Preparing for the Future: Critical Challenges in Crisis Management

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Introduction: The Changing Nature of Crisis

In the field of crisis and contingencies management, there is a strong notion that crises are changing shape (Rosenthal, 1998; Kouzmin and Haynes, 1999; Rosenthal, Boin and Comfort, 2001). Crises are becoming more complex in nature, they are increasingly transboundary and interconnected; in a way, crises have become endemic features of modern society. This changing nature of crisis appears to be a logical development, given such long-term trends as globalisation, increased mass communication ('inter-wiredness'), social fragmentation and the hotly disputed dissipation of state authority.

The potential impact of the future crisis is likely to grow as well. As the complexity and coupling of ever-larger, complex systems continue to increase, small disruptions will lead to rapid escalation (Perrow, 1999). The 1997 economic crisis in Asia exemplifies the speed by which seemingly minor events cascade into developments on a world-wide scale (Bisignano, Hunter and Kaufman, 2000). The global IT infrastructure has been shown vulnerable to 'glitches' and viruses, with small interruptions causing tremendous damages (Rochlin, 2001).

A rather pessimistic view on the crisis management capacities of public and private organisations accompanies these perspectives on crises of the future. In the pages of this special issue, most if not all authors seem convinced that crisis managers need more and different forms of training in order to prepare them for future crises.

Theory lends plausibility to this pessimistic – or should we say cautious – view. One 'stable' characteristic of crises in the past and future is the combination of uncertainty (inconceivability if you will),[1] threat or disjunction (crises as critical phases) and time compression (Rosenthal, Charles and 't Hart, 1989). In other words, there is no such thing as a routine crisis. Crises confront decision-makers with hard dilemmas that somehow must be negotiated.

The coping patterns observed by some in both the public and private sector seem to support the pessimistic view (see f.i. Lagadec, 2000). Much 'coping' behaviour barely deserves a managerial qualification. Crisis leadership is the term applied to the rare individual with the gift of fast decision making under pressure (see f.i. Rosenthal et al., 1994). On the basis of theoretical arguments and empirical findings, it seems safe to argue that public managers and corporate leaders are ill prepared for the challenges that await them.

The quite unexpected success in crisis anticipation and preparation for the feared Millennium problem adds a paradoxical footnote to our notions about future crises and the need for improved crisis management capacity. Either the Millennium bug did not have the potential of a future crisis or the world was better prepared than theory and practice would predict. Whichever statement is true, both carry serious implications for our awareness of 'real' future crises and the capacity of public and corporate organisations to deal with such crises.

Crisis managers need to prepare for the crises of the future. We forward the claim that training methodologies derived from 'normal' training practices will not suffice. Extending routine skills and methods to the challenges of the future may even have a contrary effect. Armed solely with classic tools for new problems, our future crisis managers are lulled into a false sense of security: they think they are prepared, but they are not. This special issue focuses on new ways of thinking and training, which are needed to cope with novel and unforeseen contingencies.

From Traditional 'Faults' to Future Crises

Let us assume that today's managers come to the job with a well-developed awareness that a complex environment demands a contingent approach in order to establish a match between the organisation and its surroundings. This piece of conventional wisdom in organisation theory predicts that modern organisations seek to develop a complete understanding of relevant patterns in their critical environments, and try to develop a broad-ranged capacity to deal with the various contingencies.

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Table 1: Characteristics of Traditional 'Faults' and Fault Management

- A known, isolated event, framed within conventional hypotheses;
- a situation perceived as manageable (technically, economically, socially);
- costs relatively easy to estimate, and recoverable within the context of tried systems;
- a limited duration;
- codified intervention procedures, well known by the specialists solicited;
- a limited number of interveners, all specialised in one aspect of the problem at hand;
- well determined roles, responsibilities and hierarchies, known by the services in charge.

Crisis preparation – if it exists at all beyond the symbolic level – is usually an extension of this organisational routine. After potential contingencies have been identified, the organisational capacity is upgraded to deal with these possible crises. Where possible, organisations use their resources to prevent these contingencies from materialising in the first place. For instance, prison administrations make their prisons secure to prevent escapes and train their personnel to deal with hostage-taking situations.

A common inclination is to interpret possible emergencies through the lens of predictable faults and failures (see Table 1). The operational requirement is obvious: train technicians to intervene in a timely and effective manner, according to predefined procedures and based on time-proven expertise. Crisis then becomes the domain of repairmen and rescue specialists.

The 'fault' model of crisis preparation may have been adequate several decades ago, but the modern crisis requires collective capabilities beyond the technical realm (Rosenthal, 1998). The modern crisis is the result of many converging factors: specific risks that are increasingly difficult to evaluate, large systems consisting of entangled networks with a hitherto unknown complexity, the immediate mediatisation of incidents, abrupt changes in collective perceptions and social demands suddenly condemning what was hitherto tolerated (see Table 2). Every local dysfunctionality, even if apparently harmless, has the potential, often unsuspected, to develop into a transboundary crisis.

Bridging the gap between predefined, stable system parameters and deviating process outcomes does not solve the modern crisis. The problems and threats are not circumscribed in terms of space, time, actors and costs. Intervention is necessary, but it is based on imprecise knowledge. It is not simply a matter of acting fast: it is unclear where to go, with whom, for which purpose, and based on what legitimacy (Lagadec, 1993).

The modern crisis defies 'normal' management patterns. A situation is defined as a crisis precisely because something out of the ordinary happens. The Amsterdam air crash is a fitting example (Rosenthal et al., 1994).[2] The airport near Amsterdam (Schiphol) was prepared for a plane crash; the city of Amsterdam, in turn, was prepared for public order crises and other big city problems. Nobody was prepared to deal with the immigrant population making up large part of the affected area population. Nobody could phantom the issues that would emerge years after the crash: lingering public health concerns were reinforced by information and rumours about the chemical substances on board of the crashed plane (Rosenthal, Boin and Bos, 2001).[3]

This combination of surging difficulties, disturbed organisational functions and fundamental choices requires more than routine technical measures, defined by specialists, imposed by an authority. The question of public information and communication becomes key as we are not talking about ready-made solutions for predefined problems. It will be

Table 2: Characteristics of Modern Crises

- Large impacts, large populations affected;
- very high economic costs, surpassing the classical insurance capabilities;
- unprecedented, generic and combined problems, affecting vital resources;
- snowball dynamics due to a multitude of resonance phenomena;
- emergency systems reacting on the wrong foot: obsolete, non-applicable and even counter-productive procedures;
- extreme uncertainty that will not vanish within the emergency period;
- a long duration with threats transforming over time;
- convergence, i.e. large numbers of actors and organisations bursting onto the scene;
- critical communication problems: within the responsible organisations, with the public, the media, the victims (even populations very distant in space or time);
- considerable stakes, of all kinds.

necessary to legitimise one's action, maintain credibility, demonstrate effectiveness despite a major lack of expertise. The required response is not just local and technical: it is an executive task to help systems re-orient amidst severe turbulence.

And now, as we enter the 21st century, the phenomenon of crisis itself is undergoing transformation. We are witnessing global, contextual disintegration, which can generate multiple yet specific eruptions. A systemic breakdown is an abrupt and definitive discontinuity operating through decomposition-recomposition of the most essential fundamental principles of a system: worldviews and missions, points of reference and values, identities and legitimacy mechanisms, rules of the game and structure of both internal and external relationships, modes of control and communication (see Table 3).

Insufficiently prepared organisations and managers will be unable to respond to the difficulties created by this changing theatre of operations (they will be even less prepared to take advantage of the deep openings equally brought about by such transformations). Crisis managers need to be trained in order to avoid the elementary pathologies that accompany crises and breakdowns:

- *Organisational weakness causes failure* A quick audit is sufficient to find out whether an organisation or sector stands a chance in the face of severe turbulence. Expeditious mobilisation is in order if the following deficiencies are observed: no collective discussion of potential vulnerabilities; no reflection on signals that must be monitored and deciphered; no critical assessment of available sensors; no mechanisms of increased vigilance in case of doubt (remaining trapped in a logic of required 'proofs'); no collective training to deal with future scenarios; no tested mechanisms of alerting and mobilising the networks concerned. In such a context, crises and breakdowns find fertile grounds for proliferation.
- *Reflexes promising defeat* Following the first fuzzy signals of an abnormal situation, a non-prepared organisation typically adopts avoidance behaviour: all questions from the outside are dodged and, internally, it is made clear that raising such premature questions is not appreciated. Inevitably, operational delays and bungled communications will ensue. The message to the outside world is: 'We don't know anything yet, but rest assured – it is not serious.' Before the situation is even considered apt for attention, the crisis already dominates the theatre of operations, at least in terms of representations, and very quickly in terms of communication. The slightest 'confirmation' of the non-existence of crisis is embraced. Only shattering proof of a clearly demonstrable disaster can re-open the case. The cruel example of the officer unable to convince his superior in Pearl Harbor comes to mind. His eyes fixed in terror on the burning fleet he exclaimed: 'You wanted proof? Well, there it is!'
- *Costly unpreparedness* Dumbfounded by a strange event, which does not comply with the established bureaucratic paradigm, unprepared systems instinctively generate worsening behaviours: vigilant (though illusory) defence of their territory, 'all-or-nothing' logics, obsessive search for certainties, lock-in on organisational details or secondary tools, a search for false miracle solutions, (failing) attempts to impose hierarchical logics in networks completely alien to such models. In the absence of preparation, there is substantial amateurism in the creation and behaviour of crisis units: delays, cacophony, divisions, ineptness to handle the

Table 3: Characteristics of Future Crises or 'Breakdowns'

- There is a pre- and post-breakdown state, the change being irreversible;
- the breakdown is not due to a specific event: there is global and polymorph resonance;
- basic and unquestioned procedures do not apply anymore: i.e. the fundamental principles, the identities, the contexts, the actors, the rules of the game, the defence mechanisms, the knowledge, all these tools are up for re-consideration;
- breakdown brings repeated, iterative crises, with sudden crystallisation, occurring and disappearing in a seemingly incomprehensible and random fashion;
- powerfully anchored in deep disequilibria of the system, the breakdowns are even more resistant to conventional treatment;
- the 'decomposition' side being most perceptible, the prevailing impression is one of a generalised decoupling process, a work of disintegration almost impossible to suppress.
- The breakdown pervades the whole theatre of operations. Fundamental problems resonate with each other, preventing any sequential treatment ordered in time, space and by category. There is a feeling of loss: 'there were twenty bolts, but when one snapped all twenty snapped instantaneously,' as was said in the French case of contaminated blood (Lagadec, 1998).

multidimensional nature of the crisis, unanticipated duration, inability to form co-operative links with other crisis units. Poor preparation to operate with other external units often pre-ordains rapid failures: the compartmentalisation of responses is completely out of phase with the need for co-ordinated global responses.

At the heart of these futile agitations is a classical deficiency in unprepared systems: high-level managers do not know how to get involved; they apply – with great ability – a systematic logic of avoidance. 'Is there a pilot in the plane?' rapidly becomes the dominant question precipitating the fiasco. Without active and pertinent visible steering, systems soon loose the capacity to follow any direction, to show coherence, to safeguard their structures.

- *The amnesia syndrome* The post-crisis phase engenders recurring problems. As soon as the event is over, forgetting and returning to the prior situation are in order. The units ease their efforts and disperse at the first favourable signs. The fundamental questions that generated the crisis – and that were generated by it – are not dealt with. In the absence of any analysis of the collective handling of the crisis, wrong lessons will be 'retained' – creating traps for the future. The very idea of learning will be completely out of phase with the wish to forget as soon as possible.

Preparing for the Future: Anticipation and Resilience

The old-fashioned way of dealing with crisis was resilience: through a combination of flexibility, improvisation and ingenuity, groups and societies 'bounced back' after a devastating event. Sociologists have created a long tradition of recording the tremendous human capacity to reorganise and adapt in the face of emergency and adversity. In a Darwinist perspective, crises can therefore be seen to separate the strong institutions from the weak (cf. Rosenthal and Kouzmin, 1996).

Over time, both academics and practitioners have tried hard to capture 'best practices' of crisis management in standard operating procedures, checklists, organisational structures and even job descriptions. To their credit, or so it seems, we must note that the structured approach towards crisis management has proved effective in the face of the impending Millennium disaster. The Millennium experience thus provides plenty of debating points for the proponents of both resilience and anticipation (cf. Wildavsky, 1988; Hills, 2000).

We take the position that future crises require a preparatory effort that contains both resilient-oriented strategies and anticipation-based strategies. While we agree that resilience is the key to future coping, it is necessary, in turn, to *organise for resilience* e.g. to facilitate a rapid, flexible, innovative and effective response when a future crisis presents itself.

This position has consequences for training practices. Classic emergency training is still required. It is important to react promptly in the face of an emergency. The members of an organisation must know how to alert, to trigger the emergency organisation, to send tactical forces on the scene, to take clear decisions, to co-ordinate. These training exercises are based on the same difficulties that occur in day to day business, while it is understood that there will be much more to do, in much less time, together with many more organisations. This part of the crisis training can be left to a specialised body.

But crises also create situations that cannot be anticipated, requiring non-programmable responses. During a crisis, tactical problems are not the core of the challenge. The very survival of an activity, policy or institution is at stake. Top level management must take charge and it must do so in a very fuzzy environment. They must fix key goals, rearrange priorities, rethink relationships with stakeholders, clarify the communication strategy; in short, they must provide the cement that holds the organisation together. Risk is high, in terms of internal and external politics (cf. Rosenthal, 't Hart and Kouzmin, 1991). Executives are often accustomed to see such questions dealt with by safety people, not by themselves. As Laurent Carrel informs us in his contribution to this issue, top-level managers are not keen to participate in training exercises. Hence, crisis drills are rarely built for them. Without serious and continuous training, they tend to act evasively – only to burst in when it is impossible to abstain any longer. As the pattern is strange to them, top level managers are apt to apply classic models to entirely new contexts. The result is, all too often, suboptimal (see f.i. Boin and Van Duin, 1995; Miller, 2001).

The crises of the future, previewed in such cases as the Mad Cow disease and cellular phone health risks, create new challenges. Facts remain unknown; you know that you will not know. Executives run legal risks if they do not stop an activity that is associated with crisis; at the same time, they risk their job or the company if they stop it without strong facts (which do not exist). Executives must be prepared to pilot in such tornadoes. They must be trained to anticipate the disappearance of 'given' underlying rules, to sketch new visions, to reassemble new coalitions of stakeholders, to avoid key mistakes in terms

of communication and decisions. The challenge is to propose ways that can be tolerated in those circles that are generally extremely reluctant to spend time on these very sensitive subjects. Let us summarise these observations into a handful of imperatives that may help to prepare organisations for the unknown.

Ensure Awareness at the Highest Levels

The first and indispensable step is to get the problem of crises and breakdowns on the agenda of top-level decision-makers (cf. 't Hart, 1997; Preston and Cottam, 1997). Executive awareness may be raised through workshops or simulations specifically dedicated to new crises and to the decision-makers' new responsibilities (cf. Kleiboer, 1997). The aim is to forge new attitudes: tolerate open and shared questioning about possible yet uncertain situations; reflect on the decision-making process in the absence of clear expertise; understand the need to communicate internally and externally whilst in a situation of uncertainty, even complete ignorance, for extended periods of time; steering complex systems by accommodating the coexistence of conflicting logics.

Develop Appropriate Operational Capabilities

In order to facilitate a resilient response, the following organisational capabilities must be developed:

- monitoring capability and capability to detect weak and non-conventional signals;
- emergency information systems, which can process relevant information to and from central authorities (see f.i. Comfort, forthcoming);
- alert and mobilisation capability of crisis units, with support from all parts of the organisation;
- capability to handle the technicalities of 'first emergencies:' actors must be prepared to deal with uncertainty and complexity and be able to relate technical matters to strategic issues;
- capability for action in situations of decentralised crises: provide for an organisational structure which allows the largest possible number of actors access to the system's response capacity (betting on centralisation only leads to heaviness, closed logics, communication delays; see 't Hart, Rosenthal and Kouzmin, 1993).

Engage in continuing preparation efforts

Experience, previous research and the contributions in this issue suggest a few mandatory signposts for effective preparation:

A continuous practice of feedback from experience In a constructive spirit, each crisis episode has to be subjected to a precise analysis to identify and understand the series of events that occurred in handling the case. Immediate operational learning points have to be extracted; this means that the analyses must relate to the functioning of decision support systems. International cross-fertilisation has recently proven to be extremely useful. After ice storms destroyed the electrical grid of southern Quebec in January 1998 (see Scanlon, 1999), the French electrical company EDF (Electricité de France) sent a team to study the problems and solutions developed by Hydro-Quebec and government agencies. Less than two years later, France was struck by two successive storms that destroyed part of the French grid. EDF reacted quickly: the nature of the problem was immediately understood, key mistakes to avoid were known, and strategic initiatives were undertaken. EDF leaders credit the learning process after the Quebec experience in explaining their successful crisis management.

Tests and simulation exercises It is necessary to engage in a continuous training program; not so much to prepare for well-codified faults or failures (the 'fire exercise' ritual), but for destabilising surprises. It is irresponsible to rely on previous experience only for collective training. Simulation is a bare necessity. These simulations have to be followed by rigorous debriefings ('t Hart, 1997): this effort, often neglected, is indispensable to make progress. The tests must be both extremely short to develop the mobilisation reflexes of the teams, and more complex to develop the polymorph capabilities which will be required for steering through crisis.

Training It is of major importance to provide the various managers with fitting types of training. Different responsibilities require different preparatory efforts: The executives, who will play a crucial political role throughout the crises; the crisis unit managers, who will have to steer extremely complex systems with often little known and massively perverse effects; the spokespersons; the experts – abruptly dislocated from their laboratories to the television set – are often obliged to offer judgements whilst their tools are deficient. In advanced organisations, media training is a common feature. But it is necessary to go much further: new areas of management issues are to be discovered and shared with those concerned.

Inter-actor learning As crises are processes unfolding amidst complex networks, it is necessary to expand the learning process to the external world: meetings, feedback from

experience and exercises, the exploration of unprecedented vulnerabilities – these learning mechanisms should not be internally restricted. A continuous enlargement of the circle of actors involved is necessary.

Personal involvement of elites As crises and breakdowns typically touch upon fundamental elements of an organisation's mission and structures, nothing serious is likely to happen without the durable involvement of the organisational leaders. Personal involvement in preparatory and learning processes tends to change completely when the 'boss' is personally engaged in the case. This requires that high-level managers break with the pervasive attitude that a highly placed person does not need to learn about crises and crisis management, that he should not get involved with simulations nor engage in feedback from experience.

A general scheduling of the intervention One has to be wary of spectacular plans and projects without follow-up, which exhaust energy, goodwill and budgets. It is necessary to introduce tests and resources progressively over time, gradually and incessantly, involving increasing numbers of actors. All aspects of learning have to be canvassed: an undertrained institution cannot support multiplied exercises or feedback from painful experiences without getting effective methodological and know-how support at the same time.

Mastery of core processes Any effort to prepare an organisation, or a network of organisations, for unknown crises that may occur sometime in the future requires an intimate knowledge of core processes and critical vulnerabilities (cf. Wilson, 1989). The generics of crisis management must fit the specifics of the organisation's core competences. In a situation of uncertainty, solutions must be anchored in a deep understanding of the organisation's inner-workings. In today's world, where executives typically are generalists, not specialists, crisis preparation will thus be enhanced by project-management methodologies. The temporary nature of 'project management' must, in turn, be offset by a conscious effort to embed the developed structure in the organisation.

This Issue

Conventional wisdom in the military has it that one should not 'be behind by a war.' The same holds true for public and corporate networks. We are moving beyond the simple, technical failures that occur in industrial installations (as in Seveso, Three Mile Island, or Bhopal). The future crisis will be more like the contaminated blood scandal in France, the Mad Cows Disease (BSE) in Britain, or, more in general, will revolve around Genetically Modified Organisms (GMO) or Electromagnetic Fields (see the contribution by Jacques Lambrozo and Catherine Lynch in this issue). The security of vital networks in societies containing highly complex linkages with surprising interactions – be they material, symbolic or communication related – is at stake. The challenge is to prepare adequately and in a timely fashion.

The contributors to this special issue have tried to come up with concrete ways to think about, and prepare for future crises.[4] Boris Porfiriev has mined his recent experiences as a crisis consultant and argues for a fundamentally different approach to environmental risk in the regions of the former Soviet Union. Simon Booth develops an innovative approach that may be used by corporations to prepare for 'reputational crises.' Margaret Crichton, Rhona Flin and Bill Rattray have worked with a new gaming method (Tactical Decision Games) and report on their experiences in a nuclear power plant and a prison – both located in Scotland. Laurent Carrel informs the readers about the difficulties encountered by the Swiss Federal Chancellery's Division of Strategic Leadership Training in their efforts to engage top-level decision makers in crisis simulations and training.

These contributions combine sobering experiences with optimistic outlooks. The authors share with us a sense of urgency, but their findings suggest that potentially fruitful ways exist to help prepare for the crises of the future. We invite the readers to reflect upon these insights and join the ongoing debate on anticipation, preparation and training. Communication and interaction between practitioners and academics mark the road towards future progress.

It is for these reasons that we welcome the initiation of the European Academy of Crisis Management. Transboundary learning processes facilitate a better understanding of the fuzzy and urgent problems facing us now and in the future. By laying the foundations for a European network, fruitful co-operation between academics and practitioners is brought yet another step closer.

Notes

1. Yehezkel Dror argues that inconceivability is an important characteristic of crisis situations; see the Future Forum in Rosenthal, Boin and Comfort (2001).
2. On the evening of 4 October 1992, an Israeli Boeing freight carrier crashed in a suburb of Amsterdam. The death toll was 43.

3. Other examples abound. The Heizel (Brussels) soccer tragedy in 1985 was caused by fighting fans *inside* the stadium, *before* the game. Shell may have expected all types of public relations disasters, but the Brent Spar – Shell's well-intentioned environmental effort – turned into the biggest crisis Shell faced in years.
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