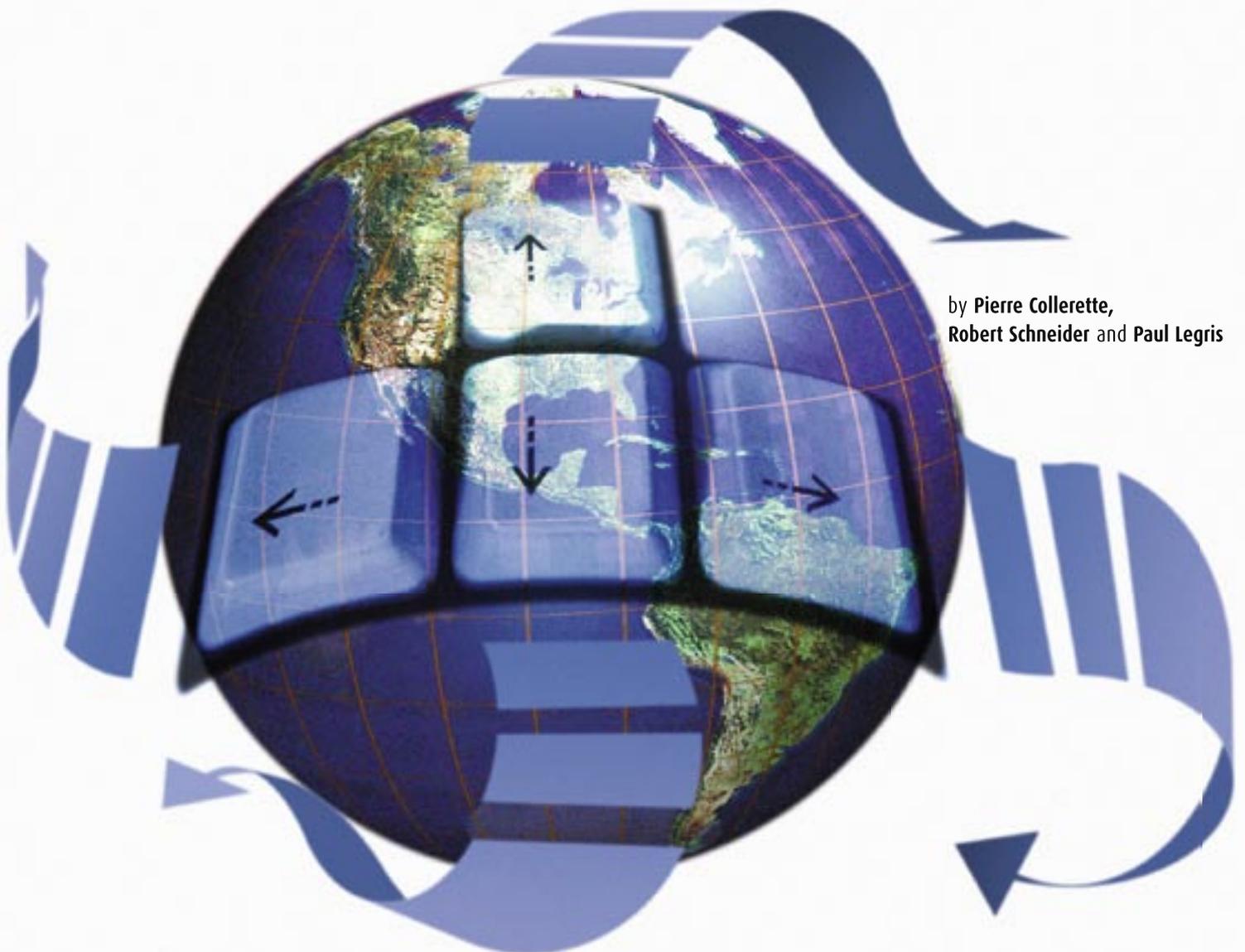




# Managing organizational change Part 7 **Complexity, change and turbulence**

*This article is the seventh and last in a series about the problems of change management in organizations. In the previous articles, we addressed the issue of complexity on several occasions, explaining that it renders change management more difficult. This time, we offer some ideas on management practices that are liable to increase complexity artificially along with adverse effects on change management.*



by **Pierre Colletette,**  
**Robert Schneider and Paul Legris**

## SPECIAL REPORT

### New phenomenon

Since the 1990s, we have been witnessing a marked increase in complexity in organizations. But what do we mean when we speak of complexity in management? A number of constant features emerges from the various definitions given in the literature:

- a high number of variables,
- non-linear relationships between them,

- behaviour patterns that appear to be random, and
- unforeseeable reactions.

In short, executives today are said to have to contend simultaneously with a number of often non-convergent variables, which are the source of ambiguous, changing and volatile situations.

In recent years, the subject has given rise to several publications, conferences and sym-

posiums and is now part of managers' daily vocabulary. There is even a specialized magazine on the topic (*Emergence: Complexity and Organization*).

Proof of this infatuation is that a search for the term "complexity and organizations" using the Google search engine in May 2006 produced more than 60 million results! A reality? Snobbishness? Fashion? Fantasy? A pretext? Probably

many of these things and that is why we have to be cautious.

The increase in complexity is certainly a real phenomenon, of which much evidence can be found. You only need to talk to some managers to hear them mention the many situations in which they have difficulty in finding satisfactory solutions, or in reconciling the multiple constraints that are at work.

Since the 1990s, we have been witnessing a marked increase in complexity

### About the authors



*Pierre Colletette is a professor and researcher in management at the University of Quebec in Outaouais (Canada). He has published several books in the fields of organizational change and management structures. In addition to his academic activities, he has held management positions and has been involved as a consultant in numerous projects in Canada and Europe.*

University of Quebec in Outaouais, Gatineau (Quebec), Canada J8X 3X7.

E-mail pierre.colletette@uqo.ca



*Robert Schneider, who has now retired, headed his own consulting firm, the Management Research and Intervention Centre (CRIG). He spent about 30 years working as a management consultant on strategic planning, change and organization issues. He also taught in several university programmes and published books and papers on organizations.*

Management Research and Intervention Centre (CRIG).

E-mail robert.schneider@cgocable.ca



*Paul Legris is a professor and researcher in information and management systems at the University of Quebec in Outaouais (Canada). He has accumulated more than 20 years of experience in management positions in the sectors of information technology and public administration. He is conducting research into integration of technology in companies' business processes.*

University of Quebec in Outaouais, Gatineau (Quebec), Canada J8X 3X7.

E-mail paul.legris@uqo.ca

An example is the difficulty in finding times at which the managers of an organization can be brought together for a few hours. Another example is provided by those people who can no longer bear to be separated from their electronic devices for keeping up with their dossiers and projects. Yet another is the difficulty of taking bold decisions without raising an outcry of protest.

Several factors are contributing to this increase in organizational complexity. We will confine ourselves here to some of them, knowing that the list is much longer.

The opening up of markets to the world, combined with the relocation of production centres to all four corners of the globe, has undermined the rules of the game that had prevailed during the previous decades.

At the same time, the absence of new rules, or their ambigu-

# CHANGE

ity, combined with the evolving nature of the phenomenon, has made heavy going of the management of many business enterprises.

Access to more extensive and more diversified economic areas obliges companies to take into account factors which previously had less influence: distances, time difference, layers of intermediaries, many different languages, diversified cultures, different regulations – all of which are factors that can make the manager's task more difficult.

The progress of information technologies now makes possible instantaneous communication on a global scale, thereby creating new expectations among both customers and partners, suppliers and colleagues, and fostering a kind of cult of immediacy in which everything has to be done within a short time span. The sender of an e-mail gets worried if he or she has not received a reply within 48 hours and sends a reminder to the recipient.

## Artificial complexity

We take the view, however, that some of the complexity is created artificially – although involuntarily – by some executives, and could partly be avoided.

In a context of turbulence, some people have in a way adopted reflexes of which the result is to increase complexity artificially and to turn it into an invasive syndrome.

In order to facilitate the identification of these dysfunctional habits, we mention some of



those which, in our view, are the most obvious (**Table 1, overleaf**, allows readers to assess their organizations against these bad habits).

## The wrong good ideas

In some cases, executives contribute to complexity by initiating, or authorizing, projects which do not correspond to priority challenges. The problem is not so much the initiatives themselves as the additional burden the projects place on managers' workloads.

The increasing number of non-essential projects often entails a dispersion of energy and enhances the impression of a fragmented organization heading in all directions and difficult to manage. It calls for an increased effort on the part of the managers, thereby leading to a mental overload.

Studies conducted in the field of cognition have shown that the human brain has limits to its ability to process efficiently a large quantity of new information (Kirschner et al., 2006).

This is the kind of cognitive overtaxing to which one exposes oneself when embarking on several projects, which come on top of day-to-day operations, thereby increasing the number of dossiers to be managed and creating this impression of a whirlwind, chaos or even madness that is sometimes reported by today's managers.



A study conducted by Probst and Raisch (2004) has shown that many organizations which had launched more projects than they could manage have experienced some severe financial failures.

Let us take the example of the senior executives of an insurance company which, owing to an expansion project at the international level, had decided to launch an extensive campaign to raise the personnel's awareness of cultural diversity. Unfortunately, it was a failure.

Working meetings, consultations and discussions were held in most of the departments, but the whole thing remained rather theoretical since most of the staff were not required to contribute to international activities, at least not in the initial phases of the strategy.

## The increasing number of non-essential projects often entails a dispersion of energy

Thus, a lot of energy was mobilized, the managers were given additional responsibilities, project implementation and follow-up mechanisms were introduced, thereby increasing the complexity of management at several levels, but with a very low – and perhaps sometimes even counter-productive – added value.

Although the intention was praiseworthy, in an already complex and volatile context, the company allowed itself to

**SPECIAL REPORT**

be drawn into an intellectually attractive project, the priority and scale of which were questionable, however.

This type of project has the annoying habit of being relegated after a while to the back burner, but of nevertheless surviving in the system and clogging up its functioning (Roy-er, 2003).

**Some circles seem to be suffering from the "everything in real time" syndrome**

**False emergencies**

Some circles seem to be suffering from the "everything in real time" syndrome. So much importance is attached to continuous adaptation that managers feel obliged to do everything immediately, thereby testifying to an inability to differentiate what can be deferred from what really has to be done immediately.

The electronic media are partly responsible for this phenomenon, by making communication possible almost anywhere, at any time. The immediacy of communication implicitly creates a mindset that encourages managers to believe that the follow-up must be immediate.

The following scene caricatures the phenomenon: in an airport waiting room, an individual is discussing something with another person on his mobile telephone, and during the exchange sends him some data from his portable computer, while at the same instant

a double blip from his pocket computer informs him of the arrival of a message, compounding the diversity of the tasks he is forcing himself to carry out at the same time.

The greater the number of these cases, the more they reinforce not only the cult of immediacy, but also the norm according to which everything has to be done at the same time.

Of course, these means of communication are prodigious, valuable and even indispensable. However, they contribute to the emergence of a culture of immediacy which turns everything into an urgent matter.

In addition, managers who are constantly "snowed under" may even create a pernicious norm for the organization according to which a good, dedicated manager is one who is always "up to his eyes" in urgencies.

In our opinion, in quite a few cases people allow themselves to be carried away by a wave of collective turbulence which is not justified and which harbours some perverse effects, including an artificial increase in complexity and an augmentation of the risk factors for the organization.

**"Too complete" solutions**

By seeking to solve very real problems, senior executives want to do things too well in certain situations, and they adopt disproportionate solutions, one reason being because technology invites them to do so, or again because it is an exciting challenge. But these

	I agree	I tend to agree	I ± agree	I tend to disagree	I disagree
1. <i>The wrong good ideas</i> : in our organization, we tend to initiate projects that do not meet priority challenges.	5	4	3	2	1
2. <i>False emergencies</i> : in our organization, we tend to want to do everything immediately; little differentiation is made between what can be deferred and what really has to be done immediately.	5	4	3	2	1
3. <i>"Too complete" solutions</i> : in our organization, we tend to adopt solutions that extend beyond the problems to be solved.	5	4	3	2	1
4. <i>"Too perfect" solutions</i> : in our organization, we oblige ourselves to seek solutions that reconcile all the trends.	5	4	3	2	1
5. <i>Continual re-organization</i> : in our organization, we are continually having re-organizations.	5	4	3	2	1
6. <i>Propensity to turbulence</i> : in our organization, we are often grappling with a disorderly succession of decisions involving change.	5	4	3	2	1
7. <i>Intellectual illusion</i> : in our organization, the senior executives tend regularly to devise new projects that the units have difficulty in absorbing.	5	4	3	2	1
<b>Sub-totals</b>					
<b>Overall total</b>					

If the total is between 29 and 35 :	your organization shows a strong propensity to artificial complexity
If the total is between 21 and 28 :	your organization shows a real propensity to artificial complexity.
If the total is between 14 and 20 :	your organization shows a moderate propensity to artificial complexity.
If the total is between 7 and 13 :	your organization shows little propensity to artificial complexity.

Table 1 - Propensity to artificial complexity

CHANGE

solutions will in turn sometimes create new problems.

Let us take the example of this service company whose senior executives wanted to equip themselves with a management dashboard to monitor some performance indicators.

After having explored the feasibility of the project, the deputy chief executive came back with a proposal for a system that would not only supply a complete picture of the situation, almost in real time, but which would also make it possible to analyse the data from quite a number of angles. To implement the project, they needed a small development team, some substantial sums of money, a reconfiguration of the databases and about one year's work.

**Many organizations which had launched more projects than they could manage have experienced some severe financial failures**

The top executives were spontaneously captivated by the project until one executive was frank and bold enough to point out that what was really needed was an extraction of data, most of which were fairly easily accessible and to sort them in a few tables around some critical indicators.

It should be added that the deputy chief executive's proposal had placed the emphasis on the technological development to be carried out and took little interest in the information already available.



The senior executives almost endorsed this proposal, the effect of which would have been to increase complexity in the organization artificially, not to mention its cost. The problem was a genuine one, but although the solution was attractive, it was disproportionate.

It would have meant introducing a new layer of information tools, which itself would have called for a series of mechanisms that would have become tangled up with the existing ones, making the organization more difficult to manage.

### "Too perfect" solutions

One senior executive, in a moment of weariness and grappling with acute problems, got these thoughts off his chest:

"Nowadays, a number of problems have become impossible to resolve. There are potential solutions, but no one dares to adopt them because you have to please everybody, failing which you find yourself faced with a barrage of protests.

"You find yourself obliged to meet the expectations of all the interest groups, which are often conflicting, and this creates insurmountable challenges. You then find yourself with two types of equally ineffectual solutions:

- very complicated solutions to reconcile all the interests, which are not only difficult to implement, but which in turn give rise to new problems and make the situation more complex to manage than previously;

- or again, solutions which, in order to calm everybody down, are reduced to the lowest common denominator. As they provide only a partial solution, they oblige you to address the problem again shortly afterwards, with a worse situation that is more difficult to rectify."

We have heard similar comments from managers in various business sectors, both private and public.

### Continual re-organization

Faced with a changing reality and confronted with the difficulty of achieving an optimal *modus operandi*, several organizations regularly make structural changes at different levels.

At a recent seminar attended by about 15 managers, only one reported that he was not in the process of a re-organization... This succession of structural modifications and modes of operation is often carried out in isolation to each other and in a piecemeal fashion, in response to the situations that crop up. Therefore, it is not always possible to ensure overall coherence and does not allow the players to stabilize the way they operate.

This practice, which is perfectly normal in a context of turbulence, may in the long run engender a kind of incoherent organizational "patchwork", to say nothing of the addition of coordination mechanisms that will be

## SPECIAL REPORT



superimposed on the existing ones.

In other words, this piecemeal approach involves the risk of creating a jumble of increasingly complex and difficult-to-manage structures and mechanisms, sometimes leading to new coordination problems to which the manager responds by applying the same medicine...

react in certain situations by taking re-organization measures too easily.

### The propensity to turbulence

In some organizations, the managers seem to be afflicted by a kind of frenzy and exaltation in connection with the turbulence and volatility of their environment. In fact,

will be to reposition the organization in its market and to alter its working processes.

One week later, the managers are informed that they must urgently review all the internal safety standards following the conclusions of an audit, while at the same time the units have to produce a personnel rationalization plan with the aim of cutting the payroll by 10 %.

special dossiers" in the space of a few days.

Despite the impression of madness that this caricature may give, it is hardly an exaggeration of the reality of some organizations. Some people might regard it as proof of great dynamism.

Unfortunately, it is rather a state of feverishness which is dressed up as a response to complexity, but which in fact conceals an inability on the part of the executives to interpret and understand their environment, as well as the state of their organization.

**It is not because an organization periodically experiences change that it necessarily has to become chaotic**

This inability, which is reinforced by a cult of activism or an impression of constant urgency, means that management finds itself constantly in a reactive mode, and rushes into disorderly actions which engender further turbulence.

Several of these actions are never completed, but nevertheless give rise to projects to which time and resources have to be devoted, thus adding to the dispersion of efforts and reinforcing the impression of being drowned in complexity. In actual fact, it is often not a problem of complexity, but rather an excess of language (which is in fashion) to express one's disarray.



Here again, the intentions are praiseworthy, but one runs the risk – involuntarily and unconsciously – of compounding the complexity of the organization.

We do not deny that organizations have to cope with an often complex reality that obliges them to adopt consequential solutions. However, we think that senior executives

we are witnessing turbulence among management itself, which takes the form of a disorderly cascade of decisions involving change.

For example, management decides to put the staff on a major training programme for the new information technology system. A few days later, management announces a merger plan the effect of which

At the same time, the communication department is asking several units to contribute to a campaign aimed at promoting the corporate image – and all this takes place in a context of difficult negotiations with the trade unions, which are marked by tough demonstrations. To cap it all, top management is regularly asking the managers to “prepare

	I agree	I tend to agree	I ± agree	I tend to disagree	I disagree
<b>1. The right dose :</b> in our organization, we make sure that the decisions and the resultant actions compound complexity as little as possible.	5	4	3	2	1
<b>2. Discernment :</b> in our organization: we strive not to introduce inconsistencies and not to add new layers of mechanisms.	5	4	3	2	1
<b>3. Reasonable ambitions :</b> in our organization, we avoid embarking on more projects than we can manage.	5	4	3	2	1
<b>4. Taking reasonable decisions :</b> in our organization, we accept to live with solutions that do not solve everything at the same time.	5	4	3	2	1
<b>5. A sense of realism :</b> in our organization the executives succeed in limiting the targets to those on which they need to concentrate most.	5	4	3	2	1
<b>Sub-totals</b>					
<b>Overall total</b>					
If the total is between 21 and 25 :	your organization is highly efficient at limiting artificial complexity.				
If the total is between 15 and 20 :	your organization is fairly efficient at limiting artificial complexity.				
If the total is between 10 and 14 :	your organization is not very efficient at limiting artificial complexity.				
If the total is between 5 and 9 :	your organization is very inefficient at limiting artificial complexity.				

Table 2 – Efficiency at limiting artificial complexity

In the absence of a careful interpretation of the internal and external pressures and of a likewise careful analysis of the measures taken in response to them, the actions can engender a state of chaos, which paradoxically will increase the problems.

### The intellectual illusion

Some executives have an excellent academic training, but limited experience of conducting operations. These persons sometimes tend to overestimate their organization’s ability to absorb successive waves of change, and to underestimate the time and energy required to implement the multiple projects which they are launching and which come on top of the other activities.

In a way, the ease with which they generate new ideas, as well as the stimulation and intellectual pleasure they derive from this activity, renders them insensitive to the consequences they will have for the life of the organization, which helps to complicate the daily mode of operating.

Some people caricature this habit with the all-purpose management instruction “just do it !” The large number of articles and lectures on new fashions in management drives this propensity, which is akin to magical thinking.

### And change ?

One effect of these debatable practices is to create a very volatile organizational context and to render change management much more difficult.

It has become a cliché to talk of the dynamic nature of the environment and of its corollary, the recurrence and compression of the cycles of change.

It is true that organizations no longer have a choice; change has become inevitable, and consequently it is normal, and even healthy, to maintain a kind of state of internal imbalance which fosters continual adaptation.

Whereas a few years ago, the art of management was to reduce uncertainty and to manage stability, today it invariably consists of contending with uncertainty and of devising continuous adaptation processes.

But it is not because an organization periodically experiences change that it necessarily has to become chaotic. Organizational chaos is not a virtue, on the contrary, and executives have to be careful not to become the factors that unleash chaos or even its apostles.

If they are not vigilant, they themselves will create conditions that will make it more perilous – and, at the end of the day, sterile – to seek to bring about change. They will promote a form of management characterized by hastily launched changes that clash with each other, are badly coordinated and incoherent, in respect of both the content and the modes of implementation.

In our opinion, this situation is one of the major sources of the decline in energy and exhaustion that has been observed in a number of managers for several years (Abrahamson, 2004).



## What is to be done ?

Since this phenomenon is fairly recent and not very well documented, we cannot stand back, try to understand its dynamic and be able to propose measures aimed at reducing or preventing it from happening.

This is quite apart from the fact that it is difficult to distinguish the share of the cause due to the context from that which is created unconsciously by the organizational players.

The reader will have understood that making an effort to be vigilant should enable several of the traps described above to be avoided (see **Table 1**). In addition, we provide some suggestions based on our experience (see **Table 2**).

Without lapsing into naive simplification, one preventive measure consists of adopting a discourse and practices that encourage the “right amount” – that is, actions and solutions which are as bold as necessary, but as simple as possible.

This requires systematically and openly questioning all decisions, as well as the resultant actions, in order to ensure that one does not compound complexity, or if so, as little as possible.

It is not a matter of ignoring the fact that certain situations call for complex solutions. Rather, the aim should be to foster a mentality of caution towards complexity, thereby putting up a barrier to a culture that glorifies complexity – even though this may be involuntary.

From the same perspective, one should be careful about the con-

sequences of decisions. Management needs to ensure not only that they do not introduce inconsistencies in relation to existing practices, but also that they do not add new layers of organizational mechanisms.

One easily tends to add appendices here and there in response to new situations, while neglecting to revise the practices and mechanisms in place.

Another good habit to get into would be to limit the number of new projects to a number lower than that which one is *capable of managing*, and therefore to which one can devote all one’s effort without jeopardizing the overall quality of the organization.

Why less than the management capacity? Because it is likely that unexpected situations will arise and thus erode the residual margin. If managers already have their hands full, they will either be incapable of taking on the new requirements, or they will neglect the ongoing dossiers and they will begin to lose control of the game.

In a culture that encourages managers to be highly dynamic, it takes boldness to ask the people one works with to curb their keenness and to show restraint. Yet judging by the work of Collins, and that of Probst and Raisch, these are important keys to efficient change management.

Perhaps we should also accept to live with solutions that will not solve everything at the same time. But then it has to be said openly in order to lower the expectations and ambitions to realistic levels. The object is

obviously not to be contented with mediocre solutions, but rather to aim for solutions that address the most significant aspects of the problems to be solved.

## Conclusion

If there is one competency which managers should develop in this context, it is truly that of being able to make choices. It is indeed better to concentrate on a limited number of

targets, but the importance of which is critical, and to rely on the spin-off effect of the measures adopted to influence the other dimensions of the organization.

This appears trivial at first sight; yet in the present turbulent times, managers are so stimulated and so sought-after that quite a number of them are drawn against their will into the whirlwind of turbulence. •

## Bibliography

- Abrahamson, E.** (2004). Avoiding Repetitive Change Syndrome. *Sloan Management Review*, Winter, 93-95.
- Collins, J.** (2002). The Misguided Mix-up. *Executive Excellence*, 19, 12, 3.
- Drucker, P.** (1980). *Managing in Turbulent Times*. Harper & Row, New York.
- Eoyang, G. H.** (1996). A Brief Introduction to Complexity in Organizations. Originally developed as prework for Chaos Network Conference in 1993. (Consulted on the Web in April 2006).
- Getz, I.; Robinson, A.** (2002). Le credo de l’innovation: évitez ses effets pervers. *L’Expansion Management Review*, N° 106, 82-89.
- Kirschner, P.; Sweller, J.; Clark, R.** (2006). Why Minimal Guidance during Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching. *Educational Psychologist*, 41(2).
- Lissack, M.R.; Gunz, H.P.** (1999). *Managing Complexity in Organizations: A View in Many Directions*. Quorum Books Publication.
- Probst, G.; Raisch, S.** (2005). Organizational crisis: The logic of failure. *Academy of Management Executive*, 19(1).
- Royer, I.** (2003). Why Bad Projects Are So Hard to Kill. *Harvard Business Review*, 81(2), 49-56.