

PARADIGM AS AN OBSTACLE TO CREATIVITY: A WAY FORWARD

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Abstract

This paper attempts to help designers unravel the mystery behind their inability to be as creative as they would have loved to be. Towards this end, the explanation of the foremost obstacle to creativity called PARADIGM was done coupled with empirical exercises that further confirm the validity of the assertion that an average person is lazy in reasoning and thinks only in terms of what is already in existence. It advocates for a shift in paradigm which entails a total deviation from the norm and the need to allow our minds to operate in a new culture (where a new set of assumptions, institutions and laws come into play) if the emergence of entirely new and innovative designs are to be seen and witnessed regularly. Finally, recommendations on how designers can enhance their creative abilities were made.

Introduction

The major pre-occupation of all designers is the evolvment of new ideas and concepts which invariably crystallize into new designs that is functional, aesthetically pleasing and easily buildable. The pertinent question on the mind of all creative persons therefore, is: what constitutes an impediment to their creative abilities? Why do some people appear to be more creative than others? It has been observed that the major obstacle militating against the evolvment of new designs are PARADIGMS, that is, things that are already created which designers see regularly and interact with; these constitute models that seek to place a limitation on their thinking and consequently, their creative abilities.

According to Nelson (1957), *'good design... is a manifestation of the capacity of the human spirit to transcend its limitations'*.

Many designers have developed the habit of ascribing and attributing a familiar function to a specific object such that its single function becomes firmly fixed in their mind making them to remain mentally blind to other possible uses, extension or modification possibilities.

Adair (1990), opined that:

We tend to see what we know already, that does leave some creative possibilities ...there is an unexplored side to everything, because instead of looking at things with our eyes, we look at them with the memory of what others have thought.

A good example, can be seen in the mentioning of the word - ceiling fan - this word conjures up the picture of an object with three blades in our mind yet there is no existing law that makes it mandatory that ceiling fans must have three blades and not four, six or more other than what has already been designed which we have seen and has registered in our memory. Shannon (1980), observed that:

Past conditioning and fixed methods of thought cause us to approach problems in the same old ways. All designers and scientists have been trained in certain specific methods of analytical, evaluative and deductive thinking. By the time they have finished college, they have learned the customary or "correct" solution or approach to problems without considering other, perhaps more creative approaches.....too often the designer or scientist fits the problem to known solution methods, not the solution to the problem.

This **paper is art attempt to identify, explain and** discuss this **major** obstacle to creativity called PARADIGM with a view to educating all designers and thereby, enabling them to overcome this hindrance by allowing their minds to become free of all encumbrances preventing the inflow of fresh ideas leading to the evolvment of new designs.

The Concept of Paradigms

The word paradigm simply means model, pattern, standard, archetype or prototype. Imprinted on the mind of all human beings, including designers, are models or patterns which evolved as a result of observations and familiarity with societal and environmental norms and existing objects. These models or paradigms act as a filter that sieves all the data coming into the designer's mind. They filter incoming (new) experiences and accept those that do fit into the rules and regulations set by the model while those that do not conform are rejected outrightly.

Paradigms create barriers and set boundaries. They constitute an impediment to the acceptance of new ideas thereby making the evolution of new designs difficult if not impossible (Barker, 1993). PARADIGMS blind the eyes of designers to new ideas and thoughts by limiting them to think in terms of what is already in existence. The nature of creativity, however, demands that designers (creative persons) should not think along conventional lines. Their minds must be free from the influence and logic of their own past and that of their fellows so that their unconscious intuition can see clues which others have overlooked and build out of them, novel designs'. (Dunlap, 1943)

Empirical Study on what Informs the Interpretation of How Designers React to Situations

Two studies were conducted among people that have one thing or the other to do with creativity, they include artists, architects, engineers, etc. numbering one hundred and twenty (120). They were picked randomly at different places and locations.

The objectives of the empirical study include:

- To determine how well an average person thinks before he/she comes up with his/her decisions/solution.
- To determine what informs the interpretation people give to what they see.

First Study

The first study made use of Fig 1 (see page 13). The people were asked to write on a piece of paper given to them the number of squares that can be derived from the figure within a time duration of ten (10) minutes.

Findings and Discussion

Majority of the respondents spent less than two minutes before arriving at their answer, expressing verbally their conviction that the exercise is rather too elementary.

Out of the one hundred and twenty (120) respondents, a staggering seventy-eight (78) respondents constituting sixty-five (65%) said only sixteen (16) squares can be derived from the figure. The rest i.e. forty-two (42) respondents constituting thirty-five (35%) percent wrote figures that are higher than sixteen (16). While one is not particularly bothered about the respondents to come up with the accurate figure within the limited time duration; it is, however, very glaring that the respondent that wrote sixteen (16) took their decisions based on face-value, i.e. without thinking deep. On the other hand, the respondents that wrote figures higher than sixteen, though did not arrive at the accurate figure, demonstrated their belief and suspicion that there is more to it than meets the eye. The solution, as presented in Table 1, [see page 11] shows clearly that there are thirty [30] different squares that can be derived from fig 1.

Second Study

The second experiment made use of fig3 [see page 15]. The figure was shown to the same set of people among whom the first experiment was conducted.

Findings and Discussion

It was interesting to discover that majority of the respondents saw either a young lady with a necklace and a covering on her head or an old woman with a covering on her hair.

Amazingly, fifteen [15] respondents out of the total of one hundred and twenty [120] respondents constituting twelve and a half percent [12.5%] saw the two super-imposed together in the same picture after studying the figure for a minimum time period of five [5] minutes. A whopping one hundred and five respondents (105) constituting eighty seven and half percent [87.5%] could not see the two super-imposed pictures but rather saw one of them.

This experiment demonstrates, without any iota of doubt, that many people are rigid in reasoning and do not want to task their brain. Hence, their inability to see the other picture that is derivable from the figure.

Thumbtack **Box** Experiment

To further prove the validity of the assertion that creativity requires a shift in one's paradigm, Dunker (1945), carried out a study in which the subject had to use a thumbtack box as a candle holder in order in to solve the problem; while the box was presented empty, almost all the groups saw the solution on ground. However, eighty-seven percent [87%] of the students were unable to proffer solution when the same box was presented full of thumbtacks. This simple exercise / experiment show clearly that presenting the box while it was serving its usual function fixed its purpose in the student's minds hence their inability to see other uses for it. Syllogistic Synthesis.

From these studies, it is glaring that an average person [designers inclusive] tends to make decisions without much pondering, probing and brain-storming which is a major requirement for proffering better solutions to problems? People generally seem to be 'fixed' in their reasoning and therefore apply a 'straight-jacket' approach to solving problems. Creativity, on the other hand, demands flexibility in reasoning and the ability to 'look beyond' the existing situations and conditions. Also, people view things and interpret them from the point of view of what they had seen earlier.

Need **For a Shift**

For the designer to overcome the obstacle called paradigm, there is need to deviate from the norm [in reasoning]. This will involve a new a new set of cognitive categories :f thought, a change in fundamental beliefs that require the designer to begin to see and imagine things in a new way. (Alexander, 1985).

Familiarity with certain objects or concepts within a fixed usage context prevents us from seeing the possibility of other uses. We think of a brick as only a building material, not as an object with mass, size, colour and other characteristics. We think of a paper clip as something to hold papers together, but not as a pipe cleaner, lock pick spring or connecting click. One interesting aspect of this problem is that just naming the object can result in functional fixedness. [Shannon, 1980].

The use of customary solutions or approaches to problems without considering other more creative approaches IOCKS us into using yesterday's solution for today's problems. A shift in parade allows for a new set of assumptions, institutions and laws to come into play and become operational. This new model/paradigm, as a rule, can not co-exist with the old one rather it has to replace the old model. No doubt, this process of replacement creates pain and a deep- seated uneasiness on the emotional, intellectual and social levels of the designer. .

Achieving A Shift

To achieve a shift in his paradigm, the designer must allow his mind to be transported and engrossed in another culture that is totally different from the one he is used to; consisting of a new and strange environment. In this new culture, different set of rules, principles and laws applies. Adair (1990), puts it succinctly:

By taking a relatively brief trip to a place where you do not live, not intending to stay there, you are transporting yourself from one culture into another. You are exposing yourself to what is a new and strange environment: different language set of customs, buildings, Ic hes and foods. All are unusual. It is just what you need to jolt out of your mental ruts.

He opined further:

The more engrossed you are in another culture, the more you will experience a mild-shock when you return home. The familiar will seem strange, for you will be looking at your own country with fresh eyes. Many things and people, traditional assumptions and values to which you have become over-accustomed will take a new existence.

If the mind is to create something new, it must be allowed and encouraged to lose sight of the existing environment and conditions, transcend its limitations and soar high. Andre Gide, (1909?) - a French novelist - once remarked that, '*one does not discover new lands without consenting to lose sight of the shore for a very long time*'.

Also the editors of The Architectural Records (1908) while contributing to a discourse that bears resemblance with the topic under scrutiny said:

It is necessary for the architect to sever his literal connection with past performances, to shape his forms to requirements and in a manner consistent with beauty of form as found in Nature, both animate and inanimate.

This 'severance of designer's literal connection with the past' is otherwise known as PARAGIGM SHIFT.

Recommendations

To achieve a shift in their paradigm and thereby enhancing their creative abilities, all designers should as a matter of necessity:

- a) Cultivate the habit of allowing their imagination to soar to heights of ridiculousness, roam freely and be freed from all practical considerations.
- b) Extend their knowledge beyond the frontiers of their professional field, cultivate a curiosity about what others are doing and learn from other areas of knowledge like psychology, medicine, the arts, economics, world affairs, e.t.c.
- c) Engage in . non-routine ways of thinking always; stop thinking along conventional lines henceforth and look beyond their immediate environment, present situation or circumstances.
- d) Be involved in personal exposure to new ideas, people and things by taking a trip for pleasure or business.
- e) Look out for alternative approach to solving a problem through the process of brainstorming, meditating, imagining and visualising.
- f) Cultivate the habit of listening, note- taking, engaging in useful discussions with others, criticism and critical imagination.

Paradigm shift can also be achieved through any or a combination of the following: retreating to a solitude area, studying and observing nature, traveling, relaxing, e.t.c.

Summary and Conclusion

The greatest challenge militating against creativity are things that are already created, i.e. paradigms. They sieve new ideas (which are vital to the evolvement of innovative designs) entering into the designer's mind and accept those that conform to the existing laws and institutions while non-conforming ideas are rejected thereby making the evolvement of an entirely new design difficult. The creation of a novel design necessitates a total deviation from the norm and operating in a new culture that bears no semblance with the existing ones. This is what paradigm shift is all about and it is a requisite condition for creativity.

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Fig. 1 A Bra? "xercise Using Squares

Source: Haggai Institute; Singapore (1998)

- (1) A (2) B (3) C (4) D (5) E (6) F
- (7) G (8) H (9) I (10) J (11) K (12) L
- (13) M (14) N (15) O (16) P (17) ABEF (18) CDGH
- (19) IJMN (20) KLOP (21) BCFG (22) JKNO (23) FGJK (24) EFIJ
- (25) GHKL (26) ABCEFGIJK . (27) BCDFGHJKL
- (28) EFGIJKMNO (29) FGHJKLNOP (30) ABCDEFGHIJKLMNOP