered through Moscow. Reports of “failures” at nuclear power stations were not only withheld from the public but also from other nuclear power stations. The Three Mile Island accident occurred 6 years

earlier in the United States, and yet, Chernobyl operators were working under the assumption that accidents do not happen at Soviet nuclear power stations. Despite the *perestroika* (restructuring) and *glasnost* (transparency) of Mikhail Gorbachev's rule, the preexisting bureaucracy smothered any negative news in the industry. In his book, *No Breathing Room*, Grigori Medvedev (1993) detailed his struggle with government censors as he fought to publish articles warning of nuclear catastrophes in the years prior to Chernobyl. With no acknowledgment of failure there was no opportunity for operators to learn from the accidents that occurred at other nuclear facilities. The reliance on success created hubris evident in the disregard for training requirements and safety protocols. Chernobyl was identified as one of the attributing causes of the breakup of the Soviet Union because the culture of secrecy and government control was condemned in the nuclear explosion (Medvedev, 1991).

Following the Learning Barrier Model (Figure 2), the Chernobyl operators "made sense" of their circumstances based not on the evidence of warning signals, but on their interpretation in accordance with the barriers through which they viewed the routine process of conducting the nuclear test. *Sensemaking* refers to an individual's ability to make sense of their circumstances on the basis of past experiences and personal interpretation (Weick, 1988). Sensemaking is an "interplay of action and interpretation" (Weick, Sutcliffe, & Obstfeld, 2005, p. 409), where meanings materialize that inform and constrain identity and action (Mills, 2003). According to Weick (1988), "actions devoted to sensemaking play a central role in the genesis of crises and therefore need to be understood if we are to manage and prevent crises" (p. 308).

Weick (2006) invokes the work of William James in his description of faith, evidence, and action in sensemaking: "Again and again success depends on energy of the act; energy depends on faith that we shall not fail; and that faith in turn on the faith that we are right—which faith thus verifies itself" (McDermott, 1977, p. 339). According to Weick (2006), sensemaking and organizing helps people cope ["faith that we are right"]. Sensemaking and organizing are found when observing coping and recovering ["faith that we shall not fail"]. When looking at a variety of settings, sensemaking and organizing ["success"] are found in the work of others ["energy of the act"]. Following this line of reasoning, the rhetorical barriers presented in the Mindful Learning Model (Figure 2) create a "false faith" in the system or culture. Classification with experience creates a "faith that we are right." Reliance on success creates "faith that we shall not fail." Trained mindlessness allows us to find "success" in the "energy of the act" by mimicking the work of others.

Even if sensemaking within the barriers prevents the identification of warning signals, failure presents an opportunity to learn. If the failure is ignored crisis can still occur. Success without the recognition of warning signals continues the spiral of the organization to potential crisis. This next section discusses the opportunities in failure and the “false faith” in success.

Success Versus Failure

Sitkin (1996) contends that without failure we cannot learn. He states, “Failure is an essential prerequisite for effective organizational learning and adaptation” (p. 541), and in fact, “the absence of failure experiences can result in decreased organizational resilience” (p. 542). Since failures can act as “small doses of experience to discover uncertainties in advance” (Wildavsky, 1988, p. 26), the sooner failure, or potential failure, is noticed and learning takes place in the crisis cycle, the sooner crisis can be alleviated or even avoided. If warning signals are missed, failure offers an opportunity to learn from what went wrong. Weick and Sutcliffe (2001) describe failures as “near misses,” which act as vaccinations that allow the organization to learn to defend against the recurrence of another failure (p. 165). Near misses should alert organizations to warning signals in the future. And yet, the experience of failure does not automatically lead to learning. After all, “Top managers misperceive events and rationalize their organizations’ failures” (Nystrom & Starbuck, 1984, p. 58). Smith (1993) suggests that organizations that do not learn from failure set themselves up for later crises.

Dillon and Tinsley (2008) define near misses not as failures, but as failures that should have happened. They describe near misses, in other words, as “successful outcomes in which chance plays a critical role in averting failure” (p. 1425). Dillon and Tinsley found that individuals are surprised by the outcome of near misses, but instead of creating a sense of urgency to fix what could have led to failure but by chance led to success, near misses appear to create a sense of complacency around a previously calculated level of risk. In fact, they found repeated evidence that near misses decrease perceived risk and promote riskier decisions.

Thus, even success by chance can “foster decreased search and attention, increased complacency, risk-aversion, and maladaptive homogeneity” (Sitkin, 1996, p. 547). The rhetorical barrier of reliance on success is further solidified when success occurs despite missed warning signals. “Success sends a reinforcing signal that no corrective action is necessary” (Sitkin, 1996, p. 544). Learning will not occur following success because

the assumption is that there is nothing to learn. Organizations can continue to be successful while ignoring warning signals. This is evident in the crisis case studies identifying warning signals postcrisis that should have been addressed a decade before the crisis. So, an organization can miss warning signals and continue its routine process while the crisis incubates (Figure 2).

Incubation

Following the Learning Barrier Model (Figure 2), success and unrecognized or ignored failure lead to the incubation of a crisis. According to Turner (1976), a crisis incubation period occurs when early warning signals go unnoticed because of the accepted beliefs and norms. Pearson and Mitroff (1993), like Nystrom and Starbuck (1984), attribute the development of precrisis conditions to faulty rationalizations built on management beliefs. In precrisis there is a “decay of vigilance regarding risk and the erosion of crisis mitigation and response capacity” (Seeger et al., 2003, p. 105). In crisis incubation, the decay that was overlooked “interacts with the incubation of some minor, yet dynamic, variance and emerging threat” elevating the crisis potential (Seeger et al., 2003, p. 105). “Trouble starts small and is signaled by weak symptoms that are easy to miss, especially when expectations are strong and mindfulness is weak” (Weick & Sutcliffe, 2001, p. 20). During incubation, the underlying problem evolves in silence under the assumption that everything is going as planned.

Reason (1990) defines warning signals as resident pathogens. In incubation, the pathogens grow and spread making it difficult to minimize consequences once crisis hits. Weick and Sutcliffe (2001) maintain that minor threats or abnormalities can accumulate, grow, and generate weighty consequences. “If you depend too much on a simple set of expectations, unusual events can develop to more serious levels before you even notice them” (p. 41). Boin et al. (2005) note that people tend to forget that risks—however small—can and do materialize” (p. 24). The latent failures in the incubation period give way to a crisis that could potentially have been prevented had the warning signals been seen or the failure encouraged learning (Figure 2).

Recalcitrance of Crisis

Why does it take a crisis to see the warning signals and failures that lead to the crisis? The surprise of crisis following incubation relates to

Burke's (1954) notion of recalcitrance. Recalcitrance describes a point in which our perceived reality is contradicted by an experience. Once the experience occurs, we can never go back to the motive before the experience. Burke maintains that "the universe displays various orders of recalcitrance" to our interpretations, and we are forced to amend our interpretations accordingly (pp. 256-257). Our perception is forever changed by recalcitrance and all new information must be filtered through an altered terministic screen.

Burke (1954) uses the example of a fish classifying bait as food until snatched by a hook. In escaping the catch, the fish now adds a classification to bait as "jaw-ripping food" (p. 5). Despite the initial classification of bait as food, the experience of getting snagged by a hook will forever change the reality of what bait means to the fish. This anecdote demonstrates how our motive is forever changed when reality disproves our perception of reality. Just as an organization's resilience is altered by failure and crisis, so too is the resilience of Burke's fish. Without the scar on its lip, the fish would not have changed its classification of food. Its potential to be caught another day would be much greater without the past experience of the snag.

The moment of bifurcation, or breaking point, in crisis literature is best characterized by what Weick (1993) terms a "cosmology episode" (p. 633). Weick explains that, at the onset of a crisis, the temptation is to make sense of what is happening by comparing current circumstances to previous events. When the experience does not fit into the preset classifications, we experience a sudden loss of meaning in which we do not have control over our understanding of the world. Despite our efforts to screen reality through categories and labels, we see the warning signals after a crisis because the experience of the crisis forced us to recognize information that did not fit our previous perception of the expected world. Venette, Sellnow, and Lang (2003) note that, during a crisis, an organization is transformed and the existing system is rendered ineffective and cannot be maintained. Crisis "shocks organizational systems out of complacency" (Veil & Sellnow, 2008, p. 78). By acting as a stimulus for improving the organization and legitimizing the need for transformation, crisis prepares members of an organization for change by reducing resistance and thereby heightening consideration of alternate strategies (Lerbinger, 1997). Huber (1991) notes that "an entity learns if, through its processing of information, the range of its potential behaviors is changed" (p. 88). To move beyond the crisis stage of the cycle, an organization must learn at least how to adjust

to the experience of the crisis. In effect, crisis forces an organization into learning, even if the crisis only becomes another experience by which to classify a future experience (Figure 2).

Crisis forces an organization into learning, even if the crisis only becomes another experience by which to classify a future experience.

Learning

As Mitroff (1994) and Coombs (2007) suggest, the precrisis stage offers organizations the first opportunity to evade crisis by learning from warning signals. These warning signals may come from inside the organization, or outside. By scanning the environment (Coombs, 2007) organizations can recognize the failures and crises of other organizations as warning signals to the potential for a similar crisis experience. Organizations can learn vicariously from the failures and crises of other organizations and enact changes in the precrisis stage (Ulmer, Sellnow, & Seeger, 2007). However, if the rhetorical barriers prevent the recognition of warning signals, organizations can still learn if a failure occurs, stimulating adaptation before a full-blown crisis. If the failure is rationalized or success solidifies the reliance on success, learning will only take place following the recalcitrance of a crisis (Figure 2).

Simply stated, organizational learning is a process of detecting and correcting error (Argyris, 1982). Learning occurs when errors are shared and analyzed and the experience is distributed as a lesson learned by the organization to enact changes in the routine process (Popper & Lipshitz, 2000). Consisting of formal and informal systems, organizational learning allows organizations to collect, analyze, store, disseminate, and use information relevant to the performance of an organization and its members (Popper & Lipshitz, 1999, 2000; Somech & Drach-Zahavy, 2004). Senge (1990) posits that learning organizations should develop by using feedback to “change the thinking that produced the problem in the first place” (p. 95). The critical element is in correcting the right problem.

Argyris's (1982) single-loop learning identifies the potential to correct errors without correcting the underlying policies. Single-loop learning leads to a first-order type of change, in which small adjustments are made so current practices can function more effectively (Bartunek & Moch, 1987). Double-loop learning acknowledges the importance of evaluating the situation and changing the organization to reflect the learning process (Argyris, 1982). "A double-loop shift in individuals' governing values is considered a second-order level of change" (Walsh, 2004, p. 306) in which there is "the conscious modification of present schemata in a particular direction" (Bartunek & Moch, 1987, p.486). While failure may encourage only first-order change, a crisis requires at least second-order change since a simple alteration will not alleviate the crisis. However, in single- and double-loop learning, the embedded cultural systems are not open to criticism. Nystrom and Starbuck (1984) argue that "Encased learning produces blindness and rigidity that may breed full-blown crises" (p. 53).

To address the limitations of single and double-loop learning, triple-loop learning was identified in which individuals consider altering shared traditions (Nielson, 1991, 1993). Bartunek and Moch (1987) contend that third-order change allows organizational members to see the benefits and limitations of their shared understandings in order to change the schemata as they see fit. Only by recognizing the shared understandings that encourage the unproductive process will an organization make the cultural adjustments required for third-order change. "Before organizations will try new ideas, they must unlearn old ones by discovering their inadequacies and then discarding them" (Nystrom & Starbuck, 1984, p. 53).

Third-order change is not automatic:

People in organizations rarely abandon their current beliefs and procedures merely because alternatives might offer better results: They know that their current beliefs and procedures have arisen from rational analyses and successful experiences, so they have to see evidence that these beliefs and procedures are seriously deficient before they will even think about major changes. (Nystrom & Starbuck, 1984, p. 55)

Turner (1976) classifies crisis into six stages of "failures in foresight" (p. 381). Stage I is a point of normal operations where culturally accepted beliefs and precautionary norms are in place. Stage II is the crisis incubation

period where early warning signals go unnoticed because of the accepted beliefs and norms. Stage III is the initial event that first draws attention to the crisis and challenges the accepted beliefs. Stage IV is the onset of the crisis resulting in direct harm. Stage V is a full recognition of the collapse of beliefs and an attempt to salvage the belief system. Stage VI is a full cultural readjustment of beliefs that returns the organization to Stage I.

As Bechler (2004) notes,

Because most of the research has focused on effective crisis response mechanisms and the need for crisis containment, crisis situations have been treated as isolated events rather than necessary correctives that are interrelated with the culture and history of the organization or industry. (p. 63)

Third-order change, and even Turner's (1976) "failures in foresight" (p. 381), typifies cultural adjustment as a difficult process that would likely require the recalcitrance of a crisis to legitimize the need for change. Based on this premise, the cultural change would only occur through postcrisis learning. However, if the culture of the organization embraces learning throughout the crisis cycle, and particularly in the precrisis stage, cultural adjustment would be ongoing. In effect, an organization fluid in response to failure will be better equipped to recognize warnings signals of potential failure.

This next section identifies the concept of mindful learning and introduces the Mindful Learning Model (Figure 3) depicting learning entirely in the precrisis stage of the crisis cycle. The Mindful Learning Model (Figure 3) shows the operation of a mindful culture that recognizes warning signals and learns from them to prevent failure and crisis.

MINDFUL LEARNING MODEL

Mindlessness occurs when we act from a single perspective and respond automatically to categories without recognizing what does not fit into our classification system. Mindfulness, on the other hand, looks at the process of each situation and not the preconceived notion of what the outcome should be. Weick and Putnam (2006) in their description of Eastern and Western perspectives on mindfulness quote *Abhidhamma*,

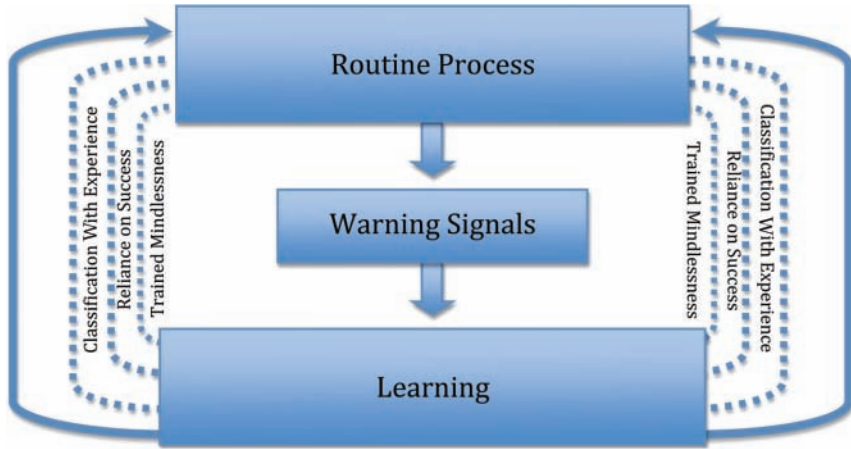


Figure 3. Mindful Learning Model

Note: The Mindful Learning Model shows the operation of a mindful culture that recognizes warning signals and learns from them to prevent failure and crisis. The rhetorical barriers to learning still exist, but mindful learning filters through the routines and training to draw attention to what does not match expectations. A mindful culture encourages constant adaptation of the routine processes as warning signals are recognized.

the Buddhist analysis of mind and mental process. From an Eastern perspective, mindfulness has “the characteristic of not wobbling, that is, not floating away from the object. Its function is absence of confusion or non-forgetfulness” (Bodhi, 2000, as cited in Weick & Putnam, 2006, p. 276). The Western perspective furthered by Langer (1989, 2005) and this analysis is the continual reclassification of experiences to interrupt routines from unfolding mindlessly. “Past experience no longer serves as a firm guide and the disruption “stirs the cognitive pot” (Weick & Putnam, 2006, p. 280).

By taking into account the contexts, environment, and perspectives surrounding a situation and welcoming new information, mindfulness allows us to reframe the situation. Reframing enables us to view the elements of the process and correct any that may be out of place. Weick and Sutcliffe (2001) observe that reframing, in essence, is constantly labeling and recategorizing new information, not just automatically placing information into developed categories. Langer (1989) contends that,

“to catch the early warnings of trouble, we must be alert to new information, to subtle deviations from the way things typically go” (p. 134). Reframing early in the crisis cycle allows individuals and organizations to not only reduce the number of crises but also shorten the time and severity of crises that do occur. “When people expand their repertoire, they improve their alertness. And when they see more, they are in a better position to spot weak signals which suggest that an issue is turning into [a] problem which might well turn into a crisis if it is not contained” (Weick, 2006, p. 1724).

To catch the early warnings of trouble,
we must be alert to new information,
to subtle deviations from the way
things typically go.

By recognizing what does not fit our expected classifications, *mindful learning* creates an awareness that filters through the routines and training to draw attention to what does not match our expectations. Conscious thought is provoked when individuals sense something out of the ordinary (Lord & Kernan, 1987; Louis, 1980). Mindful learning is not paranoia; it is attentiveness to signals that something does not look or feel right. Although we cannot be mindful of everything at all times, Langer (1989) contends that we always have the ability to be mindful of something. Mindfulness of the rhetorical barriers to learning, as shown in the Mindful Learning Model (Figure 3), reduces the likelihood that warnings signals will be overlooked. The Mindful Learning Model (Figure 3) shows a continual cycle of recognizing warning signals and learning from them to adapt the routine process. The model (Figure 3) demonstrates how acknowledging the learning barriers allows organizations to continually reframe experiences in light of warning signals in order to learn and adapt routine processes. Because learning occurs constantly in precrisis in the Mindful Learning Model (Figure 3), the organization is less likely to experience crisis, or even failure. However, because the barriers always exist (Figure 3), there is always potential to follow a barrier to failure or success as depicted in the Learning Barrier Model (Figure 2). For an organization to move to the Mindful Learning Model from the Learning Barrier Model, learning and adaptation must be more

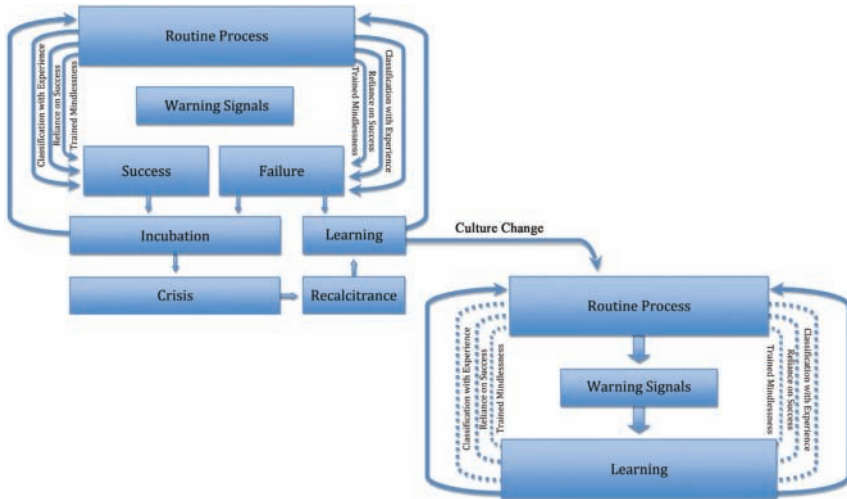


Figure 4. Moving From the Learning Barrier Model to the Mindful Learning Model

Note: Creation of a mindful culture requires third-order change or full cultural readjustment to move from the Learning Barrier Model to the Mindful Learning Model.

than simple adjustments to processes and policies as is found in first- and second-order change. Mindful learning and constant cultural adaptation is required to create a mindful culture (Figure 4).

Weick and Sutcliffe (2001) argue that it is the organization's culture that encourages or discourages individuals to mindfully manage the unexpected. "Culture provides an immediate, familiar outline of what you should pay attention to and the constraints within which you should steer your actions" (Weick & Sutcliffe, 2001, p. 146). Schein (1992) defines organizational culture as "a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration and which has worked well enough to be taught to new members as the correct way to perceive, think, and feel in relation to these problems" (p. 12). Boreham and Morgan (2004) note, "Schein makes the crucial claim that an organization's culture determines what it can and cannot do, and that the extent of individual members' socialization into that culture determines what they can and cannot do" (p. 309). By selectively prioritizing what to be mindful of, members can reexamine elements of the organizing process and better recognize warning signals. These attentive members are empowered to take control of their environment through mindful learning.

Walsh (2004) recognizes the impact of communication in culture adaptation, "An organization's culture and structure will emerge through a dialectic process" (p. 319). Through communication, a shared meaning can be developed, personal compacts renegotiated, and a sense of urgency promoted. Communication is critical in the adoption of change as it profoundly influences the motivation for and interpretation and consequences of change (Azumi & Hage, 1972; Duncan, Mouly, & Nilakant, 2001; Kanter, 1983; Kanter, Stein, & Jick, 1992). As Duncan et al. (2001) suggest, "Many problems associated with organizational change can be linked to communication" (p. 18). Successful learning organizations maintain a culture of open communication in which members of the organization conduct "organization enquiries" to discover better ways of achieving the organization's goals (Argyris & Schön, 1996). Tompkins (2005) explains that "the climate and culture of an organization, developed by the way in which people interact, can determine how well the members learn what is important to achieve high-performance goals" (p. 86). Learning must become part of the organizational culture for barriers to be acknowledged and warnings to be seen.

For an organization to protect itself from future crises, organizational learning in which changes are made to the system that caused the crisis is required. Argyris and Schön (1996) contend that culture change is the central process by which an organization learns. A culture of learning allows for new insights and lasting behavioral changes and not mere rituals of learning in which the process is reviewed and analyzed but no changes are made to the system (Popper & Lipshitz, 1999). Without generating learning as an essential outcome in the organization's culture, few changes will occur that could prevent a future crisis.

Bartunek, Gordon, and Weathersby (1983) suggest conducting exercises in which organizational members must consciously attempt to operate from other perspectives. Bartunek and Moch (1987) further this notion in stating, "The introduction of the different perspectives enables organization members to identify the ways they understand a particular problem and to generate a working appreciation for available alternatives" (p. 496). Using this process, learning organizations are collectively mindful in recognizing, questioning, and replacing assumptions that underpin current practices.

Collective mindfulness in an organization's culture is not the same as collective thinking in which individuals in a group define a common environment (Krieger, 2005). Janis's (1982) definition of groupthink is the opposite of mindfulness in that groupthink includes a collective closed mindedness

to new information and pressures toward conformity and the majority view. Shared mindfulness on the other hand is “predicated in accurate depiction of the environment via an attending state of perceiving that is continually open to incoming data” (Krieger, 2005, p. 156). In a mindful organization, members take responsibility for monitoring the elements of existing processes. The collective motive is to watch for deviants from the norm. It is only under these circumstances that warning signals of a potential crisis can be identified. Once identified, the organization can then adjust accordingly, avoiding a full-blown crisis. Weick and Sutcliffe (2001) observe that “a well-developed capability for mindfulness catches the unexpected earlier, when it is smaller, comprehends its potential importance despite the small size of the disruption, and removes, contains, or rebounds from the effects of the unexpected” (pp. 17-18).

Perhaps the most researched mindful culture is that of a high reliability organization (Weick & Sutcliffe, 2001). High reliability organizations exist in high-risk environments with the potential for severe loss of life or economic stature yet persistently avoid major crises. These organizations operate under a mindful process of having a preoccupation with failure, reluctance to simplify interpretations, sensitivity to operations, commitment to resilience, and deference to expertise (Weick & Sutcliffe, 2001). Because the potential for failure and the repercussions of failure are so intense, high reliability organizations remain fluid in their response to risk, embracing opportunities to learn before experiencing a crisis.

The mindful operations of high reliability organizations provide an example of the ideal process; however, because catastrophic risks are faced each and every day, complacency in these organizations is a trigger point to a crisis. The expectations set for high reliability organizations are not the same as those of other organizations. Weick (2006) acknowledges his work on high reliability organizations has been limited to inherently dangerous environments. As Ashforth and Fried (1988) suggest, it is the infrequency of warning signals that causes individuals to expect an absence of signals and detach themselves from their work. The high reliability framework does not take into account the ebb and flow of risks over time, the nuances of private sector organizations, or the political posturing that encourages rhetorical barriers. The Mindful Learning Model provides an understanding of how mindful learning can occur in organizations that allow for more slack in the response to warning signals and failures.

High reliability organizations demonstrate the idealized ability of organizations to operate in a mindful culture. The Mindful Learning Model

depicts how this process can be understood in light of the rhetorical barriers to learning (Figure 3). Burke's examples and the Chernobyl and NASA cases exhibit the barriers of the Learning Barrier Model (Figure 2). The theory presented here is based on assumptions from literature and case study analysis. However, further research is needed. This concluding section outlines propositions and offers suggestions for a continued line of research on mindful learning.

CONCLUSIONS AND CONTRIBUTIONS

The opportunity to learn exists throughout the crisis cycle. While the recalcitrance of crisis forces learning, rhetorical barriers prevent organizations from learning from warning signals and failures. The rhetorical barriers are lifted postcrisis because the recalcitrance prompts an alternative view of reality. Most research on organizational learning and crisis has concentrated on postcrisis learning; however, the Mindful Learning Model is offered in this analysis to draw attention to the barriers to learning specifically in the precrisis stage. Just as the experience of a crisis changes how an organization understands warning signals and crises, organizations made aware of the rhetorical barriers to learning that lead to failure are more likely to recognize tendencies to classify mindlessly and rely on past success. If learning occurs to address an issue in the precrisis stage, the organization will remain in the precrisis stage, ideally, mindfully monitoring other issues that could lead to crises. The sooner warnings, failures, or crises are recognized, the less damaging they will be to the organization. The Learning Barrier Model (Figure 2) and Mindful Learning Model (Figure 3) were outlined so that they may be tested, expanded, and refuted through further research using multiple methods. The following contentions are detailed to guide the research toward a more thorough understanding of mindful learning.

1. By preventing individuals from recognizing the nuances of a situation, the automatic classification of an experience with a past experience acts as a barrier to recognizing warning signals: The literature on terministic screens and sensemaking explains the categorization process. Case studies have shown classification with experience limits organizational crisis response. An evaluation of best practices that invites differing perspectives in an organization is warranted to encourage mindfulness when assessing a situation.

2. When an organization becomes overconfident in its processes, it expects success and opens itself to crisis that could be avoided if the organization was more attentive to potential failure rather than present success: Case studies have demonstrated reliance on success limits an organization's ability to see potential failure. However, the extent to which organizational culture relies on "success" requires further research. Is success a motivating factor or an expectation? How do different organizations view success and failure? Are organizations that reward the sharing of "failure" more successful? The role of success and failure in organizational culture needs further analysis.
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When an organization becomes overconfident in its processes, it expects success and opens itself to crisis that could be avoided if the organization was more attentive to potential failure rather than present success.

3. Training potentially inhibits our ability to see solutions outside the framework in which we have been taught to think. By being taught the best way to complete a task, individuals are trained to act mindlessly: Trained mindlessness is easily recognized as a barrier to learning, and yet, the barrier is created by organizational training. Bartunek et al.'s (1983) alternative perspective exercises need to be tested as a remedy to this barrier. Also, an evaluation of organizations that rotate training would be beneficial to determine if individuals can also be trained to be mindful.
4. The failure or crisis forces a recalcitrance in which the perceived reality of a successful culture is shattered: Research on organizational renewal is emerging in the literature (Seeger & Ulmer, 2002; Seeger, Ulmer, Novak, & Sellnow, 2005; Ulmer et al., 2007; Ulmer & Sellnow, 2002). Case examples now exist describing organizations that have experienced a culture change in which a new mission was formed following a crisis. For example, after losing 658 employees on 9/11, the once described callous bond-trading firm Cantor Fitzgerald rallied behind a new mission of supporting bereaved families (Seeger et al., 2005; Walker, 2003). Further research is needed to determine if renewal discourse is a motivating factor for culture change (Figure 4), which breaks the cycle of the Learning Barrier Model.
5. By distinguishing learning as an essential part of the crisis cycle, if an organization can get past the barriers to learning, members will be more

likely to see the warning signals and failures in time to prevent, or at least reduce the damages of crises: Cases of “crisis prevention” need to be added to the literature. Too much time is spent researching past crises (because the warning signals are easier to see after the crisis) and not enough time is spent researching organizations that seem to be immune to crises. Research is needed to determine if barriers can be identified in the precrisis stage of organizational crises. Additional barriers may exist that are not noted here. Further research into the rhetorical barriers, which lead to a crisis should be conducted with the same fervor that postcrisis rhetoric is currently analyzed.

6. In adopting a mindful culture, organizations have a collective motive to watch for deviants from the norm and recognize, question, and replace assumptions that underpin current practices: Depiction of the Mindful Learning Model (Figure 3) and the operation of a mindful culture can be found in high-reliability organizations (Weick & Stutcliffe, 2001). As noted, research on high-reliability organizations has been limited to public-sector organizations (Weick, 2006). The “success” of a mindful culture in multiple industries needs to be tested. Research that identifies the best practices of mindful organizations not classified as high-reliability organizations would be useful in crisis management literature.

This conceptual analysis bridged a theoretical gap by connecting current crisis management literature to rhetorical theories that identified barriers to learning. Two connecting models were proposed to outline the barriers, include learning throughout the crisis cycle, and encourage the adoption of a mindful culture. Crisis models were described and an explanation of the similarities between Burkean philosophy and crisis research was presented through the proposed Learning Barrier Model. The Mindful Learning Model was introduced to demonstrate how, if barriers are overcome, learning can not only lessen the impact of a crisis but also potentially prevent a crisis from occurring. Finally, the models were reviewed to outline future research. The analysis justifies a need for further research to determine if the barriers identified can be seen along with the warning signals in time to prevent future crises.

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