

Guest editorial

Implications of complexity and chaos theories for organizations that learn

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Abstract

In 1996 Hubert Saint-Onge and Smith published an article ("The evolutionary organization: avoiding a *Titanic* fate", in *The Learning Organization*, Vol. 3 No. 4), based on their experience at the Canadian Imperial Bank of Commerce (CIBC). It was established at CIBC that change could be successfully facilitated through blended application of theory such as system dynamics, and the then emerging notions of "chaos and complexity". The resulting enterprise was termed an evolutionary organization (EVO), and CIBC has continued since to re-invent itself with great success. Although the all-embracing nature of chaos and complexity was understood, in retrospect the impact of non-rational people-factors, e.g. emotion, trust, openness, spirituality were underestimated. Introduces the six papers included in this special issue, which illustrate how much more sophisticated chaos and complexity have become in the decade since Hubert Saint-Onge and Smith first began to apply the notions at CIBC. However, although the papers in this issue present some evidence of managerial "take-up" of chaos and complexity, whether "take-off" will ever ensue is questionable. It is proposed that, just as in the 1990s, if there is one thing that more than any other stands in the way of exploration and adoption of these ideas, it is management mindsets.

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In 1996 Hubert Saint-Onge and I published an article (Smith and Saint-Onge, 1996) based on our experience at the Canadian Imperial Bank of Commerce (CIBC), a large traditional organization needing to change to meet intense new competitive pressures. We established at CIBC that change could be successfully facilitated through blended application of theory such as system dynamics, and the then emerging notions of "chaos and complexity"[1]. We termed the resulting enterprise an evolutionary organization (EVO), and CIBC has continued since to re-invent itself with great success (Smith, 1999).

In the original article we argued that unfreezing management mindsets, or better still not allowing them to set, was critical to acceptance of new ideas at CIBC. This was accomplished by changing behaviours and habits so that thinking and learning were changed, not the other way around. For example, we fostered habits of learning, not by promoting learning *per se*, but by structuring roles to embed experiential learning as a way of carrying out one's job – "JIT" learning for a purpose rather for its own sake. Roles were also changed to foster a high alignment/high autonomy environment (Smith and Sharma, 2002a, pp. 764-5). In this way, responsibility for learning how to deal with issues could be given to those most concerned with them.

Although we understood the all-embracing nature of chaos and complexity, in retrospect we underestimated the impact of non-rational people-factors, e.g. emotion, trust, openness, spirituality. When dealing with similar situations currently, we take pains to fold people-factors into the EVO approach (Smith and Sharma, 2002a, b). We also utilize action learning and communities of practice as means to promote dialog and create Ba – "a space for dynamic knowledge conversion and emerging relationships" (Despres and Chauvel, 2000, p. 60).

Based on my own personal experience therefore, I am very enthusiastic about the ideas set out by the various authors in this special issue. However, although they present some evidence of managerial "take-up" of chaos and complexity, whether "take-off" will ever ensue is questionable. A review of the Emerald database is not encouraging in this regard. For my money, just as in the 1990s, if there is one thing that more than any other



stands in the way of exploration and adoption of these ideas, it is management mindsets. It is useful to frame this barrier in terms of “mindsets” rather than “mental models” since this term better represents the fixed defensive nature of much management thinking. Unfortunately mindsets have either an implicit or explicit impact on just about everything people think and do.

A mindset may be defined as the accumulated shared perceptions/assumptions of a given group, covering behavioural, cognitive and emotional elements of the group’s psychological functioning. The group’s mindset gains power because it operates outside of consciousness, acting like a conditioned reflex. It takes time to build up the slate of memory-based cues, but once this is done, the responses are fast and predictable. Even when appropriately revised, old mindset are re-activated under conditions of anxiety, e.g. when facing change or even simply the unfamiliar.

Unfortunately, there is an aspect of management mindsets that has been around for a very long time, and that is strongly opposed to adoption of ideas derived from chaos and complexity. This is the widely entrenched view that an organization is actually a machine, not merely like one. Such a view derives from the exclusive use of analysis, and the doctrines of reductionism and determinism. Because people are seen as parts to be honed to fit this machine, authoritarianism is the norm, and the strict rules introduced depersonalize the informal social practices that would normally build up over time. As a consequence, employees lose the capability to think independently, resulting in learned incapacity. The outcome is that interdependent activities that would generate learning and new meaning are stifled, and energy that could be applied productively actually becomes a damaging force that undercuts performance. A further serious outcome is that many topics become totally un-discussable at any organizational level, and everyone develops feelings of helplessness and inevitability, resulting in a vicious cycle of reluctance to exercise personal responsibility, and the development of a culture of indifference and apathy.

My own practice convinces me that aggressive organizational re-design, based on the emergent principles of chaos and complexity, with due regard for

people-factors, can still win the day. To this end, the organizational structure, processes and tools must be designed and/or re-designed specifically to develop an environment where inter-dependency, and other desirable behaviours, will be fostered. By changing the rules, all employees including managers will be persuaded to change their habits of thinking, learning, and interacting, without necessarily being made aware that this entails anything other than, for example, a change in roles. It must be borne in mind that new patterns have to emerge, they cannot be imposed; this is achieved as long as the managers and employees themselves help to create the conditions under which the new context can emerge (Smith and Sharma, 2002a, b).

The process of creating the state of change envisaged in chaos and complexity, whilst maintaining sufficient stability, is one of the most important functions of the newly defined management roles (Smith and Saint-Onge, 1996). The degree of correction required to maintain balance will be unpredictable, but what is important is that corrections made are in the appropriate direction. For example, if it is becoming too stable then more freedom needs to be phased-in to promote further complexity. On the other hand, if there is too much change, and the system is threatened with total confusion, norms must be reinforced.

During our first year or so at CIBC, little or no mention of learning, systems, complexity and chaos etc. was ever made to communities in general; all the various activities were framed in performance terms related to enhancing organizational capability (Smith and Saint-Onge, 1996, p. 16). I believe this “Trojan horse” strategy offers the most promising way forward with regard to fostering a climate in which the principles of chaos and complexity can flourish. Consider the following two examples drawn from the work of Lawrence and Nohria (2002), and from Gratton (2000). In neither case is it obvious that the chaos and complexity principles explored here are central to the values of the enterprise. However, the resulting environment sounds like the kind of place where chaos and complexity will be very much at home:

- (1) In their book *Driven*, Lawrence and Nohria (2002) set out a unified theory of human behaviour based on four basic

drives that shape the choices people make. They indicate how a successful organization such as Hewlett-Packard is founded on satisfying these four drives (Lawrence and Nohria, 2002, pp. 245-54), and quote Bill Hewlett as insisting that at HP all jobs have “four-drive potential”: “At HP we believe that a manager, a supervisor, a foreman, given the proper support and guidance (that is, the objectives), is probably better able to make decisions about the problems he/she is directly concerned with than some executive way up the line, no matter how smart or able that executive may be. This system places great responsibility on the individuals concerned, but it also makes their work more interesting and challenging. It makes them feel that they are part of the company and can have a direct influence on its performance” (Lawrence and Nohria, 2002, p. 247).

- (2) Lynda Gratton’s (2000) book *Living Strategy* is all about the “necessity” and “how” of putting people at the centre of an organization in order to enhance its chances of success; she cites a number of exemplary organizations to bolster her case, including Hewlett-Packard (Gratton, 2000, pp. 6-8). She writes “What is fascinating about the way in which human potential is created and developed at HP is the subtle combination of the “soft” with the “hard”. The “hard” which forms the process backbone of the company is a performance management process which creates a shared set of strategic objectives and constantly aligns the behaviour of every individual to the business goals” and “HP is able to balance this tight, highly focused and driven performance management process with the “soft” of a value set, the “HP Way”, which places dignity and respect for the individual employee at its centre” (Gratton, 2000, pp. 6-7).

The six excellent papers included in this special issue illustrate how much more sophisticated chaos and complexity have become in the decade since Hubert Saint-Onge and I first began to apply the notions at CIBC. Ralph Stacey sets the tone with an exploration of the question “Do organizations learn?”. He argues that the

answer is “no”; learning is the activity of interdependent people. From his analysis a new framework emerges that is highly relevant to the practical implementation of complexity principles. Marie-Joëlle Browaeys and Walter Baets discuss the conditions for organizational learning, rather than the process itself. They apply the concepts and principles of complexity thinking to the development of a new framework for evaluating culture in a globalized business world. Drawing on a real world example, Saskia Harkema examines the linkage between learning and innovation, and advances a perspective based on complex adaptive (CAS) theory that promises to improve the management of innovation and learning. Birute Regine and Roger Lewin advance the idea of complexity as a feminine science, underlining the appropriateness of women as leaders in complex organizations, and highlighting the practical difficulties faced by women leaders in dealing with mindset issues similar to those discussed above.

Charlotte Shelton and John Darling echo the difficulties of implementing learning organization principles given prevailing management mindsets. They posit that chaos and complexity provide a way forward, and present a skill-set founded on these theories that they believe will prove enabling for leaders. In the final paper, Frans van Eijnatten, Maarten van Galen, and Laurie Fitzgerald provide details of a very practical case involving a Dutch organization that demonstrates the transformative power of a Chaos-informed dialogical approach to change and learning, whilst at the same time showing that marketplace performance can be enhanced.

I leave you with the thought that at least 50 years ago, Mary Parker Follett pioneered the kinds of organizational social contexts we are trying to build (Mendenhall *et al.*, 2000). We’re on a long journey it seems! Are we making progress? What do you think? As always I look forward to your comments.

Notes

- 1 In the interests of brevity, and to avoid issues related to terminology, I have chosen to use this umbrella term to cover the various aspects of these fields.

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