Cumhuriyet University Faculty of Science Science Journal (CSJ), Vol. 36, No: 4 Special Issue (2015) ISSN: 1300-1949

## THE IMPORTANCE AND BEAUTY OF LIGHT IN MOSQUES

# Mohammad SHOKRPOUR<sup>1,\*</sup>,Ghorban MAHBOUBI<sup>2</sup>, Parizad FAKHERIAN<sup>1</sup>

<sup>1</sup>MSc in Architecture, Ajabshir Branch, Islamic Azad University, Ajabshir, Iran

<sup>2</sup>PhD Scholar in Architecture and Faculty Member of Maragheh branch, Islamic Azad University, Maragheh, Iran

Received: 22.03.2015; Accepted: 29.05.2015

**Abstract.** Light is a very important symbol in spiritual spaces and hidden. God is the light of skies and earth. Reflection and expression is the essence of God on this earth. Iranian traditional architecture represents a world of infinite light and divine wisdom and spiritual space. In some communities sunlight watching everything they knew, and most religions light is the source of all purity and goodness in Islam and one of the most basic and most essential light phenomena in human life. The analytical study and library has been relying on the literature of expression.

Keywords: Light, architecture, mosque, spiritual space

#### INTRODUCTION

Light is an important factor in architectural design. The most common use of light in architectural lighting internal space needed to carry out activities in accordance with a space. The light in architecture has been responsible for developing and living space. Meaning and symbolism of light is connected with aesthetic sense and have an important role in improving the quality of architectural space. Supernatural manifestation light on architectural structures, is the aesthetics of Islamic architecture put in mysticism and meaning. Floor and wall surfaces in architecture, sleek and bright light are used for hunting. The climax of Islamic architecture should mirror with light. Because it eliminates the architect of the light, the light of a thousand pieces, the shape of your space, so that the shape should be the same. In fact, it is realized that it is made of soft and mysterious light.

## Statement of the problem

Nowadays, various types of glass production and use of mechanical and electronic lighting systems is increasing. The use of elements, partly because of the use of natural light in buildings, is decreasing. The Iranian Islamic architecture has been replaced by post-modern architecture, urban, architectural and construction asymmetric heterogeneous and follow Western styles and models, without emotions and relaxing atmosphere of Islamic architecture. While Islamic architecture and the architecture of the real atmosphere of the park get to the essence of God. So, what is the architectural element of the Lord?. Light does not move due to the physical state of matter. Proper use of Islamic architecture with its principles, especially with the use of light and color just can not seem appropriate to describe architecture. It represents a type of architecture that Islamic architectural identity to revive.

# Nature of light

Determining the nature of light from ancient times has attracted human's attention. The ancient Greeks believed that the first light is made of particles, which are so small that the eye can see objects in dealing with them. Finally, in the last century by the quantum theory of light energy in the form of small particles called photons separately described the nature of light. Suhrawardi

Special Issue: Technological Advances of Engineering Sciences

<sup>\*</sup> Corresponding author. Mohammad SHOKRPOUR

#### SHOKRPOUR, MAHBOUBI, FAKHERIAN

described the light in this way: the light does not need to be defined because nothing appears more than light. Therefore, there is no need to define the phenomenon of light.

# The history of using natural light in architecture

Knowing the process of using sunlight to help shapes or forms different materials and building infrastructure is necessary for the design. Beginning in the fourth millennium AH to get the light and shade of difference in the exterior walls were used. In the third millennium AH burnt out on the wall of the house where they had stayed under the roof can be deduced that each room was associated with no windows through a door to the outside. In addition to the samples of material across the window of Iranian architecture, it can be found in the Sharoukin and openings in the towers of the Assyrian reliefs examples. Originally from the Persian style properties, some reasonable and necessary properties were provided for the building's ventilation and sun visor. In the course of the level of difference, it was used to absorb the light. During the Achaemenid Persepolis, door position is clear and well rounded and often left heel. Also, in the palace at the top of the doors and even the roof, outlets and cups having a large space and indoor lighting palaces and halls has helped to live in different seasons, to build a house, and take advantage of the needed amount of light from the sun. Sir Percy Sykes says, regarding the architecture of Parthian era and Hatra House, that the rooms all have wooden ceilings which have been set. And, the height of the harness and the crescent of light, which were open to the east. Sassanid contrast between shadow and light have had a tendency to show, and this is evident in all their buildings.

In the period of ancient Egypt light had particular importance. The position of the land of Egypt, and thus the contrast between shadow and light intensity is very high. Explicit and geometric forms that were used in Egyptian architecture with sharp edges and accurately under intense light has a special effect. But, the play of light and shadow in the architecture of Egypt is limited to the first major forms. For the Egyptians, it is inaccessible and invisible for the human nature of Godto be in the dark. Access to this God who should lead the light into the darkness with the light of such events, is a little clearer. Greece also used the lighting to their temples. That was more statuesque temples and their effect should be more space around the temple. The only duty of religious statues inside the temple were kept. Greek temples in many ways were similar to the blood temple with a waterfront that were made between the statue and the entrance lighting sculptures which were correct. The light shining through the water's surface reflects the light sculptures made in spaces that require more light from the ceiling light used, so that the part of the roof with more height and the space created was used to light inside . Christianity started in architecture and Byzantine architecture is always trying to be more spiritual aspect to the interior and create a dream space. It is clear that lighting has a major role in this way. Deep, dark spaces of medieval churches and Islamic mosques are decorated with light which is nice to be able to convey a sense of spiritual requirements. The result is a sense of closeness to the source inside you.

Twisted by the light of God into the body of material, namely the human soul that man shows the spiritual growth and development. As a result of this parable to show the architecture of religious buildings often light as a typical element, is independent of other elements and used concepts so that its radius can be clearly visible within the body of material and size.

#### **Light in Architecture**

Architecture is an accurate and stunning artistic collection of objects made in the light. Our eyes have been created for that form to see the light. Cube, cone, sphere, cylinder and pyramid first application that offers us the light. Pictures are pure, tangible and clear (2). Light control is a matter of importance in architecture. The building is considered in your shadow for two reasons. So, when we enter the building, we can get more light out of the light into the open air. To enter the space with lower light levels, you can create trivial changes. But, to make a dramatic change, it must be consistent with the architecture of the light with a great darkness of

our past. At night you can do the opposite, but if the rooms are higher and brighter, glorious buildings and better effects seem better (3). Further, architecture sky light and artificial light used gifted in many ways. Lighting the way to define the location, a part of the architecture. Decisions about the play of light and shadow in the mind of the space taken on the basic elements of architecture influence. Location-based lighting and lighting mosque with different museums or other items (4). For example, in a sacred space sharp contrast, light is needed to get rid of worldly attachments and helps to monitor the willingness to provide a sacred space. In contrast, in some public places, some kind of harmony light space is needed. The type of light management space has been designed differently. Light in architecture because of its various functions is important. Lighting can be considered as the first work of architecture. It is important that this first design and construction of architectural spaces often means restricting and closing with limited street lighting (5). Also, bring light to indoor spaces or semi-enclosed spaces of architecture is not limited based on the volume of external radiation and how it can be defined as effective, representing a concept of song with uniformity, diversity and movement, contrast and symmetry brought to mind images (6). Searching the architect's works are eternal and opening the sparkle of light that shines with a deeper understanding of their architecture shed to shine the light of life in such circumstances to rise (7). More light on the sanctity of religious places is visible in architecture. In the west, it is reflected in church and in the east is reflected in the mosques. Space lit by the light of the visual space when the space is completely clear, dark or totally dark rest of the space can be used as a changing element. Sky exploding in space is spread through the human experience through architecture products (). Architectural designer with clear classification of light and shadow and dark optical illusions in deep space, and the viewer sees that space goes to infinity. These spaces have always been non-roof skylights. In the architecture of churches with special lighting and forms, visual effects arise, that is not clearly distinguished several different interpretations in mind as well as the creation of a mystical and spiritual causes. Light in the upper meters of light, space gives a special case, all the attention paid to clear space so that space can become the center of attention. That's why most churches and museums of the light are used (8). The light that comes from heaven is due to be observed by the architecture, but light can be used by the designer to give the space character and to place a particular identity (9).

#### Light in Islamic Philosophy

Special attention is about light in Islamic Philosophy. First, like many deep and unbroken in the light of Islamic Sufism, Islamic scholars agree on the means and the ways of the world, all of faint (10). Since the Islamic art world linked kingdom, light as the figurative element of the manifestation of Absolute sees, Suhrawardi calls the Light of Lights will light the sky and the earth. Suhrawardi described the types or species of light on the life of human beings which is high and see everything and anything as a strobe or category Fyzan phenomenon of God brings (6). It should be noted that Islamic philosophers and mystics in the discussion were influenced by light and its relation with the verses. The most famous verse in the Quran about light, is party light verse 35:

"God is light (being part of) the heavens and the earth. The story of the light is like a place which includes the light in it and its light sparkle in the glass like a brilliant star that lit the holy olive tree which is not belong to East and West. And, without any fire make the world blazing , make clear their own world

"The light beam of light on the knowledge of the truth and God guides to His light and this is the God samples to the people (Dom) and Allah knows all things."

According to this verse, Allah Almighty is the most complete example of light, His appearance is its essence and manifestation apart and every creature will emerge and there will be by him (12). Also, in Islamic Philosophy, there is some similarity between reason and light and the relationship between the two has been noted, because the light in both reason and

#### SHOKRPOUR, MAHBOUBI, FAKHERIAN

truth help people and their leading role. For this reason, only the human connection is the ultimate truth and light because they said and expressed the truth (10).

# Importance of light in religions

Light always been sacred in religions in some religious texts and ancient, God is likened to light, and according to some ancient philosophies, being able to light and darkness and the light emerged and light to achieve victory. Light respected all religions with holy and spiritual nature. In Zoroastrianism, being interpreted, and the angel of fire and interpretations are based on the word light. In Judaism, God first created light. In Christianity, Jesus (or God) is light and Father and Christ dwells in light. Light also has a special place in Islam, as Allah in the Qur'an, the light of the heavens and the earth is mentioned (Surah Nur, verse 35). As well as the light of divine names and God called the light of Quran and the name of the twenty-fourth chapter of the Quran light (14).

In light verse, Mulla light means there is and to consider his explanation says What is the appearance itself and yet emerge and everything that is emerging would to be Existence. The truth is every object, the same aspects of the object is to light. From the viewpoint of Imam Muhammad al-Ghazali, the light is what can be seen on their own, which is non-visible (14).

In almost all religions, light is the symbol of theology and element of all goodness and purity and move from darkness to light, is considered as the main target. Also, light of Iranian art is hermetic. Iranians hate whatever is dark and always have a natural hatred. The triumph of light over darkness, evil has long been one of the main characteristics of ancient Iranian religion. In ancient Egypt, the light has been of particular importance. The position of the land of Egypt, and thus the contrast between shadow and light intensity is very high (15).

## **Light in Mosques**

The mosque, is looking for inspiration from the general concepts of God, to the spiritual world and the material world be closer together to create a spiritual space. Since light is a symbol of the unity of God, the Muslim artist is trying to convey the sense of vibration and interest. In addition to the spiritual and mystical symbol of light in a mosque, decoration also is considered . Sometimes the thought is required. Lighting and decoration of mosques, the mind and the imaginary world and the human leads are brought into the light of the world that is the right expression. The depth and breadth of vision to understand the meaning and existence finds meaning to become intuitive. Translucent wall and skylight while deprivation and intimacy mosque reserves caused by light passing through the colored glass, broken and other raw and not the outside world which is embedded and eternal bliss. At the same time, the color glass cord to become light or daylight shining through the transparent colored glass, the richness of your inner sun throws, as the divine light reflection and refraction when the mirror is smooth, being appreciated to the discount has resulted. Analysis of the light through the colored glass is a reminder of the existence of the divine light. The dominant color is the blue stained glass down and relax sky. Analog, yellow and green are used less and therefore are more precious. Image of stars and flowers and pearls can be seen. There are scenes in the geometric network and are crystallized light sentence.

## **CONCLUSION**

Light in Iranian architecture is the combination of culture and religion and Iranian art has changed over time. Traditional architecture is to create spaces of light and the implications for the effectiveness of the place. In religious buildings like mosques, the light quality of the spiritual and metaphysical space. In fact, the role of light in architectural lighting, also can be used beyond the defined space. For example, in places of worship and religious, allegorical means of sight of pantheism refers, in addition to revealing the concepts of purity and holiness can refer to unity. Another aspect in creating a sense of awareness in relation to human movement from the other room. Iranian architects have tried to create a space between the

optical mode, moving toward the heart to forgive. Transmission usually makes dark spaces during this stage because the audience is able to light in the most basic sense. A wide range of lighting applications, whether it is functional, physical or spiritual consciously has been used in traditional architecture. However, Iran's contemporary architecture, blind imitation of traditional architecture appeared mostly in the role of the architect to take place. Todays, designers during the design space, are considering the element of religion and spirituality space than in the past have faded. For example, when the presence of light in space is given to the aspect of the beauty and brightness. Using light more spiritual and metaphysical traditions lead designers to try to help and spiritual aspects of the divine light and the space, and give a sense of the divine and mystical, and in some cases lead to orientate to the Divine. The light originating from the light of God and the spirit of religion on the body of the building is blown. It looked as if the light of God is according to the spiritual spacewhereas in the light of contemporary architecture while using less space and more light on the side of the spiritual aspect of beauty and decorative light is given. Contemporary architecture pays less attention to the spiritual and metaphysical aspects of light, and more to physical beauty and brightness of the light.

## REFERENCES

- [1] Kalhor H. (2006). Lighting engineer. In an article on interior lighting, Architecture and Culture Magazine.
- [2] Pierrfon, M. (2005). At the bases to form the architecture of the place, (Trans: Simon Eivazian), Fifth Edition, Tehran, Tehran University Press.
- [3] Major, M., Espize, J., & Tisiharz, A. (1982). Art and architectural lighting (made of light) (Trans: Farshid Hosseini) Tehran: Architecture Publication.
- [4] Unwin, S. (1953). Architectural analysis (Trans: Armin Yegane). Tehran: Tamjid publication.
- [5] SltanZadh, H. (2009). Lighting and architectural lighting, Architecture and Culture Magazine, 35.
- [6] Flamky, M. M. (2004). No GrayshHay RyshhHa and architecture, Tehran, Faza publication.
- [7] Syd Sadqy, M. (2009). Search light, light verse, based on the interpretation of Molla, Mission magazine.
- [8] Grouter, J. (2004). Architectural aesthetics (Trans: Jahānšāh Pakzad, Shahid Beheshti University Publications.
- [9] Osara, Zh. (2009) Architecture combination of night and light and color, Architecture and Culture Magazine, 35.
- [10] Bolkhari Ghahi, H. (2011). Manifested in Islamic art, Christian art surveillance Buddhism, second edition, Soroush Andishe Publication.
- [11] Madadpur, M. (2011). Manifestations of spiritual wisdom in Islamic art, 3rd edition, Tehran: International publication.
- [12] Tabatabai, MH. (2009). Tafsir al-Mizan (Volume 15), translated by Mohammad Bagher Mousavi Hamedan, Tehran: TabatabaiScientific and Intellectual Foundation.
- [13] Mukri, A. (2004). Identity as the Example in Palestine Architecture. Archnet Discussion Forum.
- [14] Ghodousi, F. (2009). At the position of the light in the art of sculpting with light, Tehran, Architecture and c=Culture Magazine, No. 35.
- [15] Onz, B.(2000). Daylight in architecture, translated by Shahram Pour Deyhimi and Adl Houri Tabatabai, Tehran, Nokhostin publication.