



Creativity in Architecture

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ABSTRACT

Creativity is one of the most important parts of architecture. Many believe that if creativity is deleted from architecture, something which remains is nothing just copying. Studying the creativity in architecture is something focused on in this paper. So, the researcher first introduces the creativity in general and then studies the creativity in architecture. So, at next step the architects' comments about the creativity will be introduced. In this section, a foreign and an interior architect will be introduced; Zaha Hadid as a foreign architect and Kamran Diba as an interior architect. Finally, creativity techniques will be studied. It should be noted that the research method is descriptive-analytical and the library is the study tool.

Key words: Architecture, Creativity, Creative techniques

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INTRODUCTION

The theoretical framework:

1. What is the creativity?

Creativity is a vague term and it is difficult to provide a precise definition for it. Like thousands of other key words that by offering definition for them they are limited on our personalization framework. But we can say in general that creativity is a mental process; the combination of innovation power and flexibility which aims to produce a valuable, functional, and innovative product. "Toffler" wrote in "The Third Wave": "The first wave is an agriculture era in which human beings depend on the lands, the second wave began with industrial revolution and the third wave is the post-industrial and information technology era and the only thought that could be useful in this era is creativity. However, most people believe that with enough information and skillfully reasoning and analysis that can be interpreted as an experience, reaching the ultimate goal is achievable. In general, people believe that use of creativity in all spheres of life is limited to a few elite who are creative by nature. But today, even though scientists believe that this process exists naturally, but in their opinions, teaching creativity is more preferable, they also believe that by teaching creativity methods and studying the characteristics of creative people the context of the emergence of this critical process will be provided [1].

In the introduction part of discussion, we defined creativity as a mental process. This process in the mind of a creative architect necessarily has two prerequisites. First imagination and then conception. An imagination is the images and illusions that the architect reviews them in his mind freely without restrictions to create an architectural work. Because of too much freedom, this imagination is the perfect introduction of architectural creativity. Thus, the architect can create thousands of architectural works which came to his mind for the first time in his imagination. But architecture conception is the same mental images which an architect makes in his mind by the help of his teacher from an architectural work which he may not see before but it exists in real world [2].

To convert his fantasies into reality, the architect uses his conception of an architectural work which has been acquired to enter those imaginations to the real world. In general, "the imagination is a catalyst of the conception while the conception is a filter that imagination must pass through it to join the reality." [2]. With these two prerequisites, creative architecture and in general, creativity process becomes objective. In producing this process, people's features are very impressive. "Torrance" who has been working on the creativity process for sixty years, studied sixteen features that the most important ones according to the majority of scholars' consensus including:

- A) Disobedience
- B) Liberation (being madly)
- C) Sense of humor (having fantasy thoughts)
- D) Lateral thinking which is more important than others [3]

Disobedience

Studies have shown that disobedient people have a higher level of creativity in comparison with calm and disciplined individuals. For example, in a classroom, intelligent and studious students due to adherence of values in the class and teacher, are more likely exposed to repetition and being affected by habits. But disobedient people know that they have to make innovation to show their abilities in the class, so, they less obey from the procedures governing on the classroom atmosphere and in this case creative thinking will be created. This example includes the second features means sense of humor and fantasy thoughts. These people with their activities unlike habitual thinking of other kids, create a type of fantasy thinking which seems a sense of humor but results in the production of creative thinking through conducting [1].

Liberation

The feature of liberated thinking and being madly is familiar for architects that it can be noted as creative thinking “deconstruction” in architecture works.

Lateral thinking and sense of humor

Having this feature, a person uses different ways and innovative solutions to solve problems and always unlike people affected by habit, tries to solve the problems through unreasonable ways. These efforts have an important role in producing creative thinking [1]. By studying preconditions of creativity and the features of creative individuals, creativity barriers will be appeared. “Jean Piaget” quotes: “creativity is the preservation of a part of childhood” [3]. It seems Piaget believes that child thinking is creative since he has no experience and no much information to find the solution of his problems and for this reason he tries to solve the problems through creative ways. Researchers believe that these two items are major obstacles for the creativity of individuals.

A) Too much information

Having too much information, a person by the help of mass of information tries to solve the problem without thinking to other ways [1].

For example, data says: Two vertical angles produces a square.

A normal person always makes a square with two vertical angles.

A creative person sometimes makes a square or 180 degree angles with two vertical angles.

B) Experience

A person by observing the results of problems solving solution of others, find his solution without creative thinking [1].

Others experience: More production = More profits

Economic creative thinking: Better quality= More profits

2. Creativity in architecture

According to the researchers, it was focused on creativity after World War II when the need to produce in all fields increased and creativity was the best option to answer it. But among all the sciences, no previous studies had been done about architects and even similar field of studies such as film making, theatre, and designing because artists believed that creativity in their works was completely something saintly and had no research done about it and even avoiding talking about it. For instance, “Frank Lloyd Wright” believes that creative thought is “human light on mankind” and creative people are attributed to God and even “Le Corbusier” believes that this is something religious. As a result, in the most artistic field of studies, artistic creativity can be understood just by studying the life, moods, and works of artists [2]. However, because of the importance of creativity, the efforts were made that Europe first with modern architecture created breaking with tradition in “Bouzwart” attitude and then United States completed architecture as a creative and educational matter [2]. “Jean Labatut” is named as one of the most important activists of creativity in architecture in this country that according to “Antoniades”, he expressed the deepest roots of the idea of creativity in architecture in an article entitled “An approach to the combination in architecture”. In this article, Labatut addressed this issue “things are not things by themselves, but they are something which we see.” But then other researchers addressed this issue. For instance, “Gaston Bachelard” about the importance of creativity in architecture in his book, “The Poetic of Space”, in a discussion entitled “creative forgetfulness” addresses this issue. He quotes “Jean Lescure” as saying: “When you are working, due to consistently attracting and receiving data through education, study, and experience by the help of mental knowledge, you can reach the state of consciousness without the need to remember when and where you have got the information. “Your creation as a new combination appears at particular time and place like a voice that can be heard in rare situations. A voice from the past.” [2].

After reviewing the history of creativity in architecture, we discuss why and how creativity was created in architecture. First, the reasons of creating creativity in architecture and creative architecture were discussed. In my opinion, according to the beginning of discussion, two major reasons can be examined:

- Intrinsic motivation or love to work
- Get rid of habits and freshness trend

These two factors along with all reasons of creating creative thinking expressed, particularly in arts including in architecture is very characteristic.

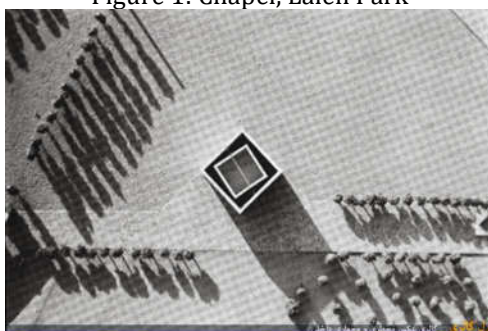
1. Intrinsic motivation or love to work

“Steiner” says: “No one as much as Einstein did not enjoy science.”

By studying the lives of creative architects, we realize that they all have keen interest in their works. They enjoyed creating architectural works and the joy of work was not turned to despair even when their projects were not accepted. “Le Corbusier”, “Libeskind”, “Peter Eisenman”, and “Zaha Hadid”, an obvious example of this interest and intrinsic motivation, are the examples of these architects. In previous discussion we realize that the only way of discovering creativity in architecture is the review of life and works of creative architects. So, to understand the origin of creating creative architect means intrinsic motivation, we should review “Zaha Hadid”.

A kind of tension, unrest, and agitation is observed in Hadid’s works. His works are made from specific pieces, sharp angles, and straight lines and so complex and exciting that it is difficult to imagine the specific form of them after the implementation [6]. “Ross Daemon” says about Hadid: “He was at the peak from long time ago when it was clear that extraordinary ideas in his mind can be implemented and another architecture created from them.” This architecture means the same creativity, the creative architecture that “Frank Gehry” and “Libeskind” are doing by deconstruction that has a lot of charm in their opinions and believe that Hadid is the follower of this approach. Hadid explains his style and says: “When we cross the horizontal territory with speed, we may have the opportunity to recognize the space and ideas related to it and then move and flexibility have an important role.” Zaha Hadid expressed that move and flexibility in his designs were important and we know that flexibility is the major root of creativity that it was also mentioned in the definition of creativity. According to “international design” journal, Hadid’s style is classified in the same group with “Rem Koolhaas” and “Peter Eisenman” who always have preserved their creativity.” With all these features, many new designs of Hadid did not run for a long time. His love to architecture and his interest in his work did not prevent his progress and propel him towards everyday architecture without creativity. Hadid says: “It was a tough fight and lot of resistance had been made. Part of this resistance is because I am a woman. There are still great difficulties. It is terrible but true.”[5].

Figure 1: Chapel, Laleh Park



Source: <http://www.arel.ir/>

Reviewing remarks and features of Hadid indicates the same intrinsic motivation and love to work and we understand how in this section we can note “Kamran Diba” as one of the Iranian creative architects. Hadid is a creative architect. She sees the result of her efforts and avoiding being affected by habits by receiving “Pritzker Prize” awarded to a woman architect for the first time [6]. Creative power is a new style of Iranian architecture. Hadid with great efforts and difficulties in this way, with her modern architecture trends looked for traditionalism and expressing Iranian traditional architecture and the result of her creative efforts was monumental works such as “new city of Shushtar”. Lotus magazine by reviewing Shushtar city expressed: “This is a picture of an Iranian city which is both ancient and modern, and has two cultures both local and global” [5].

Figure 2: Chapel Laleh Park



Source: <http://www.arel.ir/>

Lateral thinking, liberation, being madly, and fantasy thinking, can be easily seen in creative design of “Laleh Park” created by Diba. Perhaps, it is conceived that this creative work results from complex and vague thoughts of Diba. Diba explains about his design to create a chapel, he says when he saw that museum workers and some passersby pray in this part of the park or wrong direction of qibla, he decided to design a simple chapel in order to make a private and quiet space separated from busy outside of the park as well as showing the right direction of qibla. An Arab architect about the creative design of Diba say: He has pictured the simplest form of mosque with his modern architecture [5].

2. Get rid of habits and freshness trend

In explaining this reason, everyone’s mind propels to “deconstruction” architecture. In this style, the architectures by breaking inductive frameworks with liberated thinking create creative architecture. Due to the charm, innovative character, and freshness of this style, more popular today architects somewhat have oriented towards this approach and each one at least has a design in this way in his architectural record. But, it should be also noted that “deconstruction” is versus “construction” which seems attractive and innovative. But if all the architecture was “deconstruction”, flexible architecture with move and creativity can be called “construction” [6].

3. Creativity techniques:

Creativity like any other manufacturing process which has a product and its product is something new which did not exist before that, includes some techniques and overall, we enter to the area of architectural creativity education. These techniques create a creative form and it should be noted that “In the history of architecture the techniques are rarely devised that necessarily change the way of achieving form [4].

4. A variety of creativity techniques

Creativity techniques are as follows:

1. Value display, 2. Ambiguity creation, 3. Making tension, 4. Variability of form and deconstruction, 5. Use tangible and intangible metaphor, 6. Use paradox and metaphysics

1. Value display

Value display includes some techniques such as:

A) Contrast B) Order and disorder C) Full and empty D) Heavy and light E) Natural and artificial F) Old and new [4].

A) Contrast:

Ziggurats in Mesopotamia appear like artificial mountains in the flat land. Minarets in Iranian Plateau break desert horizon line and brilliant and thick colors of carpets and people’s clothes have contrast with surrounding nature.

These conflicts at the same time make balance in the space and increase the value of conflict elements and this conflict makes creative forms that opposite with one-color space affected by habits [4].

B) Order and disorder:

In this method by applying a kind of disorder in the given order, it is tried to create a new form that the architects of deconstruction as well as modern aesthetics use this method. This method is a combination of curved and straight lines [4].

C) Full and empty:

Another way to make contrast and display values is the use of full and empty spaces. A non-porous surface without opening makes architectural form iconic and keeps the supervisor away but the openings with refraction attract the supervisor and a kind of visual balance is created due to the contrast between full and empty spaces respectively means form space and openings [4].

D) Light and heavy:

Light and heavy contrast in architectural form is another kind of value display. Light mode is induced in form by using light and transparent materials like glass and polycarbonate and opaque materials like stone, brick, and concrete and this contrast is very common in "Gothic" era [4].

E) Natural and artificial:

This method is created by using contrasting materials means the use of concrete and brick, and As artificial materials and wood and stone by their natural shape as natural materials.

A molding of Islamic era and stone in neoclassical architecture induces this issue [4].

F) Old and new:

This method first was used in restoration of historic monuments. The part of old building which had been destroyed and there was no possibility to restore it, was built by applying new method and also new materials so that it was not hurt to historical value of the old building. The architects also used the combination of this contrast; like "James Stirling" that put together modern aesthetic with forms of "Romanesque Architecture" in "Stutz Gallery" design [4].

2. Ambiguity creation:

Ambiguity creation is the opposite of value display. By putting similar materials with little difference together, we can display this mode in the form. Ambiguity is a delicate technique that through which the distinctions will be decreased intangibly and certain condition is created in terms of perception [4].

3. Tension:

Complex buildings like cable forms truss structures induces this concept to the observer that they do not obey gravity laws or in ancient Iranian architecture muqarnas induces the concept of heavy volume but they are very light. This method is called tension in the form [4].

4. Variability of form and deconstruction:

In this method, by breaking the forms and recombination of them, new formed will be created that can be very creative regarding to the ability of the architect.

This method is called "form growth". For instance, James Stirling in "Null design" in "Roma interrotta" used variability forms of his previous buildings [2].

5. Tangible and intangible metaphors:

The picture of an idea in the mind of architect that can be a background of creating a creative form affected by some concepts such as individuality, culture, traditions, and material and visual features and this effect is so-called taking metaphor. If this metaphor consists human modes, it is called intangible metaphor and if it consists some visual and material features, it is called tangible metaphor. By proper use of these metaphors in creating an idea, reaching a creative form seems natural [2].

6. Paradox and metaphysics:

In this method, the architect by inspiring from opposite features with features of main form reaches to a creative idea that due to the concept contrast it is called paradox. For instance, Gehry with Claus Oldenburg offer knife-shape building for "Venice biennale" project which should be authentic and relaxing place. Overall, the whole architects of this method want to reach from opposite concepts such as crime to sacred and comforting forms [2].

CONCLUSIONS

The role and status of creativity in architecture is addressed in this article. As it was mentioned, there are some techniques for creative presentation of the architecture. Focusing on the status of creativity is something recommended to architecture students for their future studies so that we can see creative architectures in our city.

REFERENCES

1. De Bono, Edward, (2003). Serious thought, Translator: Qasim Basiri, Morteza Ghaffari pour, Publisher: Tehran Ayeezh.
2. Antoniadis, Antonisi, (2012). The poetics of architecture, Translator: Ahmadrza I, Soroush Publication.
3. Jafarnia, Mohsen, (2005). Thought engineering, Simaye Danesh Publication, 2005, P: 5.
4. Afshar Naderi, Kamran (2000), Techniques of creativity," architecture magazine, No. 9, pp. 4 to 12, Tehran.
5. Toy, Maggie, (2009). Women in contemporary architecture, Translator: Mina Mahdloo, First edition, Yazda Publication, Tehran.
6. Creativity techniques", (2002). Journal of Computer Architecture and Building, Tehran. Light and heavy: Another type is the show of the contrast between light and heavy value.

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