

Managing Management Boundaries of Creativity and Design

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Abstract

This study examines the fundamental beliefs of creativity and design in management perspective. The study is descriptive in nature. The problem of managing management boundaries of creativity and design is quite challenging. Data were collected mainly on two broad perspectives to find solutions to the challenge: 1) the product design of personal computers in comparison with the compatibility of human and other structures. 2) How nature and its stakeholders contribute to human living. Conclusions on the data found: Reflection of nature and its stakeholder, and human and other structures were compared with product's creativity and design. Thus boundaries of creativity and design are directly proportionate to the reflection and growth of human beings (consumers'). By deducting the results of this a parallel is drawn to organizations as a product to do the same in creativity and design.

INTRODUCTION

Creativity is the process of developing something new or unique (Kreitner & Kinicki, 2011). Creativity is simply building of activities to an existing one on a continuous basis with closely and distantly related phenomenal activities that breaks the traditional thinking process of human mind to think and push the scope of the whole product or service into a larger and new dimension of realistic phenomenal whole. This is known as boundaries of creativity. Boundaries of creativity lies in all the factors that makes the whole product or service. Each factor exhibits a limit in its contribution to the whole product. The boundary bound limitation of creativity and design is mainly formulated to facilitate the growing consumer's need in any given area. A product to a particular market segment is designed mainly to satisfy the needs of the customers (Donald R. Lehmann & Russell S. Winer, 2005). As creativity is incorporated in developing the same product to a higher version with more of its important and determinant attributes the product gets adjusted to the grown customer from using the previous version of the product into current version (Jochen Wirtz, Patricia Chew & Christopher Lovelock, 2012). This is constantly determined through market research and up gradation of the technological factor inside the organization.

For a better understanding of managing organizations in the real world, especially creativity and design in management is taken into consideration. Conclusion of the results of the

conceptual creativity and design of the marketed products of computer hardware, furniture, and motorbikes were used in creating a model for better functioning of an organization.

Many find it hard to adapt with the changing environment. Mostly the reasons are, rapidly changing environment and a lifestyle of user friendly gadgets that makes everyone to achieve things in a preformatted manner. I thought it would be nice to find out what would rightly enable us to understand managing management boundaries of creativity and design, by analyzing manufactured products.

Aim of the Study

The study aims to find out the relationship between creativity and design with nature and its stakeholders, and human and other structures.

The Problem Statement/Definition

Managing management boundaries of creativity and design to a desired level in a situation is challenging and causes the problem of exerting the right composition of needed level of creativity and design by an organization for its functioning.

Is there really a boundary or layer of limits for creativity and design? Defining creativity and design can it help in setting boundaries? To answer these questions, we require the understanding of the whole matter of creativity and design. If there is a boundary for creativity and design then the boundary would include all of the components that makes the whole. The whole represents every component that makes

human living.

Setting a boundary for land on a two dimensional proposition is much easier than three dimensional setting. It is easy to point out the boundary for physical than mental or cognitive, or social or spiritual domains of human living. For example, setting boundaries for land by constructing fence above the land area indicates, points to the property usage rights rather than property ownership rights. I mean the land mass that is below the surface and the space above the land mass is not defined accurately for ownership rights. Likewise, if one considers the physical assets to combine with cognitive, social and spiritual of an individual how would one draw conclusions on the boundaries of creativity and design? Because creativity involves physical, cognitive, social and positive thinking or spiritual domains of human functions in order to exist. There might be a probable boundary for these factors. But are we big enough to understand it or see it to draw a boundary with definitive? Not really! So basically the boundaries are conceptual rather than the limitations of human understanding of each matter.

According to Robert Frost, "Good Fences make good neighbors". Boundaries state the functionality without ambiguity. Ambiguity in creativity and design destroys implementation of boundaries and that results in partial or full dysfunctional behavior of human mind.

"Creativity does not happen inside people's head but in the interaction between a person's thoughts and a sociocultural context" (Mihaly Csikszentmihalyi, 1996). Creativity is not a particular inborn trait but it is the attitude toward life (Robert Sternberg, 2007). To create a right attitude that would promote human living requires more interaction with other individuals and also with the nature. Creativity is bringing in-box problems to out of the boxes and taking out of the box solutions to the box of functioning (that is to refer to the fellow human beings and to the nature). Is boundary a layer to the other components to life or is it the whole component?

The researcher tries to find a partial solution in solving the problem with comparison of physical products.

Methodology

Observational research methodology using factors identifying the design of personal computer as the research framework for this study. Observational study is one of the research methods that enables two categories viz., naturalistic observation and laboratory observation. Naturalistic observation in this research covers, how human beings have learnt from the environment and innovated new products by concepts and principles. How this process of innovation eventually resulted in new products. And the laboratory observation in this research covers human and other structures. It includes mainly, human body structure and organization's functional areas. In both of these observations, a study of the boundaries of creativity and design are set for delivering goods and functioning of structures.

Data collection were made on the following: 1) the product design of personal computers in comparison with the compatibility of human and other structures. 2) How nature and its stakeholders contributes to human living.

A. Product design of personal computer in comparison with the compatibility of human and other structures

Population: Products and services available in a market and human structure and other structures

Sample: Product considered for the study – personal computer, laptop and printer(s)

Human Structures: Eyes, Ears, hands and brains

B. Nature and its stakeholders that contributes to human living

Population: Environment as a whole

Sample: Ecological factor: air, water and soil

Animate: Human beings

Inanimate: Material resources (general)

Economic factor: Earning human living (general)

Political factor: Regulations

Social factor: Culture

Firstly, data was collected only on the structural configuration of different parts of personal computers like, monitor, keyboard, mouse, CPU and speakers. Additional two devices were additional devices for better comparisons of the same with human and other structures.

Secondly, data was collected on the major factors comprising the nature and its stakeholders such as ecological factors, animate and inanimate, economic factor, political factor, social factor and

the concoction of all the factors as one major phenomenon.

factors from September 2014 to August 2015 and collected data with the parameters of the results given below:

The researcher spent in observing the above said

Results

Table 1: Personal Computers in comparison with the compatibility of human and other structures

Sl. No.	PC and Other Devices	Human Structure Compatibility - Physical	Other Structure Compatibility	Inference
1	Monitor	It is made for human Eyes to see the output. Connects to cognitive domain (brain).	It can be placed on a table, fixed to a wall	Monitor's creativity and design boundaries are initiated by the need of different market segment's needs.
2	Keyboard	It is made as input device for both the hands with all the nine fingers working on it. Connects to cognitive domain (brain).	A stand or a table is made to accommodate or to hold it.	Keyboard's creativity is designed according to human fingers. This gives the boundaries. Touch sensitivity keyboards are virtual compared with tangible ones. Similar and added functions for enlarged operations than hardware based keyboards. Boundaries can be expanded when moving from hardware to software.
3	Mouse	Single hand Connects to cognitive domain (brain)	It can be kept on a table and other flat structure. Designed to be placed on a table.	Human hand is a mold to a computer mouse that gives structure to be handled/used human hands
4	CPU	Human brain compatibility. A partial functioning of human brain is produced in a CPU. It cannot be held by human structure. Connects to cognitive domain (brain)	It is placed in a case or cabinet.	Though CPU cannot be handled or touched directly but indirectly through other input and output devices we handle it. In actual sense the human brain is directly connected to CPU. This interaction can help identify pros and cons to further upgrade with creativity and design. It's periodic up gradation is the boundary of creativity and design
5	Speakers	It is made for human Ears Connects to cognitive domain (brain)	It can be place on the flat surfaces either on a table or similar structures.	Speakers, a sound producing product designed for human ears which can be creatively made smaller with great effectiveness. Boundary for the up gradation is set for each time it is re-innovated.

6	Laptops	Lap	Table, floor, bed, etc.	Best example for creativity and design. It's up gradation with new design always exerts creativity and satisfies the users. Boundaries on creativity and design for human handling can be seen in every model.
7	Printer	Though it is designed for human facilitation, human structural accommodation is only restricted to feeding in papers, collecting the printed sheets, replacing the cartridges. And advanced printers are with sound indicators, and visual touch sensitive monitors monitoring for executing commands and operations. Connects to cognitive domain (brain)	Small printers can be placed on a table or and big printers on the floor.	Printers are output devices that enables to print out documents. Creativity and design is executed on the desired output, like color or black and white, 2D or 3D, small or big size printing, poster printing, books, small and large quantity printing, printing on different surfaces, etc. It is liked with the CPU and ink sources for printing. Different ink for different purposes. Thus uniquely marking the boundaries of creativity and design.

Table 2: Nature and its Stakeholders Contributes to human living:

Sl. No.	Nature and its Stakeholders	What is Obtainable for living	Human Living	Inference
1	Ecological Environment – Air, water, and soil	Information Knowledge Original database Air, water, & soil Knowledge (cognitive element). Repeated research data.	Learns about the needs of it. Without it survival is impossible. Knowledge enables to function using the resources wisely. Contributes to	Decision making in terms of creativity and design by the knowledge obtained. Experience of evaluating needed/required amount of creativity and design for a desired outcome

2	Living things (Animate) Human beings	Information, Knowledge Original and complete database of different levels of forms of life. Each living thing is a book to be learned. Learning takes place in an increment.	Learns to know, understand and work along for mutual benefits. Constantly interacts with pets and other animals. Sometimes eats selected animals. Consumes vegetables, fruits, nuts and others. Living in a habitat where living things share the space.	1. Experience by interactions enables to identify relative usefulness. 2. Experience enables understanding of the need of others. 3. Decision making of creating products based on needs of others 4. Creativity and design is implied based on the expectations of human beings.
3	Non Living things (Inanimate)	Information. Knowledge or database. Resources of various kinds are available for human activities.	Learns how to use material resources. Periodical Consumption. Production of Goods and services. Constructions of houses, bridges, and other necessities of life.	Understanding of the availability of different resources and its usefulness helps in decision making in the composition of creativity and design
4	Economic environment	Information. Knowledge. Original database. Human living made by the macro and micro economic factors.	Do business to earn living. Learns how to do business and create resources.	Enables human beings to adapt market knowledge and engage in producing useful products by setting boundaries for the needed amount of creativity and design.
5	Political environment	Information. Knowledge. Database by itself The governmental actions that enables and disables human living.	Living in harmony with the legal aspects and avoiding illegal activities.	Input for modifying existing business by newly introduced government regulations either as opportunities or threats. Creativity and design depends and limited with these legal inputs.
6	Social environment	Information. Knowledge. Expounding database. Institutions interaction with people and other organizations. Beliefs and values. People lifestyle. Socializing.	Human beings live in a complex environment of increasing globalization and enjoys the availability of global products.	Social knowledge in human needs increases and enables in creating global products with incorporated Cultural manifestation of creativity and design

7	Summation of all the Environments as one environment	Information Knowledge Experience of Collective outcome of all the factors in the environment	Living in the midst of Environmental degradation and living	Decision making in terms of creativity and design requires greater experience in life to create a realistic world view.
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RESEARCH CONCLUSIONS

1. The development of the personal computer depicts how it is designed with human structural compatibility. Product creativity and design are related to human structural design. Products should work in harmony with human structure and living. If products are designed out of the purview of this objective, it will lose its significance of satisfying customer's need. This is basic and fundamental consideration while engaging in creatively designing products.

2. Boundaries of creativity and design is the level of input for creating a product in meeting customer's expectation. Every time when a product is upgraded, it tells us there is a better thought about the products design towards the structure and function of human compatibility.

3. There is no actual boundaries for creativity and design because, it is limitless and depends on human living.

4. Boundaries of creativity and design are limited to an individual's level of growth rather than creativity and design.

5. As consumers grow by satisfying previous needs, it results in the growth of consumers leading to further identification of needs. This situation of constant and periodic growth of consumers gives rise to extending the previous boundaries of creativity and design. This process of growth in creativity and design occurs as human beings grow.

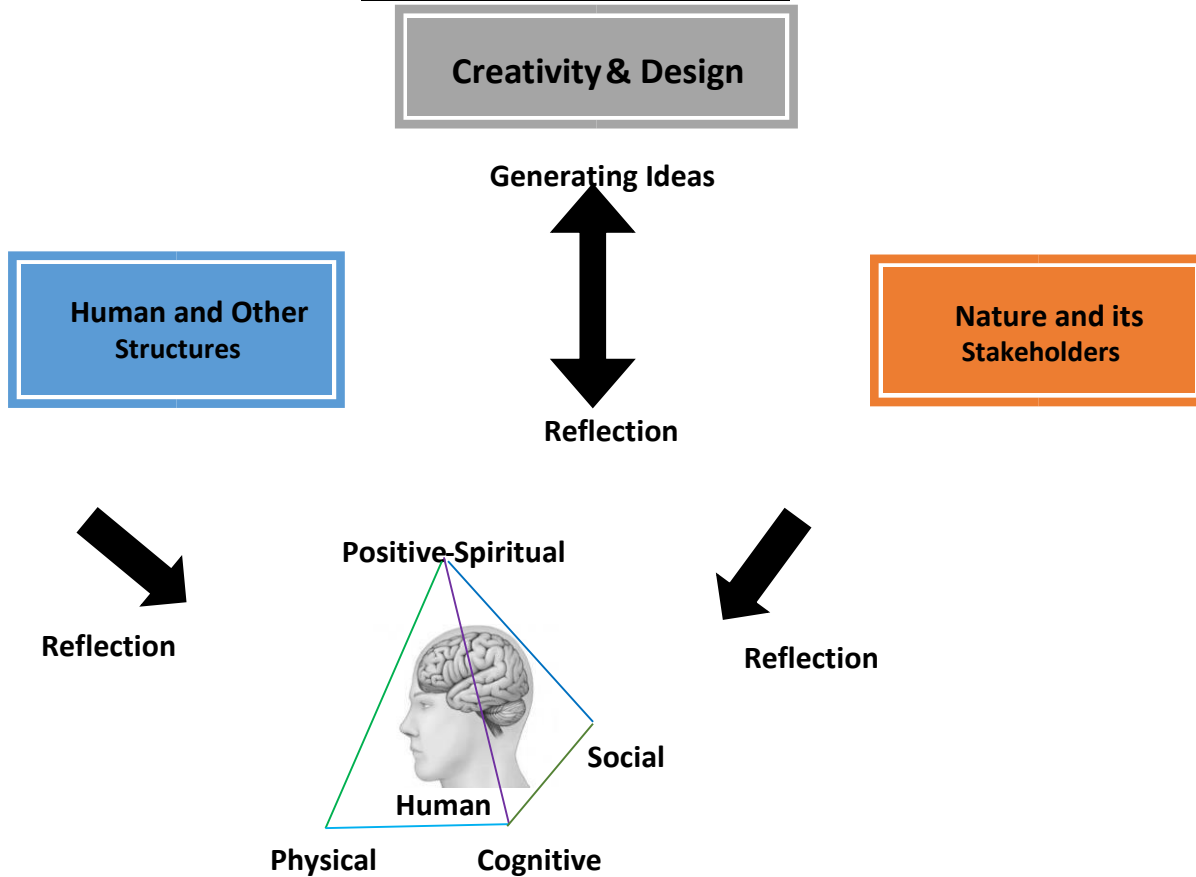
6. Growth of boundaries of creativity and design is directly proportionate to the growth of an individual.

7. Boundaries of creativity and design are only a reflection of an individual.

8. If products reflects the mind and living of human beings (consumers), then from where human beings do reflect mind and living to create products? It must be definitely from the nature and its stakeholders and human and other structures that we have considered in this research (broader manner). A good reflection of this enables human creativity and design.

9. A model of creativity and design formulated based on the results of this research.

Model of Creativity and Design



If products are designed and made in referring to human structures and living then how about an organization? Organization can also be considered as a product performing the determined function to engage in activities to satisfy human needs. It might be involved in obtaining resources or production. The above results on structural compatibility and functioning shows the reflections of nature and its stakeholders, and human and other structures. The same applies to organizations. Organizations not only reflects nature and its stakeholders, but also human and other structures, in achieving its goals. In managing management boundaries of creativity and design, an organization can grow, reflect and achieve their goals.

REVIEW OF RELATED WORK

Creativity is different to different people and it differs from one culture to another and one detail to another. People can be creative in different ways. All these creativities are put up with life's activity itself (James C. Kaufman, 2009).

Creativity is the ability to produce work that is both novel and appropriate (Robert J. Sternberg & Todd I. Lubart, 2004).

The dark side of creativity is about those things that are involved in the destruction rather than construction. It is simply designing weapons of mass destruction. Such kind of creativity should be discouraged and initiate constructive creativity. But this creativity of atomic energy when used in the right sense will bring construction rather than destruction (Maria N. Zaitseva 2010). The psychological factor plays a major role in the use of this power. This shows the understanding of the power of destruction and also the power that is in every atom. If enormous power is released in the splitting of an atom then what is the power that can keep it in stable condition. Creativity is also with boundaries (Kevin Hilton, 2010). So creativity is a double edged sword.

Creativity is like the pruning of plants which will make them to grow (Dr. Nickolas Martin, 2010). Creativity is domain specific and when a

person exhibits more in one aspect, might also be lower in creativity in other aspect or domain (Anne Jordan, Orison Carlile, 2012). Creativity enables innovation and creativity alone can do very little (Bettina Von Stamm, 2008). Creativity is linked with the work. At every level in the organization there is creativity or idea generation that can possibly help achieve better operational techniques and also in designing better work environment if it is accompanied by innovation. (Bettina Von Stamm, 2008).

Design in the 21st century into different areas covering everything in human life both family life and work life. Design management is concerned with optimization of design performance and design leadership is to innovate new strategies (Liz Moor and Guy Julier, 2009). Designing is with the purpose of creating artifacts that are meant to satisfy consumers and stakeholders need. Human beings are the only ones on the earth that are involved in designing for their living (W. Ernst Eder & Stanislav Hosnedl, 2008).

Proposed Approaches to Creativity and Design

There are several approaches to creativity and design. Some of approaches are as follows:

- Personality based creativity
- Knowledge based creativity
- Intuition based creativity
- Need based creativity
- Satisfaction based creativity
- Time based creativity
- Truth based creativity
- Wisdom based creativity
- Team or group based creativity
- Lack based creativity
- Prosperity based creativity
- Market based creativity
- Culture based creativity
- Environment based creativity
- Human based creativity
- Life based creativity

The list can be extended to everything what is possibly done through human living. Everything that is done by human beings can be connected with idea, knowledge and understanding to do a

particular task or action. When creativity is covered with all major aspects of life we emphatically mean active creativity. But if it is the old idea to perform the same task, then, the word creativity is not used for such performance. Some scholars categorize creative and non-creative approaches in solving problems. Creative approaches are those with new ideas in solving problems. Non-creative approaches are like being resistant to exploring new opportunities, acting on faulty assumptions or incorrect data. We can see the problem is in following one way and limiting the alternatives by reacting than reflecting before acting upon it. Sometimes, we overlook the need to improve, habitual responses, etc. (Scott G. Isaksen, K. Brain Dorval, & Donald J. Treffinger, 2011).

Design

Design is the result of creativity by which a definite form is depicted (Anne J. Banks, 2004). An element of newness and a new approach to the old to get attention is what the above scholars' points out as a creative element in solving problems. One can become a better designer when grounded in intuition (Jeffrey Veen, 2010). And intuition is often expressed and understood in the framework of individual experience (Jeffrey, Aaron Joseph, 2008). Pattern oriented designing is the best way to find solution to a problem and the principles that works to achieve the recommended goals (Alan Shalloway and James Trott, 2002). Designing an organization or a solution to a problem or a project involves the expectations and subjected to critical thinking, giving consideration to the cultural requirements and optimizing usefulness of the design itself (Bernard Leupen, Christoph Grafe, Nicola Kornig, Mark Lampe and Peter de Zeeuw, 1997). Designing enterprise is an ongoing and incremental activity. Decisions on design might settle as an established policy for the future reference (Ronald E. Giachetti, 2010).

Kai Wang (2014), a study conducted on creativity techniques identified three main aspects organizational context factors, perceptions of creativity techniques, and IT concerns. To improve creativity, logical methods enables better creative results than brainstorming (Vivente Chulvi, Maria Carmen Gnzalex-Cruz, Elena Mulet and Jaime Aguilar-Zambrano, 2012).

LIMITATIONS

The major limitation of this research is the data collected were limited to broader sense than specific. Deriving conclusions by comparing the results of the other. The conclusions of the researcher are based on results and partially from the published work of other scholars, readers discretion is needed for the depth of understanding. The ultimatum of understanding of managing management boundaries of creativity and design is well established but lacks wide range of illustration. Conceptual thinking is more in terms of fundamentals. This study is just a beginning, in the future it can further be elaborated.

IMPLICATIONS

The factors and the elements that are identified in this study can be useful in all the fields. It is fundamental thinking for managing management creativity and design and its impact in further detail study on each element can also be considered.

CONCLUSIONS

As a teacher of management and marketing the idea of creativity and design is viewed through the glass of nature and its stakeholders by deriving the main understanding from the subject matter of strategic management. Consideration of the external environmental factors and the internal factors for the success of achieving the goals of the organization is the theme of creativity and design. The identification of internal strengths by matching them with the opportunities in the environment to achieve the goal, requires constant assimilation and reflection of data from the nature and its stakeholders. Creativity and design works with the same principles. If a person is active, the occurrence of creativity is high and at the same time when creativity is related to human needs, the birth of new products and service packages will take place. Six days shalt thou labor and do all thy work: (Exodus 20:9, King James Version). Common sense is common only for those who work. The theory designed in this research as a model of creativity and design will undergo a series of test for its validity.

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