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TRANSPARENCY IN LOUVRE PYRAMID AND FONDATION CARTIER

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ABSTRACT

Glass is an important architectural and construction component in twentieth century to obtain transparency. Designing a building transparent may have many reasons as political or symbolic reasons. But besides that transparency has effects as changing perception of the people, making the inside and outside ambigious, dissolving the solidity in the urban context and making the building disappear. In this paper, two monumental buildings will be analyzed in term of transparency in the urban context. First example is Fondation Cartier of Jean Nouvel, which is located on the Boulvard Raspail between buildings. Respect to the nature was one of the most important aims of the building. Second example is Louvre Pyramid of I.M.Pei which is located on the plaza between the two wings of the historical Louvre. Both buildings have a monumental effect but in terms of transparency they differ from each other. It will be analyzed if they succeeded both in the urban context and for their architects.

KEYWORDS: Architecture, Glass, Nouvel, Transparency, Construction Material

INTRODUCTION

At the turn of the 20th century, the aim of the architects became to construct a totally new and artificial world which people can live in. One of the most important elements to create this world is material. Materials can be used to change the perception because they can differently under different wheather conditions like rainy, sunny or cloudy day. And a contemporary interest became rising in architecture in light, wind, darkness and nature. Light is an element that destroys materiality and the city can be translated into a cosmic pointillism. The most important material to reach the immateriality is glass. Glass is seen as the most remarkable material in architecture (Zillich, 2006). After it has been discovered that the glass can be used in architecture, a new concept has born (Wiggington, 2004). Glass eliminates the transition between inside and outside. It answers the people wants as nothing between the countryside and them, nature and them and heaven and them (presentation by Jean Nouvel).

The term transparency is linked to technological innovations. Glass is the most used material for creating transparency. Transparency means a simultaneous perception of different spatial locations, the space not only recedes but fluctuates in a continuous action. In the urban context, the users do not perceive the building as a barrier because it delimits the space and dissapear. Transparency also related with to see and to be seen. When monumental transparent buildings are analyzed it can be seen that the bodies of the visitors and general public are displayed and surveyed through the translucent skins of these monumental buildings (Fierro, 2003).

Transparency in the urban context has many meanings, one of them is related with the government which means symbolic democracy. In this paper, Louvre Pyramid will be analyzed in terms of the symbol of democracy but this is not the only and the earliest example. In 1960's the conciousness of the public met with this metaphor by Gaulle and Andre Malraux visualizations of open institutions. And this idea reached the highest point with Pompidou Center. One of the most important things while studying transparency is, transparency was inherited from the Revolution influenced from the Swiss naturalist philosopher Jean-Jacques Rousseau. According to Rousseau, transparency expresses the utopian state for human. Rousseau has an utopian political state that governance by the people will emerge from concern for the common good. And this idealized state can only be occur by destroying the boundries between government and the public and this rhetoric accessibility can be obtained by transparency (Fierro,2003).

In this paper, two monumental buildings will be analyzed in terms of transparency in the urban context which are Louvre Pyramid of I.M. Pei and Fondation Cartier of Jean Nouvel. At the beginnings of the modern architecture, the transparency means something different. Rowe and Slutzky defined two kinds of transparency which are literal and phenomenal. In early modern architecture the transparency was phenomenal that the different spaces overlap and create front and back spaces as in paintings. But the two buildings that will b examined in this paper have literal transparency and will be analyzed in this way.

MATERIALS AND METHODS

Cartier Building of Jean Nouvel

Cartier building of Jean Nouvel is completed in 1994 and it was located within the street frontage of a Raspail Boulevard. The building is both the contemporary art fondation of Cartier jewels and also their corporate heaA large ceddar tree is located on the site which effects the design directly, the tree was planted by the famous poet Francois-Rene Chateaubriand in 1823. Nouvel was required to respect not only this tree but also other natural elements. He did not want to built high so he designed a eighteen-meter-high glass screen aligned with the frontage of the boulvard. This glass screen provides a spectacular reading of the trees from the street. The park of the Chateaubriand's tree is framed with the glass screen and building, these facades blur the partition of inside and outside. It became difficult to tell if the trees are inside the building or outside. And the glass screen also responds to the ambient color of the day. In the interior of the building, the glass is irregularly sanded so people seem ghostlike from the exterior.

 He designed the building taking dematerilization to its furthest extreme. There are three layers of glass so both the trees and their reflection can be seen together, it is hard to tell which one you see. The aim of the architect is to create ambiguity by the trees themselves and the reflections of the trees. This ambiguity between real and virtual forms the building (Demirkol, 2010). By the transparency and the virtual images of the nature, the seperation between inside and outside dissappear so the social activities inside the building can be seen from the outside. It has been said that in Cartier building the illusion of the nature, reflected trees and the park behind the glass screen is more real as a symbolic representation of the nature.

"Reproducing the lines of the boulevard, the <u>glass</u> walls enable passers-by to admire the extraordinary interplay between structure and nature that characterizes the building," explains Nouvel Fondation Cartier rised on the light steel columns so the building protects the nature by not touching the trees. In the words of Nouvel himself,

"This is an architecture based entirely on lightness, <u>glass</u>, and finely woven steel. An architecture that plays on blurring the tangible limits of the building and rendering the reading of a solid volume superfluous, in a poetics of ambiguity and evanescence."

Calvino (1980) stated that he has tried to remove weight from people, heavenly bodies and sometimes from cities, but mostly from words. He defined lightness as opposite of opacity and stone, a slow petrification of people and places. He claimed that the lightness can be achieved by not looking at reality, lightness comes from reflected images and images from the mirror (The stories of Pegasus, Perseus and Medusa from the myth). Also Calvino found a way to escape from the heaviness of the life as changing the reality, this does not mean to live in dreams, it means to look at the life from a different perspective, with a different logic, with the images dissolved from realities. Lightness comes from the dissolving concreteness, changing optical images and dissolving of solidity. This idea is related with the idea of Jean Nouvel while designing Fondation Cartier. Lightness is one of the most important features of that building by creating changing images about nature, trees and sky, and changing the reality. Besides that literally, the glass and steel structure of the building dissolves the concreteness and the solidity of the urban structure located along the Raspail Boulvard.

Fondation Cartier is very important for the human perception that the layering of the transparency comes with the change of light, nature and perspectives. As Nouvel claimed this building respects to the nature, but some critics about the building argues that birds cannot see the building because of the reflections of the sky. While it respects to the trees and nature, it gives harm to the birds.dquarters. Nouvel thought that the building should be designed as a prestige building for Cartier and decided to built vertically. But besides that he wanted to keep the same height located during the boulvard so he built Fondation Cartier a little back from the edge of the boulvard, this gives him the advantage to protect the nature between the screen and the building.

Figure:

Fondation Cartier, Jean Nouvel

Louvre Pyramid of I.M.Pei

In Grand projects of Mitterand, most of the buildings are built with glass for ;

- Political leftist view
- To disappear in the mystic context of Paris
- To create a monumental transparency
- To show new building technologies

The idea of reordering the city of Mitterand is very different from the Hausmann. He wanted to create an order in contrast with the historical fabric and old monuments of Paris. In spite of emphasizing old monuments, Mitterand's projects deployed provocative technological imagery in the new public buildings. In Paris's urban sensibility two different aspects of transparency are embedded which are; the presence of exhibition buildings show the states full knowledge about the advanced glass technology and for surrealists the glass' alteration of light and image incites a fantastic thrall which conceived as a form of resistance to that state (Fierro, 2003).

Louvre Pyramid is one of the Grand Projects in 1980 by Mitterand and completed in 1989. The grand projects change the urban design of Paris with monumentalism and symbolism at the scale and in the city. Most of the grand projects are made from glass which creates transparency and creates a new leftist relationship between public and its government (Fierro, 2003). Using glass in grand projects represents the desire to dissappear in the France's mystic presence. This building as the most significant building in the cities cultural hierarchy.

The aim to renew Louvre is to make it the major gallery and center of arts. The other aim is to move the government offices in the Louvre to another place and provide more public access to the below ground spaces. (Wigginton, 2004) The aim of the pyramid is to connect three wings of the Louvre which are Richelieu, Denon and Sully wings, this idea is the heart of the project and with this idea Louvre became a unified museum from a former palace. So the movement of the people was important through spaces. Louvre Pyramide became the new entrance of the Louvre Museum.

According to the Rustow (1990), two stratigies are used in the design of the building. One strategy is to develop the existing visual and compositional axes which are determined mostly by the external conditions. The other strategy is related with the reductivist exercise in planar geometry based on the rotated squares on the plan. I.M. Pei described the Louvre Pyramid as;

" It is not really architecture. It has more to do with the art of illusion. The strict geometry of the design has its place on the continuity of French lanscape art."

The main idea while designing the building is to differentiate it from the Cour Napoleon by creating a severe form. This form should be totally transparent that the beautiful stone of the Louvre can been seen through it. The form of the pyramid serves as a lens that focuses the existing geometry of the court and a prism which translates the geometry into underground space. Pei rationalized the geometric shape that would enclose the greatest ground space by minimal volume. He argued that a horizontal roof can only bring in light, a high pointed roof bring in both volume and light by the advantage of making the entrance visible. Pei stated that the pyramid had a responsibility to say 'this is Louvre' but it could not be too large or too dominant form, this is why he used glass not stone (Jodidio). Also glass brings light to the ground floors. Rustow (1990) claimed that I.M. Pei used transparency in the project literally, functionally and metaphorically. He used literally, making the manifest the material condition of being transparent to light. The classical geometry of the pyramid refers to La Notre's garden plans, thus an extension of the Tuileries. But besides that the shape claim to neutrality against the highly charged facades of the existing Louvre. And also it a pure mathematical form derived from the great pyramid of Giza. There are many claims about the shape of the building but Pei stated that by proposing that the pyramid be constructed of glass, he assure his audience that its reduction to neutrality would be absolute. The geometry of the site mandated that building ca not be another simple prism but an idealized pyramidal geometry. He decided to make this legendary shape transparent because of his higher realms of idealization offered by the properties of crystalline (Fierro, 2003).

But there are problems about the manifacture of the glass, glass has a green tint given by iron oxide but Pei wanted to use a clear glass. He solved this problem by using a float glass that is made by using a special mix (Wigginton, 2004). While building this transparent form, every effort was made to minimize the presence of the structure not to block the purity and the planarity of the surface. But as it can be seen from the picture, the support system acts as a barrier in front of the historical Louvre. This was the greatest dissatisfaction of the Pei that the surface and the support system has a high level of opacity produced by the reflections of the sky from the glass panels.

Figure:

Louvre Pyramid, I.M.Pei

RESULTS AND DISCUSSION
Glass is one of the most significant material in the late twentieth century for the importance to show the level of technology, to obtain transparency. Transparency has a symbolic meaning as the symbol of transparent government and democracy. But besides that visibility is an important phenomenon, to see and to be seen, for public and private relationship. Also transparency has a dematerilization effect in the urban context whic is a significance point for this study.

In the first example, Fondation Cartier of Jean Nouvel, the building has a dematerilization effect and became light by dissolving the opacity and solidity of the urban structure and the building itself. Three layers reflects the nature and sky, so the reality became ambigious. People who are experiencing Fondation Cartier can not be sure if there are inside the building or not. By the screen in front of the building itself and the garden between them make people confused about interior and exterior. Nouvel succeeded in transparency but in many critics it has

been claimed that while he respects to the nature, some birds are dying because of hitting the disappeared screen.

While designing Louvre Pyramid, the main aim of the Pei is to make the building disappear in front of the historical Louvre. Connecting the three wings of the Louvre with a public space and creating a new entrance was successfully completed. But transparency of the pyramid was not fully successful because of the reflections from the sky and besides that at night the light from the inside makes the transparent pyramid nearly opaque.

Both buildings have same aims as to disappear and create a monumental effect. Fondation Cartier is transparent to respect the nature, Louvre Pyramid is transparent to respect the historical context. The forms of the buildings, materials and structural systems are quite different to create a transparent context

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