
Editorial

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Biographical notes: Jean-Luc Wybo is Professor at Ecole des Mines de Paris and Ecole de Chimie de Paris. He holds an Engineering degree and a PhD from the University of Nice. He is Director of the MSc programme in Industrial Risk Management. His research fields are safety culture, prevention of crises and organisational learning.

Jean-Marie Jacques has a PhD in Biology and in OB. He is Professor and Head of the ReCCCoM at the University of Namur (Belgium). His research integrates cognitive (perception, representations, *etc.*) and social (organisation, groups, *etc.*) dimensions in crisis and disaster studies.

1 Close the gap between the scientific disciplines

After decades of attention paid to natural hazards, then to technological disasters, the field of crises has deeply changed and is becoming more and more complex. The theoretical frame, the nature of crises and the protocols of action are questioned by the constant irruption of new lines of ruptures, for example: climate change, public health problems, data processing disruption, major communication failure, critical infrastructures and more recently terrorism. Above that we can stress the role recognised as more and more important played by social sciences (psychology, sociology, anthropology) in the explanation and understanding of these new ruptures, crises and emergencies.

The explanation and understanding come also from new methodologies and theories rooted in neuroscience, biology and political sciences as well as cognitive sciences and emotion theory. In this context of high turbulence, the theories in use, without being obsolete, do not enable us to understand the building of 'sense making'. The usual responses for resolving emergent crises are not pertinent anymore and generally leave

questions on immediate logic to be applied in fragile situations and on the strategic visions needed for direction and coherence in policy making, decision-making and action. This is true for both the public and the private sector.

We have built this special issue by exploring the ‘semantic spaces’ crossing the different papers, particularly by hunting a metaphor and a system of evocation. We founded the metaphor ‘Close the gap’, which reflects the search for filling a space, for establishing links and binds, for throwing bridges, for filling vacuums or penetrating interstices. ‘Close the gap’ mobilises a system of associations/oppositions of abstracted concepts largely present in the papers: junior and senior researchers, theories and concepts, different disciplines, paradigms and epistemologies, the visible and the invisible, the old and the new, traditional disciplines and the new ones, Anglo-Saxon and other worlds, risks and crises, emergency and crises; in other words, in search for the ‘explanatory gap’.

2 Micro and macro points of view on crisis

Mixing micro and macro points of view on crisis is an exercise, often perilous but always salutary, which makes it possible to set up another look on researches, institutions, teams and laboratories, and finally on the researchers acting in the field of crises. This exercise allows us, without searching for a unified field, to point out the complementarities of approaches and postures at different levels without falling into eclecticism, and identify the potentialities for new controversies.

3 Genesis of a crisis

A crisis is not Emergency Management; crisis management cannot be achieved using existing plans and procedures. A crisis is a dynamic process that benefits from a favourable context: latent faults, degrading situations, tensions among people, *etc.* A crisis develops itself by accumulating energy, instantly, after catastrophes, or progressively, by a succession of steps that combine to generate chaos.

Fast-going crises make time too short for action. They may be technological, as in the Chernobyl accident, and provoke the questioning of industrial activity by the Society, as in the decision to stop the development of nuclear energy in Germany. They may be natural, as in floods, and provoke the questioning of land management by citizens, as in the maintenance of dams in New Orleans after hurricane Katrina. They may be sanitary, as in contaminated blood in France, and provoke the questioning of the national health system.

Slow-going crises remain ignored for a long period; they send weak signals, disseminated over space and time that are difficult to merge, so the margins of control are reduced or non-existent when they finally emerge. They provoke the questioning of governments, as in the effects of asbestos or the greenhouse effect due to CO₂ released by industry and vehicles. Media amplification is more and more a worsening factor in these kinds of crisis.

Crises reveal the weaknesses of organisations, by the constraints they impose. People, groups and organisations have capacities of resistance to constraints, but if the gap between the planned world and the real one becomes too large, if the pressure is too strong, these possibilities of adaptation are no longer sufficient and the system breaks into chaos.

Crises reveal also the strengths of organisations and their capacity for innovation. Crises can be profitable, when they provide opportunities to find new relations between the system and its environment that permit the release of constraints. It is the energy accumulated in crisis-prone situations that arouses initiatives, emergence of new leaders, and new organisational patterns.

4 Crisis and the management of change

The constant change of the Society, of its relations with science, industry, agriculture or health, imposes adaptations at the political, industrial and individual levels. Facing these progressive abrupt changes, the Society and organisations have to adapt and to update regulations and practices.

For a government or a company, designing and implementing new rules and new uses is a difficult exercise. How can we be sure that principles and ideas that look well fitted to the past and present contexts will prove efficient in the future? On these aspects, crises force the politician, the manager to question existing frameworks; they put weaknesses in the light and urge the setting of priorities. Crises also reveal solutions that have emerged and proved adequate, as long as key people were prepared to identify them.

Managing change is also accepting new people who often face difficulties in being recognised, in finding their place in existing organisations. These new competencies find opportunities during crises to be identified and to demonstrate their contribution to the organisation.

The permanent pressure applied nowadays on political and industrial systems has a tendency to make them withdraw into themselves, to narrow their vision of the world to the limits of their knowledge, activities and perceptions. This process makes systems even more vulnerable to crises that they will not be able to anticipate.

Thinking out of the box, developing curiosity towards other organisations, their evolution, the crises they experience, is a solution to this problem. Learning from past crises enables anticipation of difficulties and preparedness. Analysing the context and the development of crises experienced by other organisations helps managers to ask the right questions: What would have we done? Would it work in our organisation, with our staff?

5 The November 2004 workshop in Nice (France)

From these reflections and questions, three French research institutes (CNRS,¹ Ecole des Mines de Paris and Ecole Polytechnique) decided to organise an international workshop with the aim of making a survey of knowledge in the field of crises, to identify the gaps and to propose new directions of research.

There were two objectives for this workshop: propose orientations of future research studies and give to a group of PhD students an opportunity to work with international experts in the field, coming from different regions of the world. The ten papers presented in this issue are organised into three groups:

- 1 Concepts and analysis of crises (Gilbert and Henry, Alam and Nollet, Jacques and Specht).
- 2 Crisis management (Wybo and Latiers, Granatt and Paré, Dugdale and Al, Webb and Chevreau).
- 3 Crisis and the Society (Kerjan and Denis-Rémis, Ekengren and Groenleer, Boin and Gralepois).

Note

- 1 French National Center for Scientific Research