

RESEARCH ARTICLE

The Divine Light, Al-Nūr, as an Aesthetic Concept in Islam

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ABSTRACT

This study aims to elucidate different concepts and theories about *al-Nūr*, the Divine Light, and its implementations in art and architecture. The study relies on the concept of *al-Nūr* as an Islamic aesthetic value; it is one of the Holy Names of God and has different explanations in Islamic sources. The meanings and interpretations of *al-Nūr* in Qur'an, Hadith, and Islamic philosophy were considered. The Verse of Light in the Quran (24:35) has a particular significance in this research; and has had a profound and continuous influence on artists and architects throughout Islamic history.

Keywords: Divine light, oil lamp, architectural opening openings, light, aesthetic values, Islamic architecture

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CONCEPTS OF AESTHETICS IN ISLAM

In the main two sources of Islamic doctrine, the Qur'an and the Hadith, many terms are used to state the concepts of beauty and aesthetics. One major term is *ḥusn*, which means “beauty” in Arabic. From this term comes one of the major fundamental Islamic beliefs—the belief of the oneness of God through His beautiful names and attributes also referred to in Arabic as *Asmā' a Allah al-Ḥusnā*. Muslims should believe in all the attributes of God and search for their reflections in themselves and in the world around them. Here, the focus is on one of these attributes, *al-Nūr*, which means “The Light,” referring to the Divine Light.

Al-Nūr has a multi-dimensional meaning and effect on human life, both physically and spiritually. It is also closely related to art. The Verse of Light (*Ayat al-Nūr*) in the Holy Qur'an relays one of the most symbolic and metaphorical images that have influenced the imagination of Muslim artists (Figure 1).



Figure 1: The word *al-Nūr* in Arabic calligraphy by calligrapher, Rami al-Shadfan.

AL-NŪR “THE LIGHT”: THEORIES, MEANINGS, AND CONCEPTS

Al-Nūr is a noun derived from the Arabic letters *Nūn* (ن), *Wāw* (و), and *Rā' a* (ر). The three letters together refer to the features of lighting, vibrations, and unsteadiness, which are some characteristics of *al-Nūr* “Light” and *al-Nār* “fire” as well.¹ In Islam, the concept of

1 “The Word *al-Nūr* in Qur'an [in Arabic],” *Islamweb*, April 9, 2012, <https://www.islamweb.net/ar/article/179087/%D9%84%D9%81%D8%B8-%D8%A7%D9%84%D9%86%D9%88%D8%B1-%D9%81%D9%8A-%D8%A7%D9%84%D9%82%D8%B1%D8%A2%D9%86-%D8%A7%D9%84%D9%83%D8%B1%D9%8A%D9%85>.

al-Nūr has attracted scholars and researchers regarding its outer appearance and inner meanings. This follows the methodology of interpreting the text of the Qur'an according to a prophetic hadith mentioned in *Tafsīr al-Jalālayn*: "Every verse (in the Qur'an) has an outer aspect and an inner aspect."²

The word *al-Nūr* occurs in the Holy Qur'an 43 times as a single noun with different meanings, whereas the overall words related to light occur 71 times.³ Analyzing the 43 times that *Al-Nūr* is mentioned in the Qur'an, it is observed that five of these occurrences refer to physical light, such as the daylight, moonlight, and the illumination that is opposite to darkness. In another six times, *al-Nūr* is referred to as the light that God gives to the faithful on Judgment Day, specifically the light of the believers (*al-mu'menūn*) and the martyrs (*al-shohad'a*). In six instances, *al-Nūr* denotes the Divine Light. The rest have a potential of different meanings, including faith (*iman*), the religion of Islam, guidance (*hudā* and *hedāya*), the Prophet Mohammed (PBUH), knowledge, and the clarity of perception.

The Verse of Light (Āyat Al-Nūr)

In the Qur'an, the concept of *al-Nūr* is directly addressed as the Verse of Light (*āyat Al-Nūr*). It is the verse 24 in chapter 35, which is titled as *al-Nūr* "the Light." (Figure 2).

اللَّهُ نُورُ السَّمَوَاتِ وَالْأَرْضِ مِثْلُ نُورِهِ كَمِشْكُوتٍ فِيهَا مِصْبَاحٌ الْمِصْبَاحُ فِي زُجَاجَةٍ الزُّجَاجَةُ
كَأَنَّهَا كَوْكَبٌ دُرِّيُّ يُوقَدُ مِنْ شَجَرَةٍ مُبَارَكَةٍ زَيْتُونَةٍ لَا شَرْقِيَّةٍ وَلَا غَرْبِيَّةٍ يَكَادُ زَيْتُهَا يُضِيءُ
وَلَوْ لَمْ تَمْسَسْهُ نَارٌ نُّورٌ عَلَى نُورٍ يَهْدِي اللَّهُ لِنُورِهِ مَنْ يَشَاءُ وَيَضْرِبُ اللَّهُ الْأَمْثَلَ لِلنَّاسِ
وَاللَّهُ بِكُلِّ شَيْءٍ عَلِيمٌ

Allah is the Light of the heavens and the earth. The Parable of His Light is as if there were a Niche and within it a Lamp: the Lamp enclosed in Glass: the glass as it were a brilliant star: Lit from a blessed Tree, an Olive, neither of the east nor of the west, whose oil is well-nigh luminous, though fire scarce touched it: Light upon Light! Allah doth guide whom He will to His Light: Allah doth set forth Parables for men: and Allah doth know all things.

2 Nicholas Stone, *Symbol of Divine Light: The Lamp in Islamic Culture and Other Traditions* (USA: World Wisdom Books, 2018), 5.

3 William A. Graham, "Light in the Qur'an and Early Islamic Exegesis," in *God is the Light of the Heavens and the Earth: Light in Islamic Art and Culture*, ed. Sheila Blair and Jonathan Bloom (New Haven: Yale University Press, 2015), 45.



Figure 2: Beginning of Āyat al-Nūr from an 11th or 12th century Qur'an from Iraq or Persia (Stone, 2018).

In this verse, it is the one and only occurrence where the word *al-Nūr* is used to denote Divinity.⁴ The Verse of Light is one of the verses which has allegorical meanings (*āyāt mutashābihāt*).⁵ The Qur'an employs allegories to speak to man through the language of symbolism.

The Verse of Light has different interpretations by many Qur'anic commentators from the first century of Islam up until the present day. In general, it has two main interpretations: one by Sufis and the other by non-Sufi commentators. Sufi exegetes are concerned more with the microcosmic "inner" level of meaning by interpreting the language as symbolic and metaphorical. However, most non-Sufi commentators insist that the verse has to be interpreted in a sense that God is incomparable and can therefore not be equated with light, which is created.⁶

One of the earliest Qur'an commentaries is the one of al-Ṭabari⁷, *Gāmi' al-Bayān*, from the 10th century, in which traditional Muslim exegeses are presented. For the interpretation of the Verse of Light, he states as cited in English translation by Bowering:

God, the Light of the Heavens and the Earth, is understood in three ways; as the guide of the inhabitants of Heaven and Earth, the ruler of the world who adorns the universe with light by day and by night, and the one who illuminates the hearts of the believers. The likeness of His light, depending on the crucial interpretation of the suffix "hu" in *nurihi* is also explained in three ways as the light of divine guidance, the heart of the believer which enshrines the light of faith and the Qur'an, or the light of Muhammed. The niche is explained literally as a windowless recess in the wall of a house, a candlestick, or a wick, and symbolically, as the chest of the believer holding the lamp of faith and the Qur'an in the glass of his heart, or as the body of Mohammed enclosing the lamp of faith. The glittering star is traditionally explained by Ibn 'Abbas

4 Stone, *Symbol of Divine Light*, 3.

5 In the Holy Qur'an, the verses are either with clear dogmatic meanings (*āyāt muḥkamāt*) or with allegorical meanings (*āyāt mutashābihāt*): "He it is who has bestowed upon thee from on high this divine writ, containing messages that are clear in and by themselves—and these are the essence of the divine writ—as well as others that are allegorical" (3:7).

6 Stone, *Symbol of Divine Light*, 50.

7 *Mohammed bin Jarīr al-Ṭabari*, 839–923 CE (224–310 AH), an Iranian scholar, historian and commentator on the Qur'an.

as one of the five brilliant planets or by Muqatil as either Venus or Jupiter, whereas al-Ṭabari leaves open the possibility of interpreting the adjective “glittering” as either *durriyun*, without Hamza, sparkling like a pearl or as *dirri’un/durri’un*, with Hamza, repelling evil like a shooting star that is launched against the devil.⁸

The blessed tree is explained as bathed in sunlight all day with the sun neither rising nor setting on it and as raised high on a hill, with neither a mountain casting a shadow on it nor a valley reflecting its shade. The tree is not of this world, yet it stands at the very center of the universe (in Syria), neither a fraction to the east nor a fraction to the west, encircling all the trees of the world. The tree resembles the believer who worships God with pure intention, without ascribing partners to God, is grateful for the divine blessings, steadfast in trials, just in actions, and truthful in words. The oil of the olive tree, with its sap shining along the bark, is likened to Mohammed’s prophethood that was transparent to the eyes of others even before he publicly proclaimed it, just like olive oil appears as a translucent, brilliant substance before being touched by fire. The phrase “light upon light” is explained either as Mohammed following Abraham, his prophetic forbearer; the light of Qur’anic revelation given by God to humanity; or the light of divinely infused religion shared by all human beings since creation.⁹

Al-Ghazālī (1058–1111 AD) in his *Mishkāṭ al-Anwār*, in which he comments on the Verse of Light and had adapted the title of the book directly from the verse, describes various levels of light with hierarchical relationships between different manifestations of the light. He explains the symbolism of the elements mentioned in the verse in association with the five faculties of the human soul: the niche related to the sensory spirit, the lamp with the imaginative spirit, the glass with the intellectual spirit, the tree with the discursive spirit, and finally the oil with the transcendental prophetic spirit.¹⁰

Mishkāṭ (Niche)

The word *mishkāṭ* is an Ethiopic loanword translated as “niche in a wall” or “window.” Mujāhid and Ibn Qutayba¹¹ maintain the Ethiopic origin of the word.¹² The niche for al-Ghazālī is related to the sensory spirit of the human soul.¹³ Saḥīf ‘Alī Shāh Ni‘matullāhī¹⁴ equates the *mishkāṭ* with the body; he uses the word *mishkāṭ* as it means in Persian, that is, perforated brass or copper lamps. He compares the holes in the *mishkāṭ* through which light passes with the five physical senses.¹⁵

8 Gerhard Böwering, “The Light Verse: Qur’anic Text and Sūfī Interpretation,” *Oriens* 36 (2001), 130–131.

9 Böwering, “The Light Verse,” 130–131.

10 Stone, *Symbol of Divine Light*, 35.

11 Mujāhid was a Muslim scholar from the 8th century (d. 104/722), and Ibn Qutayba was a Muslim scholar of Persian origin from the 9th century (d. 276/889).

12 Böwering, “The Light Verse,” 118–119.

13 David Buchman, *Al-Ghazali: The Niche of Lights*, (Utah: Brigham Young University Press, 1998), 39.

14 Saḥīf ‘Alī Shāh Ni‘matullāhī was born in Isfahan in 1251/1835 and died in Tehran in 1316/1898. He lived in India and left behind a monumental mystical exegesis of the Qur’an in verse.

15 Stone, *Symbol of Divine Light*, 52–55.

Misbah (Lamp)

The word *misbah* is derived from the Arabic word *ṣubḥ*, which means the morning. Thus *misbah* means an instrument that gives light.¹⁶ Referring to the Verse of Light when *misbah* as an instrument is placed in the niche, it generates more light than it would in an open space. According to al-Ghazālī, the *misbah* is connected to the rational spirit through which the perception of divine knowledge takes place.¹⁷

Zujajah (Glass)

The word *zujāj* which means glass, and it is used only once in the Qur'an in the Verse of Light. Otherwise, the word *qawārīr* is used. The transparency of glass makes some scholars such as Maḥmūd Bina-Motlagh¹⁸ refer to it as the subtle manifestation corresponding to the human soul.¹⁹ Al-Ghazālī relates the glass to the imaginative spirit; the glass protects the light from being extinguished by violent winds and rough movements, and this is what imagination does as the one that can organize rational knowledge.²⁰

Kawkab Durrīy (Glittering Star)

Kawkab in Arabic means a planet or a star; commentators translate *kawkabun durrīyun* as a glittering star. The analogy of the *misbah* with the glittering star suggests its context to be at night as stars glow in the darkness. According to Böwering's summary of the verse, "The simile of *ayāt an-nūr* replicates a nighttime experience, one in which the desert traveller is surrounded by the stars and guided by the light of the heavens and the earth."²¹

Shajarah Mubārakah (Blessed Tree)

Shajarah mubārakah means the blessed tree. Here, it refers to the olive tree as mentioned in the verse (Figure 3). In the three monotheist religions—Christianity, Judaism, and Islam—the olive tree has a sacred significance. In Jewish and Christian literature, the olive tree is related to the tree of life, the tree of paradise, the tree from which Jesus' cross was made, and the tree that stands in the center of the world. This tree is located in Jerusalem according to Christianity and Judaism.²² In the Qur'an, the olive tree is related to Sinai as in "Also a tree springing out of Mount Sinai, which produces oil and relish for those who use it for food." (23:19–20).²³ It also relates to the holy land of Palestine as in Surat al-Tin,

16 Ahmen Mokhtar Omar, *The Dictionary of the Modern Arabic Language* (Cairo: The World of Books, 2008), 1263.

17 Buchman, *Al-Ghazali: The Niche of Lights*, 40.

18 Maḥmūd Bina-Motlagh is a Professor Emeritus of Mathematics and Philosophy of Science at Isfahan University of Technology, Iran.

19 Stone, *Symbol of Divine Light*, 60.

20 Buchman, *Al-Ghazali*, 39–40.

21 Böwering, "The Light Verse," 129.

22 Böwering, "The Light Verse," 121–122.

23 «وَشَجَرَةً تَخْرُجُ مِنْ طُورِ سَيْنَاءَ تَنْبُتُ بِالذَّهْنِ وَصَبْغٍ لِلْكَالِينَ».

the Chapter of the Fig, “*By the Fig and the Olive*” (95:1)²⁴; referring to *al-Ṭabari* exegesis, the oath in the beginning of the verse, which invokes the fig and the olive, refers either to the holy places where these plants grow or to the mountains in Syria and Jerusalem, respectively.²⁵



Figure 3: Image for an olive tree in the Holy Land (PC: Thaher Amr).

For al-Ghazālī, the fourth spirit, which is the reflective spirit, is most the appropriate similitude to the tree. One of the characteristics of the tree is that it starts with a single root and then splits into two branches. From each branch, other branches grow and so on until the branches of rational divisions are created. Finally, the tree reaches its final conclusion by producing fruits.²⁶

Zayt (Oil)

Olive oil is the key product of the fruit of the olive tree. The olive tree in Christianity and Judaism is a tree of heavenly rather than terrestrial origin, whose oil is a source of both life and light (Figure 4). This can be corroborated by the phrase used in the Verse of Light: “*Whose oil is well-nigh luminous, though fire scarce touched it.*”²⁷ In al-Ghazālī’s *Mishkāt al-Anwār*, the fifth spirit is the holy prophetic spirit, which is ascribed to the friends of God as the utmost degree of purity and nobility.²⁸

«وَالَّتَيْنِ وَالزَّيْتُونَ» 24

25 Al-Ṭabari, *Jami’ al-Bayan ‘an Ta’weel Aye al-Qur’an* “*Al-Ṭabari Exegesis*,” (Riyadh: Al-Turath Center, 2013), 240–241.

26 Buchman, *Al-Ghazali*, 40.

27 Böwering, “The Light Verse,” 121.

28 Buchman, *Al-Ghazali*, 41.



Figure 4: Depiction of the Menorah with olive trees on the right and left sides, from Jewish Cervera Bible, Joseph Asarfati, 1299 (Stone 2018, 42).

AL-NŪR “THE LIGHT”, SPIRITUALITY AND SYMBOLISM

In his book, “*Sufi Expressions of the Mystic Quest*,” Laleh Bakhtiar clarifies that:

It is through symbols that one is awakened; it is through symbols that one is transformed; and it is through symbols that one expresses. Symbols are realities contained within the nature of things. The entire journey to God is a journey in symbols, in which one is constantly aware of the higher reality within things.²⁹

Cosmological Symbolism of the Light by Ibn al-ʿArabī

Muḥyiddin Ibn al-ʿArabī (1165–1240), known as *al-Shaikh al-Akbar* or “The Greatest Master,” is one of the most eminent Sufi scholars. He considered light in his interpretation of cosmology and referred to the symbolism of light in his discourse about astrology with metaphysical principles. Ibn al-ʿArabī affirms that the sun is the heart of the world, and it communicates light to all the other stars, including the fixed stars; and that it is illuminated by the direct and continuous radiation of a Divine Revelation.³⁰

Moreover, Ibn al-ʿArabī envisaged the relationship between the movement of the sun and the moon. There is a simple interaction between the solar rhythms and those of the moon, which traverses the Zodiac in 28 days; and it is assigned 28 stations spread in an

29 Laleh Bakhtiar, *Sufi Expressions of the Mystic Quest*, (London: Thames & Hudson, 1976), 25.

30 As to the fixed stars, although now it is known that they represent sources of light independent of the sun; however, Ibn al-ʿArabī’s theory is still viable once one accepts that the fixed stars are autonomous lights in the sensible order. The comparison here is in a symbolic sense. The sun represents the center of radiation of the Divine Light for a determined world, while the fixed stars symbolize the interferences of the light of a superior world. See: Titus Burckhardt, *Mystical Astrology According to Ibn Arabi* (Louisville, KY: Fons Vitae, 2001), 27.

unequal but rhythmic mode over the 12 paths of the Zodiac (Figure 5). In Sufi esotericism, these 28 mansions of the moon correspond to the 28 letters or sound of the sacred Arabic language.³¹

Abū Bakr Sirāj al-Dīn (1909–2005) stated that light is a manifestation of divine knowledge; and thus, the soul of the mystic is symbolized by the moon that reflects the light of the sun. The ray of light that passes between them is the symbol of intellect, and the light symbolizes the spiritual intuitions of the mystic.³²

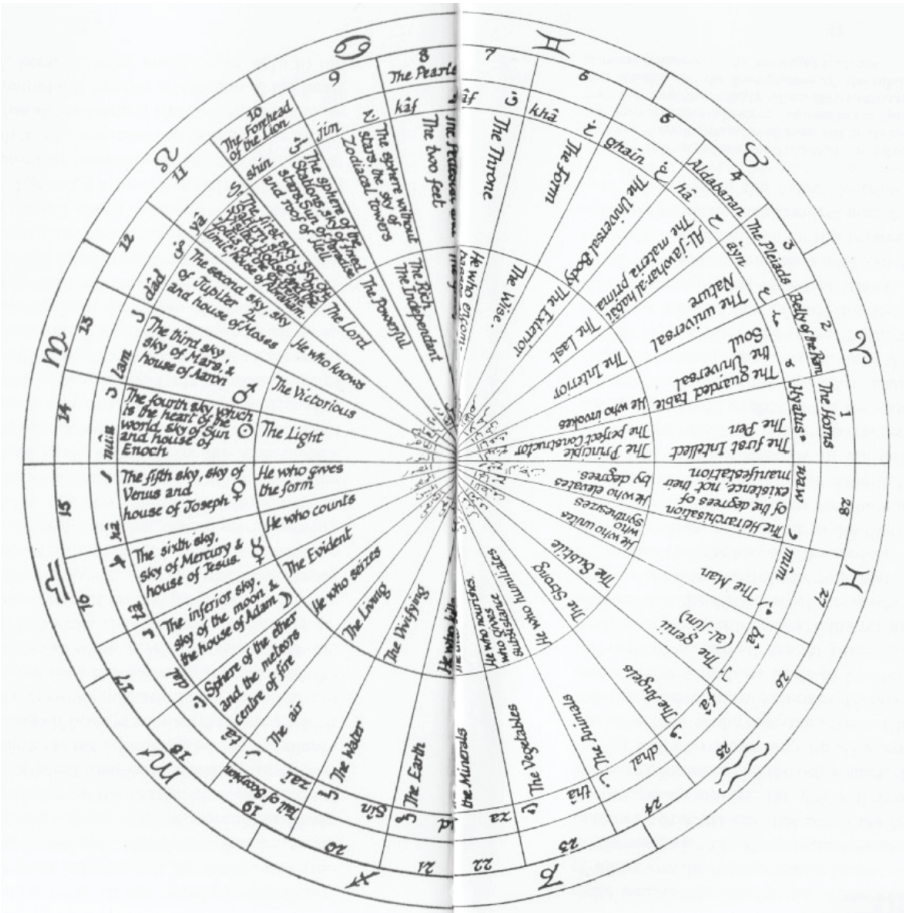


Figure 5: Chart of Creation by Ibn al-ʿArabī (Burckhardt, 2001, 32–33).

31 Burckhardt, *Mystical Astrology*, 35.

32 Bakhtiar, *Sufi Expressions*, 59.

In the chart of creation by Ibn al-ʿArabī, the sound of *Nōn* and the name of God *al-Nūr* are related to the 14th position of the moon, the fourth sky which is the sky of the sun, the heart of the world, and the house of Enoch.

Spiritual Meanings of the Light in Islamic Texts

In Islam, the references to light is associated with the metaphoric spiritual path. These meanings were clear in the verses mentioned in the Qur’an. It was also clear in the praise by Prophet Mohammed (PBUH) for Tamīm al-Dārī when he lit up the Medina Mosque with oil lamps for the first time. He said, “You have illuminated Islam, may Allah enlighten your path in this life and hereafter.”³³ Muslims, according to prophetic traditions, are requested to recite a prayer while walking to the mosque to accomplish the five daily prayers; the prayer is all about asking illumination from God.³⁴

The same meaning of illumination is repeated in other sayings of Prophet Mohammed (PBUH). The virtue of reading *Surat al-Kahaf* (Chapter of the Cave) every Friday is clarified in the prophetic hadith of how it shines the days of the reader from one week to the other: “Whoever reads *Surat al-Kahaf* (Chapter of the Cave) on the day of Juma’ah (Friday) will have a light that will shine from him from one Friday to the next”³⁵ (Figure 6).



Figure 6: Miniature of the Seven Sleepers “Ahl al-Kahaf” in the cave at Ephesus, by Agha Reza, ca. 1590 (Dĥwty 2014).

33 “Sura An Noor , verse 36 [Tafsir Al-Qortobi],” accessed November 14, 2020, <https://quran.ksu.edu.sa/tafseer/qortobi/sura24-aya36.html#qortobi>.

34 «اللَّهُمَّ اجْعَلْ لِي فِي قَلْبِي نُورًا وَفِي لِسَانِي نُورًا وَفِي سَمْعِي نُورًا وَفِي بَصَرِي نُورًا وَمِنْ قُوَّتِي نُورًا وَمِنْ تَحْتِي نُورًا وَعَنْ يَمِينِي نُورًا وَعَنْ شِمَالِي نُورًا وَمِنْ بَيْنَ يَدَيَّ نُورًا وَمِنْ خَلْفِي نُورًا وَاجْعَلْ فِي نَفْسِي نُورًا وَأَعْظِمْ لِي نُورًا»
See Sahih Muslim, *The Book of Prayer – Travellers*, accessed January 30, 2021, <https://sunnah.com/muslim:763j>.

35 Narrated by al-Haakim, 2/399 and al-Bayhaqi, 3/249. “Virtue of Reading Surat Al-Kahf on Friday,” *Islamweb*, accessed February 14, 2012, <https://www.islamweb.net/en/fatwa/27666/virtue-of-reading-surat-al-kahf-on-friday>.

In addition to the prophetic hadith and common Islamic traditions, the concept of light is present in poems and prose writings. This spiritual dialogue between the contrast of darkness and light is strongly present in Jalal al-Dīn al-Rūmī's poem, "Things Are Revealed by Their Opposites."³⁶ In his book, *Travelling the Path of Love: Sayings of Sufi Masters*, Vaughan-Lee collected Sufi quotes of different scholars in a chapter titled "Light upon Light." Light with its qualities is always present in mystic thoughts.³⁷

Symbolism of Light for Sacred Persons in Islamic Paintings

In Islamic art, artists use symbols to manifest the essence of God, since the imagery of God is prohibited in Islam. In Eastern paintings such as Persian miniatures, symbols represent mystical thoughts and concepts. The light in these paintings, which symbolizes the sacredness of saints and prophets, has a significant presence through the drawing of fire. Indeed, the artists were visually aware of the different types of fire and light, although they were not fully informed of the mystical meaning of such distinction, as Ramezanmahi and Ghehi claimed in their research about the iconography of *Miraj Nameh* (Figure 7).³⁸



Figure 7: The visit of the Prophet of Islam and the Prophet Adam, form *Miraj Nameh*.

The examples of a bright halo as a presentation for sacred people in Islamic miniatures have no limitations, such as the manuscript from *Siyer-i Nebi* (1595 AD) showing Prophet Mohammed (PBUH) in the mosque (Figure 8), and the miniature from *Khamisa of Nizami* depicting the Mi'raj with the Prophet (PBUH) surrounded with an aura of light (1539–43 AD; Figure 9).

36 Jalaluddin Rumi, *Things Are Revealed By Their Opposites*, accessed January 30, 2021, <https://www.dar-al-masnavi.org/n.a-I-1121.html>.

37 Llewellyn Vaughan-Lee, *Travelling the Path of Love: Sayings of Sufi Masters* (California: The Golden Sufi Center, 1995), 116–118.

38 Somayeh Ramezanmahi and Hasan Bolkhari Ghehi, "The Manifestation of Fire and Light in the Icons of Mir-Heidar's *Miraj Nameh*," *International Journal of Arts* (2012), 16–25.

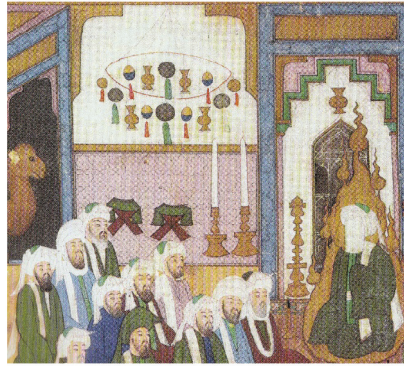


Figure 8: Manuscript from Siyer-i Nebi (1595 AD) showing Prophet Mohammed (PBUH) in the mosque with lamp and hanging ornaments (Stone, 2018, 107).



Figure 9: Miniature from Khamisa of Nizami depicting the Mi'raj with the Prophet (PBUH) surrounded by an aura of light (1539–43) (Wikiwand 2021).

THE CONCEPT OF LIGHT IN SCIENCE AND PHYSICS

Scientifically, light as an object for a quest has undergone a long history. It was always the sparkle which attracted physicians, astronomers, and mathematicians. In the ninth century, al-Kindi (801–873 AD), whose works linked the Athens Academy with Baghdad's House of Wisdom, continued where the Greeks stopped, asking whether light came from the eye as Empedocles theorized, from the object as Epicurus believed, or from both according to Plato.³⁹ Eventually, scientists confirmed that light is purely physical in nature. It reaches

39 Bruce Watson, *Light: A Radiant History from Creation to the Quantum Age* (New York: Bloomsbury USA, 2016), 42.

the retina of the eye, where it is converted into neural activity and passed along to the brain. The visual impressions are not limited to sensory experiences produced by the nervous system, but also involve the cognitive background of the observer, which gives meaning to the visual experience.⁴⁰

Alhacen ibn al-Haytham

Although the first Arabic compositions about optics was by al-Kindi, the most significant studies on light was produced two centuries later by Ḥassan Ibn al-Haytham (965–1040 AD). He is known in the Western world as Alhacen and is one of the most prominent names in the science of light and its philosophy. He is also regarded as the greatest physicist of the Middle Ages, especially for his outstanding work, *Kitāb al-Manāẓir* or “The Book of Optics,” in which he describes refractions of light in calculating the distance from the earth to the stars (Figure 10).⁴¹ Ibn al-Haytham says, “What light is belongs to the natural sciences, whereas *how* it behaves (belongs) to the mathematical sciences.”⁴² Ibn al-Haytham examined light in seven comprehensive volumes more thoroughly than anyone before Newton.⁴³

As Watson cited in his book, the light for Ibn al-Haytham formed infinite numbers of pyramids, and the vision occurred when the eye met the pyramid of light. He made the first anatomical diagram that illustrated the process of human vision and the relation between the eye and the brain (Figure 11). He noted that all vision was refracted through the eye’s crystalline humor and interpreted by the brain. The master of optical invention for Ibn al-Haytham was the camera obscura, although the Chinese were the first who noticed that the hole in a wall streams outdoor light onto indoor surfaces and flips over the image. Ibn al-Haytham, however, was the first who made the fully operative light box called the “Dark Room.” The room of a small box had a pinhole and, using five lit candles on the far side, all five flames were projected inverted in perfect proportion. He continued his experiments and calculations to find out that light did not mingle, nor did its rays cross. The “Least Light,” which diminished only when an object blacked it out, was where Newton began his search centuries later.

40 Robert L. Solso, *Cognition and the Visual Arts* (Massachusetts: The MIT Press, 1994), 3.

41 Markus Hattstein, “Science in Islam,” in *Islam: Art and Architecture*, ed. Peter Delius and Markus Hattstein (Potsdam, Cambridge: H.F. Ullmann, 2015), 56.

42 Elaheh Kheirandish (2015), 66.

43 Watson, *Light*, 45.



Figure 10: Diagram by Ibn al-Haytham shows that humans see because light rays reflect off objects creating images inside the eye (Tasci 2020).

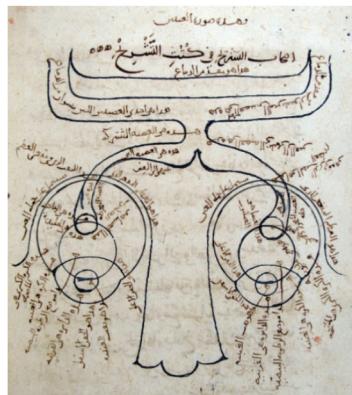


Figure 11: Diagram of the visual system Ibn al-Haytham published in 1083. The oldest known drawing of the nervous system shows a large nose at the bottom, eyes on both sides, and a hollow optic nerve that flows out of each one toward the back of the brain (Namopanik 2021).

According to Gonzalez, Ibn al-Haytham's theory of vision combined the scientific realm with aesthetic considerations; he recognized beauty and ugliness as objective and visible facts, which he called perceptual meanings (*al-ma'āni al-mubšara*). In his book, as Gonzalez cited, Ibn al-Haytham listed these meanings in 22 notions, including light, color, form, volume, and so on.⁴⁴ For Ibn al-Haytham, light is the source of sight, perception, and beauty. As Watson cited from Smith's *Alhacen Theory of Visual Perception*, "for light creates beauty, which is why the sun, moon, and stars will appear beautiful."⁴⁵

44 Valerie Gonzalez, *Beauty and Islam: Aesthetics in Islamic Art and Architecture* (London: I.B. Tauris & Co Ltd, 2021), 20.

45 Watson, *Light*, 46.

IMPLEMENTATIONS FOR AL-NŪR IN ART AND ARCHITECTURE

Al-Nūr in Arabic Calligraphy

Calligraphy is considered as the most noble of Islamic arts because it gives visible form to the revealed word of the Qur'an. It is also the art most widely shared by all Muslims as anyone who can write is in a position to appreciate the merits of a good calligrapher. It can be said without fear of exaggeration that nothing has typified the aesthetic sense of the Muslim people as much as the Arabic script.⁴⁶

The secrets in the geometries of the Arabic letter was the main focus for Moustafa and Sperl in their study, *The Cosmic Script, Sacred Geometry, and the Science of Arabic Penmanship*. They explored "spiritual geometry" and how it governs the structure of individual letter shapes, starting with a quote by Euclid: "The script is spiritual geometry, though made perceptible by a physical instrument."⁴⁷ In their study, Moustafa and Sperl analyzed the description of each letter and how it was drawn by master scribes such as Ibn Muqla, Būysunghur, and aṭ-Ṭayyibī. The research here highlights their study and analysis for the letter *Nūn*, the first letter of the word *Nūr*, and it is the sound letter for the mansion of the moon connected to the beautiful name of God, *al-Nūr*, in Ibn al-ʿArabī's chart of creation.

Nūn is composed of a semicircle endowed with a special feature described as tooth (*sinna*), ration (*nisba*), or law (*sunna*) predetermined in mind. It is defined as the small segment needed to extend one extremity of a semicircle with the diameter of the letter *alif* until the latter can be framed on four sides by the Cardinal Golden Rectangle, and it measures one-eighth of *alif*. The sample *Nūn* by Būysunghur, shown in Figure 12, illustrates remarkable precision to the proportional geometrically developed core by the researchers.⁴⁸

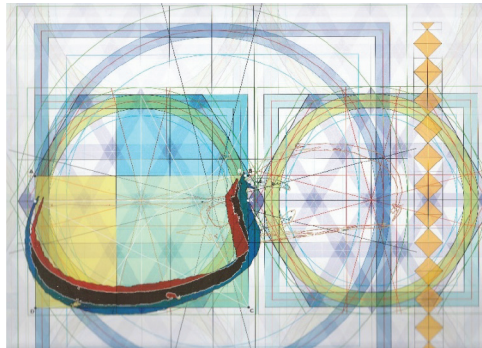


Figure 12: Diagram shows the *Nūn* of Būysunghur (red) with the *Nūn* of aṭ-Ṭayyibī in the 'Mother Circle' core (Ahmed Moustafa, Stefan Sperl 2014, 493).

46 Titus Burckhardt, *Art of Islam Language and Meaning* (Indiana: World Wisdom, 2009), 52.

47 Ahmed Moustafa and Stefan Sperl, *The Cosmic Script, Sacred Geometry, and the Science of Arabic Penmanship, Volume 2* (London: Thames and Hudson, 2014), 287.

48 Moustafa and Sperl, *The Cosmic Script*, 486–493.

The Verse of Light, as a major influence on the artists and architects, witnesses many uses in Islamic artifacts and products. By default, the verse is written in the revived manuscripts of the Qur'an since early Islamic history (see examples: Figures 13 and 14).



Figure 13: *Ayat al-Nūr* from a 10th–12th century Quran manuscript. Brown University Library. (Stone, 2018, 56) (left).



Figure 14: *Ayat al-Nūr* and subsequent verses from a Quranic manuscript made in Bust in the year 1111. (Stone, 2018, 51) (right).

The calligraphy of the Verse of Light is still present in the architectural elements of some mosques and religious buildings. An example is the *miḥrab* (the niche in the mosque wall oriented towards Makkah) brought from Isfahan to the Cleveland museum, the original building of this *miḥrab* is still unknown (Figure 15).⁴⁹

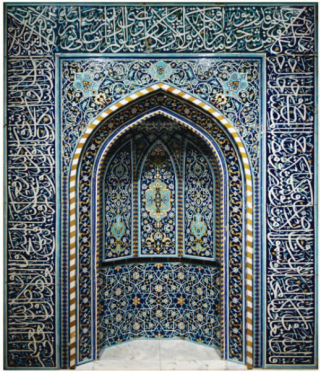


Figure 15: Miḥrab with epigraphic inscription of *Ayat al-Nūr* with shining glazed tiles. Isfahan, Iran, early 7th century. (Art, 2021).

49 “Prayer Niche (Miḥrab),” *The Cleveland Museum of Art*, accessed January 11, 2021, <https://www.clevelandart.org/art/1962.23>.

Another incredible example is the calligraphy of the Verse of Light on the interior side of the dome of Hagia Sophia in Istanbul. Hagia Sophia was erected in the 6th century AD as a church. The present dome, constructed in 562 AD, is the first large dome of the agricultural revolution age. The calligraphy in the center of the dome was executed by Hattat Kazasker Mustafa Izzet Efendi during the Fossati intervention between 1847 and 1849 AD (Figure 16).⁵⁰



Figure 16: The detail of the calligraphy of Ayat al-Nūr at the apex of the dome of Hagia Sophia, executed in gold and colored mosaic (HSRT 2021).

Use of *Al-Nūr* in Architecture

Light is one of the main components of architectural design; it has a mandatory functional role of lighting, either through access of daylight or by adding artificial light fixtures. It also has an aesthetic function for adhering to architectural elements; and functions as a tool for applying certain conceptual thoughts and converting architecture and architectural spaces to human architecture. Skilled uses of light, including intensity, contrast, and movement characteristics, can make the space a dynamic human environment full of life, creating full interactivity between the space and the user.⁵¹ Consequently, the orientation of the mosque is important from aesthetic and functional aspects. In addition to facing Mecca, openings that show sunset and sunrise are important to remind people of prayer times by daylight.⁵²

50 Revza Ozil, "The Conservation of the Dome Mosaics of Hagia Sophia," *Light on Top of the Black Hill: Studies Presented to Halet Cambel* (1998), 546.

51 Hayam Mahdy Salama, "Light as a Central Component in the Aesthetics of Islamic Architecture and its Impact on the Creation of Contemporary Design Formulations," *International Design Journal* 9, no. 1 (2019): 227.

52 Honey Arjmandi et al., "Psychological and Spiritual Effects of Light and Color from Iranian Traditional Houses on Dwellers," *Journal of Social Sciences and Humanities* 6, no. 2 (2011): 298.

Robert Hillenbrand proposed six physical categories for the use of light in Islamic architecture. The first category is direct light through architectural elements such as oculi, windows, skylights, arcades, and other openings. The second is the employment of different elements to reflect light, such as water, mirrors, glass mosaics, and luster tiles. The third category includes certain materials which have the capacity to absorb and radiate light, such as ivory, rock crystal, gold, white marble, and precious or semi-precious stones. The fourth is the use of lighting devices. The fifth is the manipulation of light and shadow to create forms. The sixth and final category is the use of external reliefs for decoration in varied forms, which are enlivened by direct sunlight.⁵³

Light in Qibla Walls and Mihrabs

The first category of using the direct light is presented in the treatment of the *qibla* wall and the dome chambers in most mosques. The qibla wall is the wall facing the direction to Mecca towards which Muslims should orient during their prayers. It is created such that it is more lit and brighter than the other walls. An example is the qibla wall of Ismihan Sultan Mosque in Istanbul, where the two tiers of three windows flood light into the area surrounding the mihrab (Figure 17).⁵⁴



Figure 17: The qibla wall of Ismihan Sultan Mosque. Photo by John Eaton 2017 (Eaton 2021).

53 Robert Hillenbrand, "The Use of Light in Islamic Architecture," in *God is the Light of the Heavens and the Earth: Light in Islamic Art and Culture*, ed. Sheila Blair and Jonathan Bloom (New Haven: Yale University Press, 2015), 89.

54 Islamic architecture contains a variety of fabulous examples of mihrabs with different treatments. Due to the size of research, only these examples have been studied.

Another treatment of the qibla wall related to light is by including a presentation of the Verse of Light in the mihrabs. An example is the mihrab of Adina Mosque in Pandua, Bengal, from the 14th century. The interior of the mihrab niche has four rows with 28 rectangular panels in relief, with lamps suspended from chains within each panel (Figure 18).⁵⁵



Figure 18: Rows with lamp reliefs in the mihrab of Adina Mosque in Pandua, Bengal. Photo by Rana Safvi on Twitter.

Light through Domes and Ceilings

Another treatment for direct light is the use of skylights, openings, and *muqarnas* (an Islamic architectural invention for ornamented vaulting). They mimic the stars and the plunging comets. Alhambra in Granada witnesses one of the fabulous sovereignty of light in Islamic architecture. The ceiling of the Sala de los Abencerrajes in Alhambra Palace, with the use of stalactites and muqarnas, transforms the surface into perforated reliefs to filter, trap, and diffuse the light (Figure 19).⁵⁶

⁵⁵ Naseem A. Banerji, *The Architecture of the Adina Mosque in Pandua, India: Medieval Tradition and Innovation* (New York: Edwin Mellen Press, 2002), 11–70.

⁵⁶ Burckhardt, *Art of Islam Language*, 84.

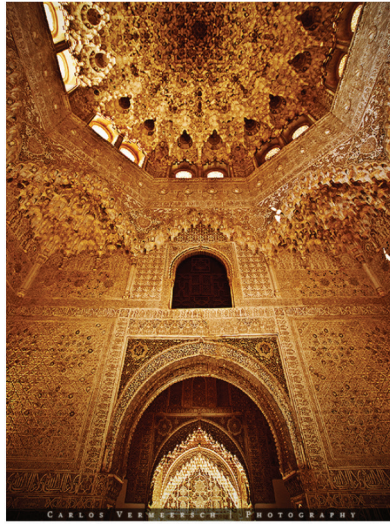


Figure 19: Stalactites in the ceiling of the Sala de los Abencerrajes in Alhambra Palace, photo by (Solrac1993, 2021).

Another fabulous example which combines architectural treatment with the calligraphy of the Verse of Light is the dome of Hagia Sophia. Sunlight, which floats all around the building and shines upon the gilded mosaics, enters mostly from the 40 windows encircling the base of the dome. Its apex is 56 m and runs around the dome (Figure 20).⁵⁷

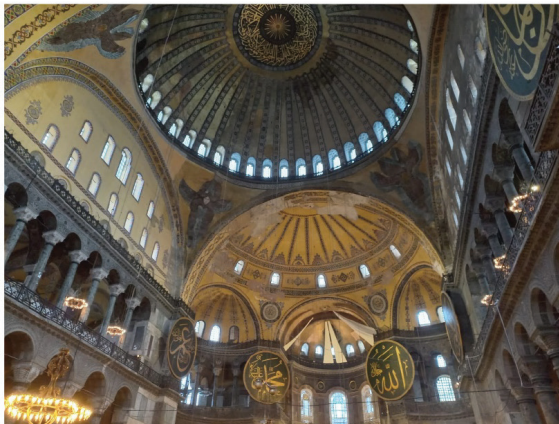


Figure 20: The interior of the dome of Hagia Sophia- Hanan Amr, 2022.

⁵⁷ Hattstein and Delius, *Islam*, 554.

According to Hayam Salama, Muslims call some openings *qamariya*, referring to *qamar* (the moon) and *shamsiya* referring to *shams* (the sun). Qamariya are rounded holes used in ceilings to illuminate internal spaces while having privacy such as in the baths and restrooms (Figure 21). Shamsiya is an architectural opening in walls, made of marble, stone, or plaster with vegetation and written motifs; some can be covered with stained glass (Figure 22).⁵⁸



Figure 21: Qamariya on the ceiling of Çemberlitas Bath. Istanbul. (Wisaal, 2012).



Figure 22: Bright light from shamsiya opening in the mosque of Ibn Tulun in Cairo, Egypt (Salama, 2019, 237).

The Arabic names of these openings affirm the relation that is always present between the human and universe in Islamic thoughts.

⁵⁸ Salama, "Light as a Central Component, 237.

Light through Windows and Wall Openings

Openings in the walls as windows are the most common architectural elements to introduce light into the building. In Islamic architecture, especially the mosques, these openings have been elaborated by adding some layers on them or by being treated differently. The use of porous walls in Sheikh-lotf Allah mosque in Isfahan is a stellar example. The openings are covered with perforated floral motifs, the light streams through these screened windows, and their shadows play a fabulous composition on the monochromatic ground (Figures 23 and 24).⁵⁹



Figure 23: Image of light streaming through the porous wall in Sheikh Lotf Allah Mosque, Isfahan. Photo by Rumnita Mazumder.

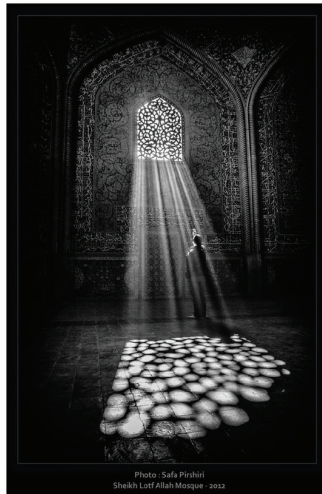


Figure 24: Image by Safa Pirshiri showing the dialogue between light and shadow in the mosque of Sheikh Lotf Allah, Isfahan, Iran.

⁵⁹ Hattstein and Delius, *Islam*, 510–511.

Another significant mosque where light dialogues with the shadow is the mosque of Ibn Tulun in Cairo (Figure 25). The windows in the mosque are not meant to bring sufficient light. They have another role of being the mediator between the sun and the interior of the mosque. According to Swelim, in the morning when the sun moves, it shines onto the piers, arches, and the floor of the arcade (*riwaq*). Its rays illuminate the outlines of the windows and their different geometric designs. As the sun rises further, it shines alternately on the piers and the floor between the piers. This lighting effect decorates the whole *riwaq* and is described as a “carpet of light.” Consequently, this light indirectly is reflected upward to illuminate the interior of the mosque.⁶⁰



Figure 25: The sun shines through the screened window in the Mosque of Ibn Tulun (Swelim 2015, 121).

Direct Light through Reflective Materials

According to Hillenbrand, the second category of using the light in Islamic architecture is the use of different elements and materials to reflect light such as water, mirrors, glass mosaics, and luster tiles. Different reflective materials were used in the walls and floors of the buildings to capture the light and reflect it. It gives the space a dynamic quality by creating textures of light and shadow.⁶¹

60 Tarek Swelim, *Ibn Tulun: His Lost City and Great Mosque* (Cairo: The American University in Cairo Press, 2015), 119–121.

61 Hillenbrand, “The Use of Light, 99–100.

Reflective Glass

Glass is a reflective material that has been used in Islamic architecture. Persians developed glass in their architecture in Orsi windows where colored glass is used to decorate the interior and exterior. Orsi windows are a mix of wooden Garih tiles with colorful pieces of glass. The use of glass in Islamic Iranian architecture refers to the light allegory, which has been inherited from ancient Iranian traditions, such as Zoroastrianism, Manichaeism, and Mithraism, to illuminate their doctrines.⁶²

A good example is the Mosque of Nasir al-Mulk in the city of Shiraz, which was built from 1876 to 1888 AD by the order of Mirzā Hasan Ali (Nasir al-Mulk; Figures 26 and 27). In this mosque, people can feel and experience the effect of light and observe dynamic images appear and change continuously, depending on the weather and the position of the light.⁶³

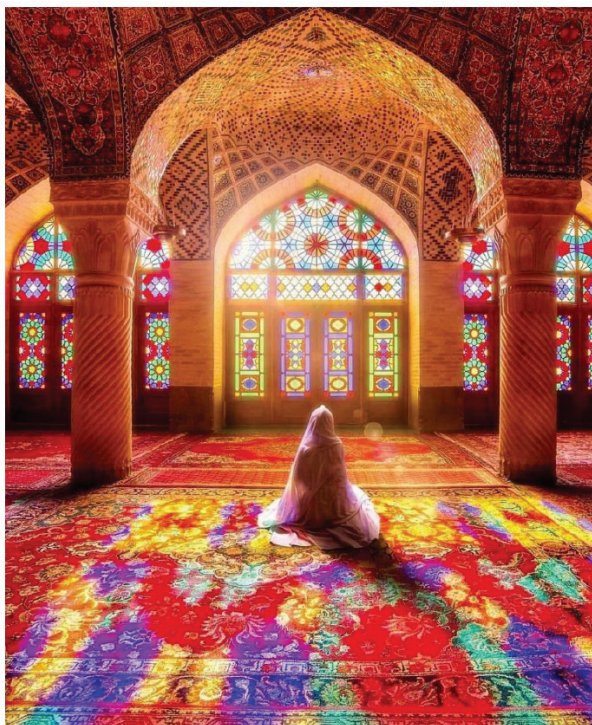


Figure 26: Light through Orsi windows in the Nasir al-Mulk Mosque. Photo by Amazing-iran.com.

62 Parinaz Faghihi, Fernando Quintas, and Teresa Almedia, "Architectural Glass in the 18th to 20th Centuries in Iran," *5th GLASSAC International Conference* (Lisbon: NOVA FCT, 2017), 43–45.

63 Faghihi, Quintas, and Almedia, "Architectural Glass."

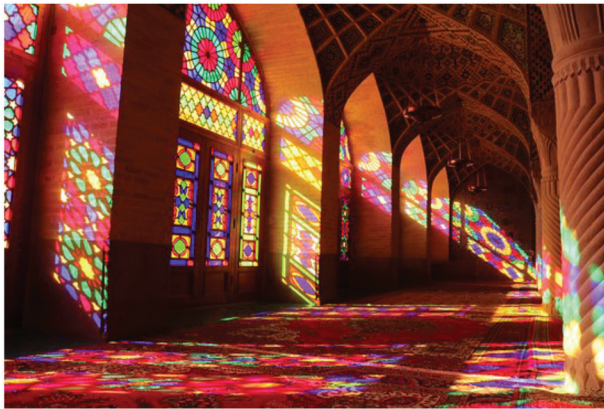


Figure 27: Light effects through Orsi windows. Photo by (Rasaeipoor 2021).

Manifestation of Water in Architecture

Water is also used as a natural reflective material and has some conceptual and metaphoric aspects in addition to the aesthetic appearance. The use of water in large flat expanses makes it function as a mirror, which is sited near the monuments so that it reflects as much of the architectural mass as possible. The Court of the Myrtles at the Alhambra is a significant example for the reflective pool for the buildings and the sunlight (Figure 28).⁶⁴



Figure 28: The North Facade of Court of the Myrtles at the Alhambra. Photo by Richard F. Ebert.

The reflective dialogue between water and glass is manifested in the Qur'anic story of Solomon and the queen of Sheba, Bilqis. In the final episode of the story, Prophet Solomon

⁶⁴ Hillenbrand, "The Use of Light," 94.

invited the queen to enter his palace where he put her throne, the floor of which was made of glass or crystal. She lifted up her skirts thinking it was water; however, Solomon corrects her mistake, declaring that the palace is made of glass (Figure 29).⁶⁵



Figure 29: Image from lacquered panel depicting Bilqis, lifting her dress to cross the crystal floor of Solomon Palace, mistaking it for a pool of water, Iran, 15th century (Stone 2018).

Reflective Materials as Marble, Mosaic, and Luster Tiles

The use of reflective materials in Islamic architecture was also influenced by other cultures, sub-cultures, and traditions. Iconic Islamic monuments are distinguished by their selected materials in addition to their design. The shimmering surfaces of white marble in the Taj Mahal in Agra, especially under the sunlight, is a part of its prominence and distinction (Figure 30).



Figure 30: The white marble of Taj Mahal reflected in the water mirror. Photo by Joe Bindloss.

⁶⁵ Gonzalez, *Beauty and Islam*, 26.

Another type of reflective material is the glass mosaic. Mosaic tiles have much more sparkle when the sun strikes its surface as it comprises many small pieces fitted together, and the smallest deviation from a plane surface creates refracted light.⁶⁶ The Dome of the Rock, completed in 691/692 AD in Jerusalem in the Umayyad era of the Caliph Abd al-Malik, is the first monumental Islamic building to witness the beauty of reflective mosaic associated with the mother of pearl. Floral motifs and Quranic inscriptions adorn the interior façade of the shrine (Figure 31).⁶⁷



Figure 31: Detail of the interior mosaics in the Dome of the Rock showing hanging crowns, jewelry, and inscriptions. © Said Nuseibeh.

USE OF *AL-NŪR* IN THE MOSQUE LAMPS

The use of lamps and light devices is the fourth category of the six physical ones proposed by Robert Hillenbrand for the use of light in Islamic architecture for functional, aesthetic, or conceptual purposes.

History of Mosque Lamps

Historically, lighting the mosques with oiled lamps began with the early mosque in the time of Prophet Mohammed (PBUH). Tamīm al-Dūrī, an Arab-Christian monk from Palestine who converted to Islam and became a companion of the Prophet, had advised the Prophet to build a minbar in the Mosque of al-Medina and to use oil-lamps to illuminate it (Figure 32). He adopted this from Christian Palestinian and Syrian practice.⁶⁸

⁶⁶ Hillenbrand, “The Use of Light,” 99.

⁶⁷ Moya Carey, *An Illustrated History of Islamic Architecture* (Leicestershire: Anness Publishing, 2012), 38.

⁶⁸ Böwering, “The Light Verse,” 117–118.



Figure 32: Manuscript from Siyer-i Nebi 1595 AD showing Prophet Mohammed (PBUH) in the mosque with lamp and hanging ornaments (Stone, 2018, 107).

Thus, the oil lamps were first introduced to mosques as an influence from the religio-cultures of Christianity and Judaism. The oil lamp in Jewish Scriptures most often symbolizes God lighting the way for the chosen people (Figure 33). The best known symbol of Judaism is the Jewish Menorah, the seven-branched candelabrum.⁶⁹

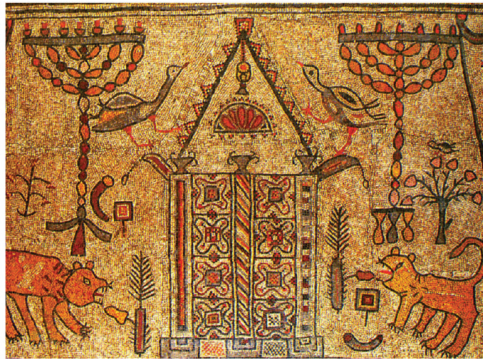


Figure 33: Mosaic floor of 6th century Beth Alpha synagogue, depicting Torah shrine with hanging lamp suspended from its gabled roof (Stone 2018, 32).

The lamp also has an important place in Christianity. In the Orthodox Church, the oil lamp should be lit when the church is consecrated, and the light should never go out (Figure 34). In the Catholic Church, the oil lamp should stay burning on the altar, and this

⁶⁹ Stone, *Symbol of Divine Light*, 31–33.

refers to the commandment in the Book of Exodus, where a lamp filled with the purest olive oil should always burn in the tabernacle. The lamp symbolizes the presence of God.⁷⁰



Figure 34: Manuscript of The Abingdon Apocalypse from late 13th century showing an altar with two candlesticks and a lamp above (Stone 2018, 33).

Mosque Lamps, Function, and Symbolism

In addition to the lighting function, the mosque lamp in Islamic art has a conceptual and metaphoric interpretation for the Verse of Light (*Āyat al-Nūr*). In the verse, the concept of God is equated to a light shining in a glass lamp hung in a niche, which has been associated with the miḥrab image since the 12th century (Figure 35).⁷¹

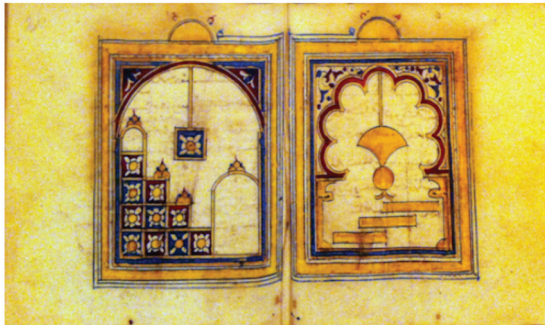


Figure 35: A painting from the prayer book of Al-Jazūli, Maghreb, 1844 AD. It shows a golden lamp suspended centrally within a lobed arch resembling a miḥrab (László 2013, 234).

⁷⁰ Stone, *Symbol of Divine Light*, 33–35.

⁷¹ Filiz Çakır Phillip, “Collections, Panel,” *Aga Khan Museum*, accessed October 12, 2020, <https://www.agakhanmuseum.org/collection/artifact/miḥrab-panel-akm585>.

In addition to the physical glass lamps on mihrabs in the mosques, many decorative panels in stone, stucco, and ceramics have ornamented different buildings throughout Islamic history (Figures 36 and 37).



Figure 36: Stele with lamp motif with inscription from Light Verse in Budayriyyah Madras, Cairo. (1357 AD) (Stone, 2018, 140).



Figure 37: Fritware, unglazed panel, from Syria, probably (1575 AD). In the center of the arch, a suspended cobalt blue mosque lamp reveals the declaration of the Muslim faith, the shahada (Phillip 2020).

Glass Mosque Lamps

Rock Crystal Lamps

Rock crystal, which is a natural material, contains a variety of quartz with exceptional transparency. It was mined and carved in Mesopotamia and in the Byzantine Empire.⁷² In the early Islamic era, a crystal lamp was placed above the Mihrab of Companions of the Prophet in the Great Mosque of Damascus. This was placed in the first Islamic century by the Umayyad caliph al-Walid, who reigned from 705 to 715 AD. The lamp was known as *Qulaila*, referring to accounts by Ibn ‘Asakir, al-‘Umari, and al-‘Ilmawi in which it is described as a pearl (*durra*) that shone like a lamp (*siraj*).⁷³

Rock crystal lamps were used in major Islamic shrines; some lamps are mentioned in historical accounts (Figure 38). For example, in Mecca in the Zamzam Dome, Ibn Jubayr noted the exclusive presence of rock crystal lamps; and Ibn al-Najjar in his history of

⁷² Avinoam Shalem, “Fountains of Light: The Meaning of Medieval Islamic Rock Crystal Lamps,” *Muqarnas XI: An Annual on Islamic Art and Architecture* (1994), 3.

⁷³ Shalem, “Fountains of Light,” 2.



Medina (1197 AD) recorded a variety of lamps in the tomb of the Prophet (PBUH), including more than 40 made from silver, two of crystal, and one of gold.⁷⁴



Figure 38: Fatimid carved rock crystal lamp, 10th century Iraq, converted to a vase in 13th century Venice.

Manmade Glass Lamps

The glass industry was an ancient tradition, and it was revived in the countries of eastern Mediterranean with different techniques in the 12th century. Glassmakers in Islamic empires were famous in Syria and Egypt. The first step was the creation of a glass object by free-blown methods or blown in the traditional manner. The object was then cooled in an annealing oven, painted with enamel pigments and gold after it cooled down, and reheated again with both materials together (Figure 39).⁷⁵



Figure 39: Procession of glass workers with a working furnace on a float. From a manuscript dated to the reign of the Ottoman Sultan Murat III, late 16th century AD (Carey, *An Illustrated History of Islamic Art & Design* 2012, 64).

⁷⁴ Stone, *Symbol of Divine Light*, 81–82.

⁷⁵ Carey, *An Illustrated History*, 64.

During the overlapping Ayyubid (1171–1260 AD) and Mamluk periods (1250–1517 AD), enameled glass mosque lamps became closely associated with the history of Islamic art.⁷⁶ Before the Mamluk period, glass lamps were simple shapes with simple decorative features (Figure 40).



Figure 40: Free blown glass lamp dated 10th–12th century, this lamp has a roughly globular body, a neck shaped like funnel, and three small vertical handles. Lamps of this type, with or without wick holders, were widely used in the Islamic world and in parts of southern Europe (Stefano Carboni, David Whitehouse 2001, 77).

In the 14th century, Mamluk Cairo demonstrated religious enthusiasm by establishing new mosques and colleges called *madrasas*; and to light these buildings, hundreds of highly decorated enameled mosque lamps were suspended from the ceilings.⁷⁷ The hanging lamps were decorated with gilt and enameled designs. Mostly, the neck was designed with the Light Verse or other Qur’anic verses, and the patron who established the foundation might be named on the body. The calligraphic blazon of the Mamluk Sultan and his officers’ emblems all were shown on the glass vessel (Figure 41).⁷⁸ Mamluk mosque lamps usually take the form of a vase-shaped vessel with a flattened globular body and a wide, funnel-shaped neck.⁷⁹

76 Johanna Salvant et al., “Investigation of an Enameled Glass Mosque Lamp: A 13th–14th Century Mamluk Example or 19th-century European Version?” *Heritage Science* 4, no. 5 (2016), 1.

77 Carey, *An Illustrated History*, 67.

78 Almut von Gladiss, “Decorative Arts,” in *Islam: Art and Architecture*, ed. Peter Delius and Markus Hattstein (Potsdam, Cambridge: H.F. Ullmann, 2015), 199.

79 Salvant et al., “Investigation of an Enameled Glass Mosque Lamp,” 1–2.



Figure 41: Mosque Lamp with the name of its patron, Qawsun (d. 1342), amir of the Sultan al-Nasir Muhammad ibn Qalaun, made in Egypt. On the neck, the Verse of Light is enameled. Metropolitan Museum.

Metalwork Mosque Lamps

In Islamic Empires, craftsmen demonstrated their expertise by using different materials and techniques. For mosque lamps, the limitation in the size of the glass lamps and the desire to achieve larger dimensions may have been the primary reason for the development of similarly shaped lamps made from perforated metal (Figures 42 and 43). The majority were made from metal, such as bronze, copper, brass, and sometimes gold and silver for important shrines.⁸⁰



Figure 42: Mosque lamp, openwork sheet brass, Iraq or Iran, 10th century (Collection 2020).



Figure 43: Image for a Mamluk mosque lamp, made for the mausoleum of Sultan al-Zahir Baybars, 1277 (Stone 2018, 90).

⁸⁰ Stone, *Symbol of Divine Light*, 83–93.

Opaque Mosque Lamps

The majority of metal lamps overcame the opacity of the material by perforating the lamp body in order to allow light to pass. However, rather surprisingly, in the development of the mosque lamp, a greater thickness of the metal was used with less transparency.⁸¹ These opaque metal lamps were mainly used for decoration and symbolism rather than lighting up the space, such as the lamps in Figures 44 and 45.



Figure 44: Engraved brass mosque lamp, 11th century (Stone 2018, 102).



Figure 45: Mamluk brass lamp inlaid with silver and gold, late 14th century (Stone 2018, 102).

Another type of an opaque lamp which superseded the Mamluk glass lamp was in Ottoman, Turkey, and was made from pottery. The tradition of ceramic mosque lamps goes back to at least the 13th century, as demonstrated by examples in Figure 46 and Figure 47. It is evident that in such cases, the “lamp” was not intended to act as an actual lighting device and instead was primarily symbolic.⁸²

⁸¹ Stone, *Symbol of Divine Light*, 103.

⁸² Stone, *Symbol of Divine Light*, 105.



Figure 46: Mosque lamp from Suleymaniye Mosque, height 48 cm, Istanbul, 1557. Victoria and Albert Museum.



Figure 47: Iznik mosque lamp, height 38.5 cm, signed by Musli, 1549, probably made for Dome of the Rock, Jerusalem. British Museum.

REFLECTIONS AND CONCLUSIONS

Al-Nūr, represented either in its physical or symbolic interpretations, has a remarkable presence in Islamic culture, art, and architecture. The Verse of Light and its interpretations have a great potential for visual and symbolic presentations. The verse begins by mentioning that God is the Light of the Heaven and the Earth, and it contains two different objects from each of them; the glittering star from the Heaven and the olive tree from the Earth. An allegory of God's light is then described with architectural elements, such as niche, lamp, and glass.

Interestingly, most of the artefacts and the architecture studied in this paper are related to the elements mentioned in the verse. Lighting the mosque by mosque lamps started with glass lamps using oil. The oil is mentioned in the verse by referring to the oil from the olive tree, a tree that has a symbolic presence in the three monotheist religions. Mihrabs in mosques have a symbolic representation from the verse by hanging lamps in their niches. Later, the images of mihrabs with hanging lamps appear in different presentations, such as paintings, miniatures, carved panels in stone or stucco, and glazed tile panels. The architectural elements and openings in religious buildings are used for lighting as well as symbolic purposes. The symbolism of these openings is noticed as a dialogue between shadow and light; it is also clarified by adding the calligraphy of the Verse of Light or by using reflective materials as glazed tiles, luster, and glass. The relationship between architectural openings and light is illustrated in the titles given to some of these elements, such as *qamariya* and *shamsiya*, which are connected to the moon and the sun, respectively. Finally, *Al-Nūr* is an aesthetic value by itself and is an element used in art and architecture to enhance beauty, "For light produces beauty, and thus the sun, the moon, and the stars look beautiful ... light by itself produces beauty" (Ibn al-Haytham).

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