

THE ROLE OF TEAM EFFICACY AT CRISIS MANAGEMENT

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Abstract

What is the difference between the team which can absorb the crisis and not? Three case studies are discussed: the Tokyo subway sarin poisoning 1995, Sumitomo Electric Industries, Ltd. (SEI) in the Hanshin Awaji Earthquake 1995 (collapsed main plant), and United Airline 232, air incident case. We observe the existence of an efficacy cycle; many managers used this cycle unconsciously and produced a successful result. For reliable success it is important to have a mechanism that permits teams to be independent from mother organizations and rendered autonomous and free decision making authority.

Introduction

Adaptation to crisis has been studied in various academic disciplines as “Research on Crisis Management”. In these studies, the occurrence of crisis was defined as a negative and unfavorable phenomenon that is only threatening. (Mitroff 1990, 1993, Pauchant, 1990; Barton 1993) Historically conventional study of crisis management is characterized by the following three major features. Firstly crisis management is identified as providing the basic means of adaptation as “return to the steady state” and researches have been conducted from the standpoint of those actions meant to return to the ex ante situation (Mitroff & Pearson 1993).

Secondly it has been held that in the process of adapting to any crisis, the strengthening of top-down type organizational hierarchy’s ability for action is essential. In other words, the concept has been such that the top management of an organization was perceived as the “decision-making center” where all relevant information and power of decision-making have been concentrated and the front line workers perceived as the “agent” that faithfully executes top management’s instructions and orders. Thirdly it has been held that the key factor of adaptation was for the top management to exercise a strong leadership (Ohizumi, 1996; Meyers, 1993). The background of such thinking lies in the concept of organizational hierarchy that purports people in the top echelon excels in decision-making ability than people in the work front.

2. Raising the Issues

When considering crisis management in the more modern managerial environment the writer feels there is a gap in the literature and understandings. What is asked of today’s crisis management team is to function effectively in a “flattened” or horizontally distributed organization and to transfer the decision-making power to the front line workers and not to concentrate the said power to the top management. It is believed that recent thinking highly values the autonomous action of front line individuals whose actions in a flattened or networked organization make the important decisions -- not the decision-making of a hierarchical organization where all decision-making is concentrated upon the top management.

Yet the top-down type hierarchical organization continues to be largely dominant at the time of crisis. Why is this so? The objectives of this study are to identify through case studies the actual



reactions of the field team that had faced and coped with a crisis and to construct a new framework by providing a fresh view that focuses on “respondents”. For that purpose, the author intends to present a new framework after having compared the two separate viewpoints; the one based on the framework of the conventional research on crisis management and the other based on the hypothetical framework this study indicates.

3. The Structure of Crisis

The author uses the two concepts: corporate mindset and execution procedure to organize the following discussion.

Corporate Mindset and Execution Procedure: The Conceptual Tools

In any work front of business, there is a conceptual diagram of action that tries to determine the anticipated actions and expected outcome of a given job. This study refers to such a conceptual diagram as “corporate mindset”. Corporate mindset is a conceptual diagram of human behavior formed through focusing the attention on human *aminus quo* and *ethos*.

This study refers to the action program formulated in a certain order of priorities to achieve the expected outcome as anticipated by corporate mindset as “execution procedures”. In other words, “Execution procedures” collectively is the subordinate concept of “corporate mindset” implemented to realize the implied results.

The Structure of Crisis and Classification

Table 1 classifies the structure of crisis in detail from the standpoints of corporate mindset and execution procedures.

Table 1 Adaptation to Crisis: Standpoints from Corporate Mindset and Execution Procedures

	A state in which Execution Procedures are valid	A state in which Execution Procedures are invalidated
A state in which Corporate Mindset is valid	i) Steady state	ii) The so-called state of crisis
A state in which Corporate Mindset is invalid	iii) State of autonomous behavior: Procedures are stultified	iv) State of confusion A state in which corporate mindset as well as execution procedures need to be created.

i) Steady State

The steady state is a condition where execution procedures accommodate the current state and people are take diversified actions to realize the corporate mindset. A fine adjustment to the contents of corporate mindset could be conducted so as to adapt to the changing environment but no drastic change as such would be made.

ii) The So-called State of Crisis

The darkly shaded column is the so-called “crisis”. The corporate mindset adapting to the current state is valid but the execution procedures are invalid. This is precisely the crisis that the conventional “research on crisis management” has been focusing on. Since the corporate mindset is fixed in the endeavor to “return to the steady-state”, what should be done in this case is to realign or create execution procedures.

iii) The State of Autonomous Behavior: Only Corporate Mindset is Invalid

This is the pattern in the state of autonomous behavior where a corporate mindset is invalidated but execution procedures are in force. It is the state where people do know what has to be done to cope with the crisis they are confronted with but cannot find a corporate model.





iv) The State of Confusion

The state of confusion is a “crisis” in its pure sense where both corporate mindset and execution procedures are invalidated. In many such cases, respondents are under the state of confusion immediately after the crisis occurs.

4. Structuring Hypothetical Framework

In the conventional research on crisis management, the center of research has been to fix the corporate mindset and to study (Table 1-ii) the pursuant reactive adaptations. This study, however, does not place return to the steady state as the final objective of adaptations but structures a new hypothetical framework aimed at adapting to crisis in its broader sense (Table 1-ii-iv) by basing perceivable adaptations on various possibilities that could be considered. In the process of structuring this hypothetical framework, the two separate studies have been applied. The one is the research on self-organization in a given institution and the other is the research on the development of creativity as a team and its motivation that is referred to as team efficacy.

Constituent Element 1: Adaptation to Crisis through Self-Organization

The concept of self-organization could help to better understand conceivable methods within which a team copes with a given crisis. Self-organization is a phenomenon in which people take adaptive actions through structuring a set of new order and changing the system itself. Advancing self-organization at any juncture is for the team to form its own corporate mindset and execution procedures through trial and error. Through the promotion of self-organization it is conceivable that adaptive actions against crisis would be activated.

Constituent Element 2: Team Efficacy, the promoter of Self-Organization

The advancement of self-organization within a given team could be considered as a state in which front line workers have created a new sense of corporate mindset and execution procedures; the respective members have confidence in controlling and containing the immediate phenomenon. In other words, this is a state in which a given team believes it has the confidence in controlling the immediate phenomenon, that is to say, ‘each team member is certain about the team’s capability to take necessary actions to produce a certain result’. Such a state of having self-confidence is referred to as collective efficacy in the discipline of psychology (Bandura, 1995).

It is generally believed that a given team’s autonomy is well maintained by a state in which collective efficacy exists and that diversified workloads can be successfully carried out based on intensive communication among the team members as well as on the solid relationship of trust (Campion, Papper, Medsker, 1996). At the same time, it is indicated that positive influence is exerted on achievement of tasks and performance (Bandura 1997). That is to say, it is considered that stimulating the generation of collective efficacy would result in promotion of self-organization. Bandura (1995) cited the following four elements as the sources that generate collective efficacy; they are namely: mastery experience (acquiring experience of success), vicarious experience (acquiring quasi experience of success by means of using successful experience of others as the model), verbal persuasion (persuasion through positive address hinting at a success such as “We are sure you can do it!”), and physical and affective status (physically in good shape).

5. The Framework of Crisis Management and Hypothetical Framework

Table 2 shows the comparison between the framework of the conventional researches on crisis management and hypothetical framework constructed on the basis of the constituent elements mentioned in the preceding chapter.



Table 2 the Two Frameworks

Elements of Analytical Frame	Viewpoints based on the Researches on Crisis Management	Viewpoints based on the Framework of this Study
Corporate Mindset in Adaptive Phase	Return to steady state	Return to steady state is considered but the creation of new corporate mindset shall also be considered
Adapting Entity	Management team: The decision making center	Work front team
Actions to be taken as an organization	Behaves as a top-down type hierarchical organization	The work front adapts through self organization
Corporate mindset/ execution procedure	Top management alters and renews	Work front creates and makes references: (Promotion of self-organization)
Communication	Instruction/execution	Collaboration
Key Factors of Adaptation	Strong leadership of the leader	Advancement of self-organization that stimulates generation of team efficacy

6. Introduction of Cases and the Method of Study

Three cases studies were reviewed for this study. The first case is St. Luke's International Hospital that treated a large number of victims of salin gas attack on the Tokyo Subway System by AUM on March 20, 1995. Initially, nobody suspected the victims were attacked by sarin gas and, consequently, the hospital's medical team was subjected to great hardships. Observation by participation was used as the research method to attend to this case.

The second case is the series of adaptive activities taken by Sumitomo Electric Industries Co., Ltd. (SEI) on the occasion of the Great Hanshin Earthquake that struck the area on January 17, 1995. We looked at SEI's Itami Works that was actually hit by the quake and implemented rebuilding program. We reviewed the activities of the Power Team belonging to the Osaka Sales Division that had actively participated in the rebuilding programs in the region. SEI had linked the earthquake management conference room on its corporate intranet (J-NET) and all the remark logs were recorded. The analysis of this record and surveys by interviews at the end of the first and 6th years after the incident were conducted.

We took the miraculous incident that happened on July 19, 1989 as the third case. It is a case in which the United Airways' team of pilots had safely landed an aircraft that went through theoretically unexplainable complete loss of the hydraulic pressure systems. Analyses on the records of interviews conducted and disclosed by NASA, accident survey reports of the National Transportation Safety Board and the records of the voice-recording device were reviewed.

7. The Results of the Case Studies

The results are shown in the table below. The results as assumed are marked ○, those results partly different from the assumptions are marked □, and the results entirely different from the assumptions are marked ×. (A = Analysis)



Table 3 The Case Study Results viewed from the Two Analytical Standpoints

	Elements of Analytical Frame	Viewpoints based on the Researches on Crisis Management	Viewpoints based on the Framework of this Study
A1	Corporate Mindset in Adaptive Phase	Return to steady state	Return to steady state is considered but the creation of new corporate mindset shall also be considered
	St. Luke's Intn'l Hospital	At the work front, people aimed spontaneously at returning to the ex ante normalcy. The hospital then took the necessary actions to return to normal practice. There was a time difference between the two entities.	More than one corporate mindsets created at the work front were in force simultaneously.
	Adapting Entity	Work front team	Work front team
	Comparison with the Assumption	○	○
	SEI	The organization as such aimed at returning to its steady state. In the work front level, Itami Works aimed at returning to its steady state (returning to the ex ante state). The Power Team belonging to Osaka Sales Division was too busy coping with problems that occurred one after another	People at Itami Works aimed at returning to steady state and no new corporate mindset was generated. Osaka Sales Division's Power Team created a new corporate mindset on its own and multiple corporate mindsets were in force simultaneously.
	Adapting Entity	Work front team	Work front team
	Comparison with the Assumption	□	□
	UAL Flight 232	"Maintenance of safety and landing alive" were the only existing rule.	Return to steady state was impossible and "Maintenance of safety and landing alive" were the most important factors. No creation of new corporate mindset was done.
	Adapting Entity	Work front team	Work front team
	Comparison with the Assumption	×	×
A 2	Actions to be taken as an organization	Behaves as a top-down type hierarchical organization	Adapts as an autonomous organization



	Promotion of self-organization	A large number of members became autonomous actors that made decisions on their own, henceforth; numerous decisions were made on the spot at the work front. However, the domain of purview was not clearly set.	Various adaptive actions were carried out through the promotion of self-organization.
	Corporate Mindset/ Execution Procedure	Work front team was the instructing and executing entity	Work front team created them on their own and altered them as the situation demanded. (Promotion of self-organization)
	Communication	Collaboration	Collaboration
	Comparison with the Assumption	□	○
	SEI	A large number of autonomous actors adapted by making on-the-spot decisions. The top management clearly indicated organizational mindset at an early stage	Various adaptations were carried out through promoting self-organization. Especially, people at Itami Works self-organized themselves in connection to execution procedure. The Power Team belonging to Osaka Sales Division formed both corporate mindset and execution procedure on its own by self-organizing.
	Corporate Mindset/ Execution Procedure	Work front team instructed and executed on its own	Work front team created and addressed itself (Promotion of self-organization)
	Communication	Instruction and collaboration	Collaboration
	Comparison with the Assumption	□	○
	UAL Flight 232	Team members exchanged opinions and made decisions on their own	All team members acted as autonomous actors and adapted to the crisis
	Corporate Mindset/ Execution Procedure	The captain and other members instructed and executed simultaneously	All team members created on their own and addressed themselves (Promotion of self-organization)
	Communication	Collaboration	Collaboration
	Comparison with the Assumption	□	○
A 3	Key Factors of Adaptation	Strong leadership of the leader	Promotion of self-organization



Promotion of self-organization	The top management clarified the organizational corporate mindset at the outset and had concentrated in creating workable environment for work front team. Performed the obligation of making explanation externally.	It is considered generation of team efficacy was triggered through the promotion of mastery experience stimulated by the introduction of original information disseminating media called “Mini-Kawaraban = News Letter”
Comparison with the Assumption	□	○
SEI	The top management does not come out front after setting corporate mindset as an organization. Rather, they acted in response to requests from work front team. Concentrates on easy to work environment for work front team.	It is considered that through utilization of J-NET (the corporate intranet), broad feedbacks from diverse sections in fast cycle were fed that led to the promotion of generating mastery experience and team efficacy. Moreover, through the sharing of activities on the net, the situation was such that the generation of vicarious experience-like efficacy was facilitated.
Comparison with the Assumption	□	○
UAL Flight 232	Although the leader acted as one of respondents and acted in unison with other members but the scene in which the leader issued commands was also numerous.	It is considered that since the feedbacks on adaptive actions from the aircraft and ground crew at a fast cycle were received, the generation of the cycle of mastery experience was stimulated, which, in turn had triggered the immergence of team efficacy.
Comparison with the Assumption	□	○

8. General Discussion (Knowledge Acquired through the Cases)

1. Corporate Mindset in Adaptive Phase: Returning to the steady state was not necessarily the objective of corporate mindset. The cases showed that people took adaptive actions based on a new set of corporate mindsets fixing their eyes on the style of future organization at the same time.

2. Actions to be taken as an organization: The front line workforce acting as autonomous actors coped with the crisis but the top management exerted ‘strong leadership’ in a certain sense. The leadership did not take the form of centralized system where all decision-making and authority are concentrated upon the top management but it worked more in the direction of creating an ‘adequate atmosphere’ enabling people at the work front to make decisions autonomously and to take adaptive actions and measures more freely.

3. The Key Factors were the Self-Organization at the Work Front: In the above three cases, the front line work force coped with the crisis through self-organization – creation of corporate mindset and execution procedures. The role of propagating and sharing new information within the team was spontaneously assumed by someone and was functioning properly. This was not an action taken in response to the direction of the top management but it had emerged as the result of autonomous actions. Besides on-the-spot verbal communication, the original media created by the respective organizations fulfilled the complementary roles of disseminating and



sharing information among the members. The scenes in which the top management was obliged by instructions issued by work front teams were frequently observed.

4. The Generation of Team Efficacy contributed to the Activation of Self-Organizational Phenomenon: Through the interviews with those people who handled the crisis and by analyzing the records of verbal communication, it was possible to deduce that the mastery experience acquired during the period of adaptation had directly triggered the generation of team efficacy. In each crisis case reviewed by this study, it was observed that there was increased possibility to receive more feedbacks on adaptive actions at a faster cycle through various information media than what had been possible in the past in more traditional “steady state” systems. This is a concept linked to the ‘cycle of mastery experience’ that emerged between the adaptive actions and feedbacks and the rapid movement of this cycle enabled a more frequent acquisition of mastery experience by the members was possible compared with the speed of acquisition during the steady state.

Moreover, it is possible to consider that vicarious experience had been activated through original information media of the respective organizations. Information media enabled frequent transmissions of up-to-date situational information and successful adaptive actions and measures taken by others within the organization. It could also be considered that by continuously acquiring ‘fresh information from the field’ and watching the changes caused by some team members’ adaptive actions, vicarious experience-like phenomenon has immersed although no adaptive action was taken.

9. New Crisis Management Frameworks

It was not possible to fully explain the phenomena through respective frameworks as they were observed. However, we can point out the necessity of forming an integrative framework

Presentation of Integrative Framework

Table 5 summarizes the integrative framework surmised through studying the cases

Table 5 Integrative Frameworks in Crisis Management

Elements of the new Framework		Viewpoints of the New Framework
Basic Organizational Form	Organization	Supports adaptive actions of autonomous actors as an organization. An organization that accepts work front to act as autonomous actors. However, organizational hierarchy itself exists within.
	Work Front	Structured by team comprising people at the work front as autonomous actors.
Corporate Mindset in Crisis Management	Corporate Mindset of the Organization	Makes explicit the corporate mindset devoted to the work in the field at an early stage of crisis management.
	Corporate Mindset of the Work Front	Adaptation by forming corporate mindset and execution procedures answering the needs of the immediate situation. (Adaptation by self-organization)
Key Factors of Adaptation	Leadership that makes the most of Work Front	Activating self-organization at the work front by making the policy of top management explicit at the outset. Will not make top-down decisions.
	Team Efficacy	Activation of self-organization. Creates organizational system enabling speedy feedback on adaptive actions aiming to generate team efficacy at the outset of adaptation.
	Communication	Creation of environment where interactive transmissions of



information through various media is possible.

10. Conclusion

Lastly, the author wishes to indicate the limit of this study. This study is an exploratory research based mainly on case studies. However, since this kind of work deals with a unique phenomenon called crisis, a generalized and controlled quantitative analysis is not readily possible. The number of cases the work dealt with was only three and quite some time had elapsed since their occurrences. In this respect, the author fully realizes the necessity of research on greater number of cases.

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