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Breaking free from the linear: In search for Innoveaders

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Abstract

The characteristics of the global business environment in which the organizations are expected to sense-and-respond to the target customers' preferences constantly on the move have drastically changed for the last four decades. The impact of repeated and prolonged attempts to design the whole (system) has been neutralized since it is barely enough to predict the outcomes of the upward-causality from the knowledge of the parts. Innovativeness, under these circumstances, cannot be reified as something done to organizations via deliberate managerial interventions. Traditional leadership approaches fail to grasp the very insight regarding the creation of ingenious organizations in which emergence is giving rise to innovation. This conceptual paper intends to delve into the relationship between innovation-driven organizations and the right context of leadership to be instilled through incorporation of complexity science into management and coins the term *innoveadership* to identify the characteristics of such context.

1. Introduction

Bauman (2000/2012), in his seminal work 'Liquid Times', defines our current presence in time as an 'interregnum' – "when the old ways of doing things no longer work, the old learned or inherited modes of life are no longer suitable for the current *conditio humana*, but when the new ways of tackling the challenges and new modes of life better suited to the new conditions have not as yet been invented, put in place and set in operation…" He proposes that there actually is not any clear image of where we are headed towards and positioned the term liquidity

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against solids with clear spatial dimensions but resist the impact and downgrade the significance of time. However, liquids, one variety of fluids, cannot easily hold their shape and are constantly prone to change it; "so for them it is the flow of time that counts more than the space, after all, they fill but for a moment" (Bauman, 2000/2012). Urry (2003) mentions that fluids transcend beyond time and space as they "move according to certain novel shapes and temporalities as they break free from the linear, clock time of existing spaces – but they cannot go back, they cannot return, because of irreversibility of time." This calls for organic structures with the capability of dealing with the intricacies of the extremely turbulent global market conditions. The global business environment has become like a cobweb of interactions driven by interconnectedness at an unprecedented level that the portraits of markets are only glanced through just for a moment. In an age of fluidity, traditional organizational theories haunted by the ghost of modernist assumptions succumb to the emerging qualities imposed by the new way of doing business. Embracing fluidity helps managers develop savvy in favor of complex mental models as opposed to linear causal logic (Schein, 2010). Changes in small places are capable of affecting the entire global system, not through incrementalism, but because every small system participates in an unbroken wholeness and by no chance we may know how small activities will trigger others through fabric of our connectedness (Wheatley, 2006). Knowledge is the core commodity and, thus, knowledge creation is the core quality for organizational fitness. There is a need to challenge the ingrained assumptions imposed by leadership studies, which seem to have fallen short of responding the demands of the new organizational landscapes. Leaders should be transformed into enablers who are supposed to instill an appropriate socio-organizational context in which vibrant interactions between the members of the organizations will ensue emergence of new meanings out of diversity leading to continuous innovation. The second section of this paper intends to provide insight from the complexity science and its relationship between management. The third section specifically builds a conceptual bridge between leadership and complexity and delivers a general framework for innoveadership context. And the last section consists of concluding analysis regarding the concepts discussed in the paper.

2. Literature Review: Complexity Science and Management

Morgan (2006) proclaims the constraints inherent to mechanistic approaches to management notwithstanding their relative success on organizational operations. First limitation is that the management may render the organization incapable to adapt the changing circumstances in its environment. Second, an unquestioning bureaucracy may arise stifling innovation driven managerial endeavors. Third limitation is the potential divergence of interests between the employees and the organization as a whole. Lune (2010) notes, "if our identities and efforts are kept separate from any sort of goal or value to be found in the work then we are alienated from our labor". The fourth limitation is the potential dehumanizing effects upon the employees. This is why incorporation of complexity thinking into social sciences has received considerable attention from the researchers in organizational studies. Embracing complexity might open new avenues of thinking on the way to instigate innovation in organizations.

Complexity science is the study of nonlinear dynamic systems. In nonlinear systems relationships between variables can only be understood through analysis of the complexity of interconnections, which totally differs from Newtonian paradigm of a clockwork universe governed by the deterministic laws of nature (Merali & Allen, 2011). Complexity studies, as one of the fluid epistemologies, analyzes the study of dynamic behaviors of complexly interacting interdependent and adaptive agents under the conditions of internal and external pressure (Uhl-Bien et.al., 2007). It examines the patterns of dynamic mechanisms that emerge from the adaptive interactions of many agents (Marion, 2008). Maguire et.al. (2011) draw a framework regarding the inherent mechanisms of complex systems:

> A complex system is a 'whole' made up of a large number interacting 'parts' or 'agents', which are each governed by some rule or force which relates their behaviour in a given time period contingently to the states of other parts. Interactions among parts are usually though not necessarily local and rich; and can be material or informational. As individual parts respond to their own specific local contexts in parallel with other parts, qualitatively distinct emergent patterns, properties and phenomena can arise at the level of the system despite the absence of explicit inter-part coordination. The outcomes of this upward causality are very difficult to predict from knowledge of the parts and rules however. In addition, once emergent phenomena exist, they can in turn exert downward causality on the parts through the same rules that brought them into existence.

The above definition of complex systems indicates that we cannot predict the way agents in a system (whole) interact and the outcomes that might emerge out of these interactions. The systems that exhibit nonlinearity are sensitive to small deviations in the initial conditions of a system, or other intervals throughout its existence, meaning that a small perturbation at the beginning of a series of values is soon magnified into major differences between evolving systems (Mendenhall et.al., 2000). This situation evokes the infamous butterfly effect, which is the notion that a butterfly fluttering its wings in one part of the world can cause a tornado in a far other side alluding that small perturbations in the initial condition of a system might result in unexpectedly major changes afterwards. Given the fact that nonlinear systems evolve over time, the system continuously creates new initial conditions as it adapts and grows, thus, sensitivity to initial conditions is a constant throughout the system's existence (Mendenhall et.al., 2000). Complexity science implies that organizations are re-shaped over and over again by the many and varied activities of their members (employees). Adoption of complexity thinking in management studies posits some suggestions, which are illustrated in Figure 1.
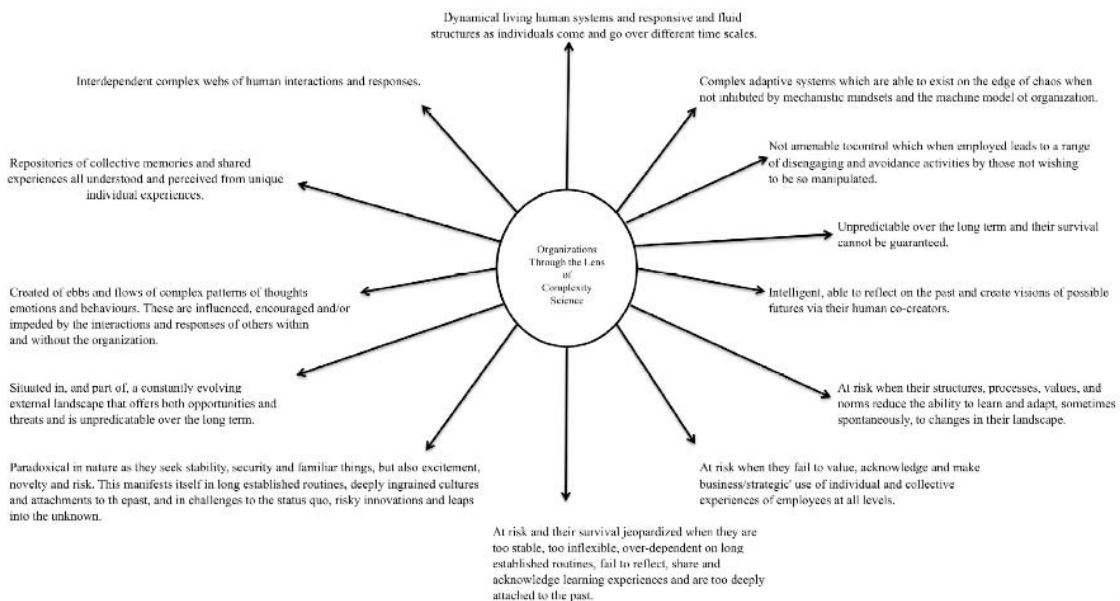

Fig.1 Organizations and Complexity Science (adapted from McMillan, 2008)

Fitzgerald (2002) identifies principles (as cited in Linstead et al., 2009) of chaotic way of thinking which distinguishes it from traditional assumption of materialism, reductionism, determinism, mechanism and conservatism (equilibrium seeking) in scientific approaches to social and organizational change, which are consciousness, connectivity, indeterminacy and emergence. Consciousness represents "that meaning should be sought in the organization and relationships between elements of the universe or in their awareness of each other, rather than their physical properties". Connectivity denotes interdependency among variables determining the characteristics of the whole through engaging into micro-interactions. Indeterminacy stresses that the universe is so dynamically complex that the connections between the cause and effect is opaque, thus, outcomes of such relations are unknowable in advance and error is actually inevitable and accepted as a norm. Finally, emergence implies that "the trajectory of being is towards ascending orders differentiation, coherence and complexity but that leads to dissipation - the cycle of falling apart and recombination in new and novel ways which break with past norms of organization". Marion (2008) puts special emphasis on interaction and adaptation as dynamics of complex systems and underlines the robustness of complex systems to further define the nature of interaction as "interactive behaviors

and outcomes feed back on one another in convoluted fashion, with effects becoming causes and with influence often wielded through extended chains of effect. These networks exhibit multiple redundancies with the same effect receiving input via multiple chains of causation." Goldstein et.al. (2010) highlight the criticality of interaction in complexity thinking: "… complexity arises when even two agents interact, since their unique information and perspective generates difference and difference leads to unanticipated and novel outcomes". Complex systems are dynamic in the sense that unpredictable change is a key characteristic driven by atemporal relationships among variables. Marion (2008) underlines the importance of adaptation as another dynamic of complex systems. It refers to "the ability to adapt and make strategic changes that adjust individual or systemic responses to pressures; … The resulting interactive adaptations and compromises simultaneously serve the locally pertinent, adaptive needs of the individuals involved and create adaptive capability for the aggregate as a whole." Anderson (1999) argues that adaptation is a process of endless series of organizational microstates that emerge from local interactions among agents trying to improve their local payoffs. Due to the richness of information flow among the members and groups within the organization order is emergent and unpredictable (Uhl-Bien et.al., 2007). The dynamics of emergence involve the existence of relevant context and properly functioning mechanisms that make organizations more adaptable, capable of learning and creative (Figure 2). Emergence is the kernel of complex systems and it is heralded as the complexity theory's anchor point phenomenon (Chiles et.al., 2004). From a managerial point of view emergence means deployment of guiding principles that stimulate individuals to coordinate their activities of their own volition (Birkinshaw, 2010). Emergence occurs when the right context for knowledge creation is established to break hold of dominant attractor patterns in favor of new ones (Morgan, 2006). Spontaneous innovations emerge out of the interactions within social networks in the organization and since there are no impositions of any kind employee commitment is highly anticipated (Goldstein, 2011).
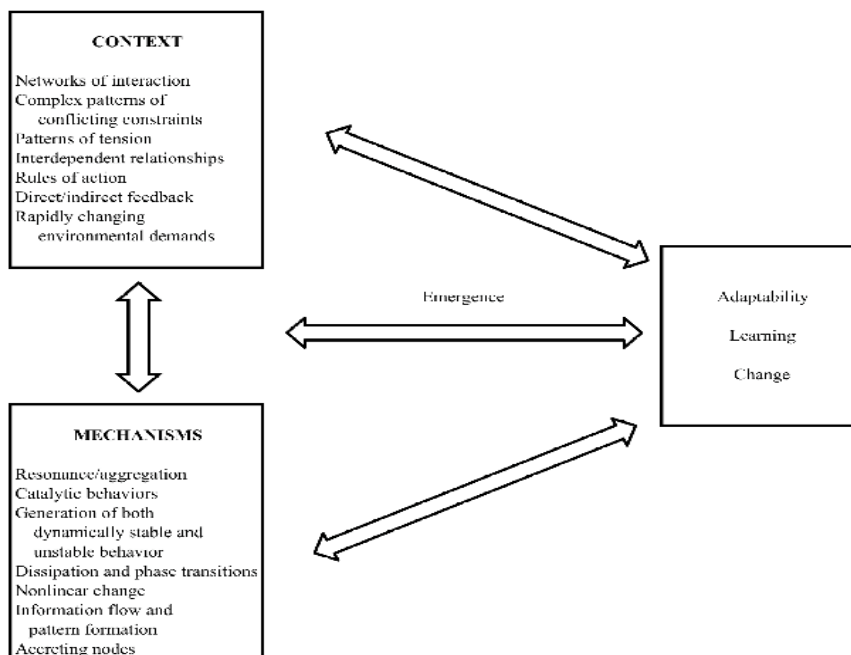

Fig.2 The Emergence Dynamics (Uhl-Bien et.al., 2007)

A proper context of leadership should be contrived to heed the needs of contemporary organizations such that innovation is viewed as an open-ended process of adaptation and learning is deemed essential to keep the system in far-from equilibrium (Andriani, 2011). Such a leadership context in which, both, leadership and innovation are enmeshed, that is to say, innoveadership.

3. Conceptual Framework for Innovation-Driven Leadership under Complexity: Innoveadership Context

Traditional conceptions of leadership assume dyadic relationships between the leaders and their followers (presumably a small group of authority-holders at upper echelons) driven by leaders' capability to influence behaviors. Jennings and Dooley (2007) mentions that "influence theories are based on an assumption of certainty derived from traditional bureaucratic notions of organization in which the world is knowable, social systems are predictable, and organizational outcomes are deterministic of leader actions and follower responses." Innoveadership refers to the enmeshed nature of leadership and innovation. Innovation is about building new capabilities that eventually render the organization resilient. Inspired from complexity leadership theory and enabling leadership suggested by Uhl-Bien et.al. (2007), innoveadership could be viewed as a process that happens in the space between members of the organization as they interact and places the emergence of innovative outcomes in the nexus of interactions (Goldstein et al., 2010). Crevani et.al. (2010) put emphasis on leadership embedded in social interactions among people in organizational settings and suggest that we may "develop understandings of leadership as continuous processes where performative norms meet the specifics of everyday muddling-through, where people both enable and circumscribe themselves and others, where perceptions of emerging structure and emerging ambiguity are constantly handled in interaction." Innoveadership appreciates that the role of leadership is to *enable* the dissemination of knowledge-driven novel practices across the organization through exploiting communication channels and cultivating an air of indifference. Bilton (2007) highlights the importance of exchanging ideas and making connections in informal groups and stresses the significance of the vividness of communication as follows:

> Whatever the mode of communication, offline or online, internal or external, the key task for managers is to clear some space for outward-looking, non-task oriented communication. With the intensification of internal communication networks, 'strong ties' of loyalty, hierarchy and accountability are replacing 'weak ties' of sociability, curiosity and unpredictability. Communication has to extend beyond an internal system of monitoring and controlling data into willingness to engage with ideas and realities outside the organization. What is needed here is a thin layer of causal contacts across a wide network rather than a narrow inwardly focused communication systems – fewer meetings, more conversations.

Innoveadership entails encouraging and stimulating the members to transfer and exchange their talents and experiences (knowledge) into organizational assets through facilitating interaction and resonating the expansion, parsing, amplification, transformation and combination of multiple interacting, often conflicting, elements under conditions of tension and asymmetrical information (Roth, 2003; Uhl-Bien et.al., 2007). Interaction exists when people in a social system (i.e. organization) gain and develop the possibilities of an understanding of each other's subjective views with an intention to extract new meanings out of those interactions (Yolles, 2000). As an essential ingredient of innovation, knowledge is the 'meaning' that can only emerge in the ongoing relating between people when the interactions are fluid enough, when there is diversity, tension and conflict in the thematic patterning of organizational experience, analogous to the edge of chaos (Stacey, 2001).

Innoveadership is an awareness of the interactions as the main source of innovation. The leadership approach provided by innoveadership context requires being influential on processes of social construction (Calhaun & Starbuck, 2005). Management of knowledge is co-extensive with the management of complexity (Boisot, 2011). Nonaka (2005) suggests that leadership in a knowledge-creating firm involves improvising along with the interaction between subjectivities and objectivities. Thus, innoveadership embraces evolution and *enables* and nurtures a heterogeneous environment (existence of diverse experiences, skills and perspectives) in which symbiotic relationships (interdependent coevolution) among the participants of the social network are built through fostering effective collaboration to firm up the system integrity. Coevolution suggests that each subsystem (diverse functions

in an organization) and its interactions provide the microlevel variations, in other words, diversity serves as the seed of emergent innovation (Goldstein et.al., 2010). Innoveaders embrace an enabling leadership style that catalyzes complex adaptive systems dynamics that promote emergence. It fosters interaction, foster interdependency and injects adaptive tension to maintain interactive dynamic and manage the entanglement between bureaucratic and emergent function of the organization. Innoveadership adopts a new leadership function to include anyone taking on a leadership role.

4. Conclusion

Embracing complexity does not impose abandoning the pillars of bureaucracy on which most organizational structures are built. However, evolution is inevitable. Analogous to the operating systems and software in our computers, bureaucracies should also be upgraded in an organic fashion converging complex adaptive systems. Incorporation of innoveadership context into management might usher in an era of post-resilience. Innoveadership denotes the entanglement of leadership, knowledge creation and innovation in organizations. It intends to help us to grasp the insight of how novel solutions for unique problems might emerge in an organizational setting along with inimitable knowledge that distinguish successful companies from the ones lagging behind. Innoveadership benefits from concepts such as evolution, nonlinearity, self-organization and interaction, which are all derived from complexity science and adopts the propositions of enabling leadership based on leadership in complex adaptive systems. Extending leadership beyond being exercised by a small group of people at the top and redefining it as a relational ingredient of innovation including anyone taking on leadership role might open up new horizons to unveil the advantages concealed in socio-organizational networks. Clash of divergent perspectives and injection of tension into the social network of interaction leads to the emergence of innovative practices that eventually yield adaptability and reveal new meanings.

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