

IMPACT OF SPATIAL QUALITY IN THE CREATIVE PROCESS IN ARCHITECTURE

A dissertation presented to the
Faculty of Architecture University of Moratuwa,
Sri Lanka for the M.Sc. (Architecture)



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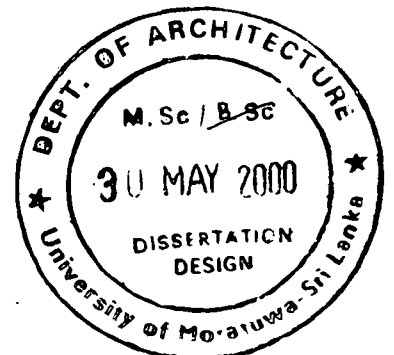
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From the beginning the nature of the study was a mixture of behavioral, philosophical and architectural knowledge. It was a state where the expected results were very faint.

Unless the following guidance received it would become a subject of a vast area, leading to many specialized fields, which is hard to achieve and misdirected.

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ABSTRACT

The fact that people act and behave differently in different settings, is a matter with many arguments. Main purpose in architecture is to modify such settings to promote, or inhibit, certain activities taking place in a given environment. Creative thought generation and impact of spatial quality or spatial experience is a matter, to be considered with many views, arguments, and theories.

Creative aspect is a matter of confusion, depending on behavior or habitual act. When considering creative process with many theories, it can be identified that cognitive approach and hypothetical approach seems to exist in defining the creative process, where the spatial impact on the process seems different.

In the hypothetical approach, theories exist that, certain clairvoyance is in existence from conscious to universal conscious levels. It seems, that certain information exist, which is beyond normal human being to approach, and the creative person is labeled as the person who can approach such information. Some times, they are labeled, as divine artists. Such dream like creative process also has many theories. Many of such theories end up with a stage of sudden creative solutions after a contemplative moment such as 'incubation period', and seems to be less depended on spatial experiences.

In the cognitive approach when analyzing deeper, it can be identified that how the spatial experiences influence in the thought process. It does not seem to have any impact on behavior and consequently the thought process, But certain environments seem to promote certain thought generations and consequently affect behavior, when it becomes a habit.


When considering empirical psychology, human beings always have certain built in functions to make order consciously, with what ever received through the senses. Whatever the spatial experience, all information is decoded with similar experiences, and transform in to, some comprehensible conscious order. This condition seems to be affecting the creative thought process, where the novelty or other alternative choices are inhibited. It seems to be an evolutionary condition, where the beings are not promoted to be creative. A certain spatial quality is a signal of food or death, and no choice for creative options.

Therefore to create novelty or to resolve a novel anomaly, is a matter of going beyond existing order. In architecture it seems that within very limited periods, certain orders, languages come in to play. Some basic norms seem to exist through centuries. Under such established norms it is difficulty to a person to step away from that framework of experiences, unless he was influenced by different spatial qualities, to be flexible in the thought process when dealing with such established norms. Unless non-routine, out of order and contradictory elements exists, to experience the creator, the creative work seems to be less creative, come within an order, and in the long run, only produce similar products and solutions.

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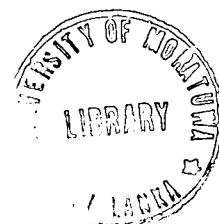
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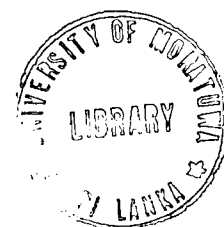


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INTRODUCTION



1 : INTRODUCTION

1.0 Explanation of the subject

The environment in any society seems to place a high value, upon the creative thinking potential, from schools to many institutions and related places. This has been necessitated by the cultural changes in the world, with the population expansion and explosion of knowledge, which is becoming specialized, day by day, due to technological advancements and scientific innovations. **Guilford (1959)** noted it is not merely the coming of the space age and its technology, which has produced the upsurge, of interest in creativity, but rather the social implications of these advances. **Rogers (1959)**, too, relates the serious deficiencies in culture, to its scarcity of creativity, and maintains that there is an urgent need, for the development of creative behavior among individuals. **Barron (1968)** is also of the opinion that human creativity may prove to be the key to 'success, or failure' in mankind's quest for knowledge.

Many researches now find many ways, to improve creativity by using many techniques, of nurturing and promoting patterns of thinking, especially in the school setting. Studies adopting multi media approaches, employing some computer programs and package of instructional materials, with organized teaching practices, are most frequent, in the development of, creative thinking among young children. Many psychologists and educationists, conceive creativity as a process, which can be taught, and enhance, through manipulation of environmental conditions

With such demanding trends of improving creativity it seems that the spatial aspect seems to be an area, which was not touched by many research studies. But spatial impact on humans, has become the most important factor, in the new millennium, where they spend much time in artificial environments from vehicular modules to computerized work places.

When architects design all these places it is necessary to study how the architects behavior and thinking patterns affect such products. He is the creator of these new space age human settlements. Therefore if it is possible to understand, what spatial qualities affect a persons creative potential, then it can be manipulated for the well-being of the society.

2. 0 Importance of the study

There are many places designed for human beings, such as prison cells, contemplative places, amusing parks, active places, religious places, and many other artificial places to enhance various psychological conditions. Such designed spaces can exert some influence on, the user behavior, and much more in his thought patterns.

Many space agencies throughout the world are now engaged in the careful study, of the relationship, between the human organism and space, and many other areas are now under experiment. But here only the spatial aspect is considered. When we consider spatial aspect, it seems that as long as we are unaware of the issue, we do not feel the impact of spatial quality. To understand in a extreme situation, is in outer space where there is no gravity affect much, and the astronauts has to become relative coordinates, even without a top or bottom. If such conditions prolonged in the future, what could we expect? Suppose someone who born and live in a space journey what kind of person he would be, how their schemata adjust their thinking process, and many other complications come to be aware. Sensory starvation seems to be affecting human beings and in his thinking pattern, is one aspect found from outer space research.

The ***Solipsism Syndrome***, which is defined as the psychic deficiencies, caused by highly artificial environments, is one latest finding. In the new space age, humans has conditioned, their behavior patterns in many artificial environments, such as highly technical work places, mined spaces, in submarines, in arctic settlements, polar laboratories, offshore platforms, space stations, modules, and with many

other vehicular environments where much time is spend.

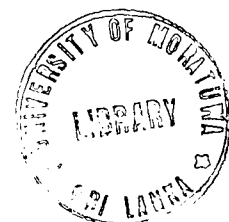
Another aspect is, in a mental hospital we need to have certain spatial qualities, which should inhibit creative thought generation of the patients. Otherwise they will get wild imaginations, which lead to severe consequences. Every nook and corner providing, spatial stimuli are dangerous for such situations. For such spaces need to have certain typical spaces. Their intuitive understanding should be capable of finding, the places they need, in the building. Such other areas can be identified, as where people need to work under command without any creative uprising, which can disrupt the system.

There for it is necessary to explore and see how the spatial quality affect to the human perceptual schemata for the creative process. In architecture, there are many basic spatial elements, used in different ways, to create spaces. If some spaces arranged in a specialized way, and the participator gets any impact on creativity, it is necessary to analyze how the spatial quality has any impact. If perception of a person, is limited in sensory stimulation as scientists called **sensory starvation**, specially those who are living in confined spaces, it seems to have some major impact on his thinking process. It is a study in this dissertation, is attempting that, how the architectural spatial qualities affect in regard of this. Because our perception of knowledge is mainly come form literacy, audio, and visual, but in many places the former two is missing and the whole system is engaged on visual terms of spatial experience.

3.0 The intention of the study

The intention of the study is to examine what spatial qualities affect on the creator in the process of creative work in architecture. First it is attempted to come to a general understanding of a creative process, due to the existence of various methods and processes.

Secondly is to examine how and when spatial experience are affecting the creator. Because response



of two persons', for a same spatial stimuli would seem to be different. Spatial experiences as schemata and influence on architectural creative process are discussed deeper. It is also looked in to some architectural spatial elements and norms and how they affect on thought patterns and visual imagery is examined. Next some spatial manifestations, and their impact on the users creative potential are examined.

4.0 Method of the study

As various writers have discussed the creativity and the creative process in various ways, it was looked in to some historical understanding of the creativity and the creative process. Then a more applicable creative process is introduced for architectural creativity.

Next the impact of spatial quality on human behavior and perception was looked into and its influence on creative thought generation is searched. Then it is possible to judge a picture falling in to the 'retina' and how it is processed according to the individuals built up experiences.



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Then some 'empirical psychological' conditions and architectural spatial elements has to be identified to see whether what ever spatial experiences are automatically converting into the organization of the optic nerve or adjusting optic nerve to the visual object. Creative thought pattern generation is looked in to, with such spatial stimuli.

Architectural norms, languages, or symbols also have to be identified, and how they are formulated in the society should be identified. Finally some selected architectural forms, situations, functional aspects, and an architectural form with structural stability is examined to see how the observers, users new thought generations occur, and the impact on creative thinking are discussed.

5.0 Scope and limitation of the study

When considering the creative process and the impact of spatial quality, it is hard to come to a



definite theory of creative process. Therefore, finally it is necessary to come to the concluding theory, which is more relevant to architecture. Creative process was seen as a process of generating novelty in every day life. Some writers sees it as 'creative act' when only it is useful, but in this dissertation it is assumed in the other way. Because many new artifacts and creations were not useful at the time of creation, only later it was identified as useful.

Impact of spatial quality, on human behavior is in a long range for the human thought generation, which is unlimited. Here only some fundamental architectural spatial elements are taken to show the point of view of the impact on creativity. To prove such points it was taken many examples from overseas, due to the suitability and convenience to show the extreme situations.

Finally case studies would discuss the arguments aroused in the second chapter, and it is not enough to cover the whole range of spatial impacts on the creative thinking. It was only an attempt to show how various situations can have different spatial experience in formation and re-modification of spatial schemata consciously and unconsciously which would lead to have more creative (resolving) options.