

Learning Processes for Crisis Management in Complex Organizations

Patrick Lagadec*

Safety practices and preparations for limited emergencies are common activities in complex systems. In contrast, the vital task of planning for a crisis is usually poorly handled. This paper seeks to provide a better understanding of the prerequisites for successful learning processes to deal with crisis situations. It reveals the barriers that emerge during the process of developing satisfactory learning practices.

The objectives of this paper are twofold. The first aim is operational: how can one develop adequate learning processes despite the challenges involved? The second aim is theoretical: what light do these efforts and the resistance they arouse shed on the debate between 'High Reliability Theorists' and 'Normal Accident Theorists', in which the status of learning processes is a key element. The author refers to his personal experience with crisis research and consultation.

Introduction: Learning and the Debate Between High Reliability Theorists and Normal Accident Theorists

The issue of determining the viability of complex systems has been enriched in recent years by the dialogue between two theoretical approaches known as High Reliability Theory and Normal Accident Theory (La Porte, 1994; Perrow, 1994). High Reliability Theory seeks to explain why some large organizations manage to achieve high levels of performance in the area of safety. It emphasizes the priority placed by managers on safety; redundancy in both human and material resources; the development of a high reliability culture, notably by means of training; and the comprehension of complex technologies by means of learning processes (Rochlin, 1993).

The Normal Accident Theory delivers the opposite message: it is illusory to think that complex organizations can avoid accidents (Perrow, 1984). Besides, in complex, tightly-coupled technological systems, complexity makes unexpected interactions between failures inevitable. These failures are rapidly propagated throughout the system along tightly-coupled lines. Hence, a system break-down is caused (Perrow, 1984). Safety is far from being treated as the priority that it should be. Redundancy induces complexity and, hence, has distorting effects on reliability. Despite the claims of High

Reliability Theory proponents, Normal Accident theorists suggest that a safety culture cannot be imposed on an organization. The learning process is handicapped by technical uncertainties and political barriers (Sagan, 1993).

The dialogue which has evolved from these two opposing perceptions of stability in complex, high-risk systems, is a useful one. It forces managers of large systems, to take a critical look at safety conditions in their organizations. It forces scholars to take into account the full complexity of the processes that develop in actual organizations (Sagan, 1993).

This paper does not attempt to determine which side is 'right'. The value of this debate lies in the tension between two opposing points of view; it is important to leave the question open, without simplifying or caricaturing it. The author simply wants to provide some 'food for thought' by considering a specific aspect of the safety issue: crisis prevention and crisis management and more precisely, the issue of learning.¹ This paper will not discuss techniques and skills for crisis management (Lagadec, 1993) but, rather, how complex systems seek to acquire them. These observations are based on the author's, necessarily limited, experience involving complex systems in France and other countries, in both the State-operated and private sectors over the past ten years (Lagadec, 1995).

In the first section, the paper outlines some of the major challenges for adequate crisis management faced by sophisticated systems.²

*Patrick Lagadec, L'École Polytechnique, 1 Rue Descartes, 75005 Paris.

These challenges require significant learning efforts. The second part examines learning strategies to be undertaken and developed, as well as the resistance often evoked by these learning processes. The third section offers a few parting thoughts aimed to provoke discussion and consideration.

Taking Stock: Acute Challenges in Crisis Management

Challenge Number 1: How to Detect and Understand an Emerging Crisis; How to Achieve Cross-Departmental Mobilization Based on Weak, Ambiguous Signals?

A crisis does not necessarily clearly announce itself before arriving. It often edges forward disguised as business as usual, or gathers strength on a secondary front, away from the closely monitored centres of interest. It seems to avoid targeting a single, specific department, which would then be assigned unambiguous responsibility for dealing with it. As the strategist Sun Tzu advised, it does not attack a highly visible, clearly outlined position, but seems to rather undermine 'its enemy's strategy', underlying values, sources of authority and world vision.

Even the best organizations have been known to fall into this trap. Instead of developing in-depth thinking and mobilizing their forces, organizations are reassured: 'Nothing is going on'. That is, nothing that was anticipated in the emergency plans. The crisis may inch forward and take over the entire field of operations, through 'underground' channels that the organization fails to recognize. What is missing is the characteristic feature of an emergency: a clear trace that would justify triggering the warning procedures and mobilizing resources.

The crisis only makes itself known once it has established solid bridgeheads. Then, it is often too late to counter-attack. The classic reaction is 'I couldn't act any earlier, I didn't have enough evidence'. To be capable of reacting adequately, one would have to be able to mobilize forces across the board and call on a great number of organizations involved in one way or another. But people don't know each other well enough, even within a given organization, and it is hard to imagine convincing other partners to take action based on strange and ambiguous indicators. Besides, the crisis sometimes emerges in strange or even taboo territory. Before moving onto such ground, everyone involved wants solid proof of the need to do so.

A variety of factors converge to give the crisis a formidable advantage at the outset: pre-defined rules standardize procedures to be respected; underlying taboos; antagonisms between

cooperating parties; and a mis-match between existing world visions and the actual dynamics driving the crisis (Setbon, 1993). Once failure has occurred, the same observation is made repeatedly: 'We didn't stumble on any specific point, the cause of the collapse was deeper. We simply weren't ready at all for this type of challenge'.

Challenge Number 2: How to Manage Multi-component Systems?

Large well-trained organizations are usually equipped with quality leadership, control centres, 'war rooms', emergency plans and other crisis necessities. Yet they often find themselves to be at a loss when faced with a real crisis, one that brings a wide range of partners into the game. Each organizational unit involved, finds itself confronted with critical questions and no firm ground to stand on.

If the necessary networking has not been achieved, then general system of actors will fall apart. Each unit, whether internal or external, quickly takes its distance, acts on its own account and develops new systems of relations, information and interactions. The central crisis team soon becomes merely one spinning wheel among many others. It can no longer claim to be actually managing the situation. When desperation sets in, it begins to fight an essentially bureaucratic battle intended to mark out its territory (the symptom often found in 'calls for coordination').

The whole state of affairs quickly becomes extremely vulnerable. Periods of crisis create strong bonds between inter-organizational systems, with exactly the same risks as those faced by a group of climbers roped together, especially when the terrain is slippery. Any given action, any mistake that might, in fact, be minor, can take on major symbolic importance and trigger a general collapse, even if the mistake occurs on the periphery of the system or in a unit of secondary importance. All it takes is problems that converge at top speed and unleash disastrous dynamics. This trap is made all the more devious by the fact that most of the attention is generally focused on core activities rather than on peripheral activities. One is usually more vigilant about clearly worrisome phenomena than about scattered details that appear 'flimsy' and may become dangerous only when several combine together.

When confronted with a crisis, large configurations of actors typically and implicitly considered as reference networks suddenly cease to function. These assemblages begin to crumble; their members no longer cooperate harmoniously with each other or maintain the stable relationships they previously enjoyed.

The configuration of the whole may transform very rapidly, as the crisis generates surprising kaleidoscopic effects. The result is a new 'game' in which crisis managers must think much harder about the interplay of the actors and about mutations and re-alignments that are likely to take place. The trick is to be ready for a surprise (see the analysis of the Amsterdam air crash on 4 October 1992, by Rosenthal et al, 1994).

Challenge Number 3: How to Deal with Expert Uncertainty?

Until recently, the greatest challenge was to rapidly find and organize specialists who could present the available knowledge and the types of action tested and proven by the scientific community and its experts. Now, as crises become increasingly complex, the problem is often one of piecing together a minimum of scientific understanding about new, poorly-understood subjects that are difficult to comprehend. In the area of public health, this is an overwhelming issue. It is especially thorny when the question deals with the importance of trace quantities, but it is omnipresent: expert opinion is often available too late to be of use in decision making or communicating.

The task is no longer to find the scientist in a white lab coat who will silence ignorant policy makers from atop a lofty pile of publications. Nor is the challenge to locate another Red Adair; an expert who has solved that particular problem hundreds of times and knows all the 'ins and outs' of the job. The task is to develop, and enhance, the much more complex processes of constructing an informed opinion that is both relevant and credible and, at the very least, to find signposts for those who must decide a course of action (Dab, 1993).

The transition has to be made from holding up unquestionable, established truths to working with infinitely more open-ended, and essentially 'political', concepts. Finding a way out of some of the conventional traps will pose a cultural challenge to decision makers, who are still used to waiting for undeniable evidence ('if it hasn't been proved, I won't do anything'), to using either/or logic ('stop everything versus business as usual'), to cringing from informing the public ('if I talk about the uncertainty, everyone will panic'), to believing, deep-down, that specialists will arrive with the answer. Unless properly trained, managers are programmed to fail in crisis situations.

Challenge Number 4: How to Handle the Reverberations of a Media-Driven Environment?

Until recently, the great communication revolution entailed the shift from secrecy to

openness. By now the requirements are well understood and even respected: the media must receive information quickly, press conferences must be held, actors must be available and cooperative with the press. However, the media-driven environment as a whole, and the new rules it is laying down, are raising some critical issues (Lagadec and Scanlon, 1995). A certain number of observations should make actors stop and think again, notably about how prepared they really are.

First, the media-driven environment compresses the margin for manoeuvring. In almost no time, hundreds of journalists converge on the scene. Even the best organizations have difficulties coping, if only because of the logistics involved. Secondly, new capabilities exist for finding, getting access to and spreading information. The sites of crises are much more accessible, due to new technology such as high-powered lenses and night-vision cameras. Within minutes, any available information can be distributed via worldwide networks. For example, a train serving the Brussels-London route has a minor incident, which produces some smoke, but nothing serious. It stops on Belgian soil. The Belgians send some fire trucks, just in case. Smoke and the fire truck induce a British passenger to call the BBC on a cellular phone to announce a fire on board of the Eurostar. The news can achieve international circulation within minutes.

From a less technical and more socio-organizational point of view, one can observe that systems have lost their cohesiveness. An actor's power is often determined by its ability to present a strong image to the outside world. The awkward consequence is that insiders tend to call media hotlines well before organizational members have been properly informed. The links between 'insiders' and media can be efficient to a troubling degree.

Thirdly, live interventions by the media can complicate crisis management tremendously. The media coverage of the hijacking of the Algiers-Marseilles Airbus (24-26 December, 1994) demonstrated that an important threshold has been passed in this area. The many dubious media initiatives during this episode included the question posed to the French Minister of Foreign Affairs, during a prime-time news show on a leading channel: Could he confirm the presence of two representatives from the French embassy on board the hijacked plane? Then there was the news flash, just before special forces stormed the plane, announcing that the terminal in Marseilles (to which the plane had flown in the course of events) had been evacuated; this could have been interpreted by the terrorists as a clear sign of impending attack.

Challenge Number 5: How to Stake-out a Position in Increasingly Unknown Territory?

Well-equipped organizations know how to react to emergencies. The trap set by a crisis is much more devious. Without specific preparation, they fall into deep trouble. A crisis blurs territories and power sharing so that it cannot be easily accepted and handled head-on and openly. It would require solid justification and considerable changes in mindsets just to alter the various individual's prerogatives. And, before reaching this stage, all the usual mechanisms – denial, avoidance, rationalization and exclusion – come into play. This process may be less pronounced in smooth-running organizations, but the challenge remains sizeable in any major crisis.

Organizations face severe difficulties in deviating from their conventional benchmarks and taking time to re-think some fundamental questions. A crisis team may not have the authority to do this. The crisis causes a shock to the accepted world view which, in turn, inevitably arouses incomprehension, reticence and denial. How can a manager willingly generate decisive disruptions in the name of a crisis whose actual existence is still doubted, whose very shape is uncertain, since it can only be vaguely glimpsed and which keeps changing direction like a raging cyclone? Before leaving the reputedly unsinkable Titanic – 'Even God could not sink this ship', said one of its officers – and climbing into a frail lifeboat, people demanded irrefutable proof it was necessary.

In the most serious cases, a structural problem appears. By definition, the crisis team is made up of the people in positions of responsibility and authority, those who are running the system that has come under attack. Their perceptions, their benchmarks and their interests can hardly lead them to initiate the changes required to face the crisis. History is rich with examples. Consider Joffre, who, in August 1914, could not be made to understand that the German army was not at all organized as the famous Plan XVII had foreseen (Tuchman, 1962). The situation is even more acute today, as it is commonly recognized that our conventional benchmarks are in a state of flux. Against this already unstable backdrop, specific crises take place. The results are extremely complex reverberations that appear random and uncontrollable:

For fifty years, a bi-polar world order provided simple guidelines for understanding history. There were good guys and bad guys, friends and foes. Recently, everything has changed. The confrontation between two ideologies has given way to religious conflicts, culture clashes, ethnic battles, economic competition, and technological rivalry, to the tune of shifting alliances in which the sworn enemy on one front may be a critical

ally on another. The image of chess, an obsession during the cold war, is no longer relevant. Today geopolitics looks more like a series of simultaneous poker games, against adversaries involved in unpredictable coalitions. Within this apparent disorder, the rules of the game for the twenty-first century are being hammered out (Attali, 1995:1).

Staking out a position under these volatile conditions, which are replicated not only in international politics but in all sectors of activity, has become excruciatingly difficult. Untrained crisis teams have little chance of finding their way through the brave new world of contemporary crises. The human, economic and organizational costs are tremendous. It should be clear by now that crisis management requires more than an understanding of a few ground rules.

Learning Processes: Procedures and Resistance

The most highly prepared organizations know how to train for the implementation of emergency measures. But a crisis has other requirements: repeated learning by people, teams and networks about how to detect and handle disruptive situations as a group. Simply repeating the basic pre-planned motions, updating checklists and making sure managers know what is in them, is not enough. The task is not merely to induce reflexes; the task is to prepare, as an organization, to confront situations that are unimaginable and potentially highly de-stabilizing.

Undertake Work With Top Leadership and Teams on the Issue of Major Unexpected Events

The very first, indispensable, step is to have executive teams work on the issue of major, potentially disruptive events that could undermine their whole system. What are the weak points, unexpected break-downs, or possible and possibly amazing combinations of broadly disturbing phenomena that may occur? The main focus of these initial discussions, which should take place during a retreat away from the work place, is less to develop knowledge than to break away from the day-to-day managerial mindsets and procedures. The purpose, very basically, is to form teams that can move forward in a mutually supportive, structured manner when potentially discomfiting signals are detected around sensitive issues.

Launching this process is very difficult. Of course, each manager can imagine how he or she would present a proposal for an emergency plan to other colleagues. But, such people are

extremely reluctant to think as a group about the potential weaknesses of these measures, about possible flaws in the structure of their organization and about collective uncertainties that would be raised by a proper crisis-preparation process. Experience has shown that it can take many years, including a major negative occurrence, before this kind of gathering with its very special agenda can be envisaged.

Debriefing

Learning from experience involves reviewing a difficult episode from a constructive point of view. The goal is to extract fundamental lessons learned from the way the event was handled by the main actors involved. In other words, the difficult experience is treated as an opportunity for group progress rather than something to be placed between parentheses and forgotten. It is even less a chance to place blame. This type of procedure is already familiar to reliability engineers who intervene in the aftermath of technical system failures. It is rarely employed in the wake of organizational crises.

Experience has shown that the introduction of this practice meets with fierce resistance. Dealing with issues of organization and crisis means entering into a very sensitive environment, the realm of crisis itself. Much of the time, unless the project has behind it the firm commitment of the most senior leadership and an especially strong-willed team, well versed in the method and its dangers, this effort founders on an overwhelming number of problems with scheduling and motivation. A consensus emerges that the idea is interesting, of course, but that the timing is wrong. The project quickly slips to the bottom of a drawer. In fact, every participant realizes that because the organization is so ill-prepared, any examination of these risks will uncover flaws, hidden agendas and basic assumptions that no one wants to have to explain.

Yet, the very difficulty encountered in launching this debriefing process is highly revealing: it is a clear sign that the organization is still very poorly prepared to face crises and, consequently, that it is highly vulnerable.

Simulations

It is not enough to rely on 'real' experience alone for crisis preparation. An untrained group will have tremendous difficulty in taking charge of an exceptional situation and innovating when faced with the unimaginable. This is why it is useful to practice regularly in the organization, not on well-choreographed incidents (like the ritual fire-drill), but on major, highly de-stabilizing shocks.

Organizations accustomed to carrying out annual manoeuvres involving routines that no longer trouble anyone, and that fail to de-brief the participants after the exercises, will find it unsettling to enter into truly (or at least potentially) unstable settings which are structured, monitored and analyzed for this purpose. The mere prospect of such a simulation, with the general realization that it will lead the group away from the typical routine, still frequently leads to the cancellation or delaying of such training devices. Or it may be rendered useless, as controversial aspects are removed from the program. Everyone is happy to train on accident scenarios, but not on situations that may put a finger on the points at which the organization is less than robust.

Specific Advanced Techniques

It is vital to provide individual training to a small number of key managers: the top executives who will have a crucial political role to play during the crisis; the 'crisis managers' who will have to oversee highly complex systems; spokespersons, experts and others. Most sophisticated organizations now offer media training. But this is not enough.

Surprisingly, we are constantly discovering top managers who have not developed the use of this type of advanced technique. In fact, they often resent having to spend their valuable time participating in simulations. Implicitly, they are assuming that at the level of responsibility they have reached, they naturally know how to manage crises. The layer of management just beneath them is not much more open to the learning processes targeted at them.

Multiple-Actor Learning Processes

As already discussed, a crisis is a process that encompasses many actors. Consequently, it is important to extend the learning processes beyond the focal organization, alone, through meetings, feedback, simulations and the exploration of unexpected weak points in ways that cannot be achieved internally. The circle of actors involved should be continuously broadened.

The resistance is even more ferocious at this level. It is hard enough to break-down barriers between in-house departments. Opening up the examination of potential problems in this way generates tremendous anxiety. This process, which should lay the indispensable foundations for preparing any complex system to face a crisis, is often written-off as unrealistic – even by the most advanced organizations.

Implementing a Task Force

To see that all this work is effectively carried out, it is important to create a specially mandated unit (one or two people) whose assignment is to supervise and provide methodological support. These should not be managers who would have heavy responsibilities in the event of a crisis. Instead, this special unit should clearly have a purely methodological brief. It should be made clear that if a crisis hits, the task of these people is not to take charge, but, rather, to continue providing methodological support. For example, they would act as observers and analysts and would keep a strategic log-book.

Organizations are very reticent to set up this type of structure. Consequently, learning processes are one-off events. They don't receive the follow-up necessary to develop a true policy of prevention and crisis management.

Some Concluding Considerations: Resistance and Change

Despite persistent efforts in this field over the last ten years, one conclusion can be made recurrently: with a few exceptions (which occur when one individual sets personal goals in this area and moves forward, even at the risk of harming his or her career), learning processes in crisis management are barred by considerable obstacles. This leads to the following hypotheses, presented in unpolished form here to provoke discussion:

- Everyday pressures leave little time to think about fundamental crisis risks, even though these can threaten the stability and future of the organization;
- when it comes to marginal technical dysfunctions, safety issues are well understood; the issue of crisis, however, which challenges fundamental equilibria and organizational survival, is not spontaneously considered to be one to which examination, intervention and learning can, or should, be applied; and
- more fundamentally, crises feed on ambiguities about legitimacy, spheres of influence, basic strategies and power. Often, these are issues that top management instinctively refuses to touch. No one can accept the idea of a spotlight focused on these grey areas that exist in any organization. People are willing to consider organizational change in order to increase marginal efficiency; they reject it if it is aimed at the foundations of the organization.

Consequently, it appears that everyone may

be very interested in marginal risks, but certainly not in issues of survival and fundamental equilibria in the organization. Even top management seems to lack the legitimacy necessary to undertake this process:

- Learning processes are barely tolerable within an organization, and they become even more problematic across organizations;
- there is a deeply anchored notion that exceptional and abnormal events are not a concern suited to a rational approach; it would seem that the watchword of the 18th century French naturalist Buffon, who was fighting against a belief in supernatural phenomena, still holds true: 'Causes whose effect are rare, violent and sudden should not concern us, as they are not part of nature's ordinary cycle; rather our causes and our reasons are to be found in effects that happen every day, in movements that follow one from another and recur unceasingly, in operations that are constant and always reiterated'; and
- last, but not least, everything seems to indicate that managers are accountable for the 'delta' in their results, but not for the underlying direction that influences these movements and the overall survival of an organization; managers recognize the enormous risks if they threaten marginal efficiency, but they cannot imagine they are creating substantial dangers to the institution when they are in fact "betting the Finn".

Taking the possibility of crisis into account would probably require other management practices, based on open exchanges of ideas and on work done as teams on ambiguity, shocks or networks. For example, in companies as advanced as Hewlett-Packard, capable of navigating successfully in a world of crises and constant breaks with the past, principles can be observed that would shatter the business cultures of many state-owned organizations. At Hewlett Packard, the hierarchy is very flat and the withholding of information can be considered as a serious professional fault.

If we take a broader view, over the longer-term, the observations made above can be nuanced. It is possible, for instance, that the resistance encountered is temporary and is rooted in business cultures that can change, sometimes deeply and quickly. A number of contrasting observations should be noted:

- Though the issue of crisis is worrisome today (as it should be), it causes less and less paralysis among top executives; the subject is becoming easier to address and the problem can be included on the agenda;

- though the issue arouses resistance and fuss, progress has been observed in learning processes which have been initiated in large organizations; feedback exercises and simulations are no longer frightening monsters, but are becoming practices that are increasingly incorporated into an organization's benchmarks;
- task-forces are gradually developing, at least informally; they will probably win official acknowledgement in coming years;
- crisis management skills are often astonishingly weak and the resistance to learning processes can be violent, but it is also important to acknowledge that organizations can progress in surprising ways; once the cultural hurdles have been passed, people realize that technical and organizational adaptations can be made very quickly;
- the issue of institutional reliability, which used to be the preserve of safety specialists only, is increasingly becoming a domain for general management; and
- when the headlines are full of news about crises, mindsets can alter rapidly: sometimes incredible changes take place in a few weeks. These few elements should make one cautious. It is possible that the coming years will see powerful shifts in the area of prevention as well as in crisis management. This is especially true of learning processes in this constantly developing field.

It was noted earlier that the High Reliability and Normal Accident theories were interesting catalysts for discussion. It is, however, important not to become locked into either model or to contrast them excessively. The realities of life in society, especially when touched by crisis, refuse to be boxed into such all-encompassing models. One should be wary of hasty generalizations, even when they enable us to organize otherwise hard-to-classify observations.

A reality check should make us cautious. Organizations are capable of amazing degrees of adaptation, depending on their circumstances. This is an essential factor in the field of crisis. Initiatives that are considered, today, to be too risky may suddenly be perceived as acceptable, in the aftermath of a costly crisis or because of new standards in the media or legal arenas. Risks can even become organizational opportunities not to be missed: all it takes is for the field in question to become a prize to be captured in the conquest of new powers in the organization.

As a general rule, managers should be modest when facing a crisis, and so should analysts. Students of crisis can and should try to shed light on an issue that is often dark and mysterious. But they should resist the

temptation to reach definitive, all-encompassing conclusions. As attractive as these may seem, they are actually deceptively simple.

Notes

- 1 The focus is not on simple 'emergencies'; that is, clearly bounded accidents within generally stable situations. In such cases, the key to success is the speed with which specified means and procedures are implemented. Instead, the focus is on 'crises' and the dynamics of disruption, which call into question benchmarks, assumptions, the applicability of tools, procedures, options and the foundations of authority.
- 2 This refers to those organizations already well aware of security issues. Most organizations, however, are poorly prepared to face crisis issues and their problems are much more basic than those examined here.

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