

A STUDY ON THE CONCEPTS AND THEMES OF COLOR AND LIGHT IN THE EXQUISITE ISLAMIC ARCHITECTURE

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ABSTRACT

Today, diverse ideologies, thoughts, and beliefs exist in the world all of which try to transfer concepts and ideas to others using the indirect language of semantics. In this regard, architecture, especially the valuable architecture of Iran with wide application and permanent presence in human life has gained considerable attention. Iranian art has always been in coordination with the spirit of Islam and an indicator of its truth. Architecture is where meaning is represented in the formal, structural, and spatial aspects. Light and color are two important visual elements of formation and cognition of architectural works. Color does not manifest by itself unless it is seen through a design, when becomes the origin of work and intervenes in its sense of space.

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It should be considered that how the existence of light and color in the patterns has been effective in the environmental psychology and how the space is defined in terms of these two elements? And whether the sole use of light and color in the historical architecture was to represent meaning?

The present study adopts a descriptive-analytical approach to review and explain the semantic elements of light and color, their application and conceptual features in the historical architecture and hence examines these two distinct elements in the art and architecture of the past and tries to find their semantic features to the extent that have influenced the face and essence of modern architecture in the hope of providing useful insights for the modern architecture.

Keywords: Islamic architecture, light, color, concepts, exquisite architecture.

1. INTRODUCTION

Identifying the relationship between form and meaning proposes an enigma to the art and architecture. In the history of architecture, architects have been seeking for a lost element in the architectural design i.e. the implicit meaning beyond the body and surface of a work. However, different interpretations were presented for meaning and these interpretations have been always changing with respect to the underlying ground of thought and culture. Muslim artists see formal dimensions as a medium for spiritual journey to the world of truth and meaning. In this regard, Islamic mosques are a manifest of the visual beauties and a sensible example of combination of symbolic forms with deep religious beliefs. Like their source of inspiration, these meanings cannot be realized but through codes and metaphors, as in Quran and other sacred inscriptions the spiritual knowledge are expressed by the language of codes and metaphors [1].

Light and color are two interconnected elements which are always defined in relation with each other. From one hand, Iranian architecture reflects diverse coloring, especially in the residential buildings. The Iranian architecture around the world shows that the life of this nation has been adorned with art and beauty throughout the history. Love to beauty and edification had been the basic subject of Iranian traditional art in all times. As we can see that

artists illustrated natural beauty using diverse colors and designs in the tiles, stucco decoration, wood paintings, mirrors, inlay and metal fabrication.

Traditional Iranian art is at first level intertwined with life and its essence is the human experience. A look at the Iranian traditional art shows that Islamic Iranian arts mostly were practical and applied and were regarded as handicrafts. The existence of light and spirituality and the design of color boost the mystical soul of mosques beyond description, which is perfectly applied and recognized by past architects who combined these elements very skillfully. Color, light, and also water are considered as the aesthetical elements of Islamic architecture. Light is one of the distinct aspects of Iranian architecture which is regarded as the divine wisdom element, color which is observed in the refraction of light, and water which is a reflection of nature in Islamic architecture. Color is also thoroughly defined in Iranian Islamic architecture as created by the diversity of light. It has a nature of unification and oneness.

The first duty of architect is to preserve these values and not allow them to be destroyed in the Iranian architecture. The next step is to teach and apply these values in today's life to have an Islamic city.

2. Basics of light

Our surrounding life is composed of two elements of form (shape) and color. The effect of color in human's life is to the extent that imagining life without color is impossible. Color is a wonderful phenomenon and endowment of being and gives sense and passion to human life. Color gives perfection to form and gives it life. A physicist named Yong combined the colors and found it results in white. Yong understood that a combination of blue, red, and green makes white. The harmony in coloring refers to creation of a consistent and pleasant color combination of colors where the color differences are accurately used. In other words, harmony should have four characteristics: pleasant, consistent with the theme, united, and diverse. These are essential for creating an environment where a graphic designer can express her feelings and thoughts in line with the commercial goal but close to the concept of art, just like a poet or a writer.

Nasr wrote on the effect of color in "Iran, the turquoise bridge": "the art of color mixing and chemical aspects of it is similar to alchemy. Each color has a unique allegory as well as a

relationship with one of the inner sentiments of human and his spirit". Psychological studies on the effects of color and light on the human perception of space and time reflects the impact of color on the sense of weight (light and heavy), temperature (hot and cold), distance (far and near) and size (large and small). Even time scale has variety in spaces with different colors. The collection of these factors in two similar spaces with different colors has completely different effects on the human perception, regardless of the environmental factors and spatial features [2].

The reality and psychological effect of color is what we call "color effect". The richness of color and its effect are only adjustable in some cases of coordinated themes. In all other cases, the richness of color is turned into a new work.

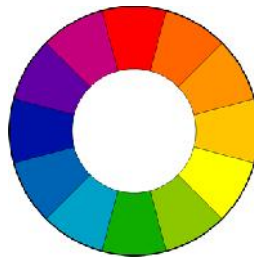


Fig.1. Itten's color wheel

3. Color effect

Some of the great personalities believe that white is a symbol of god or the absolute being. And black is the color of Ka'aba and the main symbol of metaphysical balance related to Ka'aba. In Islamic Iranian painting, three colors of blue, turquoise, and gold have special glow and effect more than other colors. These colors are also mentioned in Quran. For instance, yellow is the sign of peace and happiness or white was the favorite color of great prophet of Islam (PBUH). The manifest of color in the material forms and light is regarded as its capability in the mundane world and sometimes these manifestations are contradictory to each other; because the white in light refers to the existence of all colors, while black in the light refers to lack of color. Hence, colors with different nature have spiritual and material values in the Islamic culture and civilization.

Table 1. colors and their characteristics

	Color	characteristics
Main colors	Blue	It represents perfect peace; it is a sign of truth and trust, surrender, loyalty, eternity and symbol of lasting traditions and values.
	Green	It represents will at work, effort, stable thought, faith, and self-awareness. This comforting and calming color is associated with nature and is often used to help relive mental dilemmas.
	Red	It represents the life force and all forms of desire and passion. This color refers to achievement of desired results and success.
	Yellow	It represents a fleeting happiness, expansion, and easy mind. This color could have abnormal effects on mind in the long run and cause mental confusion and disorder unless it is combined with its complementary color i.e. purple.
Secondary colors	Purple	It combines the dominative nature of red and peaceful surrender of blue, and represents assimilation and indecision. This color increases mediation and inner reflection and works well along with its complementary colors (yellow spectrum colors).
	Brown	It indicates social security and the need to physical comfort and pleasure. Covering a wide area of environment with this color creates a heavy atmosphere and even may cause depression.
	Black	It represents emptiness, withdrawal of interests, hasty conduct, and unwise behavior. The best color to belittle the environment. This color has a thick and heavy energy and represents the environment static and negative.

4. Yellow

Contrary to the general belief, this color is extremely important in the educational environments and training places. Yellow is the brightest color and has a warming effect; when combined with gray, black and purple it losses all its characteristics.

Yellow color is a density of white and the color of joy and happiness, vitality and relaxation. The yellow color symbolizes the other life, surprise, and sunlight (the light of life and universe) and resembles the warmth of sun, rise of prophets, and the joy. Its emotional content is hope and freedom, contrary to the general belief that regard it as the color of hatred.

Imam Muhammd Baqir (AS) advised us to wear yellow shoes due to its extraordinary effects. Moreover, this color helps to good digestion like the music and makes digestion easier. It is the sign of power and glory, the symbol of wisdom and science and has a soothing power. It stimulates dementia and is very effective for treatment of liver diseases and indigestion. A

room with yellow furniture is good for researchers and students because it boosts their mental power. Yellow on a red background is noisy, cheerful, and luxurious and on the black background represents power, strength and ostentation.

In general, yellow is one of the bright colors. It symbolizes sun, eternity, and immortality. "In the tenth century in France, doors of criminals were identified with this color indicating betrayal. Yellow with dark shadows represents distrust and betrayal [5].

5. Green

Green represents freedom, liberty, and life. It evokes a sense of prosperity. Because of its soothing effect, green color has been introduced as the color of health and safety. Green is used for showing non-dangerous physical signs.

If yellow and blue are mixed, we will have green. Green is a middle and balanced color in the color spectrum; it nor has an exciting effect like yellow and not a passive static effect like blue. Green color indicates stability of mind and self-knowledge. it is the color of peace, country, trees, and grass. Bright green evokes spring and fertility. Green is the color of peace and thought, while blue only represents peacefulness. Skip to the green nature is under the influence of this wonderful color.

If yellow is regarded as a symbol of wisdom and knowledge, blue as a symbol of spirituality and faith, then green is a symbol of wisdom and faith, the color of excellence and perfection.

Green is the most beautiful color which is proposed ten times in Quran and there are some references to the green stuff, silk, and clothes of heaven people. Also, the green color has been repeated several times in Quran. Green transfers happiness, ease of mind, and joyfulness. It is the symbol of growth, life, and living. Psychologists consider it among the most soothing colors, which is the symbol of life, growth, and eternity. [6]. It is also the color of patience, tolerance, and sustainability. It invigorates and stimulates vision, and relaxes the eyes. Imam Kadhim (AS) said: three things increase your vision (in another quote three things push sorrow away from the heart): looking at the green grass, looking at the flowing water, and looking at a beautiful face [7]. Green is a moderate color which is made by mixing yellow and blue; it has neither the exciting effect of yellow nor the passive and cold mood of blue. This color represents stability of mind and self-knowledge [8]. Green is the symbol of faith,

perfection, and heaven. Because the elements of trust and faith are associated with this color, green is regarded as a sacred color for Muslims and people related it to the Prophet of Islam and his pure family (AS) [9].

The holy Quran states green at one point as the color of heaven (Mod'haa Matan in Al-Rahman Sura refers to two paradises which are ultimate green) and at two points as the color of clothes of heaven people and their throne.

(The Holy Quran, Kahf, 31): "they wear green clothes of thin and thick silk"

(The Holy Quran, Rahman, 76): "while they (heaven people) lean at green bolsters and scarce beautiful carpets.



Fig.2. the green dome of Al-Nabi Mosque, Medina, Saudi Arabia.

6. Blue

Najm al-Din Bemat¹ has a short notable writing about blue color in Islamic architecture: every blue color is not for this world, it induces a clam eternity, super human, beyond human. Kandinsky says: dark blue leads us to the infinite and raises a pure desire and hunger to supernatural in human. Blue by itself does not have a nature; it obtains its material manifest from whatever it covers. It is never-ending, where reality becomes a fantasy. Blue is the color of stillness and balance. There are many investigations about this color with respect to psychology, traditional rituals and religion. Blue is a clear and bright color, fresh and calm, sweet, quiet, surrendered, and primarily blue is a holy color and is sacred in the Islamic culture, because it is the color of sky where God, pure souls, and angles are. Due to the mental effects of blue that make us feel comfortable and relived, a constant contact with this color

¹ Bemat, Najm al-Din, 1990, Islamic city, trans. by Halimi, M.H, and Islambulchi, M.; Tehran: Ministry of Islamci culture

even in large scale does not create fatigue or other adverse effects, it can be used in the workplace [10]. Blue has a divine and heavenly implication and is regarded as a sign of holiness in west and the east. Hence, it is used in the decoration and design of mosques and holy places; because this color helps people to reflect upon divine kingdom. The Christians painted the dress of Mariam, the virtuous lady in blue i.e. the color of sky to show her eternity. In the Iranian thought, blue is the sign of cleanness and spirituality. In the architecture of Islamic mosques the colors blue and turquoise blue are used abundantly.

7. Turquoise blue

The traditional people believed in the holiness of turquoise blue. In their opinion, turquoise increases the eyesight and is the color of growth and eminence; cures infertility and sterility; brings dignity and health, and was effective on the dominance of light on darkness.

Turquoise blue is very ancient in Iran. Pre-Islamic Iranians also believed in its holiness; they used it on the tiles of dome and minarets.



Fig.3. turquoise doom of Goharshad mosque, Haram Razavi, Holy Mashhad, Iran.

8. White

In the analysis of white color, an intangible and unperceived innocence can be seen. White indicates indiscrimination, perfection, pureness, sunlight, air, illumination, innocence, and sacredness. Nowadays, white cloth is a sign of happiness and usually brides wear white clothes. Indian people wear white cloth in their mourning ceremonies symbolizing the escort

of dead to the heaven and perfection.

The selected color and first choice of Islam is white. Imam Baqir (AS) said: "no clothes is better than a white one" [7].

Islam is based on cleanliness, true nature, and pureness; it has emphasized wearing white clothes as the best color of dress. Most clothes of Prophet (Pbuh) were white and he said: dress your alive with the white, and shroud your dead with the white as well. White clothes is also advised in prayers and black is abhorred [12]. White is the symbol of faith and happiness, and black is the symbol of ignorance, paganism, and cruelty. Quran describes the happiness of the faithful with a white face and the misfortune of unfaithful with a black face. This is because of the certain attributes of these two colors. White denotes the satisfaction of the faithful, and black presents the passivity, shame, and embarrassment of the unfaithful [13].

- ✓ White color is the symbol of innocence and purification.
- ✓ White color creates a sense of wider space.
- ✓ White color usually represents coldness, cleanness, and calmness. A room painted in white might seem open and spacy but cold and empty. Hospitals and medical centers use white color to create a sense of cleanness.

9. Form and shapes as meaning creators

Discussion on the form and appearance of mosques and the necessity of continuing traditional architecture and combining it with the modern architecture has gained considerable attention among the scholars of this field. This subject can propose formal aesthetical factors and emphasize on beauty and the traditional architectural proportions from one hand; and propose higher levels of meaning, the readability of mosque in the urban texture and transmission of concepts such as divineness and sacredness on the other hand. When we talk about the form and appearance of mosques, we mean all formal dimensions and sides of a mosque; its physical body and building in the internal space of cities and towns which play an important role in injecting the spirituality and religiosity in the soulless material atmosphere of these societies. In Islamic era, different types of architecture of houses and mosques were similar to each other; for example, the specific veil used for the doors and windows of houses were also considered in the design of mosques.

The apex of beauty of Islamic art can be observed in the dome, portico, nave, and main apron of a mosque. The connectivity of these sites represents the art, culture, and lifestyle of humans. In Islamic culture dome is a lively manifest of Islamic globalism. Through symbolic meaning, the concepts of center, circle, and the hidden sphere become reality. On architectural signs and symbols of Islamic-Iranian art, Yaser Movahedfar the Islamic researcher says: "the symbols and signs used in the mosques which represent Islamic thought and ideology include niche, arches, domes, and minarets. Minaret is the center of dispersing light which is an essential element of Mehr cult in Iran; light is manifested in mosques as Shamseh (sun) which is known as Helal in Arab countries. The bow-arch architecture design in the mosques induces peace in the worship sites in a way that even a passer-by can receive this peacefulness.

The prophet of Islam (Pbuh) describes from his Ascent (Miraj) a very huge dome built from white shell and in its four corners was written the first verse of first Sura i.e. "In the name of God, the beneficent, the merciful", and four streams of water, milk, honey, and heavenly drink as the four divine and eternal rivers of happiness were pouring from them. It seems from this narration that shell can be regarded as the symbol of divine spirit that within itself (the dome) includes the pearl (creatures); in other words, the shell is the divine throne which includes all his creatures [15].

Also, the designs used in the past symbolize a specific subject. Shamseh (sun) is a symbol of divinity, light, and oneness. This design is the symbol of plurality in unity and unity in plurality. Plurality is the manifest of God's attributes represented by plural forms in this design emanated from a united center [15]. As its name suggest, this shape is associated with the concept of light, likewise God is called light in holy Quran. Hence, Shamseh is a symbol of God, the light of skies and the earth [16].

Islamic art is a symbol of belief, mystical intuition, and the tangible physical world, which in general represent the spiritual world. Since art is the sensible image of spiritual world, the tangible form in art represents the form of a spiritual meaning [17].

In Islamic art, symbols refer to beyond themselves and try to depict a reality beyond the earthly mundane world. Burckhardt points out that symbol is not an ambiguous issue or the result of a sentimental tendency but it is the symbol and language of the soul [18]. One of the

features of Islamic art is symbolism or using codes and allegory, which is a common feature among most religious arts. According to this feature, constraint to nature that is at the level of shadow does not exist and every symbol represents a reality beyond the mundane world [19]. Accordingly, Muslim artists express the concept of plurality in unity and unity in plurality using this representation. In the Islamic architecture, especially in the appearance of mosques, designs have a wide application because other type of images such as incarnation and sculpture and image of live creatures were banned in line with the fight against paganism [20].

Use of scripts and calligraphy in the architectural ornament is done in the form of inscription and tiles painted and designed with verses of Quran. Often the inscriptions reflect the verses of holy Quran and in the eyes of Muslims Quran is the origin of all beauty, happiness, and salvation of humanity. It is the word of God; hence the reflection of God's words and their permanent display for the humans has been very important [21]. While the inscriptions reflect Islamic orders, they are regarded "as important historical information and documents. Since they represent the most documented information of a building they are significant and preferred to historical quotes". [22].

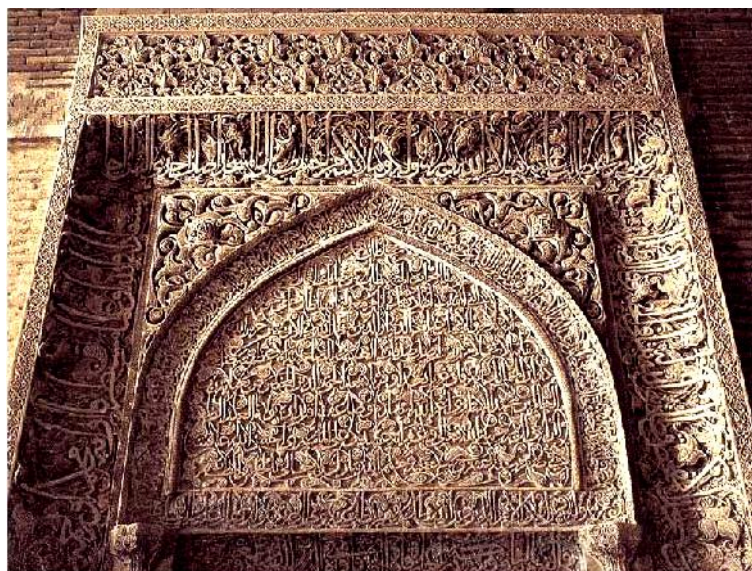


Fig.4. al-Jayto niche with unique cornice from the Seljuk's era: Jameh Mosque of Isfahan

10. Painted tile

Painted tile was created following the evolution of arabesque art and was widely used in the decoration of mosques and holy places. Many documents especially rich literary sources indicate that familiarity with other disciplines and skills is necessary for artists especially architects, such as astronomy and knowledge of colors; because many astronomical issues and the seven days of week were interpreted by seven colors. One of the most ancient and best sources which thoroughly discussed the application of architectural materials and their colors especially application of colorful stones into Islamic buildings is Ibn-Rasta's book "al-A'laq al-Nafisah from the third century AH. The representation of color in the material form and light is both in spiritual and mundane worlds, which its representation sometimes contradict each other; since the whiteness of light is the existence of all colors.

The value and credit of Iranian architecture depends to a large degree on its ornaments. Tile work is one of the most important features of architecture and many believe that Iran is the first country who used tiles first as a decorative and then as a fortifying element in the buildings. Before the prevalence of tile work in architecture, dating back to almost the onset of Seljuk's era, brickwork and stucco were regarded as two important elements in decoration. The method of brickwork in Iranian architecture led to development of tiling.

Since the beginning of Islamic era to fourth century AH, stucco, painting, and stonework were applied in most religious and non-religious buildings. It seems that using brick decorations up to before the year 300 AH. was very common. In the Ghaznavid era, brickwork is particularly significant and artists and architects of this period decorated many buildings with bricks. With the start of fifth century AH, the brickwork techniques started from the east of Iran became common almost in every part of Iran, north in particular, and the religious and non-religious buildings were decorated as such.



Fig.5. the tower of Masoud Ghaznavi in Ghaznin, 508 H

Since Seljuk's era, artists were familiar with the skills of glazed bricks. Moreover, a part of historical documents indicate that in the early Islamic period buildings were decorated with some type of tile. Iranian architects in the early Islamic period have innovative works of bricks with uniform glaze; they preferred turquoise blue to all other colors and combined turquoise tiles with bricks. They applied turquoise tiles amid the bricks similar to setting the jewel of a ring; they framed colorful tiles in the geometric shapes and different sizes between the bricks or applied them with decorative bricks in the form of Kufic inscriptions.



Fig.6. Jameh Mosque of Isfahan, Seljuk period

In the short period of Khwarezmid dynasty, the brickwork and uniform tile work were continued following the past patterns. The portal of buildings designed by Quran verses

written in Kufic calligraphy and turquoise color was regarded the most beautiful type of decoration with uniform tiles. "Mongols" attacks disrupted artistic activities for a period of time, but since the mid-seventh century AH, when the religion of Islam was accepted by Ilkhanid rulers, the activities gradually started again by the construction of religious and non-religious buildings and brickwork and tile work decorations. Thereafter, using other colors such as yellow, indigo, brown, black, and white became common. Tile work decorations which were used only in the exterior design of buildings until Ilkhanid period were applied for covering the interior design as well. At late Ilkhanid period and start of Timurid dynasty, tile work with a history of three centuries evolved into its most beautiful form i.e. faience mosaic (Mo'araq tiles). The art of faience mosaic or flowering tiles gradually adorned the whole Iranian architecture, especially religious buildings. The importance of faience mosaic compared to other types of tile is in its extraordinary beauty and strength; as a result, it remained on the buildings even after many years are passed. The artists of Timurid era developed faience mosaic in the eastern Iran and many religious places of this part are adorned with faience mosaic, particularly Herat, Samarkand, Bukhara, and other Timorese capital cities. In faience mosaic work, diverse colors are used dominated by white, dark blue, turquoise blue, green, and orange. Since the late Timurid and early Safavid period, another type of tiles known as "kheshti" or "painted color" became common in decoration of buildings. At this time, painted tiles gradually replaced faience mosaic. The evolution and domination of painted tiles can be attributed to political and economic reasons. Regarding the importance of architecture and increasing construction of religious and non-religious sites in Safavid era, architectures attempted to use painted tiles for adorning various buildings.



Fig.7. painted tile with Arabesque traceries- Imam Jameh Mosque, Isfahan.

11. Aesthetics in architecture

According to holy Quran, we can find the unique status of beauty, and the comprehensive definition provided for the beauty. The first step for examining the concept of beauty and aesthetics in Quran is familiarity with related terms and words used in Quran. These words can be divided into four categories: [23]

- Beauty, goodness, and grace that are three key words related to beauty.
- Helieh, Behjat, Zukhruf, and Tasvil which are at the second order of application
- The words which can be interpreted according to some aspects of beauty such as hobak and Tabaraj (adornment)
- Words that indicate some features and elements of beauty such as light, color, and magnitude.

Aesthetical goals are among teachings of Islam and its effect can be clearly observed in traditional cities. One of the psychological needs of human is the need to aesthetics. Since aesthetics is an internal quality and an inside mood of human soul, satisfying it can be a prelude to spirituality and worship of god. By satisfying the need of human to beauty, mosques can become more attractive and effective on the religious growth of human. Aesthetics is an answer given by the individual to the beautiful subjects. In other words, aesthetics is a study of individual's response and sensitivity to beauty, not the study of artistic functions. To achieve this, artistic tools such as painting and calligraphy can be useful. Plato

describes beauty as a harmony between the parts with the whole [24]. Herbert Read sees beauty as the unity of formal relations in our sensory perceptions. Allameh Jafari says beauty is a collection in which every part represents its perfection without the interference of other components [25].

12. The effect of light

Almost in every religion the light is the symbol of divine wisdom and the element of all good. And, the movement from darkness toward light is regarded as a main objective [26]. According to various verses of Quran, if we accept that light has always been considered a representation of god and his presence, use of it in the artistic fields which are derived from religious thoughts would not be unexpected. As Shabestary says in his *Golshan Raz*:

Behold the world as the light of truth

Where truth is so manifest that seems hidden

Thinking the holy status of "light" in the ideas of Islamic thinkers such as Sheikh Ishraq, Avicenna, Farabi, and Mulla Sadra is not hidden for any one. On the other hand, cultivated orientalist such as Henry Corbin, Rene Guenon, Titus Burckhardt and Mohammad Nasr who have spent their life on finding the truth hidden in the heart of Islamic Iranian culture have spoken many times in their articles and studies of the status of "light" and "luminous man" in the Islamic thought.

Islamic thought is present in light and its manifestation. The deep concept of this element in Islamic thought especially in Sheikh Ishraq, Ibn Arabic, and Mulla Sadra confirms that the flow of existence is reflected as light and everywhere there is a light, there is a sign of the presence of the absolute existence.

Another point is that philosophers of Islam and Islam scholars believe that the philosophers of world of icons are from the light i.e. in their elevation the sage, the mystic, and the artist are purified from the material and enter the realm of light. Hence, the principle and foundation of abstraction in the Islamic world needs more reflection.

On the other hand, light is associated in architecture and miniature with a divine aspect. That's why the light is not only a determinant of the identity of an art work, but also make an art work the owner of divine attribute and a representation of the absolute existence. The effect of light and color in Islamic architecture is undeniable and has a great importance. The role of

light in Islamic architecture emphasizes on the principle of emanation. The role of light is making the material transparent and reduces its difficulty and frigidty. In the tangible world, color is the irreplaceable companion of light. Light as a symbol of being is applied in the space of mosque as one of the elements of perceptual space.

In fact, light has given life and mobility to Islamic ornamentations. Rather than occupying the mind, light and decorations of mosques direct human to an imaginary world and break the mental formats with the light of a world where truth is manifest. Hussein Nasr in his book "Iran: the turquoise bridge" writes on the effect of color: "colors in art have a chemical aspect and combining them is an art like alchemy. Each color has its own allegorical feature, as well as a relationship with one of the inner sentiments of human and soul. The similarity of the concept within this verse "Allah is the light of skies and the earth" in Islamic culture is a halo of light which comes in the form of flames around the face of God's selected leaders. Light is also illustrated in the geometric Iranian art. It is manifested in the form of "Shamseh" as the light of sun. In one painting of Shahnameh in which Buzarjmehr and the Indian ambassador are playing chess, a sun painted above the king's head represents the divine charisma of the king. This expression of Shamseh claims that light is gradually moving away from the objective image and tends to abstraction. The ceiling of Sheikh Lotfollah Mosque in Isfahan also represents an abstract expression of light in Islamic art. Shamseh recalls the pure crystalline material system and inanimate world with a mathematical order. Among the geometric symbols, the star-like shapes are associated with the sky, and the concentric circles under star nodes reminds the circle of stars in the sky, and the identical radius of Shamseh is akin to the beams which shine at the starry sky.

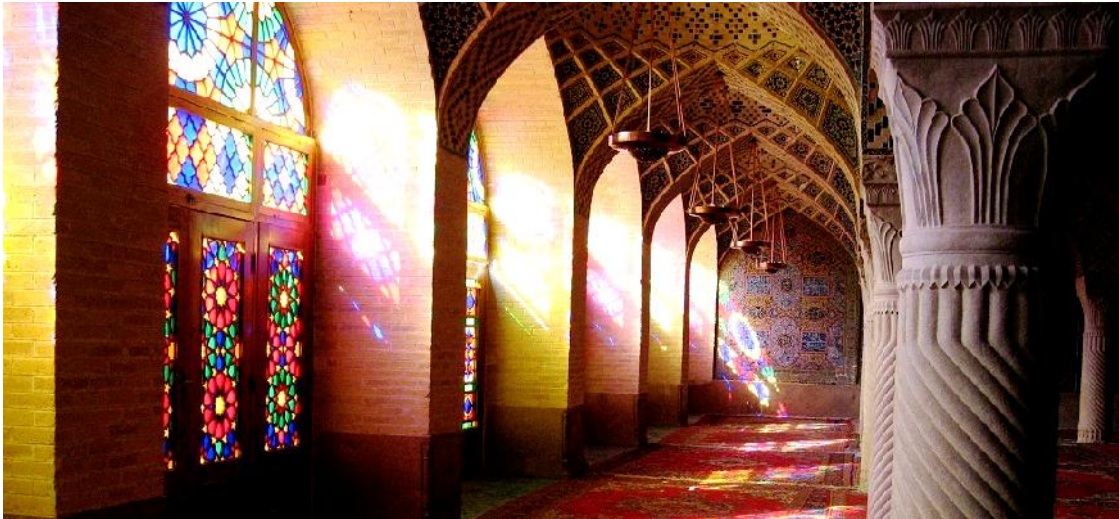


Fig.8. Nasir al-Molk Mosque¹ in Shiraz, the work of two genius innovative masters of architecture, Mohammad Hasan Me'mar, and Mohammadreza Kashipaz Shirazi

13. CONCLUSION

The relationship between symbol and color is an issue which originates from the principles of Islamic art. The effect of light and color in Islamic architecture is undeniable and bears a significant meaning. It is one of the important features in creating the spiritual space of mosques and holy places. Light and color are two interconnected elements affecting the spatial value as the most immaterial tangible element of nature in Islamic architecture. In fact, they represent the holy world and spiritual space. All colors represent a specific existence, the features of every color are in coordination with the essence of an existence; colors give personality and make them distinct from each other.

If the nature of this architecture is based on the existence of sacred affair and spiritual art, its reflection will be peace, mental and physical comfort of the users of these places. However, if architecture is distanced from these high levels and empty from any kind of meaning, identity, and without deep roots extended in the fertile land of culture, religion, and tradition of Iran, it would result in the soulless colorless buildings which grow like mushrooms in the cities.

14. REFERENCES

¹ Unlike Sheikh Lotfollah Mosque in Isfahan where blue and cream colors are dominant, this mosque is known as pink mosque; because pink is used extensively in the interior tiles of mosque. However, the high color diversity makes it unfair to call it pink. Colorful glasses in the structure of mosque have given a splendid grandeur to the building. On the other hand, the unique architecture of it doubles its beauty.

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- [1].Ahmadi B, Truth and Beauty, Lessons of philosophy of arts, Tehran: Markaz, 2001.
- [2].Mohammadi K, Shakiba-Manesh A, Basics of colors in architecture and urban planning. Tehran: Tahan, 2015.
- [3].Seyed Sadr A, Architecture, color, and man. Tehran: Asar-e Andisheh, 2001.
- [4].Paknejad R, The first university and the last prophet, The cultural foundation of Shahid Dr.Paknejad, Yazd, 2004, Vol. 3 & 5.
- [5].Itten J, The book of color, Trans.by HosseinHalimi M, Tehran: Islamic culture and reform, 1997.
- [6].Nassaji Zavareh E, Green: the color of belonging and peace, lessons from Islamic thought, 2011, No.8, p 48.
- [7].Majlesi M B, Behar al-Anvar, Beyrut: Alvafa, 3rd ed 1403 H.
- [8].Luther M, The psychology of colors. Trans.by Vida Ebizadeh. Dorsa, 19th ed, 2004.
- [9].Abutalebi E, The symbolic meaning of colors, Center of Islamic studies of broadcasting organization, 1993.
- [10].Ahmadian L, Investigating the element of color and its display in the Shahnameh, Master's thesis, 2002.
- [11].Sepehri S, The blue room, 3rd ed. Tehran: Soroush, 1997.
- [12].Majlesi M B, Heliat al-Motaqin, corrected by Morteza Janatian. The center of research: Isfahan, 1999.
- [13].Tabatabaiee S M H, Tafsir al-Mizan, Daral-kotob al-Islamiyeh, Qom, 5th ed. 8th ed, 2005.
- [14].Akhshik S S, Investigating the place and effect of the symphony of color and light in the post-modern architecture of libraries. Shamseh Magazine, Electronic journals of Library, Museum, and Documents Center of Astan Qods Razavi, Mashhad, 2010, No. 3.
- [15].Maghbali A, Rahmati S, Symbolism in religious art and its effect on the architecture of mosques in Seljuk era, the proceedings of the first international congress of new horizons in architecture and urban planning. Tarbiat-Modares University, Tehran, 2014.

- [16].Balkhari Ghahi M, The logic of art and beauty, Tehran: the center of Islamic culture publications, 2005.
- [17].Dehqan M, Essays of Khaledeh thought companions. Tehran: The center of humanities research and development, 2007.
- [18].Sattari J, Encryption and the sacred art, Tehran: Markaz, 1997.
- [19].Madadpour M, the spiritual wisdom and the realm of art. Tehran: Education department publications, Monadi-Tarbiat Institute, 2001, 386 pages..
- [20].Shekari Niz J, explaining the architectural and physical features and the sacred art of mosques in Islamic period, proceedings of the conference on "Mosque architecture: past, present, and future". University of art: Tehran, 1999.
- [21].Makinejad M, Thuluth calligraphy in architecture. Negareh Magazine, 2009, No. 13, p30.
- [22].Behpour B, Epigraphs in Qajar period, Journal of Fine arts, 2005, , vol. 22, No. 22, p 84.
- [23].Kharqani S, The aesthetical concepts in Quran, Journal of Islamic studies, 2008, No. 80, 14-20.
- [24].Motahari M, The philosophy of ethics, Tehran: Sadra, 2007.
- [25].Jafari M, Beauty and art from the viewpoint of Islam, Tehran: Center of Islamic culture publication, 1982.
- [26].Philips D, Day-lighting natural light in architecture. Elsevier publication, London, 2004.

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