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▶ **To cite this version:**

Patrick Lagadec. Crisis management in the 21st century ”unthinkable” events in ”inconceivable” contexts. 2005. ⟨hal-00242962⟩

HAL Id: hal-00242962

https://hal.science/hal-00242962v1

Preprint submitted on 6 Feb 2008

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CRISIS MANAGEMENT IN THE 21st CENTURY
"UNTHINKABLE" EVENTS IN "INCONCEIVABLE"CONTEXTS

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February 2005

Cahier n° 2005-003

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CRISIS MANAGEMENT IN THE 21st CENTURY
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Abstract: Unbelievable", "unthinkable", "inconceivable" the 21st century opens a new era in the field of risk and crisis management. Recent crises, including the unconventional "9/11" terrorist attacks, swift world-wide contamination by the SARS virus, continental blackouts which can occur within the space of a few seconds, the continent-wide effects of a tsunami in unstable geopolitical zones, all seem to differ fundamentally from the seminal cases which gave birth to crisis management studies in the 80s - the tampering of Tylenol being the founding stone of the discipline. The trend seems to be accelerating, so that crises today are increasingly global, intertwined and "non text-book" events.

The contents of the established crisis tool kit: risk analysis models, crisis management tools, text-book techniques, organisational check-lists and communication rules all seemed meritorious. Rightly so, because the lessons of the past still have their place. Failure to take them into consideration can ensnare any attempt at crisis management into the increasing complexities of the emerging crisis world, with potentially disastrous results. However, rear view mirror management is no solution, the discipline must move forwards. As observed by foresighted military strategists, the warning is clear: "do not prepare to fight the last war".

This contribution aims to clarify the issue, identify the traps and outline some creative lines of response and initiative.

Key Words : Emerging Crises, Discontinuity, Decision-Making, Governance

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Gunfire Kills. Outdated ideas too.
General Foch

If reality is inconceivable,
then we have to invent inconceivable paradigms
Hegel

Introduction

When the discipline of crisis management was developed some two decades ago, it was basically the art of dealing with a specific breakdown and/or severe potential turbulences in a complex system. The aim was to prevent unmanageable cascading and debilitating effects. However, one condition was taken as a given: the triggering event was generally identifiable, and occurring in relatively stable and delineated contexts. However, although a great deal has been achieved by the work of many[1], we must now go far beyond.

At the beginning of the 21st century, the global situation is infinitely more complex, blurred, and unstable [2,3]. In every domain there seems to be a complete rupture, total change with the past, be it for environment, global climate, public health, technological risks, social dynamics, international relations or violence. The ingredients of these cleavages include radical surprises, potential global domino effects, real time dynamics, destruction of ultimate references (for example destruction of the species barrier in the BSE crisis or the fact that individuals and communities choose death rather than life). "9/11" casts a very long and pervasive shadow, but it is far from being the only challenge. It is just the keystone of a global mutation in our emerging world, where crises must be anticipated, prepared for, prevented as far as possible and emergency situations tackled.

Our responsibility is to address the situation and to rethink our tools, organisations, mindset, culture, and training processes accordingly. The stakes are incredibly high, the difficulties more severe than ever. A real shift has occurred and the new challenges must be addressed, as it is not possible to entertain the option of failure.

Due to the sensitivity and profound fears triggered by the issue, any attempt at risk management must satisfy two fundamental requirements :

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[1]Among them: Fink, S. (1986): *Crisis Management. Planning for the Inevitable*, Amacom, American Management Association; Irvine, R. B. (1987): *When you are the Headline - Managing a major News Story*, Dow Jones-Irwin; Regester, M. (1989): *Crisis Management. What to do when the unthinkable Happens*, Hutchinson Business, London; Ten Berge,D. (1990): *The First 24 Hours. A comprehensive guide to successful crisis communications*, Basil Blackwell, Oxford; Lagadec, P. (1993): *Preventing Chaos in a Crisis*, McGraw Hill, London; Harvard Business Review (1994) : *Crisis Management* ; Heath, R. (1998): Crisis Management for Managers & Executives, Financial Times-Pitman Publishing.

[2] Lagadec, P. and Guilhou, X. (2002): *The End of Zero Risk [La fin du risque zéro]*, Eyrolles, Paris.

[3]OECD (2003): *Emerging risks in the 21st century: An agenda for action*. Report.

- *Honest and focussed open-mindedness*: General Foch saw into the heart of the problem. Being "a war behind"[4] is a natural trap, as it is always very comfortable to base any policy on past experience. People tend to base their approach to risk on the deeply believed, much repeated and safe affirmation that there is "nothing new under the sun"[5]. The problem with this mindset, is that it excludes open questioning and can lead straight into bitter disasters, such as in 1914. General Bachelet acknowledged that "we marched into the industrial era with the agrarian mindset of the previous age". The type of strategic errors made then are too easily repeated, as illustrated in the maxim "in 1914 we were caught totally unprepared. In 1940, we were fully prepared – for the First World War"[6] .

- *Courage*: officials or academics regularly and strenuously underline that the mere mention of anything that could represent a new challenge is a reprehensible and pathological manifestation of "pessimism". However, optimism cannot be founded on blindness, evasion and defection. Optimism demands open questioning minds, personal involvement and a determined spirit of initiative.

The aim of this chapter is to consider crisis management in this new global context. Three areas will be covered:

1. *The new frontiers* of our shared safety and the *challenges* which we must now address - in other words, the field of emerging crises - go far beyond usual typologies.
2. *The mental blocks and resistances* that are so dominant in the field and which threaten to lead us from one fiasco to another and which explain why they are so naturally predictable. If this in-depth examination is avoided there is no real possibility to find any promising outcomes.
3. *The positive and creative dynamics* to be generated if the challenges of our time are to be met. To a certain extent this is our historic responsibility.

There is no doubt that these issues are inherently difficult and that our knowledge is still fragile, which inevitably limits suggestions and discussions. However, there is sufficient information to justify and give priority to urgent in-depth analysis of the situation and more importantly, to try and push this examination way beyond the normal boundaries. Proof comes too late, as illustrated by the story of *Minerva's owl which begins its flight only in the gathering dusk* (G.W.F. Hegel, "Preface," *Philosophy of Right," "Phenomenology of Spirit").* Of course patience and wisdom are essential to avoid illusion and traps. However, the urgency of these stakes is a total priority. Asking for ever more data, models, statistics, proofs, definitions and taxonomies must not be an excuse for inaction. We have sufficient signals to measure both this urgency and the crucial need for bold analysis, beyond conventional frameworks.[7] As the hero of Camus' novel *La Peste* says to the official who wants to know if

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[4]Educational documentary films produced by Patrick Lagadec: *Complexity Crises – Never Fight the Last War*, Mike Granatt, A Partner of Luther Pendragon, London; Visiting Professor, University of Westminster. Previously: Head of the Cabinet Office Civil Contingencies Secretariat, Head of the UK Government Information and Communication Service, Communication Director of three major departments, Communication Director of London's Metropolitan Police Service, talking to Patrick Lagadec, editing Aurélien Goulet, June 2004.

[5]Ecclesiasticus (1:8-10)

[6]Général Bachelet, in Lagadec, P. (2000) : *Creative ruptures [Ruptures créatrices]*, Eyrolles, p. 179.

[7]Quarantelli, E. (1996): "The Future is not Repeated: projecting disasters in the 21st Century from current trends", *Journal of Contingencies and Crisis Management*, Blackwell, vo. 4, n° 4, December, p. 228-240. Boin,

it "really" is the plague, before he takes action: "*This is not a question of vocabulary, it is a question of time*".[8]

My own position is that I believe that unconventional questioning must not only be the result of circumstance nor the preserve of terrorists. If we do not change our approach repeated failure and fiasco are inevitable. More constructively, the severe turbulences in our complex and unstable world must be turned around and used as opportunities for the basis of a new policy. We must engage a positive approach, based on honest and focused open mindedness, creativity and determination.[9] There is no time to waste…

Paradigm shift

New Frontiers: Risks, vulnerabilities, and emerging crises

"9/11" was a watershed in the experience of and approach to risks. The underlying paradigm has shifted from local to global. This shift is clearly illustrated in the the US reflection on "Homeland Security", in particular in the many discussions concerning "critical infrastructures". This debate emerged as early as 1997-8 in a US Presidential commission [10]:

> « *Our national defence, economic, prosperity, and quality of life have long depended on the essential services that underpin our society. These critical infrastructures – energy, banking and finance, transportation, vital human service, and telecommunications – must be viewed in the Information Age. The rapid proliferation and integration of telecommunication and computer systems have connected infrastructures to one another in a complex network of interdependence. This interlinkage has created a new dimension of vulnerability, which, when combined with an emerging constellation of threats, poses unprecedented national risk* » (p. ix).

The "9/11" Commission Report[11] clarified the gap between the threats on one side and the mindsets and available competences on the other:

> « *We believe that the 9/11 attacks revealed four kinds of failure: in imagination, policy, capabilities, and management* ». (p. 339)
> « *Imagination is not a gift usually associated with bureaucracies*». (p. 344)
> « [it] *was different from anything the government had faced before* ». (p.348)
> « *It is hardest to mount a major effort while a problem still seems minor. Once the danger has fully materialized, evident to all, mobilizing action is easier– but it then may be too late* ». (p. 350)
> « *Government agencies also sometimes display a tendency to match capabilities to mission by defining away the hardest part of their job. They are often passive, accepting what are viewed as givens, including their efforts to identify and fix glaring vulnerabilities to*

A. and P. Lagadec (2000) : "Preparing for the Future: Critical Challenges in Crisis Management", *Journal of Contingencies and Crisis Management*, special issue on Crisis Preparation and Training, Guest Editors: Arjen Boin and Patrick Lagadec, vol. 8, n°4, December 2000, p. 185-191. Dror, Y, P. Lagadec, B. Porfiriev and E. Quarantelli (2001) : "Crises to come: comments and findings", in U. Rosenthal, A. Boin, L. Comfort (2001) : *Managing Crises, Threats, Dilemmas, Opportunities*, Charles Thomas Publisher, Springfield.

[8] Camus, A. (1947): *La Peste*, Gallimard, (Livre de Poche n° 132, p. 43).

[9] Lagadec, P. (2000): *Ruptures créatrices*, Eyrolles, Paris.

[10] President's Commission on Critical Infrastructure Protection (1998), *Critical Foundations, Protecting America's Infrastructures*, Washington D.C..

[11] National Commission on Terrorist Attacks upon the United States (2004): « *The 9/11 Commission Report* », Final Report, Authorized Edition, Norton.

dangerous threats would be too costly, too controversial, or too disruptive ». (p. 352)
« *Information was not shared, sometimes inadvertently or because of legal misunderstandings. Analysis was not pooled. Effective operations were not launched. Often the handoffs of information were lost across the divide separating the foreign and domestic agencies of the government* ». (p. 353)
« *However the specific problems are labeled, we believe they are the symptoms of the government's broader inability to adapt how it manages problems to the challenges of the twenty-first century. The agencies are like a set of specialists in a hospital, each ordering tests, looking for symptoms, and prescribing medications. What is missing is the attending physician who makes sure they work as a team* ». (p. 353)

However, terrorism is not the only issue which requires global safety-security policy and "outside the box" crisis management. "9/11" is certainly the most spectacular but certainly not the only incident which has projected the world into a new and profoundly unstable orbit as far as crises are concerned. Consider the SARS episode (2003), which occurred as a result of the powerful interaction between an unknown virus and jet powered travel[12]; the power failure which affected North-Eastern USA and Canada (August 14, 2003); the black-out which plunged Italy into darkness some weeks later (28 September 2003); the 15000 fatal victims of the heat-wave episode in France (4-14 August 2003); the tragedy of the large scale fertiliser plant explosion in Toulouse, France (21 September 2001); the large-scale computer meltdown such as the one which occurred at Heathrow airport (4 June 2004); the BSE (Mad Cow Disease) crisis[13] which ended the illusion of a protective barrier between species (1996) and most recently the Tsunami tidal wave in Asia (26 December 2004).

It is not any specific uncertainty or singular event, but the general trend which seems to have propelled mankind into a disconcerting universe, which has disrupted the global conditions of risk assessment and crisis management. Even with no actual event: the mere plausibility of largely open scenarios has transformed the conditions of risk governance in our times.[14]

Generic challenges

Following a major event, the usual line of action is to list the various risks and to clarify practical responses for each category. However, the new complexities are such that a different and more strategic approach is needed. The generic problems linked to the new unstable state of the world and the new risk frontiers must be elicited. Fundamentally, these in-depth challenges outclass our paradigms, organisations and tools. The following 'fault lines' can be considered:

- *Discontinuity*: our intellectual baggage has been designed for a stable and linear world with only limited and marginal uncertainty, where events and the contexts in which they occur can be clearly compartmentalised. But this is not the world in which today's crises emerge. Threats and challenges now occur in a context of instability and

[12]Lagadec, P. and Rosenthal, U. (eds.) (2003): "Anthrax and Beyond: New Challenges, New Responsibilities", *Journal of Contingencies and Crisis Management*, Special Issue, Volume 11, Number 3, September 2003.
[13]Lord Phillips, J. Bridgeman and M. Ferguson-Smith (2001): *The BSE Inquiry, vol 1. Findings and Conclusions*, London, Stationary Office.
[14]Educational documentary films produced by Patrick Lagadec : *Crisis, Complexity and Governance – From Emergency to Political Science*, Arjen Boin , Crisis Research Center, Leiden University (NL), talking to Patrick Lagadec, editing Aurélien Goulet, April 2004.

poorly defined frontiers. In these situations, averages, statistical regularities and historical trends provide neither an adequate, nor even relevant basis to tackle the problem. Technically we are equipped to treat massive phenomena involving swarms of points which can be modelled and plotted. However, in modern crises the situation may hang on one single outlier point, which becomes the swing point. Our intellectual tradition is ill-suited to deal with sudden mutations and non-linear qualitative jumps. We have trained ourselves to ignore differences which are manifestly outside the analysis of variance. Now we must confront phenomena outside "accepted" scales, shifting problems and difficulties from the edges, where they could be forgotten, to the core. For example, insurance mechanisms for covering damage used to work quite adequately. Today, the type of threats which loom mean that the entire paradigm base of insurance policy must be reviewed.[15] We used to work in stable, known contexts with a few difficulties and irregularities at the margins. But now the inconceivable has entered the field of our daily range of certainties, the improbable wild outliers have moved from the periphery (where they could be conveniently forgotten) to centre stage.[16]

- *Ignorance*: The accepted practice in any difficult situation is first to consult expert opinion, make an informed decision and then "communicate". Now, the expert finds himself sidetracked in the validation of these models. Whether the crisis is mad cow disease, SARS or the material resistance of the Twin Towers, in each case expert opinion has been at a loss to provide answers within the tiny decision time scale available. The traditional position of the expert as one who delivers reference knowledge has been usurped. Dominique Dormont, an expert on prion structure, highlighted this radical change: « The first message which experts have to transmit to the relevant authorities must underline the limits of current knowledge »[17]. Similarly, while policy-makers become encircled in their desire to provide « reassurance », barriers disintegrate almost visibly around them. This was highlighted by a veterinary specialist : « We are faced with an impossibility; experimental science cannot affirm something that does not exist »[18]. The same deliberately constructed indeterminism is also naturally evident in terrorism.

- *Massive domino effects, high speed contagion, erratic effects*: over time we have mastered the art of dealing with cleanly defined accidents and emergencies. Our societies are not armed to cope with ultra-rapid, geographically dispersed contagion on a massive scale. It is quite probable that the source of any threat can now be geographically very far removed from the point of impact; and the effects of

[15]Kunreuther, H. and Michel-Kerjan, E. (2004). *Insurability of (Mega)-Terrorism: Challenges and Perspectives.* Report for the OECD Task force on Terrorism Insurance. Paris: OECD; Kunreuther, Howard and Michel-Kerjan, Erwann. (2004), "Policy watch New Challenges for Terrorism Risk Coverage in the US", *Journal of economic Perspectives*, fall 2004. "La couverture des situations hors normes : de nouveaux repères à inventer", in O. Godard, Cl. Henry, P. Lagadec, Erwann Michel-Kerjan : *Traité des nouveaux risques*, Gallimard, Folio actuel, 2002 (p. 464-548).

[16]Educational documentary films produced by Patrick Lagadec: *Inconceivability – From the periphery to the core*, Pr. Uriel Rosenthal, Chairman CRT, Institute for Safety, Security and Crisis Management, The Hague, Professor of Management Studies, Leiden University, Member of the Dutch Senate, talking to Patrick Lagadec, editing Aurélien Goulet, April, 2004.

[17]Dominique Dormont: "Expertise in major episodes of crisis and rupture" ["L'expertise dans les grands épisodes de crises et de ruptures"], in Patrick Lagadec, *Ruptures créatrices*, op. cit. p. 342.

[18]Philippe Baralon: "Food safety : a cleavage in the food sector" ["Sécurité des aliments : une rupture pour les filières alimentaires"], in Patrick Lagadec, *Ruptures créatrices*, op. cit. p. 358.

propagation can be startling. This was the case with SARS, where the unknown virus spread at (literally) jet speed from Hong Kong to Toronto via the transport communication hubs of the planet, from hospital to hospital (for example when the specialised staff works in several hospitals, all the key lines of defence are rapidly taken out). This was also the case for anthrax: the problem was not a specific contaminated letter, but contagion in the sorting systems – here the network actually becomes part of the strategy of the attack, providing industrial-scale efficiency. [19] The weapon is the network.

- *Submergeant information, the Larsen media effect*: information sources are now almost infinite (the same phenomenon is diffracted worldwide, and the complexity of the organisations seems to shatter the echo into penetrating fragments); news travels almost instantaneously around the global media networks and most particularly when the information is very uncertain and unsettling. Emotion has become a central factor of any reality, because emotion is the essential nerve of the media. The Larsen effect – the electro-acoustic phenomenon of feedback between microphone and amplifier resulting in maximum sound output – quickly overwhelms any attempt at reasoned information. Excellent classic media communication is possible, but how can any decision-maker cope when the whole context of an event is overwhelming? Structurally speaking, the media networks still seek and recycle any event which best suits their working tools and so favour « camera-ready disasters ». These are simple stories, binary formulae which combine maximum emotion with overt simplification particularly when the complexity of the situation threatens the entire data treatment system.

- *The citizen on the front line*: the 9/11 Commission of Inquiry specifically highlighted the fact that the traditional model of « State intervenes, citizen receives aid » has attained its limit. *The lesson of 9/11 for civilians and first responders can be stated simply: in the new age of terror, they —we— are the primary targets. The losses America suffered that day demonstrated both the gravity of the terrorist threat and the commensurate need to prepare ourselves to meet it. The first responders of today live in a world transformed by the attacks on 9/11. Because no one believes that every conceivable form of attack can be prevented, civilians and first responders will again find themselves on the front lines. We must plan for that eventuality. A rededication to preparedness is perhaps the best way to honor the memories of those we lost that day. »*[20]. Similarly, inquiries conducted after the severe 1998 ice storms in Quebec, led to the conclusion that citizens should ensure themselves a certain subsistence autonomy ("three days autonomy, to be the responsibility of each citizen for himself and family applicable at all periods of the year"),[21] particularly in terms of energy needs. This decision was taken in order to allow the authorities to deal with vital networks without having to concentrate on all fronts and from every angle of the shattered fragments of a problem.

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[19]Michel-Kerjan, Erwann. (2003): "New Challenges in Critical Infrastructures: A U.S. Perspective", *Journal of Contingencies and Crisis Management*. Volume 11, Number 3, September 2003, p. 132-141.

[20] « *The 9/11 Commission Report* », op. cit., p. 323.

[21]Report of the Scientitic and Technical Commission inquiry into the events of the ice storm 5th to 9th January 1998 « *Facing the unforeseeable – Lessons of the 98 ice storm* » [Rapport de la Commission scientifique et technique chargée d'analyser les événements relatifs à la tempête de verglas survenue du 5 au 9 janvier 1998 : « *Pour affronter l'imprévisible – Les enseignements du verglas de 98* »], Nicolet Report, Les Publications du Québec, 1999, p. 236.

- *Global dynamics of the destructuration of known phenomena, loss of orientation, loss of reference points*. Each of the identified phenomena intermeshes as it occurs. The result is that the solid base of our knowledge, our hold on the natural world is at best subject to uncertainty, at worst positively wrong or even destroyed. For example, the loss of the certainty that the species barrier was the ultimate protective wall, between man and diseases rampant in other species. Similarly the loss of the very characteristics defining temperate climate. Or again that an aggressor attacks in the certain knowledge that he will lose his own life – a strategy which totally destroys the foundations of the techniques of negotiation, namely that the negotiation is conducted with someone who values his own life. Considering a death sentence for a kamikaze is clearly nonsense. The context is now entirely new, all previous approaches, commentary and postures have been turned upside down. The principle of the "new" unconventional events is that they all seem to apply the principle of Sun Tzu where "the best warfare strategy is to attack the enemy's plans" (chapter 3)[22].

- *Governance, not communication.* These episodes are essentially "crises" as defined by the ancient Greeks, namely they are fundamental moments of truth. The hardest thing to grasp is their meaning. Business-as-usual "management" is no longer adequate. The problem must be seen and tackled from a multiplicity of fresh angles, new choices identified and the logic of the actors involved redrawn – none of this falls under what was traditionally accepted to be management technique and expertise. As Xavier Raufer forcefully states: "*the art of politics is not management alone!"*[23]. This quote highlights the extent to which "good crisis management techniques", the tried and tested "recipes for crisis communication" are not only severely limited but misleading.

- *From rationality to wager?* Perhaps the most destabilising factor, is that emerging crises confront us with situations, at the beginning of which nobody can know with any assurance whether ultimately they will be classed as minor, critical, extremely severe, monstrous, or…a non event. AIDS was no great concern in the early days of the pandemic, and yet it has now become a historic threat of monumental proportions, especially for Africa. Conversely, when BSE emerged, some specialists predicted a global disaster, in reality the mortality from the disease can be counted in hundreds in the United Kingdom and single figures in France; and not the millions of deaths predicted. Again for SARS, the bark was considerably worse than the bite. At the time no-one could assess the gravity of the problem and the Director of the Atlanta Center for Disease Control, the worlds leading centre of expertise in the field, stated to the media that the death toll could rise to 16 million if it developed into a pandemic. Over-estimation was certainly not the problem for the 2003 European heat wave. The initial alert estimated 50 deaths, the final count was nearly 15 000 in France. In the case of terrorism, the issue achieves a state of paroxysm as to what can or cannot be excluded. Responses run into problems of either catastrophic under-provision of measures of protection, or on the contrary massive over-provision. Or again there is the real risk of not even being able to define what is over-reaction or under-reaction. The swing point can occur at any moment, anywhere, from any event or news of an event whether founded or not.

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[22] Sun-Tzu: *The principles of Warfare, The Art of War*, http://www.sonshi.com/sun3.html.

[23] Xavier Raufer : "Terrorism and security in the new world disorder" ["Terrorisme et sécurité dans le nouveau désordre mondial"], in Patrick Lagadec, *Ruptures créatrices*, op. cit. p. 209.

Our rules of governance easily run aground in this new universe. The risk is avoidance strategies, waiting paralysis. There is also the danger of repeated U turns in risk policy, which are (rightly) perceived as incomprehensible and which in any case are always a stroke behind. The ultimate trap is when fear becomes the driver of governance, which can lead to all manner of distasteful actions under the cover of "safety/security" – and where any dissention becomes labelled as treason. In this way terrorism can extend the reach of its empire without any actual attack, it merely has to play on the capacity of the system to close in on itself. Sun Tzu is still right: "*to subjugate the enemy's army without doing battle is the highest of excellence*" (chapter 3). Other risks also dramatically reinforce the feeling that society has lost its reference points. Thus the cycle of denial- dazed- manipulation is fed by fear.

To counter this lethal process we need both new systems of intelligence and of governance. These systems are still embryonic, they must be developed. The first step is trying to understand what could possibly block or slow the necessary reinvention of the machinery of action.

The Trap: Fear and Paralysis

Fierce resistance

Our emergency culture is primarily equipped to grasp specific, limited problems, and solve them with specific responses. A crisis manager copes well as long as "a crisis" can be defined as a somewhat delicate situation requiring specifically adapted materials, plans, checklists and organisational tools and rules. Here, the manager just has to request a list of the likely risks and crises. Using this information he can delegate the task of preparing response plans and response data sheets and can recommend the implementation of practices to ensure that all the prepared responses and response equipment are in good working order. The crisis once neatly packaged, complete with set responses is domesticated, controlled and can be "rubber-stamped" as acceptable.

It is far more difficult to try and bend the mindset of individuals and groups to work on the essentials of the crises: any event outside normal experience presents extraordinary challenges, which by definition do not come with a prepared set of desirable responses. When it comes to preparing for unconventional events, most organisations try to tackle the problem with some "media training". However, it is very disturbing to observe that any attempt within any organisation to go beyond this approach and to develop a crisis culture, whether conducted by external specialists or internal managers, systematically meets with ferocious resistance or determined inertia.

Experience repeatedly highlights the following observations with sickening regularity:

- When a "What if?" type question is asked on hypothetical issues of safety not normally examined, the reaction is always instantaneous, brutal and final: "We are here to tackle problems, not to create new ones". "Sorry, but I am pragmatic, we are solutions people here, not theoreticians."

- Suggesting that normal lines of defence could be bypassed – that "unsurmountable" barriers might be crossed? The credibility of the initiator of the discussion is fundamentally at stake: "For goodness sake, we are optimists here!"

- Suggesting to someone lower down in the line management that a simulation could and should be organised? Quickly rejected out of hand: “I am afraid that here we don’t play at involving top management, top management would never accept it here. In any case, we never check who is actually qualified to intervene among the top managers who are on duty”.

- Suggesting, that during a simulation an unconventional complication, outside the usual rituals could be introduced? The response is always horrified “Certainly not, it would destroy the exercise!”

- Suggesting to a major multinational group, that an in-depth study could be conducted on major vulnerabilities? This leads to instant refusal on the grounds that “No, all we need is a plan and some media training for some of our directors. ”

- Suggesting that a president or minister could be included in an exercise, to give a little of their time to the problem of unconventional crises? This usually elicits sighs and concern: “We do not bother that level with this type of issue; anyway they simply don’t have the time. Prepare a clear information sheet and they might just drop in.”

- Suggesting an unusual and major innovation after a difficult event, for example an experience exchange, an initiative to be conducted with others? Elicits the response “Listen, we managed to get out of this one, let’s not make things any more complicated.”

- Suggesting that certain partnerships could be considered? This is the crowning lesson on the fact that the economic context is ferociously competitive and that any information sharing could prejudice the share of markets, budgets and territory. Interestingly, this attitude is very similar in both the public and private sectors: everywhere competition for territory is bitter, fundamental and identity-defining.

- Suggesting to an excellent management team that it might be good to reflect on the new frontiers of risk that affect that company? “Impossible, our teams are engaged in calculations, have models to follow which are in their normal line of work. They would not tolerate overt questioning of their systems.”

- Suggesting to multinational institutions that they could include issues of governance in highly unstable conditions on the agenda? “No, we are organising a meeting with technical experts who will present specific scenarios. The rest is off the agenda”. “We cannot include or decide anything if it has not been requested by all of our members, which is not the case at the moment”.

There is an infinite number of specific examples. The important trend is the homogeneity of the retreat: no questions, no anticipation beyond the bounds of known experience, no inclusion of the higher tiers of management, no simulations on events which might fall outside the normal rituals, no audacious partnerships. The field is wide open for crises…

It is important to measure the depth of this resistance.

- Example: In May 1989, speaking on the topic of “new risks” at a conference organized by a major international organization in Ottawa, the General who passed me the microphone had time to whisper under his breath: “*Whatever you do, don’t scare them*!”. This was just a few months before the fall of the Berlin wall.

- Example: Eleven years later, in June 2001, at a Defence Zone meeting on the same subject at Marseilles in France, a highly placed defence official who had come down to the meeting from Paris interrupted me. He announced "I cannot let this continue. In France things are under control. I am optimistic". Strong words from the Defence official. However, during the cocktail party afterwards the same official came to me and confided that "You were right, but I couldn't let that be said to the heads of regional government (Préfets)". This was just two months before 9/11.

To any suggestion of work or new ideas on the subject, the most favourable response today is "Let me think about the best way of selling the idea, otherwise we will immediately come up against a wall of resistance". Surely the time has come for ideas on the issue to be received more creatively.

The problem is not even of resistance to change. The blockage goes far deeper. The stakes are very high and it is these same stakes that we must try to understand.

Testing the resistance

The fact is that on this issue a number of fault lines converge. The situation is very worrying and calls for very strong corrective action.

Intellectual handicap

Anything that is unusual, exceptional and non linear is instinctively rejected by our society. It is as if our approach has remained stationary since the natural philosophers of the 17th century:

> *"Causes which result in effects which are rare, violent and sudden must not affect us, they are not part of the ordinary process of Nature. Our causes and reasons are the effects that occur each day, movements that follow one another, effects that are continually renewed and endlessly repeated"*. (Buffon, 1749) [24]

Uriel Rosenthal one of the pioneers in crisis study, notes that this tradition has remained central and currently blocks crisis management:

> *"Scientists feel uncomfortable with phenomena that seem beyond the scope of the neatly crafted theories which have been developed on the basis of normal circumstances and events. Crises seem to be in total opposition to the very foundations of modern social science."* [25]

Or as A. Weinberg stated rather more forcefully:

> « *Science deals with regularities in our experience; art deals with singularities* »[26]

It would seem that unconventional problems will remain orphan: they repel scientists who like phenomena to be regular, reproducible and measurable. Leaving it to the artists is

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[24] In: *Théorie de la Terre (1749),* cited by Jean Delumeau and Yves Lequin: *Les Malheurs des temps – Histoire des fléaux et des calamités en France ; Mentalités: vécu et représentations,* Larousse, 1987, p. 397.

[25] Uriel Rosenthal, Michael T. Charles, Paul 't Hart. Ed. (1989): *Coping with crises. The Management of Disasters, Riots and Terrorism*, Charles C. Thomas, Publisher, Springfield, Illinois (p. 5).

[26] A. Weinberg, Science and its Limits : The Regulator's Dilemma. *Issues in Science and Technology* 2 (1): 59-72.

certainly not going to be enough. And whoever takes an interest in these phenomena will have great trouble to be taken "seriously".

Managerial handicap

Ralph Stacey, professor of strategic management has stated that:

> *"At least 90% of the content of textbooks on strategic management concentrate on the relatively easy part of the management task, namely the running of the organizational machine in as surprise-free way as possible […]. On the contrary, the real management task involves tackling exceptions quickly and without pressure, coping with and even using unpredictability, clashing counter-cultures. The real task is about managing instability, irregularity, difference and disorder."* [27]

The fact is that today when flung into these situations, managers are highly likely to react clumsily or simply be confused. To make matters worse, any invitation to prepare for the abnormal is taken as unfounded, illegitimate or even provocative.

Governance handicap

Because crises and unconventional events are unplanned, the arguments opposing any real strategic preparation and any personal engagement by people in governance positions are recurrent. The positive results of personal engagement are very clearly illustrated in the way in which Rudolf Giuliani, the then mayor of New York, totally involved himself in crisis exercises for the city, in particular in July 2001[28].

Psychological handicap

This is probably the most determining problem. A crisis event can effectively strip the manager of all his sense of direction, casting him adrift of all his structuring and supporting frameworks, with the loss of everything justifying his social position (responsibility, respectability, power, identity). Consequently, crisis situations confront the manager with the risk of facing total surprise (in the words of Sun Tzu: "Is it not at this point that half a step in the wrong direction could put me thousands of kilometres away?"). Clearly this is profoundly destabilising and destructuring for somebody unprepared. It cannot be sufficiently hammered out that a crisis is not a calculable event and no perfect model can be made to fit. Rather it places the manager in front of an incomprehensible precipice; and there are no quick fixes to fill this void.

At this point the analysis of the situation becomes almost psychoanalytical, due to the powerful and often irrepressible emotions which surface among both individuals and groups in critical situations (even a planned exercise regularly evokes the same type of destabilisations). As the psychoanalyst Nicole Fabre has commented on Descartes:

> *"His thoughts are a whole. His work also. There is no crack through which it can be attacked. There are no voids. His belief is that there is no vacuum in nature. As such his controversy with vacuum, in particular with Pascal's "quick-silver experiments" and his*

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[27] Ralph Stacey (1996): *Strategic Management & Organizational Dynamics*, Pitman, London (p. 19-20).

[28] The July exercise was followed by the decision to organise a follow-up exercise on the 12th September 2001. The follow-up exercise included evacuation of the crisis centre – which is exactly what had to be done during the real crisis on the 11th September. Patrick Lagadec educational film documentaries: *World Trade Center, 11 September 2001*, Interview with James Ellson, Technical advisor to the American authorities for the 11th September 2001, previously in charge of emergency planning against terrorist attack for the city of New York, July 2002, editing, sub titles: Aurélien Goulet, 2002.

> *refusal to consider the existence of any vacuum, is so surprising in this man who referred to experiment whenever possible, to the extent that it is impossible not to see in this refusal the expression of his personality or his mode of reasoning. So much so, that I must speak of this refusal in terms of resistance. If Descartes resisted the notion of vacuum so completely, if the notion of emptiness was so inconceivable and shocking to him, it must be that to him the notion of vacuum symbolised nothingness or chaos. It represents a risk of disorder. Descartes' use of rationality to reject this concept so vigorously, manifests his fear of nothingness (death?) and the fear of losing his hold on the solidity of a system which he values because it presents not the slightest chink."* [29]

It also seems appropriate to add to this reflection some of Freud's words, modified slightly to suit current purposes [indicated in square brackets]. Thus adapted, the world of crises appears as foreign to today's managers and policy makers (used to dealing with "normal" phenomena) as psychoanalysis was to the doctors and experts of Freud's time. *Introductory Lectures on Psycho-Analysis* can be reread in this light because the way psychoanalysis was considered at its conception, seems to have clear parallels with the debate on the best way to tackle crisis situations today – a disconcerting world that destabilises and initiates all sorts of rejection mechanisms.

> *« I will show you how the whole trend of your previous education and all your habits of thought are inevitably bound to make you into opponents of [crisis] and how much you have to overcome in yourselves in order to get the better of this instinctive opposition » (p. 18.)*
> *« You have grown accustomed to regarding [crisis] with suspicion, to denying it the attribute of being scientific, and to handing it over to [journalists, victims, judges, and even terrorists]. This limitation is without doubt detrimental to your activity [of governance] […] and I fear that you will be obliged as a punishment to leave part of the influence you are seeking to the lay practitioners, nature curers and mystics whom you despise so much » (p. 23)*[30].

Although these references may seem out of context, they are essential. The crisis situation, the loss of references almost automatically makes psychology *the* major issue, both at group and individual level. In practice, collective fear and panic repeatedly exacerbate managerial, governance or intellectual handicaps. Profound destabilisation leads to negation, compulsive/extreme rationalisation or avoidance…

These handicaps would not be such cause for concern if ignorance in the field was not slowly growing and our technologies and understanding were constantly pushing back the frontiers of uncertainty. However, as highlighted by Bernstein in his cult book *Against the Gods*, this is not the case. After a detailed historical study of uncertainty, Bernstein concludes with considerable insight:

> « *Discontinuities, irregularities, and volatilities seem to be proliferating rather than diminishing*. »[31]

[29] Nicole Fabre: *L'inconscient de Descartes*, Bayard, Paris, 2004, p. 91.
[30] Sigmund Freud: *Introductory Lectures on Psycho-Analysis*, The Standard Edition, Liveright, 1977.
[31] Peter L. Bernstein: *Against the Gods. The remarkable Story of Risk*, John Wiley & Sons, 1996, 1998, p. 329.

The straightjacket of daily routine

The task of decision makers is exacerbated by the tyranny of daily routine, which complicates the fundamental difficulties described above. The complexity is "real time" which engenders saturation at all levels. All available time and energy is swallowed up in the tactical management of daily operations. This in itself is the leitmotiv of decision makers who see no time available for temporally projected reflections, open-minded questioning, initiatives and cross fertilisation of ideas.

The avalanche of contributing factors caused by current trends including the acceleration and march of globalisation in the business world, the violence of the shocks which seem to call for ever more stringent and weighty administrative operations (whether for control, accompaniment, repair, etc.) and the focus of everyone on stable features among the universal changes constantly taking place, leaves very little room for manœuvre. This has occurred at exactly the time when only an increase in the wiggle factor can allow immediate tactical obstacles to be overcome.

The meagreness of the room for manœuvre has to be measured and understood before any real progress can be made. If not, failure is inevitable, accompanied by all the regular ritual: announcement of a new national priority every two days depending on the ups and downs of the news; communication instead of governance; compensation for the lack of personal involvement with poorly defined rules to be imposed on others; with the final conclusion every time that the ultimate learning lesson is that "children need to be taught these things as from primary school".

Clearly, given all the problems, there are no easy solutions. But the pressure of reality is upon us. The risk threshold is repeatedly exceeded, redefined and the handicaps afflicting our capacity for preparation, reaction, implication and leadership have given rise to very disturbing responses. Three seemingly accelerating factors appear to govern destabilisation:

- The *disarray* of specialists and managers, confronted with the new interconnected complexity of vulnerability, in a context of exacerbated instability, about which our ignorance appears ever increasing and invasive.

- The increasing *mistrust* of the people involved who have experienced the hollow traditional verbal assurances, on the lines of "everything is under control", and observed the U-turn to the new theme "we have no control over events but we guarantee good, transparent communication".

- The threat of *decoupling* between decision makers and managers on one side and the wider public on the other. The danger is that, on a rapidly approaching horizon, radical shift occurs in reaction, from the consensual "Never again" to the "Let them all go to hell!". The dynamics of this shift can be characterised as going from explosion to implosion.[32]

These difficulties are being studied and must be addressed.

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[32]Patrick Lagadec and Laura Bertone, with Xavier Guilhou: *Journey to the heart of an implosion – lessons to be learned from Argentina*, Eyrolles, September 2003. [*Voyage au cœur d'une implosion – ce que l'Argentine nous apprend.] Ruptura y reconstruction – Lo que la experiencia argentina nos enseño*, Evolucion, Buenos Aires, noviembre 2003.

The Creative Dynamics Needed

These issues cannot be solved by any quick and easy recommendations, with attached checklist. They are real challenges, with real twists and turns – each one characterised by a unique set of surprise, shock, unthinkable…. but also positive opportunities.

There are two basic lines of approach and both must be engaged. First, in-depth groundwork, to provide the basic information to address the new challenges, even if the boundaries are sometimes chaotic. Secondly, an effort towards adjustment / safeguarding to provide a better basis for dealing with immediate turbulences.

Building fundamental strengths

We must try and generate a radical turn-around on a number of fronts. Rupture but in a positive and creative sense. The following list is not exhaustive:

A radical change in intellectual approach

The road map is nearly a clean white page and because it is such, it invokes all the paralysis which goes with this information vacuum. The perspective of the issues must be literally up-ended. Issues which had previously existed "on the periphery" have been brought centre stage and must now be treated as core issues and not freak events. The "known world" no longer exists, the comfortable world where we conducted our activities and projects, with recognised measures of excellence with a few discrete little uncertainties at the edges. In the past these marginal uncertainties were only worthy of attention if they fell into validated theories supported by robust statistical evidence, neatly cleaned free of untidy outliers. The new frontiers of knowledge and the focus of intense and urgent intellectual effort must now concentrate on events and data excluded until now: discontinuity, irreversibility, extremes, volatility, radical change, crystallisation and resonance. This work must be conducted both vertically in all disciplines and horizontally across all disciplines. These subjects must stop being taboo and the work undertaken must not be lip service paid to the wild peripheries, a small concession simply to maintain basic order. The challenge is there, ready to be taken up by the best brains and specialists. If this movement is not tackled with determination and conviction, the intellectual world will disengage. When turbulence and mind numbing events occur, challenging all the reference points of our world and disturbing the tranquillity of our accepted paradigms, arguments that anything "out of the box" is not science are not acceptable. We need new tools for the new challenges and the closer these tools can be brought to the people at the front line of the management procedure, the less they will refuse the obstacles which confront them.

Intense involvement at the highest levels

When confronted with such weighty matters that concern identity, survival, plans and visions for the future, nothing can be done without intense, personal, direct involvement by the key players in the organizations concerned. For example, during the "9/11" crisis, the actions of Rudolph Giuliani, Mayor of New York, went far beyond mere circumstantial "media communication" and were a determining factor in the management of the entire situation: "*Have beliefs and communicate them. See things for yourself. Set an example. Prepare*

relentlessly. Underpromise and overdeliver. Don't assume a damn thing".[33] Those who occupy the highest offices are expected to be on the front lines, where the stakes are high, mobilizing people capable of taking charge. Those involved must receive the powerful message, that nothing less is expected of them. To date this type of direct and personal implication by leaders is very much the exception - in all countries.

A shrinking ability to think on our feet

Plunged into a world of violent turbulence, organizations must be led, mobilized and empowered in new terms. The acquisition of a specific, rigid technical arsenal to respond to an unusual situation is no longer adequate. Advance planning, a high level of responsiveness to weak signals, at the highest level, are essential in order to anticipate sudden change, counter ethically unacceptable reactions and build the necessary networks of actors. Due to the elements of surprise and complexity and the aberrative nature of the events, organizations must develop new ways of monitoring situations. Leaders must be able to rely on people accustomed to operating in a crisis, people capable of objective stepping back and assessment, whenever a sensitive situation arises. This skill is particularly necessary to counteract the inability to think, perhaps the most seriously pathological reaction to the new forms of crisis ("In a crisis, you don't have time to think"); to counteract, in the same line, a sort of "bunker mentality" which emerges with each person holed up in his own little corner and adopting the easiest approach to problems, usually purely technical, without examining the underlying positions.

Today, more than ever before, great crises will lead to great disaster unless sufficient thought and ability for strategic leadership are developed. The Spanish (mis)management of the Prestige disaster[34] and the fiasco of the 11 March 2003 should serve as a final warning here, for Europe as well. During a recent international simulation, we were able to see the degree to which the lack of strategic ability in these areas was determinant. The European political capability was exhausted in only two hours. In fact, the expression "Crises as Institution Killers"[35] was coined to express what we observed then.

Experience exchange "clubs"

The critical barrier is the profound anxiety which instantly emerges with any "out of the box" event, where there are no coded and validated responses. We must all (and this applies particularly to those exercising the highest levels of authority) engage the search for best approaches to these difficult territories. Although still at a very embryonic stage, "clubs" for the sharing and exchange of problems, questions and solutions have proved successful. This type of forum has been much appreciated by those who have taken the step to take part. Together, the participants address the destabilisation factor of major surprise, of the unmanageable, the unthinkable, and subsequently prove far more able to cope with situations and actually exercise their responsibilities. These clubs cannot provide easy solutions - no checklists, no standard practice - but they do enable participants to take a more objective approach, to understand that each event is unique and that as such management directions must be tailored to the actual challenge being faced. However, these clubs can only continue

[33] Rudolph W. Giuliani: *Leadership*, Miramax books, New York, 2002, p. X.

[34] Debate at the European Union Mixed Commission, Meeting of MEPs, Madrid 5th December 2002, speech given by L. R. Zapatero on the crisis management, TVE2.

[35] UNDP Conference for South-East European Countries: "Building Transnational Crisis Management Capacity: an exploration of viable ways to improve civil security in South-East Europe", Bratislava, Slovakia, 23-25 January 2003.

to be effective if they are provided with some guidelines and direction from time to time. Rigorous professionalism is needed, organising a meeting is not enough on its own...

Civil society back in the loop

In the same spirit, we must get past the notion that, in delicate situations, everything is immediately put in the hands of some government agency, under a single command, using a sort of military reasoning that believes that civil society will only "panic and give way to looting." The example of the 1988 Quebec ice storms is quite instructive in this regard. The debriefing (largely open and extremely detailed) strongly emphasized the need to determine the response in close cooperation with citizen and NGO type organisations. For example, it was said that for such complex network failures the citizen had to be prepared to go it alone, cope with the situation at his level and wait as long as it took for service to be restored. The decision here being that the overriding priority was given to the structural restoration of the networks.

Any other strategy can only lead to overall impotence and horrendous mistrust. This is not a militant view advocating some dangerous oversimplification. The shocks that will accompany the new world of risk will require modes of functioning which can no longer rely on our vision of a State that provides solutions to passive groups of people within a "Command and Control" philosophy.

This also assumes other ways of looking at science. We must extricate ourselves from positivist thinking. In the words of a former British Chief Scientific Adviser, Sir Robert May, at a recent European conference on science and governance[36]: *" In many important issues – both of safety and ethics ---science alone rarely gives unarguable answers.* As Brecht wrote in his play *The Life of Galileo: "The chief aim of science is not to open a door to infinite wisdom but to set a limit to infinite error".* We must re-examine our conception of information and democracy at a time of uncertainty, and even ignorance. The same Sir Robert May, in a deposition before the investigative committee on the bovine spongiform encephalopathy (BSE) crisis in Great Britain, again pointed out positive approaches: *"You can see the temptation on occasion to wish to hold the facts close so that you can have internal discussion and the formation of a consensus so that a simple message can be taken out into the market place. My view is strongly that that temptation must be resisted, and that the full messy process whereby scientific understanding is arrived at with all its problems has to be spilled out in the open."*[37]

Here, we touch upon our most fundamental concepts of governance. At a large staff meeting of a large ministry, held a few years ago after several serious weather-related events, one of the national administrators argued for a new conception of the role of the State by citing: *"To profess to solve all problems and to answer all questions would be impudent boasting, and would argue such extravagant self-conceit as at once to forfeit all confidence." (*Immanuel Kant, *A Critique of Pure Reason).* The meeting made known how much it agreed with this statement. A high official expressed his indignation, to emphasize the extent to which, on the contrary, the State had all the resources needed to perform its noble tasks. This issue lies at the core of our discussions on risk: is this an opportunity to raise questions and to take

[36]Sir Robert May: *Bringing Science into Governance,* Conference "Science and Governance in a Knowledge Society: The Challenge for Europe", European Commission, Directorate General Joint Research Centre, Directorate General Research, 16-17 October 2000, Brussels.

[37]Lord Phillips, J. Bridgeman and M. Ferguson-Smith (2001): *The BSE Inquiry, vol 1. Findings and Conclusions,* op. cit., p. 265 (§1297).

responsibility? Or, on the contrary, a danger that requires reaffirmation of the principle that "everything is under control" --- without, however, there being anything "reassuring" about it.

Here also there is a need to open, share and invent. However, to achieve this supposes that new approaches are available. For example, a few days before a public meeting on risk in Toulouse after the terrible explosion at the AZF factory on the 21 September 2001, I drew to the organisers' attention the need to build in a new framework for sharing experiences and views. The reply was: "The speeches are ready". It is very clear that the time has come to move on and to engage different practices. The real problem is that the paralysing nature of these challenges 'freezes' action.

In the same way, involvement of citizens must be improved. For example, when emergency exercises are conducted, the heads and managers of institutions such as hospitals, schools, retirement homes etc. should be consulted in order to get a better idea in advance of their specific needs and constraints, and so target the testing of certain procedures. This would enable the old approach of "Do nothing until you receive orders" to be overturned in favour of "What would be the most useful for you and then we can test it together?" We can only reap the trust that is sown.

Training

The stakes are high. Until these areas have been explored and become part of the basic training in higher education programmes, it will be very difficult to include them on the agendas of our decision makers. These subjects will remain taboo if they do not become part of the identity, the reference training and the league tables of excellence for new generations of managers/decision makers. Without this in-depth preparation, the fear associated with major risk will remain too uncontrollable to enable any creative synergy to be generated.

More positively the big question is to define the necessary basic grounding which our future managers (among others) need to be able to find the vision, balance, skills and ability to listen in a world constantly shaken by the shockwaves of permanent cleavages. It is no longer sufficient to prepare them for a basically stable world where the rare and freak event requires "management". On the contrary they must be trained to "manage" in a world where the dynamics and cleavages engendered by crises are structural realities.

Immediate creative initiatives

In addition to long term action, we must adopt more immediate strategies which may well be needed in the short term.

Rapid Reflection Forces

Major crisis events engender closure, seizure, the raising of barriers, and engagement in cul de sacs. In real terms, each nation with its own diversity of culture groups must designate a range of people who can be mobilised to deal with all aspects of an emerging major crisis. The same should be developed in industry. The lack of such teams was particularly evident during the Toulouse-AZF crisis, and again during the recent tsunami episode. The task is to identify the people who are both competent and able to remain operational in the face of unconventional crises and to make them work together to develop flexible but efficient strategies for crisis management. These people do exist but they are often dispersed. They must be brought together in teams and trained in order to extend their experience, skills and ability to ask questions, so that they may assist decision makers to cope with unconventional situations. In

building these teams, we must be careful not to fall into the usual rut of assuming that the members should be drawn from the established elite. In order to guarantee the essential open-mindedness needed, the teams must include a whole range of people including women, foreigners, young people, etc. This approach is currently under discussion at European level, in particular within the framework of the European Crisis Management Academy. The next step is to move from idea to action.

Minimum preparation for senior management

From an institutional point of view, there are two current dominating topics in crisis management strategy: firstly, the preparation of crisis plans (often subcontracted) and secondly "crisis communication", media training which is too often seen as the priority. This rather rigid compartmentalisation must be broken down, this type of "safe waters" response is no longer adequate and crisis management strategy must now make preparations to survive in the challenging "high seas" of risk today. Preparation for unconventional situations should be at the top of all senior management group agendas, from boards of directors, to executive committees and ministerial cabinets …without arguing that they already do this on a daily basis!

Preparations and action partnerships

Emerging crises give rise to organisational problems which have no identifiable frontiers. It is now urgent to engage those involved in their management in joint preparations and training. To encourage them to ask more and the right questions. For the last four years, the notion of partnership has dominated all meetings on "critical infrastructures". The time has come to move into the action phase. For example, this could involve studying scenarios such as the film "The Day Britain Stopped" (BBC, 2003). In this BBC film drama, Britain faces a national crisis in the country's transport infrastructure which has been operating at virtually saturation point. A series of unfortunate events paralyses all transport systems – road, air, rail – resulting in snowballing chain of events; the interdependence of the decisions adopted by each of the key actors is ignored[38] and the individually managed strategies all become unoperational. This programme is only a drama and although it lacks rigour on some points (as often criticised in the UK) the real question should be why should the monopoly of creating such scenarios be left to journalists? Why are the actual decision makers involved absent from the reflection and work to be accomplished?

Tough, targeted and bold initiatives

With a battlefield so vast and complex, it is necessary to move forwards in carefully thought out, very specific, but bold stages. In implementing a very specifically defined plan to achieve progress, the lesson can be learned that action is not suicidal, on the contrary it can be fertile. The very targeted nature of such initiatives is also crucial due to the constraint of time which, as already highlighted, is always in very short supply and does not permit the implementation of complex plans.

Example: In February 2001, a major snowstorm on the Aix-Nice motorway (South of France) trapped 4,000 people on the road for nearly 36 hours. Weather conditions were unprecedented – 3 feet of snow in a few hours. Instead of claiming "force majeure"[39], the Chairman of the corporation concerned (Escota), called a public debriefing. Through the press, all interested parties were invited to share their experiences at a public meeting three months later.

[38]Geoffrey Heal and Howard Kunreuther: "Interdependent Security: A General Model", The Wharton School, Risk Management and Decision Processes Center, University of Pennsylvania, July 2004.
[39]Force majeure – an uncontrollable event.

Moreover, this collective effort was supplemented at the meeting by joint consideration of what each participant could contribute to the safety of such a large network (which, for example, would require that trucks be held back at the Spanish and Italian borders if it were necessary to cut off traffic in Provence). The result was particularly interesting, as much for a better understanding of the incident and the problems to be confronted as for preparation for the future. In a word, the meeting afforded an opportunity to become better aware of the networks at work, and especially to create new networks among the various players --- the turnpike authority, government authorities, local officials, service stations, the weather service, truckers and motorists.

Example: after the anthrax attacks in 2001 in the United States, and thousands of false alarms in Europe, I suggested to postal operators that they should organise an international meeting for experience exchange and to define some strong operational initiatives for the future. The President of the French postal service *La Poste*, immediately agreed to the idea. In 2002, key representatives of about thirty operators attended the meeting in Paris to share their experience, the lessons they had learned and to set up an inter-network alert and information system. One month later, this new capacity was implemented and was used to deal with a new alert, coming again from the American network. A number of key factors made this operation such a success, a willingness to listen, to consult and to suggest innovative strategies.[40]

How often is this type of information exchange engaged today after some major event? Many of the major actors in the Toulouse tragedy, regret today the lack of this type of initiative following the AZF explosion.[41] In the SARS episode, it would also have been important to organise a meeting between the public health actors, representatives of the affected cities and governments and the transport sector in order to try and identify the big issues, centralize good ideas and strategies for progress.

However, experience exchange is not the only solution. Strong initiatives must be instigated on a number of other fronts: questions need to be asked, simulations created, training organised, international public debate engaged etc. The time has come to be creative. We must be as innovative and proactive as the emerging crises are surprising and furtive. There must be one central belief, namely that it is only by taking the risk to try something new that creative opportunities are made. Only by taking risks do we stop being the prisoners of risk. We must be prepared, so that the taking of risks is less terrifying and paralysing than the perspective of a guaranteed fiasco.

Conclusion

In the film “The Hunt for Red October” there is a key moment where the Commandant of the Soviet submarine announces to his officers that he has informed the Kremlin of his plan to defect, and take his ship to the West. His officers rebel violently against what seems to be a personal whim of their leader: “Suicidal” they cry. The Commandant calmly replies “But the problem is not the Russians!: I know their tactics!” This scene summarises the crucial challenge of any high risk situation: traditional approaches are totally submerged by events,

[40]Patrick Lagadec and Erwann Michel-Kerjan: “A Framework for Senior Executives to Meet the Challenge of Interdependent Critical Networks under Threats : The Paris Initiative – Anthrax and Beyond”, Working Paper, Center for Risk Management and Decision Process, The Wharton School, The University of Pennsylvania, July 2004, WP#04-028.

[41]This fact emerged clearly from the witness accounts of that event from the emergency services during the Congress of Catastrophe Medecine. (Toulouse 4-6 December 2002)

and so we can expect nothing from people in charge because we know that they have neither the culture nor the tools to rise to the occasion: it is a totally different game.

> *Therefore the skilful leader subdues the enemy's troops without any fighting; he captures their cities without laying siege to them; he overthrows their kingdom without lengthy operations in the field. With his forces intact he will dispute the mastery of the Empire, and thus, without losing a man, his triumph will be complete.*[42]

The major risk today is the litany that "everything is under control" "that we mustn't be pessimistic and therefore there is no point asking too many questions" whilst simultaneously insisting that citizens must abandon the notion of "zero risk" and lamenting society's "unhealthy preoccupation with legal action". If we do not have the courage to take strong, determined and open-minded initiatives, we run the risk of becoming increasingly bogged down in a bunker mentality. The risks will not wait for us to get ready and if we go from fiasco to fiasco, the will, energy and confidence to tackle the issues will collapse reinforcing the fears of the public, the authorities and feed into a dynamic and morbid loop.

"Failure is not an option". We must acquire the entire range of skills needed for the new challenges– intellectual, managerial, governance, psychological. We must visit the new frontiers with confidence, improve our intelligence about them and acquire brand new skills – vision and an entire strategy logic. In order to remain actor of our particularly turbulent period of history.

Fear is the major assailant to be conquered at all costs, despite all temptations to the contrary and any collateral benefit which it may procure.

In Philadelphia, birthplace of the US Declaration of Independence, the *Liberty Bell* proclaims: « *Proclaim Liberty throughout all the land unto all the inhabitants thereof* » (Leviticus 25:10).

We must not deal the best hand to the terrorists, they will have triumphed if they succeed in replacing the word "Freedom" carved into our hearts and minds, with the word "Feardom".

[42]Sun Tzu, op.cit. III, § 6, 7.