Examination of the Lifespan of Unknown Complicated Systems

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Abstract: Human beings are living in an epoch which has intrinsic complexities. Complexity is a crucial factor both in natural phenomenon and the manmade ones. We ought to be acquainted with complicated matters to encounter the extant world and to know ways of dealing with it. Once there was an epoch in which Kepler, Galileo and Newton's discoveries definite scientific features ruled the world of science. Some hypothecations denoted that physical apparatuses are pinpoint able. Therefore it is feasible to foresee their future based upon their past conditions. Such hypotheses opened novel vents in the ruling paradigms of that epoch. They congregated plenty of followers around themselves. Such conclusive views were attractive and thrilling not only for pundits but also for the canaille. They heralded a reliable predictable future. These attitudes evinced that there was no unreliability and everything abided by the cause-and-effect pattern. Einstein's relativity hypothesis which was actually a generalized version of Newtonian mechanics furthered the prognosticated features of phenomena. The predicament named "undeterminedness" was propounded in the quantum physics. We happen upon some phenomena in quantum physics whose future situation portending is difficult even if a precise quantification contraption is utilized. These are the circumstances in which we ought to resort to statistics and probabilities. Once Heisenberg promulgated that human beings will never be capable of overcoming the undeterminedness tenet as long as quantum mechanics is valid. Some endeavors are made in this article to define three concepts named "chaos", "complexity" and "catastrophe" in the nundination settings to counteract such conditions. Organizational sensibleness in a complicated setting is collated with Adizes organizational maturity level.

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1. Introduction

One of the most pivotal quandaries that most managers encounter it these days is occupation-related complexities. The notion of complexity may be probed both inside the organization and the ambience in which an organization is functioning. The pivotal point pertains to the comprehension of such complexities. It should be noted that some of these complexities have been instigated due to manmade tasks, for instance the beak-throughs transpiring in the scope of communications and diverse sciences has complicated the ambience and internal settings of most organizations. Some other types of complexities have already existed naturally without intervention of human beings; nonetheless scientists were not cognizant of it owing to the slight level of human knowledge in that epoch. They took measures to simplify those complicated phenomena to be capable of expounding them. Human beings are capable of using some contrivances to comprehend and expound some of the complicated phenomena due to some scientific headway.

Some endeavors are effectuated in this research to define complex systems and to expound their specifications. They sought to happen upon manners and means of comprehending, expounding and foretelling the comportment of such systems. Some of the hypothecations mentioned in this research encompass the hypothesis of complexities, the turbulence postulation (orderliness in chaos) and catastrophe theory (unanticipated events). These three postulations were propounded in the recent years during the past years (from 1970 onwards) in the empirical sciences and physics to grasp and explicate the complexities of disparate phenomena nevertheless they were also utilized apprehend and explain the complexities of social science phenomena.

At first the research methodology is explicated, and then the topical literature will be expounded in three sections. Data analysis methodology together with the obtained corollaries will be presented afterwards. The ultimate section of the article deals with a critical examination of upshots as well as submission of proposals.

2. The Research Methodology

The extant research is a hypothetical one from the objective aspect and a heuristically analytical one from the aspect of data forgathering (Sarmad et al, 2004). The chief goal of this scientific investigation is as follows:

"Identification of the system deportment in complicated settings"

The actualization of the chief aforesaid purpose requires accessing subordinate objectives of this research which have been purported as follows:

- Becoming acquainted with the concept of complexity, turbulence and catastrophe
- Recognizing the relationships between the three aforementioned notions
- Matching complicated systems with unknown settings

The ensuing questions are posed for accomplishment of objectives

Foremost question:

How does the system function in complicated ambiences?

Subordinate questions:

1. What do complexity, turbulence and cataclysm purport?
2. What is the relationship between the aforesaid three notions?
3. How does the system function in complicated settings?

3. Complex Systems

Scientific developments pertinent to complex set-ups are dealt with in this section. Then three concepts named complexity, turbulence and catastrophe will be expounded. Robert May born in 1936 was an Australian researcher, biologist and mathematician in Princeton University. He was appointed as the professor of the royal institute. He initiated some tasks on the subject matter of population dynamics which contributed to the formation of the turbulence hypothecation.

The population of a particular group for instance deer alter year by year. Their total population in one specific year is a worthy criterion to foresee their quantity in the next year. If population surpasses certain quantities, nutrition will become scarce and a larger number of animals remain ravenous and die. Then the population will be restored.

May researches in the 1970s demonstrated that the equations utilized for description of animals are more complicated than what may appear at first glance. His exploration evinces the fact that such a set-up undergoes splitting due to the occurrence of behemoth parameters pertinent to the natural capacity. The population may vary between two dissimilar quantities. Bionomics specialists already perused this equation; nevertheless they were hankering after fixated quantity. They disregarded the data of curvatures. May et al commenced working on these curvatures. Then they noticed their widespread corollaries. May beheld that animal population in laboratories do not manifest turbulence-stricken comportment nonetheless this behavior does not reflect what transpires in the actual world. Thus fluctuation epochs in the real world double.

David Rooel an expert on mathematics and physics brought about the first drastic alterations in the turbulence hypothecation by making perusals in this subject before which turbulence had already been propounded as a Brobdingnagian plight. Werner Heisenberg (1901-1976) was the first person who introduced the unreliability tenet in quantum physics. He was distraught about this matter up to the last moments when he perished. This tempestuousness is a disorderly far-reaching chaos. It is unstable and dissipative. It absorbs energy and makes trouble. In this enigma one has to find out how a smooth stable stream turns obstreperous in fact flow equations have remained unsolved for years. This is a nonlinear minor differential equation. Rooel decided to supersede the run-of-the-mill approach with the abstract one. Benoamandelbert is another virtuoso in this field. Born in 1924, he is a French physician and mathematician of original polish extraction. He worked in IBM Corporation, and created the fractal geometry which played a momentous role in initiation of turbulence hypothecation. The geometry which is known to all of us as Euclidean geometry. Euclidian shapes are orderly: triangle, square, circle, et cetera. Fractal geometry pertains to specific types of disarrayed shapes. Fractal entities are availed to quantify qualities which can solely be designated through this procedure. The extent of unevenness, rupture or disorderly features of an object, or quantification of the aqueous border between Booshehr Province and the Persian gulf evince that when a fractal configuration is collated from far or near distance, it possesses resembling traits, that is to say, the fractal object is selfsame, in other words, selfsame characteristics renders it obligatory for each subsystem to be made up of a fractal set-up equal to the entire system.

Mandelbert is a mathematician who has worked in some other fields too. He is also empirically well-versed in economics too. Economists believed that evanescent minute alterations have nothing to do with vast long-term alterations. Mandelbert commenced the examination

of this topic nonetheless he did not detach behemoth changements from slight ones. He viewed the integrality of the system. He input cotton data of several years. Then he noticed that price alterations appear haphazard and unanticipated nevertheless the sequence of changements is independent from the collation scale. In fact, the curvature of diurnal and monthly alterations matched each other bodaciously. The changements degree remain fixed during 60 years. Two world wars and a stagnation era eventuated during this interstice, in other words, there was chaos in order.

Another virtuoso in this field is Edward Lorentez. He was the first person who recorded a renowned specimen of the obstreperous deportment. Lorentez was the primary person who found out this matter after making experiments in weather forecasts. He noticed that slight variations may instigate colossal corollaries as a result. Actually Lorentez utilized computerized paradigms of the earth's atmospheres and oceans to check the realization among three nonlinear weather forecast factors named temperature, pressure, and the wind velocity. He noticed that slight variations in initial conditions wind up in drastically disparate and unanticipated replies.

Some other views appurtenant to Lorentez are called strange attractions. Complex systems manifest characteristics which mathematicians name them attractions. These allurements depict situations which may be adopted by a set-up in terms of its features for instance envisions a marble which is revolving in the internal surface of a bowl. It may cease moving at the bowl bottom. The spot in which the marble will position is named as the point of marble attraction.

Lorentez is a name which is intermingled with butterfly effect. The point he cites in his hypothecation pertains to the fact that fluttering of a butterfly can cause a whirlwind; it can also counteract a tornado too. The butterfly effect accentuates upon this point so prefatory conditions and minor discrepancies play crucial roles in chaos.

Michelle Fijen Baum is also among other diligent persons in this field. He was the first person who substantiated that chaos is not a mathematical trick; rather it is a global feature of systems bearing negative feedbacks. He proffered explicit hypothetical evidences which demonstrated that chaos is seen in most of the actual situations of the real world. During his researches, he noticed that a particular benchmark is being reiterated in diverse nonlinear systems. This paradigm has a bearing upon numerical strings which were revealed in calculations. A pocket calculator demonstrated this specific extent to be 4.699. Fijenbaum could not envisage how such a sequential reiteration transpires. He just postulated that the numerical functions denote some regulations on systems in the point passing from orderliness to tempestuousness. The existence of paradigms in the numerical sequence purports the existence of templates in the chaos phenomenon. He explicates his bonanza by explanation of the concept of globalization.

Iliaprigozhen has performed notable activities in this field. He won the chemistry noble prize for the sake of working in the dissipative field. Perigozhen was the person who devised two concepts pertinent to dissipative and self-organized systems. He was also the first person who demonstrated that the conditions which wound up in the creation of structures can't set up a balance. Biological and social systems are open; hence they can't be comprehended by mechanical enunciation. Reality is usually unstable and full of disorder and changements. Perigozhen differentiated among near and far balanced systems. A minute population who does not undergo a behemoth alteration by several births or demises is deemed as a balanced one nevertheless if the birth rate increases out of the blue and uncontrollably, then some wonderful matters may transpire which may destabilize the system. The unbalanced situation can be beheld in notable re-organization of matter. Disorder is transformed into order. Novel dynamic material situations are formed. Perigozhen name such structures as dissipative ones which generally have a enfeebling process named friction.

When a system commences a turbulent epoch after remaining in balance, it will achieve a disparate level of order automatically. Perigozhen named this process as self-organization. Perigozhen designated self-organization as a phenomenon during which a system regulates the internal structure independent from external wherefores. Such methodizing systems manifest the turbulent characteristics. Some of the momentous traits of these systems encompass nonlinear features of fractal structures feedback and overdependence upon prefatory circumstances.

Renetam the professor of supreme perusals in Paris was among other persons who initiated the unanticipated events hypothesis played pivotal roles in formation of the tempestuous hypothecation and complexities. He committed his opinions to paper in a book in 1972 which has been explained in a theory named catastrophe bodaciously.

Professor Siemens from Aerobic university of England is among other virtuosos of this field. He introduced the pragmatic aspect of the unexpected events hypothecations. Siemens proffered an article in this case in 1976, which is approximately the first all-inclusive article on unanticipated scientific events for further information of other scientists and practitioners.

3.1. What is Complexity?

Einstein's relativity hypothecation which was actually a generalized version of Newtonian mechanics abided by the foreseeable nature of phenomena. The undecidedness plight was put forth in quantum mechanics. In quantum phenomenon one encounters phenomena which are difficult to foretell their future situations intrinsically even if a highly precise contraption is utilized. In such cases, one has to resort to statistics and possibilities. Heisenberg announced as long as quantum mechanic is valid, human beings will never manage to take precedence over the indefinite tenet.

We have witnessed a great development in the natural sciences during the past decades. This sudden changement was effectuated by the manners the scientists of this discipline availed to grasp and express phenomena. Scientists initially imagined that the world is made up of a group of systems. Effects are the resultant products of particular wherefores.

However they allude to the creative role of tempestuousness and chaos. They deem the whole universe composed of a set of systems which act in creative self-organized methods. This novel science is named "the hypothecation of nonlinear dynamics and complexities.

Complicated systems are those in which a great number of independent variables are interacting. Such complex systems can set up a balance between order and chaos. On this balanced point which is named tempestuousness system undergoes a thorough chaos in an absolute lifespan vacillating between stability and collapse.

Complexity of the novel science pertains to the examination of complicated systems. Complexity deals with perusal of "life in tempestuousness" and observation of complex features in that point. The wealth and existence of actions and interactions among an abundance of independent variables enable complex systems to make a self-organization (Moghaddami & Niazmand, 1999). Unknown systems have certain hypothecations as follows: (Alvani and Danayeefard, 2002), nonlinear deportment, periodical bifurcation, dynamic congruence and self-organization.

Myoori (2003) believes that complexity has two molecular and plexus-based styles. In molecular style, complex systems have a set of straightforward regulations based upon the cause and effect. Several routes winding up in a unified point are defined in such systems to attain the goals. Hence system deportment will be haphazard based upon habits. On one hand such itineraries are designated in the time dimension, on the other hand one of the regulations is opted for casually which orientates the system towards the goal or the point of attraction. A conspicuous specimen of this pertains to releasing a ball in a bowl. Another sample of such complexitys is seen in the butterfly route. The laws of this system formulate the comportment of a complex matchable set-up or complex adaptive system which enables him to grow to survive. This type of organizational complexity causes the organization to tally itself with the system, in other words, the proportionate rate of the system augments.

However in nexus-based attitude, units are interconnected constantly. The extension of this link varies from feeble to stalwart points. Units submit positive and negative feedbacks to each other. Thus in this type of complexity, a labyrinth of units are associated together. Attraction can hardly be defined in this type of complexity. Congruity is up to the interlinking of the units inside a nexus. In this attitude, self-organization eventuates at the ambit of the tempestuousness. This is the point where the system is capable of finding an ameliorated congruous position between a bodacious fixation and chaos which can't be foretold. If this enhanced position approaches stability, it will be nomenclatured as straightforward attraction. If it draws closer to chaos, it will be named "exotic attraction".

This cast of complexity has been approved and corroborated by cognoscenti such as Mariyon, Lenginkhall, Wolf, Steamy and Zimmerman in 1999. These specialists believe that each member of the plexus is bodaciously active in their interactions. Steamy reckons that systematizations of extant organizations is equal to the complex process of communications and the relationships among members. Lengnikhall and Wolf deemed the rationality of such a complexity equal to the widespread propagation of nonlinear systems. Such set-ups are based upon the network feedback and unforeseen relationships. Zimmerman opines that organizations ought to evolve shoppers on their growth itinerary. This fact stems from planetary web-based interactions.

Afridanko and Juliyan (2001) gave a synopsis of hypothecations pertinent complexitys in 4 levels. Two criteria named unique features of system (the identical rate of regulations in a system); tolerance and endurance (alteration scale of system rules) make the footing of this placement. Four complexity levels are designated based upon this benchmark which are as follows: straightforward ((expedience hypothecation), intermediate (the organizational lifespan), substantial (competitive values) and overabundance (chaos).

3.2. What is Chaos?

Chaos theory is a revolutionized manner in which we ponder over the worldly functions. The findings of this hypothesis transmogrify the legally Newtonian-style commented world into an extremely complicated universe. Everything in such a world is interlinked in a web-based approach (Tabandeh, 1997).

Chaos and tempestuousness does not purport unmethodical features, inefficiency and perplexity. Disorder concerns unanticipated adventitious aspects in dynamic phenomena which possess their own particular characteristics. Muddle purports an ultimate systematization as expounded by Hayles (Alvani, 1994).

This type of disorganization or disconcertment is a sort of regulated perturbation or order in disarray. It is deemed as muddle owing to fact that it has unanticipated corollaries however it is systematic due to the decided traits.

Principally disorder and perturbation are deemed equal while chaos hypothecation or the ultimate order theory is a set of paradigms and methodologies to peruse upon nonlinear sporadic unsystematic quandaries (which are innately haphazard). Praigogin the winner of the chemistry Nobel Prize accentuates upon the point of eliciting order out of disorder in 1977. Jacobs the architect and urban constructor deemed Manchester as a failure on account of the fact that it was systematically divided among several districts. Each one of the residential and commercial plants were positioned in a section. This order made the borough unyielding so matching capabilities were diminished. Birmingham which was an unregulated town with scads of disparate institutes was more thriving on account of the fact that this disorderliness instigated a situation harmonious with variable conditions. This burgh has managed to have further headways as contrasted with Manchester.

Nevertheless chaos or disorderliness alias the ultimate systematization has been introduced in orismological texts since 1975 namely at the epoch when Liyoork published an article entitled “the third era and the necessity of chaos hypothecation”. He mentioned perturbated and disorderly events in it. Robert May the renowned mathematician and biologist proffered straightforward equations by alluding to the aforesaid equations which limned complicated dynamic modes. His views were widely welcomed. Chaos or ultimate systematization became sought-after in scientific circles. On the other hand, chaos did not purport a shunning mode, rather it was a theme focused by plenty of scientific disciplines, which was furthering the grounds of a novel thought. Most of the cases which sounded imaginative before were orismologically expounded under agitated apparatuses and equations. Their complexitys were scientifically upheld, for instance in the case of epidemic spread of some illnesses in diverse years. It seems as though the intensity of a disease outbreak is due to the external factors such as atmospheric changement, people’s emigration, alterations in the rate of hatches, matches and dispatches, which is difficult to foresee. However specialists have availed computerization simulation and tempestuousness equations to demonstrate that if the effect of the external noises is not taken into account, they will accomplish diagrams which resemble actual statistics tremendously. Hence, researchers came to the conclusion that outlandish noises can’t be disregarded, however, the effect of noises does not render the sicknesses seem haphazard, rather it is due to the fact that pandemic nature of illnesses acts agitatively (Moghaddami, Niazmand, 1999).

The critical point in tempestuousness is relevant to the fact that one of the contraptions availed for analysis of such systems is system dynamicity

3.3. Catastrophe Theory

Abstract perusal of unanticipated events is not a novel unimaginable matter. In fact, unlooked-for eventualities has formed a part of the everyday life of human beings in a manner that explanation of such unusual incidents has been cited in scriptures such as bible, the Old Testament and Koran.

Numerous cases of diverse events may be found in such holy books which can’t be explored with extant practical and scientific instruments.

Scientists and researchers have exerted themselves to render a rational link between the constituents of such events by observation of unanticipated events. Their efforts have been futile so far, for instance they have striven tremendously grasp and recognize the relationships or factors affecting the rise and fall of emperorships such as Roe, ancient Iran, Greece, China, India and other socio-political changements during such rises and falls. They have always been striving to comprehend the wherefores of events such as tremblors, conflagration flare-up, enormous whirlwinds, fatal waves of the sea, bridges disintegration and so on and so forth. Then they manipulate them by accurate recognition. One of the critical goals of scientists and ponderers has always pertained to gaining mastery over nature nevertheless no accomplishment has been achieved yet.

Such materials are scarcely expounded. Most of the scientists opine that natural changements and sudden quandaries and unanticipated events of the ancient epochs has always drawn the attention of human beings in general and scientists and other ponderers in particular. However they made

pragmatic incessant endeavors to grasp and solve such unknown natural phenomena (Tajdari, 1987)

One of the professors of the supreme institute of mathematical researches in Paris named Reneh Tom presented a novel hypothecation to the world of science which was called the postulation of unanticipated events or the cataclysm theory. The phenomena examined in such hypothecations are those whose gradual nonstop alterations are transformed into sudden ones step by step. Thus the corollaries or the deportments transpiring due to them is a great unimaginable alteration. This matter is quite noteworthy in scientific quandaries.

The hypothecation of unanticipated events alias catastrophe postulation expounds disintegrations eventuating due to perpetual alterations. The application of this hypothecation has been substantiated in disparate eventualities for instance bridge disintegration owing to overloading, incurvation of beams, disorders of the nervous system, bankruptcy in stock exchange, initiation of a mutiny, eventuation of revolutions, political movements and scads of other socio-political matters. These practices encompass explanation of sudden alterations which take place gradually in some quandaries.

Professor Siemens from Aerobic university of England proposed an aggression paradigm for the first time to demonstrate the pragmatic utilization of unanticipated events hypothecation. Lorenz has also explained that people may manifest aggressive comportment owing to two clashing factors, for instance, fury and fright are two factors directly affecting the aggressive behavior of a canine creature. Lorenz has advocated the practice of these two determinants at a specific reliability level to quantify and foresee the invasive behavior of a dog.

4. Analysis of complex system behavior in the time span

According to the organizational lifespan hypothesis (adizess, 2002) the viability period of an organization is sundered into 4 stages known as the introduction, growth, maturity, and degradation. The introduction stage has been limned in figure 2 where the organization is being newly formulated. Expenditures are usually high and profits are low in this stage. Most of the firms lose their vitality in this stage. Investments commence gradually to be fruitful in the growth stage and the marketing ability of the incorporation may result in higher sales. The organization achieves a specific stability in the maturity stage nonetheless it will fall on a relapse process in case the corporation can't grasp new points, or make creativity and initiatives to match themselves with the mart developments and alteration of laws.

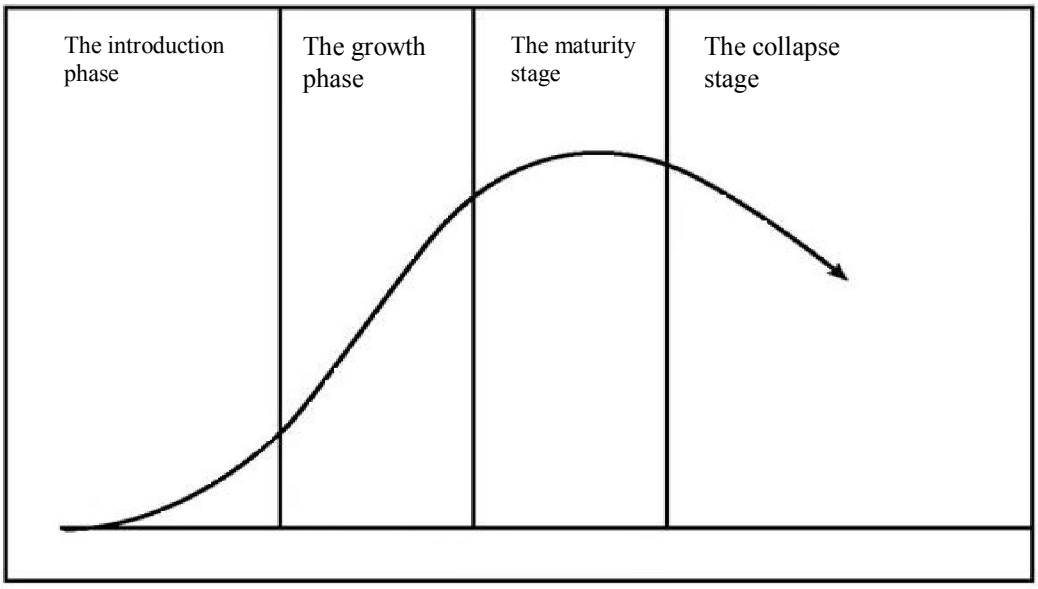

Figure 2: an organization's lifespan stages based upon the organization's viability cycle hypothesis

Macro-strategies of corporations are categorized into 3 groups known as growth strategy, stability strategy and division reduction growth strategies pertain to the development period. Stability strategies concern the maturity stage. Reduction strategies are about the collapse phase. The aforementioned classification evinces the available methodology to analyze a system comportment in a time span nonetheless complex systems may be explored in other manners too. Three analyses will be proffered to expound this attitude. You can take note of figure 3.

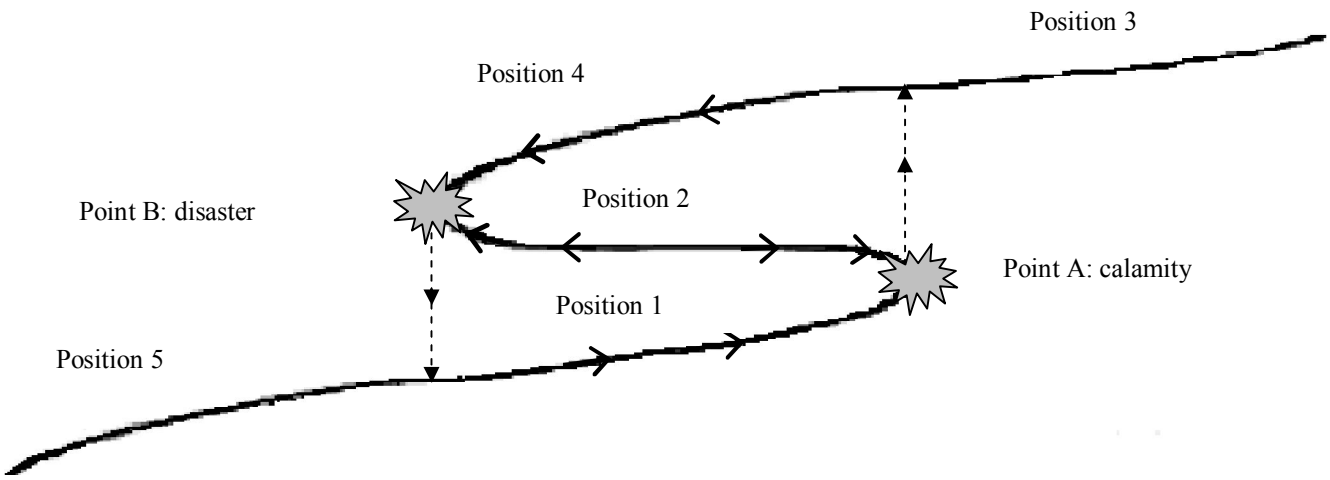

Figure 3: Anew attitude of a complex system behavior

This hypothesis has to be taken into account to explicate this Figure. There are two types of turbulences: positive and negative ones. A system may be expected to proceed its complexity in position manners during a positive turbulence, that is to say, system performance (such as mart share increase, sale escalation, technology betterment, etc) may ameliorate whereas system performance diminishes in negative turbulences.

If a system is in position 1, it will have positive turbulence. System complexity escalates as the turbulence increases. Thus turbulence intensification has direct relationship with the better performance of the organization, in other words, turbulence results in performance improvement and performance betterment instigates turbulence escalation. The relationship of these two variables is a spiral one (figure 4)

First Analysis: System Move to up

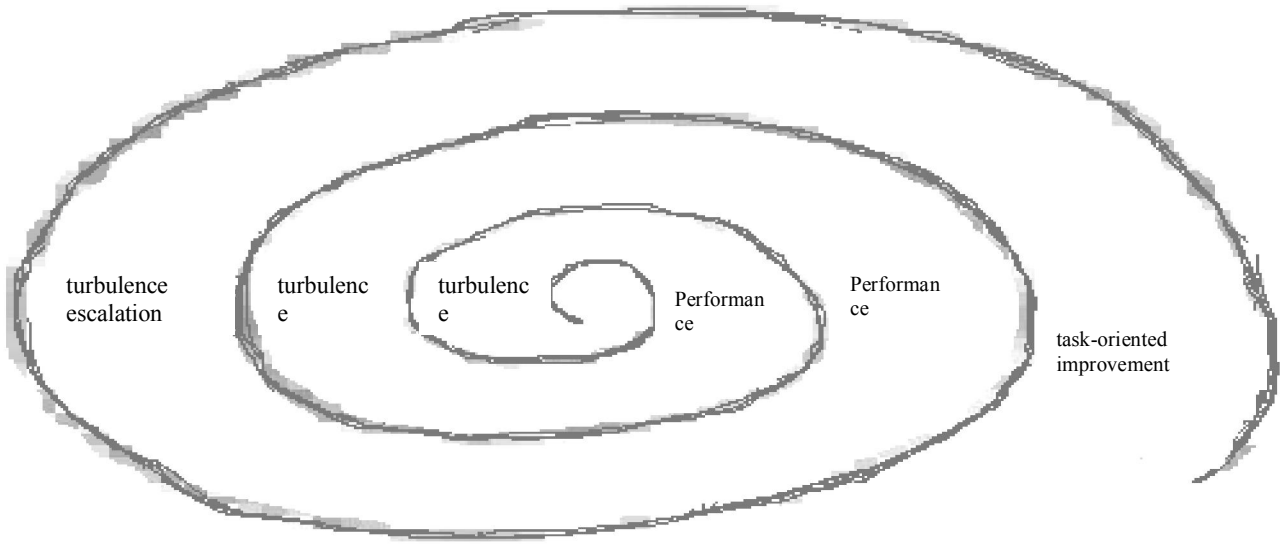

Figure 4: The relationship between the turbulence and the system performance

Thus it is expected that the system in position 1 proceed. Such a position is equal to introduction and growth stages in the organizational viability phases (figures 1 and 2 in figure 5). However this motion may cease in a spot because each system has a limited capacity, in other words complexity intensification and performance betterment exert disparate pressures upon the system. A system may sustain such loads based upon its capacity but eventually the total burdens exerted upon the system may outstrip the system capacity. This is known as the utmost turbulence stage. In fact it is totally complicated. This is the point where a catastrophe transpires and the system is transfigured. Hence it will switch to position 2 or 3. It achieves a short-term stability in position 2, and then it musters up diverse sources. This position is equal to the organizational maturity stage in the viability cycle of the establishment (figures 1 and 3 in diagram 8).

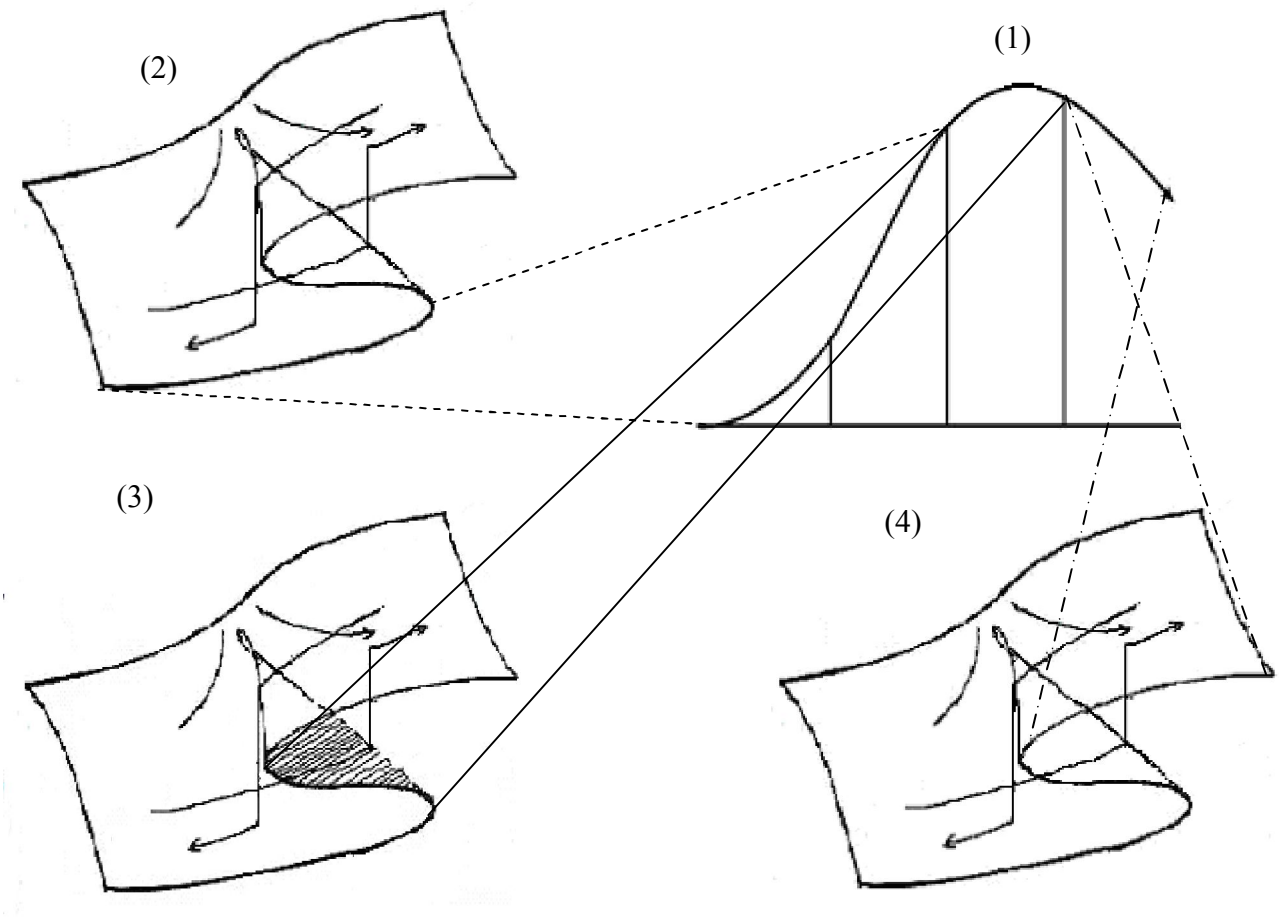

Figure 5: approximation of the curvature hypothesis of the organization's lifespan and the entanglement theory

This system is upgraded and entirely transformed in position 3. The brand new system functions in novel circumstances. Therefore, it has better features and capacities. This transforming symbolizes the establishment of a new lifespan diagram for the organization (diagram 9). It should be noted that the position alteration from 1 to 2 or 3 is dependent upon the impact of the cataclysm and the pertinent power. If the catastrophe impacts are profuse, system will switch from position 1 to 2 (figure 6). However positions 2 and 3 outdo position No 1.

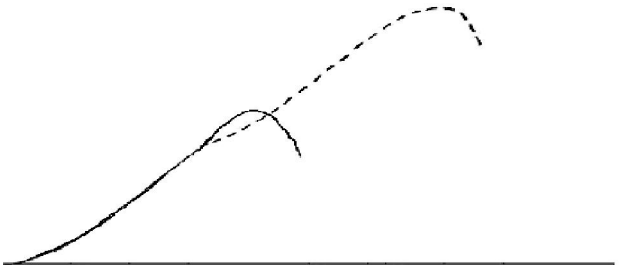

Figure 6: alteration process in organization's revitalization

The 2nd analysis: system downfall

Here it is postulated that the system is in position 4 (figure 6) hence, it has a negative turbulence. The competitive capacity of the system dwindles in negative turbulence. The relationship between the turbulence and the system performance is direct and reciprocal as cited before, however competitive performance curtails as turbulence escalates in this system afflicted with negative turbulence. Performance reduction causes more conflicts and intensifies the turbulence. These reciprocal impacts cause system collapse which is equal to the downfall stage in the viability cycle hypothesis (figures 1 and 4 in diagram 8). Thus turbulence will intensify as the time elapses and the system will become more complicated. System chaos may come to a pinnacle which results in the worst performance. Thus it winds up in a conflict and subsides to position 5.

It is postulated that the system is in position 5. Position 5 is equal to system stability. If the firm can't switch from position 5 to position 1, it will collapse to position 6.

3rd analysis: compiling a strategy

A system performance is complicated in disparate positions; hence, the type of strategy adopted by a system in dissimilar positions is a moot point. Three strategies are propounded to reply the aforementioned question. These strategies are proposed at the corporation level.

Development strategy: growth strategies of Pierce & Robinson will be proposed in case the system is in position 1 or 2 and is proceeding positively to position 3 (figure 7).

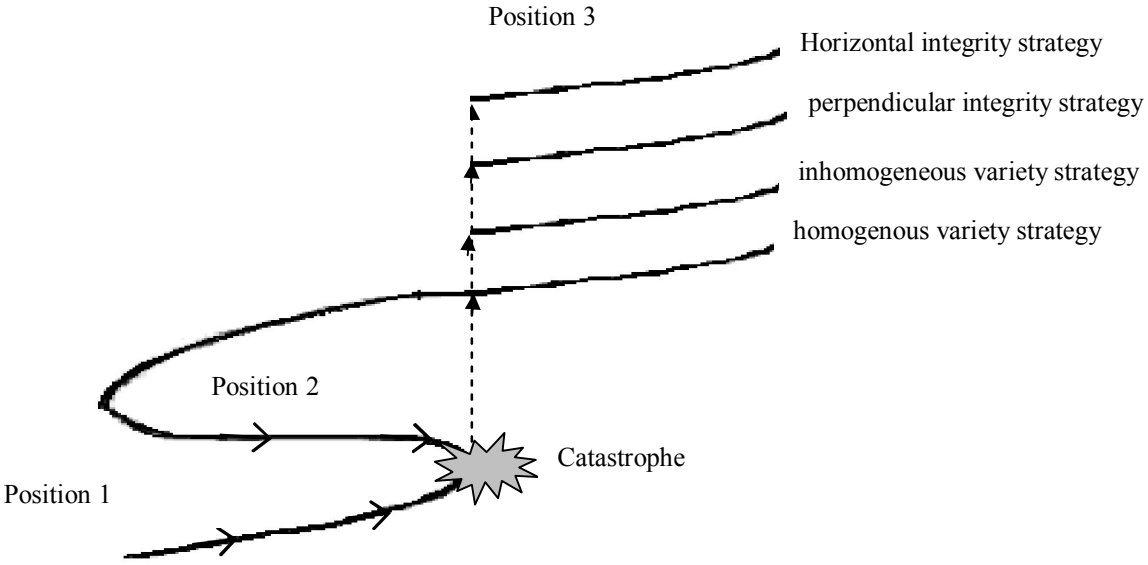

Figure 7: development strategies to switch from position 1 or 2 to position 3

Stability strategy: if the incorporation is in position 2, stability strategies have to be adopted.

Stability strategies (Pierson & Robinson, 2005) are mentioned in figure 8.

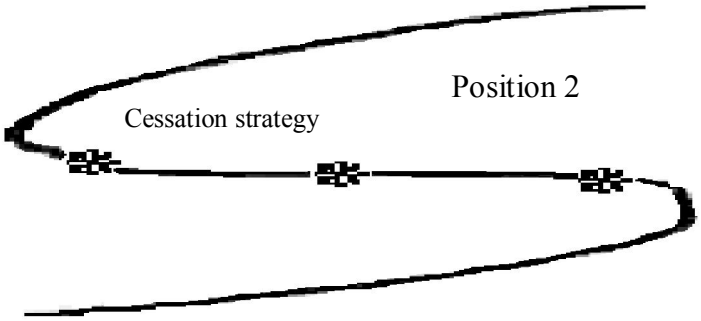

Figure 8: stability strategies in position 2

Reduction strategy: if the system is in position 4 or 2 and makes a downfall to position 5, 4 types of strategies (Piers , Rabinson, 2004) in the order of figure 9 will be prescribed.

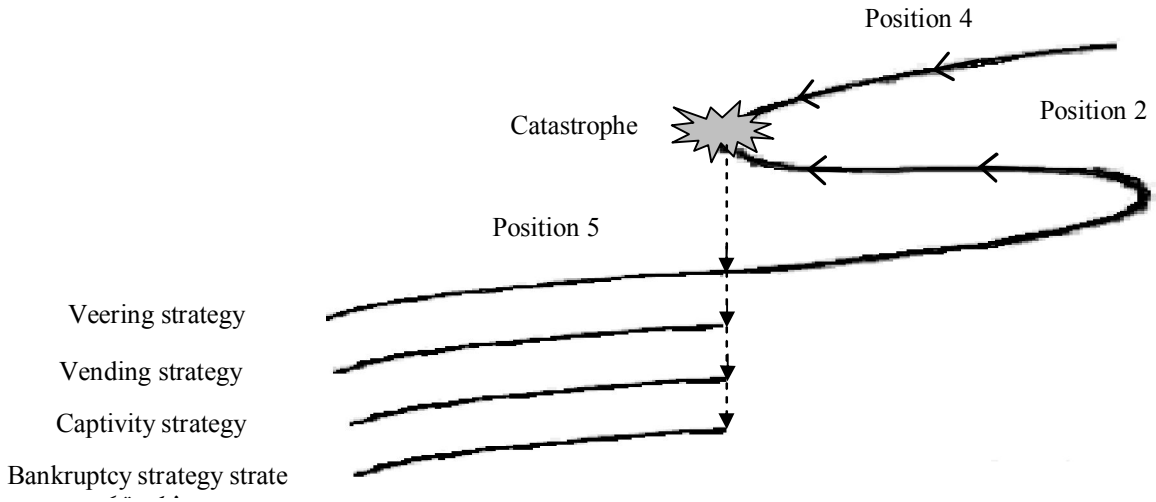

Figure 9: curtailment strategies to switch from position 4 or 2 to position 5

5. Conclusion

The postulations of such systems have to be elucidated to pave the way for the presentation of a blueprint to manage organizations in unknown and entangled environments. The aforementioned suppositions are as follows:

- Human beings as the chief elements of such organizations
- Sensitivity in blind spots
- The utilization of the intuitive methodology in the organization
- Relying upon the available Knowledge of the organization
- Utilization of the information technology as the main contraption to make communications in the organization

Three hypotheses called complexity, turbulence, and catastrophe were expounded in this script. System comportment was explored in the time span. It is postulated that the system is complicated. System lifespan was elucidated different from Adizess Theory. Of course this attitude and Adizess Theory were matched. Thus it is entailed that a system lifespan is always dynamic. A system time span is not gauged by performance not annually.

If a system accepts new conditions ultimately, it can switch from position 1 to position 2 or 3. It will also be able to switch from position 4 or 2 to position 1.

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