

The role of complexity theory in organisations commerce essay



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This review seeks to make an assessment of the value and reliability that complexity theory makes regarding a new approach to future thinking. The assessment is done with regard to organisation and management. The literature is addressed, as firstly the complexity theory and notion related to complexity theory, the application of complexity theory as metaphor, the concept of self organisation and its robustness in the organisations. Secondly, the role of complexity theory in organisation science-as far as strategy, planning, and vision is considered for future. Thirdly, the complexity theory is analysed in the aspect of leadership and finally the conclusion with a proposed model for further research.

INTRODUCTION:

Complexity theory states about unpredictability, non-linearity, and the advantages from non-linear thinking.,(1996) has asserted the role of both positive and negative feedback in organisations and the importance related to creativity(Innovation). Creativity and innovation, both are generated at the edge of chaos and the some patterns are generated . Chaos theory which is a part of complexity theory has notified the significance of these patterns. It is a creative place far away from equilibrium. Over the last 30 years and more, an aspect of this behavioural pattern has become the focus of attention in a number of scientific disciplines and fields such as astronomy, chemistry, evolutionary biology, geology and metrology.

Valle ,(2000) has explained the complex system as the one in which numerous independent elements continuously interact and re-organise themselves into more and more elaborate structures over time. Mathews et .

al ,(1999) called it as an emergent dominant force, distinct from the older competing paradigms.

According to Holm dahl, (2005) the complexity theory or complexity science is used as a unifying name for a set of patterns found in the most different areas. However Edmonds ,(1999) supported an argument that it compromises of several views and interpretations; it is not a Unitary, monolithic, fully fledged theory on which there is an academic consensus (Sawyer, 2005). Colemann, (1999) also stated that there is no unified field of complexity theory but rather a number of different fields with intriguing points of resemblance , overlap or complementary with each other.

Researchers like Morrison ,(2010) and Edmonds ,(1999) has mentioned about complexity theory, as a nascent, emergent science where it's still developing and clarifying its central Tenets, paradigmatic principles, applications, derivatives, methodologies, foci and coherence.

Mc Elroy ,(2000) has asserted that complexity theory is the system thinking applied to the behaviour of natural systems. Wheatley ,(1994) have shared the idea of organisation being natural living systems, where they emerge and grow in their environment according to simple rules of nature. However Griffin ,(2002) has extensively criticised the same and the way in which the complex and paradoxical phenomena are drawn into a systematic understanding of organising. Various Organisational theorists such as (Chia, 1998; Tsoukas and Hatch, 2001; Tsoukas, 2006) also disagree with the direct transfer of models and theories from the natural sciences and explores how,

if at all, complexity science may be located in the context of established social theory relevant to organisations

In relation to patterns and behaviour, Coleman, (1999) has said it's the unpredictable behaviour within the system, encouraged through underpinning patterns that can further represent a powerful, albeit unpredictable innovation. Levy, (2000) has also said that the observing patterns can be more useful if we can associate different phases of system with other characteristics, such as relationship between business cycles and other variables such as demand, interest rates, vendor lead times, and labour market conditions.

In relation to the unpredictable behaviour and observation of patterns in systems, Rosen head , (1998) has challenged Coleman ,(1999) arguing that under certain conditions the complex systems performs in an regular predictable ways

and in other conditions they exhibit behaviour in which regularity and predictability is lost.

Some researchers have criticise other's work of complexity theory by signifying their lack of experience such as Rosen head (1998) in his papers has criticised the work of Mc Master (1995), Merry (1995), Stacey (1992) and Wheatley (1992), as Rosen head explains that the findings that they report and interpret, is about scientific fields related to management concerns where they have no experience at all. Rosen head has supported researchers such as Stewart (1989) and Kaufmann (1993), who being scientist of high reputation wrote about research fields in which they are themselves active.
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Both Stewart and Kaufmann have written about chaos and complexity and their works do make some relevance in regard to complexity theory as they belong to the same field.

Complexity theory as a metaphor:

Complexity theory has been valued in the social sciences as a source of metaphor (Lissack , 1997).

Different researchers have different views for complexity theory and for its basis such as Burnes,(2005) who considered it as an metaphorical device. Van Eijnatten and Van Galen, (2002); Fitzgerald and van Eijnatten, (2002) has mentioned complexity theory as a lens (like chaos) or an analogy (Sundarasaradula et al., 2005). Morrison, (2010) regarded complexity theory as a set of constructs.

Indeed as a theory also, Lissack ,(1999) has also argued that it is more, a collection of ideas than a theory.

Smith and Humphries, (2004); Murray, (2003) has suggested complexity theory to be best regarded as metaphor.

Metaphor, being a complete legitimate device is a way to explain certain phenomenon in a novel way. If complexity is utilised as a metaphor, while understanding the organisational behaviour and management, it would lose the prescriptive force (Rosen head, 1998).

While advocating complexity theory as a set of constructs (Morrison , 2010) has argued that complexity theory in itself could have been more valuable as

a set of constructs however the complexity theory essential practicalities makes its susceptible to the charge of relativism , arguing for it contemporary reasons, context specificity of the values and actions involved in the subject called change. Complexity theory relativism undermines its own status (Siegel, 1987), (Laudan , 1990).

According to Morrison (2010), Complexity theory is only relativistic and ephemerally useful, rather than having absolutist aspirations.

According to researcher the issue being raised here is the need to clarify the status of the complexity theory as what: a theory, framework, a metaphor, a set of constructs, lens, principles or collection of ideas.

According to the researcher view, it's vital to understand the plain status of complexity theory while considering complexity theory as a robust theory to be used in management or organisation studies. There urges a strong need to research on the subject to utilise the full advantage of it.

Self-Organisation: Concept of Self organisation in complexity theory and its validity in management and organisation:

Complexity theory suggest that, self organised order may supersede command and control in many situations advocated by Andriani et al. (2004), Brown and Eisenhardt (1998), Falconer (2007) , Kelly and Allison (1999), Marion and Uhl-Bien(2001), Majchrzak et al. (2006), and Stacey(2005).

However Willis (2004) argued the view, and said that self-organisation as per the complexity theory may result in a useless development and managers should concern themselves with content, not only with process.

According to complexity theory, the human beings should be left to organise themselves. Stacey (1996) has mentioned this as a property of dissipative systems and has mentioned human beings as dissipative structures. Some researchers like Smith et al. (2004) have mentioned these ideas to be unreliable, selfish and irrational. According to them, the organisation science is structured to be led, regulate, manage direct or even control the human beings to guide and give them the sense of direction to achieve their common goals. .

Macintosh and MacLean (1993) has argued about the concept of self organisation that, it might exhibit a contradiction between naturally occurring self-organisation and contrived or deliberately , managerially forced positioning of organisations at the edge of the chaos (Falconer, 2007).

So this contradiction might lead to inefficiency, time wasting, mob rule and people going in so many different directions which would be resulting in the loss of connectivity and alignment between parts of an organisation, its value and directions (Morrison, 2010).

The contradiction about the naturally occurring (emergent) or contrived, deliberately forced positioning of organisation while on the edge of chaos, is difficult to identify and the emergent events could also become destructive (Schneider and Somers , 2006)

Similarly negativity might result from new forms of organisation so one has to be very clear while identifying the nature of the self-organisation as people might take benefit of the autonomy in other manner.

Eoyang , (2004) in his paper has said about exploring the power and ubiquity of self organisations by giving a theory of self organization in human systems. He has designed the difference matrix in aid to understand the degree of difference in an organisation; still not all self-organising is successful (Lichtenstein, 2000) as some can lead to system failures or catastrophes.

Researcher also agrees that the concept of self organisation is probably not absolute in the case of management and organisations as the consequences and conditions vary in different situations and particularly from one organisation to other. So the concept needs further analysis within different business environments.

Complexity theory -Strategy-Planning-Vision

Complexity developed popularity due to uncertainty and turbulence in environment as the environment is now more and more unpredictable and dynamic in nature. Stacey (1996) in his book has said that the long term planning is irrelevant.

Stacey has criticised the strategy as visionary thing and has mentioned that the “ single vision to serve as intended organisation future, motivator of behaviour, and guarantor of corporate cohesion as a thoroughly bad idea.”

According to Stacey, such an idea generates a culture of dependency,

restricting the expression of conflicting views and creates mental models tending toward groupthink.

Our vision and planning is both inter-related and according to complexity theory one should not keep long term planning as the world is dynamic in nature, still there is no evidence that explains the actual meaning of word long in the terms of complexity theory.

Apart from long term planning, the scenario planning is also criticised by complexity advocates still nobody tells about the term long term (Levy, 2000) and this notion changes from one environment to other such as biologically evolutionary systems , firms and industries.

Smith, (2005) argues on the concept that the complexity advocate asserted so much about the complexity theory and the butterfly effect, still if we consider the macro environment, then the place for scenario analyst is very significant.

McMaster (1995) implicitly conceded that scenario analysis could be useful in thinking about the future. According to Smith (2005), thinking about different alternatives remain a better approach to encourage innovation than trusting to emergence and quick action, as supposed by complexity advocates like Kelly(1998) and Tatenbaum(1998).

Tetenbaum (1998) and Kelly (1998), both the complexity theorist, has advocated that the future is an inherently unpredictable, unstable entity, from which patterns emerge from the bottoms up. According to Smith, (2005) they have completely discarded the planning and scenario analysis.

We need both the innovation and creativity when the organisation thrives at chaos; however we also need the analysis to avoid the pitfalls again.

According to researcher the compatibility is the actual word which has to be addressed and needed further attention as

Rosenhead , (1998) has also argued that if we rely only on the facts of unpredictability and uncertainty then it would be great achievement in itself.

Bunker and Alban (1997) has asserted that even plans can be conceived as actions, as actions unfolds making and economising, with the scarce resources easier and therefore planning process can yield the organizational learning, shared mental models, in fact a meta language which will be supporting the knowledge based view of organisation rather than resource based view.

As a researcher, I agree that the world is dynamic and non-linear still the world needs a focus and I believe that the scenario planning and long term planning provides a focus to strategise, in both internal and external environment.

Future analysis in general and scenario planning in particular might be well served to the value of system thinking including the chaos, complexity and the catastrophic theory.

So then the people would be able to conceptualise the alternative scenarios (Smith, 2005) as it would be promoting the innovation factor.

The concept can be explained through observation of macro environment, where the oil prices which are non-predictable still crucial from analyst point <https://assignbuster.com/the-role-of-complexity-theory-in-organisations-commerce-essay/>

of view. Certain scenario analyst, who have years of experience in the same field can make an assessment for short term.

Researcher agree with the fact that world is changing rapidly, still the years of experience people have with them in respective field is also an valuable asset for the future, the only need is to make the complexity theories compatible with this experience to evolutes a new understanding on the subject. So as a researcher, I have proposed a model in conclusion which need further research.

Leadership:

The role of leaders is to successfully implement the change within the organisation. According to complexity theory, the leadership emerges through interactions, networking and connectivity, relationship, as these enhance operational effectiveness. (Goldstein and Hazy, 2006; Lichtenstein et al., 2006; Surie and Hazy 2006; Parellada , 2007). Leadership and management, from the perspective of Complexity theory, is adaptive, participative and enabling (Schreiber and Carley, 2006).

On the one hand, Complexity theory advocates distributed leadership that operates in an ever-changing, unpredictable environments, Gronn (2003), Lakomski (2000), Gunter (2003), Harris (2003), Falconer, (2007) and on the other hand, it suggests that employee empowerment, voice, creativity and diversity have considerable significance. (Stacey, 2000; Parellada, 2007; Capra et al., 2007).

Complexity theory introduces the reality of unknown future, may be through overstating the case for unpredictability or absolving leaders and managers of responsibility.

However, it does not argue against the fact that leaders and managers have to operate with the best evidence to date, rather than having perfect knowledge. (Morrison, 2010)

Researcher also agrees that there is inconsistency in the definition of leadership by complexity theory and it plays a very vital role in the management of organisations.

Indeed Smith and Humphries (2004) write that complexity theorists such as Brown and Eisenhardt,(1998) accept instability and uncertainty with too much certainty. This rehearses the postmodernist's dilemma of proscribing fixity and firmness yet holding such proscriptions fixedly and firmly.

Conclusions:

Complexity theory is a field within which some un-expected and diverse results have been found, further leading on to some further intriguing conjectures. What does not follow here is that any such result necessarily applies to all situations.

As a researcher, I have developed an idea that might use the concept of complexity in organisation to achieve improved results. As the researcher has worked in marketing field , so recognises the importance of innovation and creativity. Firstly, I agree with the concept of unpredictability and long term planning, however the urge is to utilise the experience gained by senior

people in the companies. I feel the importance of complexity in change management and would like to propose an idea for it. Organisation has a particular culture and learning process shaped from either past or present to achieve the future goals. So it implies that both are inter-related (Culture-Learning). Both of them should be nourished with negative and positive feedback as well as with an awareness to change. So people who has linear thought process and with non-linear thought process should be trained consciously or sub-consciously towards change.

Let us give name

People with linear thought process= A

People with non-linear thought process= B

The senior management can identify and differentiate between people A and people B, by observing their responses to their works. (problem-solving methods).

For 6 months, without any restriction, A should be allowed to give recommendations through a non-linear point of view in their problem-solving ways for 6 months and Data collection has to be made.

For same 6 months, B should be allowed to give recommendation through linear point of view in their problem solving ways. Data collection has to be made.

Then relocate them as they were before, now observe the changes and pattern. Involve both nontechnical and technical team to assess the problem

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solving ways to achieve solutions on complex problems related to organisation.

Performance might get improve or might deteriorate; still there might be chances that Organisation can get a dynamic team with dynamic capabilities.

I understand the issues related to it, so will suggest a further qualitative deductive research on the model to establish a link from complexity theory to the science of organisation.

Overall after the review, researcher highlights the need to further research on the following subjects of complexity theory:

Status of Complexity theory-Complexity theory absolutist or relativistic status to understand the organisation science

Complexity theory mandate about self-organization that may be directive, manipulative and mechanistic. Still about its source and validity no one has confirmed, yet a so further study has to determine the link between the exact global pattern and its validity.

How complexity theory helps leaders and managers in the enterprise as it does not does not address the problem of how to replace command and control without using command and control. Complexity theory refers to an system without any ordered rules and regulations and then specifies its own regulations to follow the concept of self-organisation, positive feedback, connectivity and the concept of non-linearity in predictable and non-predictable world.

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