

Learning and Renewal Following Threat and Crisis: The Experience of a Computer Services Firm in Response to Y2K and 9/11

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ABSTRACT

This paper reports on a research project in progress. This project is an investigation of the ways in which organizations learn in response to threats and crises. Considerable scholarship in organizational learning theory, renewal, and in organizational crisis suggests that the ability of organizations to learn and reconstitute themselves is a critical capacity for successfully responding to crises and threats. These learning processes are examined within the context of a global, Fortune 100 computer services firm and its response to the Y2K threat and the 9/11 crisis.

Keywords

Crisis, Threat, Renewal, Organizational Learning, Case Study.

INTRODUCTION

Crisis and disaster studies are a robust area of inquiry. Scholars have approached the phenomenon of sudden catastrophic collapses in systems and structures from a variety of perspectives. This includes descriptions of the conditions leading to organizational crisis (Pauchant & Mitroff, 1992; Perrow; 1984), the developmental features of crisis (Turner, 1976; Fink, 1976 ; Reynolds & Seeger, In Press), and the social and psychological aspects of crisis (Quarantelli, 1988). Recent efforts have also focused on the ways in which systems reconstitute themselves following a crisis. This includes pragmatic attention to questions concerning the mitigations of harm and strategies of recovery. In addition, some approaches have explored the opportunities for renewal created by crisis (Seeger & Ulmer; 2004; Seeger, Novak, Sellnow & Ulmer, In Press). These approaches are grounded in natural ability of complex systems to reconstitute themselves and the opportunities created by a suspension of the status quo (Seeger, Sellnow & Ulmer, 2003).

One of the assumptions of this approach is that crisis and disasters signal fundamental flaws in the organization such as mismatches with environmental conditions, inadequate risk sensing and technological weaknesses. Therefore, those organizations that are able to treat crises and disasters as opportunities to learn by attending to these flaws are more successful in recovering and renewing themselves following a crisis.

The current investigation examines the ways in which organizations learn from crisis and risk. We draw on the concept of organizational learning to examine the ways in which organizations reconstitute themselves following a catastrophic collapse. We also ground our discussion in the concept of organizational renewal. These concepts are examined within the context of a major global technology and computer service organization's (Global Technologies Organization, GTO) response to the threat of the Y2K collapse and the 9/11 disaster.

GLOBAL COMMUNICATION

Just being a European company would constrain us.
Like Socrates, we are citizens of the world.
We converse with all.
Per Blanker, (1989)

Uncertainty and ambiguity are primary factors of the global environment (Batteau, 2000; Stohl, 2001). Convergence and divergence represent two poles on the continuum of global research (Inkeles, 1998; Stohl, 2001). Convergence refers to unifying imperatives embedded in the global economy, such as technology. Divergence refers to issues of cultural diversity grounded in human experience (Habermas, 1984; Stohl, 2001). Together these approaches capture the dialectical tension in the complex and dynamic processes of globalization (Barber, 1992; Stohl, 2001). This paper seeks to understand how one successful global organization deals with the uncertainty and ambiguity manifest in risks and crisis.

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This investigation begins with the typography of communication which argues that communication, and its subset, discourse, is epistemic. Discourse as epistemic is the overall context; organizational change is the structure within that context; organizational learning is a process within the structure of organizational change. Discourse of renewal is defined here as the construct under investigation.

TYPOGRAPHY OF COMMUNICATION

We approach this inquiry from the perspective of communication as epistemic; that is communication as constitutive of new knowledge, insights and understandings. Communication at this contextual level of abstraction provides the basis for a discussion of organizations, change, learning, risk and crisis. Deetz (2001) argues for communication as context, suggesting communication should be viewed as the theory of organizations. Historically, in traditional models of organizations, the core process is economic and communication is viewed as aiding economic accomplishment. Deetz (2001) seeks to highlight a reciprocal, albeit Habermasian notion of communication as the negotiation of relationships; the vehicle through which suppressed tensions and conflicts among stakeholders can be appreciated for their differences and be included in responsive decision making.

Discourse, according to Habermas (1975) is a type of communication involving "the cooperative search for the truth" (p. 108). He distinguishes discourse from communicative action. In the world created by discourse is the "ideal speech situation," in which power does not dominate. Whereas communicative action involves all communication, verbal and nonverbal, acts through which understanding is reached (Habermas, 1984). Finet (2001) has also developed a discourse-orientated approach to understanding the complex interactions between organizations and their sociopolitical environments. But unlike Habermas, Finet (2001) views the role of organizational discourse, conceptualizing

organizations as “conversations,” embedded within its power structure of the sociopolitical environment. These two perspectives lie at the polar extremes and continue the dialectic tension as related to economic power.

Fairhurst and Putnam (1998) described the process of discourse analysis as the study of words and signifiers, including the form or structure of words, the use of language in context, and the meanings or interpretation of discursive practices. Then three years later, Putnam and Fairhurst (2001), characterized organizational discourse at a different level of abstraction, presenting an argument that places discourse as context, as a way of knowing, as a perspective for understanding organizational life; in other words discourse is epistemic. We suggest that this epistemic nature of organizational discourse is particularly salient during moments of high uncertainty, such as high risk contexts and dramatic systemic crisis.

ORGANIZATIONAL CHANGE

Change is arguably the most constant dynamic in organizations. Boulding (1961) argues organization is not simply lack of chaos, “it consists of structures” (p. 19). Kuhn (1962) argued that change is rooted in meaning, suggesting the “...need to change the meaning of established and familiar concept(s) ...” to promote fundamental change (p. 103). McPhee and Poole (2001) suggest that organizations are not simply structure and change is not just meaning, but instead argue that it is both and more. They note that organizational structure is not a physical object or ontological constant but a social reality partly constituted, and sometimes transformed, in real-time interaction. Organizational structure endures and alters the course of events because it is inscribed in the material setting and the memories of its members *and* is responsive to and legitimized by institutionalized expectations in society at large.

Change may be precipitated by either external or internal forces and is most often a consequence of both. Moreover, Cheney and Christensen (2001) suggest the conceptualization of organizational boundaries as solid is misleading since an organization is dependent on its environment for its identity and legitimacy. Sutcliffe (2001) also suggests that organizations and their environments are interdependent in terms of the flow of information and its processing. Waltz’s (1979) definition of interdependence as “mutual vulnerability” is especially helpful in discussing organizational threats and crises (p. 143). Organizational change, then, is meaning centered and dynamically constituted by both the organization itself and by the larger context within which it exists.

ORGANIZATIONAL LEARNING

Developing strategies to mitigate vulnerability is organization learning in its most basic form. Organizational learning through adjusting to environmental contingencies, is presented here as a process of organizational change. Organizational learning theory (OLT) is an extension and refinement of systems perspectives (Seeger et al, 2003) and is rooted in a balance between stability and change (March, 1991). Organizations must maintain knowledge, skill, and wisdom, as well as production, while concurrently remaining open to new insights, new skills, new understanding and new opportunities. OLT is closely associated with other systems based views, such as organizational behavior, organizational culture, organizational development, and various human resources movements such as the quality movement.

Organizational learning has, in fact, been characterized in almost as many ways as there are learners and things to learn. Concepts of organizational learning can be placed along a continuum with cognition at one end and behavior at the other. Organizational learning has been characterized as inquiry and action (Argyris & Schoen, 1996), as experience translated into history (Cohen & Sproull, 1996), and as development of routines, standards, procedures, and practices (Johnson & Kaplin, 1987; Levit & March, 1988; March, 1981; Nelson & Winter, 1982). Organizational learning has also been characterized as cumulative production skill (Dutton & Thomas, 1984) and the development of organizational consensus (Hastie, 1986). Others have described learning as the determination of optimal decision rule (Grofman & Owen, 1986; McGuire & Radner, 1986) and as improved accuracy in problem solving (Lin & Carley, 1992).

Pisano (1994) has suggested that learning by doing may be more likely when organizations lack the underlying knowledge needed to simulate and predict, whereas firms with deep knowledge of cause-effect relationships tend to learn *before* doing. Weick and Ashford (2001) suggest organizational learning seems to be enhanced in organizations where conflicting forces are tolerated; where decision makers thrive on tension and paradox; where participants are open regarding their experiences; and where communication is learning in the form of knowledge diffusion, and dialogue. Seeger et al (2003) has also equated organizational learning with effective communication.

For the purpose of this research, organizational learning is defined as an interactive process; as change in organizationally-based skill or knowledge (Brown & Duguid, 1996); and as the processing of information leading to change in the range of behaviors (Huber, 1996).

Organization Learning as Process

We learn from what we attend to,
and we become what we practice.
Feldenkrais

Huber (1996) detailed a synthesis of processes and kinds of organizational learning. Learning involves four basic processes: 1) acquisition of knowledge; 2) distribution of information among various sources; 3) interpretation of information when commonly understood interpretations are available; and 4) storing knowledge for future use, in organizational memory. Within this framework, learning is changed behavior through information processing. Huber (1996) notes that information, when distributed widely, can result in synergistic understandings, in which information is used in unforeseen ways. Many organizational communication failures, inadequacies in networks, information overloads, various kinds of noise, beliefs about proprietary information, and attitudes toward communicators disrupt the distribution of information and make it inaccessible.

Within each process, there are sub-processes that detail and influence types of learning. Knowledge acquisition has five specific learning sub-processes: 1) congenital, 2) experiential, 3) vicarious, 4) grafting, and 5) searching (Huber, 1996). Congenital is the knowledge learned at the organization's founding. Experiential learning involves both, intentional activities, such as systematic experiments, and unintentional activities, such as external critique. Vicarious learning is a kind of secondhand learning gained by observing others and making decisions about the efficacy of the observed behavior. Grafting involves acquisition of new members, such as in a merger, to gain new skills and knowledge. Searching is conscious monitoring of internal and external environments.

Huber's (1996) description of the learning processes demonstrates the comprehensiveness and complexities of organizational learning. Learning as an adaptive process is influenced by an array of organizational and human factors. Learning is both the product of access to information and the higher-level interpretive and institutionalizing processes.

Organizational Learning as Response to Critical Events

After periods of significant discontinuous change,
incremental, adaptive learning may be just the thing
to help consolidate transformational or generative learning.
Nevis, DiBella, Gould, 1995

Organizational learning is a multi-faceted process which occurs under a variety of organizational conditions, including through failure. Organizations may discover their faulty learning when they experience radical failures, such as following a crisis (Weick & Ashford, 2001). Small or large-scale failures, misunderstanding or total communication breakdowns imply faulty prior learning and necessitate corrective learning.

Normative readjustment offers a model for the consequence of inadequate risk recognition called "intelligent failure" described by Turner (1976). Intelligent failures can be viewed as functions of several organizational and leadership phenomena. Turner (1976) suggests that disaster is the result of some inaccuracy or inadequacy in the organization's accepted norms and beliefs. Reevaluation of norms and beliefs about risk definition and analysis allows leaders and organization members to successfully resolve potential problems. Problems that are judged incorrectly, as insignificant or irrelevant to precautionary norms and beliefs are failures and can become "crises."

Prior to "Year 2000" (Y2K), for example, most corporations did not realize how dependant they had become on the Information Technology (IT) systems which provided foundational support to their respective businesses. But even more problematic, very few people understood that a computer programming design decision made 30 years earlier could lead to a massive IT failure. In addition to intelligent failure, a more serious type of organizational "failure of foresight" is the consequence of inadequate risk recognition which leads to crisis. Prior to the events of September 11, 2001 (9/11) few organizations, if any, considered a scenario involving hijackers turning airplanes into guided missiles (Seeger, & Ulmer, 2001; 2002). The disaster of 9/11 was a powerful example of the fact that very few people understood the threat of a devastating terrorist attack.

In some cases, the accepted and dominant set of beliefs about risk and attendant norms, standards, and proper procedures that constitute a sense of normal operations collapse in the face of a devastating event. Turner (1976) describes these situations as a sudden collapse of core beliefs which then have a domino effect with regard to risk assessment and avoidance. This collapse precipitates the rapid initial ad hoc adjustments and initiation of new beliefs and norms. As the crisis is dealt with and resolved, a full cultural adjustment occurs. Equilibrium is reestablished between the new post crisis insights, understandings, and “lessons learned” and the organization’s beliefs. The resolution may require some general consensus about individual and corporate responsibility, the nature of the causes and possible blame.

Intelligent failures and failures of foresight are based in faulty or inadequate judgment of critical risk situations. Sitkin (1996) even suggests that organization can learn by planning to fail on a small scale in order to test assumptions and forestall failure on a large scale. Strategic failure is the alternate route and when combined with an organizational culture that fosters failure, strategic failure can test high risk areas with small manageable experiments. Organizations particularly examine internal processes related to innovation, safety and security; mergers and acquisitions. Sitkin believes that organizations which adopt strategic failure as a type of learning will see positive results without ignoring the realities of short-term market pressure.

RENEWAL

The current investigation is grounded in the assumption that risk and crises can be sources of fundamental organizational renewal. Renewal is a construct which has been applied primarily to post-crisis discourse. According to renewal, crises can serve as the underlying source for organizational learning, change, normative readjustment and the reemergence of competitive advantages. Renewal as a process of organizational learning can point out fallacious assumptions or unforeseen vulnerabilities, and as in this case precipitate consensus, cooperation, and support (Seeger & Ulmer, 2001, 2002; Ulmer & Sellnow, 2002). Renewal can also occur when organizations respond to threats and prevent disasters just as certainly as when organizations sustain disaster (Seeger, 2004). Crossan, Lane, & White (1999) have identified renewal of the overall corporation as the underlying phenomenon and organizational learning as the principle means to that end.

Hurst (1995) suggests that renewal helps the organization meet the challenges of organizational and environmental change. Renewal is concerned with the revival of mature organizations; it is the restoration of commitment, value, and the meaning of work. Hurst (1995) argues that organizations become systemically vulnerable to catastrophe and must renew to survive. Senior managers have the power to reconnect events, to reconstruct meaning and renew their organizations by understanding and communicating the dynamic nature of nonlinear systems.

Seeger et al (2004), Crossan et al (1999), and Hurst (1995) have recognized that renewal is fundamental to organizational survival. The current research adds to the understandings of renewal by investigating how GTO Corporation learns, comprehends what it has learned, and communicates learning specifically with regard to the threat imposed by Y2K and the crisis imposed by 9/11.

CRISIS AND THREAT

Threats and crisis are closely related concepts. Threat is the relative probability of some loss of a valuable resource, such as reputation, market share or access, employees, equipment, etc. Threats include some level of uncertainty regarding the actual manifestation of the harm. In most cases, the exact nature and implications of the threat are not immediately evident (Seeger, et al, 1998). The severity of the threat is related to the nature of the organizational goals and the probability of loss (Billings, Milburn, & Schaalman, 1980). Decision makers often have a difficult task coming to terms with the severity of the problems and weighing alternative solutions. At times, these decision makers must wade through a wide array of probabilities as the values of a loss may change when information, updates, and responses from other organizational members become available. Threats, like icebergs, may lay hidden beneath the surface such that the real risk of loss is unknown (Perrow, 1984).

Organizational crises, then, are often triggered by the complexity of the system itself, and by faulty decisions, as well as by the interrelationship between technological systems and the humans attempting to manage them (Pauchant & Mitroff, 1992). Threats that become manifest and that include the loss of high valued resources lead to crises. Crises are often the source of profound human loss combined with the potential for profound change. They are the stories of hubris, indifference, and greed juxtaposed to the stories of heroes, ingeniousness, and guts (Seeger, Sellnow, & Ulmer, 2003). Crises are massive, complex, dynamic, and unexpected social phenomenon. Organizational crisis is almost always the consequence of systems of organizational structures that have internal contradictions and complex, non-linear interdependencies.

RESEARCH GOALS

This project explores the ways in which organizations learn from threats and crises. Specifically, we are interested in understanding the ways in which threat and crises become learning events, the ways in which they promote organizational renewal, and the specific lessons that emerge.

These processes are explored within the context of a major, global information technology and computer services firm specifically with regard to the Y2K threat and the 9/11 attacks. Global Technologic Organization (GTO) is a \$ 20 billion firm Fortune 100 firm with operations in 60 countries. The company employs 120,000 people to service 35,000 businesses and government clients. The firm is widely recognized as having a strong and distinct corporate culture and as an innovative industry leader. GTO was directly affected by both Y2K and 9/11. In the former case, GTO was threatened directly by the possible breakdown of its own systems and the potential impact on its clients. GTO faced at least the potential of significant legal liability in the case of major system problems based on the Y2K programming bug. In the case of 9/11, the company faced a crisis in terms of the impact on both its systems and clients. Several major clients were severely and directly impacted by 9/11. GTO was immediately called on to help in data recovery and in reconstituting IT systems.

METHOD

Using a case study approach, we conducted a series of semi-structured interviews with senior managers at GTO. These interviews focused on the learning processes associated with the 9/11 and Y2K events. We also examined the larger corporate messages associated with these events to assess the ways in which these messages functioned to promote learning and renewal. Specifically, we explored the ways in which the events were framed, the prospective nature of the messages, the abilities of the organization to reconstitute itself from a blank slate, without previous constraints or artificial limitations, and the provisional versus strategic nature of messages. Finally, we were interested in what specific lessons were learned from the event and whether the lessons from a threat and from a crisis differed in significant ways.

To that end, this study asks two questions: Does this organization engage in distinctive communication strategies for its response to these events; and can the discourse of renewal characterize the learning processes that were undertaken?

RESULTS

During initial fact finding interviews, with GTO's Y2K Director, Colleen Murphy, data on the strategies, actual time tables, telephone logs, and progress notes that were written during the 48 hours of the Y2K Event were collected. Based on that interview and interviews with two other executives the following narratives were assembled.

Summary Narrative for Y2K

By December 1999, every possible contingency for Y2K had been reviewed. Detailed reporting structures, along with timetables, were in place and definitions for success were clearly defined. GTO managers were confident that as the final count down began on December 29th everything looked "good to go."

Y2K was on GTO's radar as a significant threat that required direct and sustained attention as far back as 1992, eight years before the millennium. By 1996 strategy work had begun. At that time responsibilities were beginning to be defined and work groups were assembled. And in September 1997 project plans, mitigation, and test strategies were begun. GTO had completed mitigation and testing by mid 1999. This is not to say that everything was easy and always ran smoothly. Distance and cultural differences were a greater challenge than the actual systems themselves.

The global nature of Y2K forced companies like GTO to work globally and cross-culturally to a greater extent than they ever had before. That experience laid the foundation for the movement of work off shore which occurred in the first five years of the new millennium. In essence then, Y2K created opportunities for growth and renewal through a kind of experiential and generalized learning.

The North American Group, probably because they were closer to headquarters, suffered from some internal politics and changes in management. Mitigation strategies were not coordinated until mid 1998. But by early 1999, not only was coordinated mitigation in effect, but detailed communication plans and practice drills were also organized. In September 1999 practice drills began attempting to account for any and all contingencies.

The complex global communication for Y2K was planned and organized in detail. Satellite, Iridium Phones, and Command Centers were organized. All the corporation leaders were set for a 48 hour day. And at midnight in New Zealand the first reports were filed first to Europe and then forwarded on to North America.

Many other organizations, public, as well as private, were perhaps caught by surprise and struggled to meet a deadline that could not be moved. But GTO was ready. As the planet orbited the sun into a millennium, GTO continued to report success after success, every system came up and ran properly. The millennium watch did not stop on January 1st, GTO continued to monitor and test systems well into year 2000, but within a few months all the data was in and GTO was paid in full by their clients.

In sum, then, the early recognition of the risk of Y2K and the associated long lead time allow GTO to engage in comprehensive threat mitigation. The presence of a specific, fixed date for the threat focused GTO's operations. Lessons and experiences were generalized to other opportunities, which created new opportunities for additional growth and renewal.

Summary Narrative for 9/11

GTO had people, work, and clients in the World Trade Center Towers and in the Pentagon. Within an hour of the attacks, GTO had accounted for all their people, even the fact that one employee was slightly injured. Once GTO had located all of its people, they began procedures to move the work from the two affected areas to other locations so that business continuity could be assured. GTO then turned their attention to their clients needs and began immediately addressing and mitigating their needs.

Prior to the crisis of 9/11, corporate policy was already in place to mitigate possible crises. Every major division at GTO had to have a procedure in place to account for all of their employees within hours of a crisis. In some divisions managers carry rosters with them at all times. Redundant communication tools were already in place for employees to "check in" in the event of a crisis.

There were also processes and tools already in place to allow GTO to run indefinitely in spite of disruptions to the public infrastructure. Moreover, some clients were offered space to continue their operations. GTO was able to reaffirm a number of important client relationships as a consequence of these kinds of actions. These relationships are, of course the backbone of GTO's business model as an IT services organization. In addition, GTO was able to reaffirm its reputation for being prepared and capable of handling high uncertainty, complex conditions. Finally, GTO, like many organizations was forced to refocus its corporate values system. The company responded to 9/11 with a number of philanthropic activities. These lessons and activities have been generalized to other events, including the recent tsunami .

DISCUSSION

Preliminary findings suggest that GTO seems to employ a proactive communication style with regard to risks and preparation for crisis. Corporate leaders spend little time progressing through the change curve, and move quickly to adaptation and action. It is interesting to note that one executive related her personal scale for assessing risks; "I use the one that the CDC (Center for Disease Control) uses...and then it really is just a matter of practice to know what is just "chatter" and what do I need to focus on."

GTO has norms for action, rather than avoidance, and a zero tolerance for failed initiatives. The organization acts at that level of personal commitment and shared ownership. They value their people as their primary assets and their clients as their primary business.

Executives reported that their communication strategies were the basis for their Y2K success. All communication for the Y2K event had been organized into themes which were worded by corporate communications in conjunction with corporate legal. At midnight the first communication, a public announcement by the CEO, was given to the major networks. And then every hour status reports were collected from around the world. The pulse of every system was monitored. The reports were collected at various regional centers, summarized, and then forwarded on to headquarters. Executives at headquarters had telephone calls with their clients every hour and scheduled meetings with all their clients every four hours to answer questions and give updates. The 48 hours surrounding the actual Y2K event was minutely choreographed. But it was the communication strategies of the previous three years that made the event run so smoothly.

Y2K gave GTO the opportunity to grow into the global reality working globally and cross-culturally to a greater extent than they ever had before. It is one thing to have offices everywhere it is another thing to operate successfully

everywhere. Y2K was their opportunity to truly coordinate their effort globally and hone their skills. The Y2K lessons were immediately generalized and put to work for the European currency translations to the Euro a year later.

Although GTO did not anticipate 9/11 specifically they had several mitigating strategies which helped them to face the crisis. They had detailed plans and procedures to account for their people first, for the maintenance of business continuity, and for meeting the needs of their clients.

The crisis of 9/11 also gave GTO the opportunity to grow into a new sense of community and a much a broader understanding of social commitment. A crisis mitigation web page with opportunities to make contributions is available as the result of new social commitment; offering employees ways to be of help in times of need and make an immediate contribution should any crisis occur anywhere around the globe.

CONCLUSION

Words are not meant to stir the air only,
they are capable of moving greater things.
Natsume Soseki, Kokoro

This project explored the ways in which organizations learn from risk and crisis, contributes to understandings of how these experiences become learning events, and explores how communication helps promote organizational renewal. GTO has managed to remain profitable in an industry in which many others have failed. This success is usually described in terms of its employees and their capacity for invention and implementation through creativity and commitment. It may also be that GTO has the capacity to learn and generalize those lessons, even when they concern that radical departure from the normal manifest in threats and crises. Before Y2K and 9/11 GTO's members maintained risk vigilance. Their outstanding record of service had established a positive image of credibility. GTO develop contingencies for instrumental and robust communication channels and procedures for crises. During the Y2K event and the 9/11 crisis employees were able frame meaning that encouraged decisiveness and mitigation of harm. Designated spokespeople maintained communication with various stakeholders. Then, at the conclusion of the Y2K event and the 9/11 crisis, members worked to facilitate learning, make appropriate changes to procedures and policies to account for new learning. The constructed a narrative of the events which created a prospective vision. GTO is an organization that has learned important lessons from risks and crises and has been able to generalize those lessons in ways that lead to growth and renewal. GTO's structures, processes and culture facilitated this learning and helped the organization move forward even in the face of these dramatic constraints. Many other organizations have faced crises and risks with much less success and some are even destroyed by crisis. The question, what conditions lead to renewal and what conditions lead to failure remains open. This case suggests that the nature of the risk or crisis, the organization's pre-event structure, culture and levels of preparedness and the communication strategies all play important roles.

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