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A Liturgical Examination of Lighting and Lighting Elements in Religious Buildings from the Middle Ages to the Present

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Abstract

There have been different historical processes in the use of lighting. It started with a fire in the Paleolithic Period and continued until the Modern Age with lighting elements such as torches, candles, and kerosene. The differences in this process are related to the change in sociological needs and often stem from the form. Especially in the lighting of religious buildings, sociological needs, symbolic narratives, and liturgy were the main elements of differences until the modern age. This research investigates the various forms that lighting elements have taken throughout history, based on different functions, from the Middle Ages to the present. These forms are examined in terms of their liturgical meanings based on their intended use, as well as their requirement for effective symbolic expression in lighting elements as part of the mission they undertake in religious buildings.

Keywords: Lighting, liturgy, lighting elements, religious buildings, middle ages lighting.

Ortaçağ'dan Günümüze Dini Yapılarda Aydınlatma ve Aydınlatma Elemanları Üzerine Litürjik Bir İnceleme

Öz

Aydınlatmanın kullanımında farklı tarihsel süreçler yaşanmıştır. Paleolitik Dönem'de ateş ile başlamış olan aydınlatma kullanımı, meşale, mum, gazyağı gibi aydınlatma elemanları ile Modern Çağ'a kadar devam etmiştir. Bu süreçte var olan farklılıklar sosyolojik ihtiyaçların değişimi ile ilgili olup genellikle biçimden kaynaklanmaktadır. Özellikle dini yapıların aydınlatılmasında sosyolojik ihtiyaçlar, sembolik anlatılar ve liturji Modern Çağ'a kadar farklılıkların ana unsurları olmuştur. Bu çalışmada Ortaçağ'dan günümüze kadar olan süreçte işleve bağlı olarak çeşitlilik gösteren aydınlatma elemanlarının dini yapılarda yapının amacına göre üstlendiği misyon ve bu misyonun bir gereği olarak aydınlatma elemanında sembolik anlatımın etkili olabilmesi için aldığı şekiller ve bu şekillerin kullanıma bağlı olarak yüklendiği litürjik anlamlar incelenmiştir.

Anahtar kelimeler: Aydınlatma, liturji, aydınlatma elemanları, dini yapılar, ortaçağ aydınlatması.

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1. Introduction

The history of lighting, which is one of man's most basic needs, is at least as old as the history of humanity. This adventure, which started with man's ability to control fire in the Paleolithic era, enabled him to control light and design the environment he was in with this light he could control. According to Talu (2017), this relationship with light was vital for physiological and psychological needs. From ancient times to the present, people have used the power of light to suppress their fears, sometimes to feel safe, and to camouflage or reveal the things around them (Sirel, 2016). Various shapes were tried in buildings to break the effect of the light and protect from the heat coming from the light or to provide optimum benefit from the light while protecting it from the cold outside (Günaydın et al., 2021; Acara, 1997; Çatay, 2002; Küçük & Sümengen, 2022).

The historical process that started with fire continued with torches, candles, and kerosene lighting and later evolved into more modern and different lighting tools with the invention of coal gas and electricity. While electricity and industrialization allowed the production of many different lighting elements, the variation in lighting methods during the Middle Ages was more directly influenced by technological possibilities and liturgical concerns (Gutwirth, 2017; Erdoğan, 2008; Acara, 1998). Literature reviews show us that the form of lighting devices brings a symbolic meaning rather than randomness. In this study, the symbolic meanings and forms of the lighting elements and different lightings of historical buildings in Anatolia, which have survived the Middle Ages, will be examined. The authors of the article try to bring a different perspective to the history of lighting.

Lighting, as defined by the CIE (Commission Internationale de L'eclairage: International Commission on Illumination), is the application of light to ensure that the environment and objects can be seen properly (Sirel, 1997). Lighting is grouped under three main headings (Özkaya, 1994).

- a. Lighting According to the Illuminated Place: There are two types of lighting, indoor and outdoor, according to the illuminated place.
- b. Lighting According to the Origin of Light: Artificial Lighting: It is used when natural lighting (daylight) in buildings is insufficient, or natural lighting is not desired. In addition, it has been observed that natural lighting in historical buildings is sometimes insufficient in the building and negatively affects the function of the building. Thus, when so the existing natural lighting is not used, artificial lighting is used in these buildings. Natural Lighting: It is the type of lighting made with the help of spaces such as windows and doors left in the buildings by making use of daylight. However, since this type of lighting is not sufficient on its own in historical buildings, it is used together with artificial lighting systems. Integrated Lighting: It is a type of lighting that includes the integrated distribution of natural and artificial light.
- c. Lighting According to the Purpose of Establishment of the Lighting System: One of the most important factors to be considered in lighting applications in historical buildings, following the function and quality of the building, is the quality and quantity of lighting. In the quality of the lighting, all the details that must be seen should be visible, the surface and texture forms should be perceived correctly, the colors should be well chosen, and looking at the illuminated objects for a long time shouldn't tire the eyes. In the quantity of lighting, the amount of illumination of the building or objects is determined. The types of lighting systems can be categorized based on their intended purposes into three main types (Özkaya, 1994). These can be listed as physiological lighting, decorative lighting, and remarkable lighting. Physiological Lighting: It provides the realization of the conditions related to the light composition, distribution, and intensity required by the eye physiology to see objects with all their real qualities, in a short time, without getting tired. Decorative Lighting: It aims to show the objects in shape and form in a way that can give the designed aesthetic effect. Remarkable Lighting: It aims to draw the observer's attention to an object or event, as seen in Figure 1.



Figure 1. Holy fathers orthodox church England - an example of striking illumination (Hart, 2015).

2. History of Lighting

While referring to the history of lighting, the important elements, places, and dates from the past to the present can be summarized as follows.

Elements used:

- a. Torch: The torch, also called a kindling lamp, is a primitive lighting device made by attaching a kindling or other easily flammable wood to an iron pole. It is also called Detal, Helene, Daldes, and Lophnis (Çokay, 1996).
- b. Mine and glass lamps: They usually consist of a bowl-shaped oil tank, a hole or wall created for the wick to come out, and an arm or ears for carrying (Sirel, 2016). The oil is usually sulfurous olive oil, and the wick is papyrus or oakum. The religious use of the torch by Demeter and Persephone in Eleusis ceremonies became widespread (Çokay, 1996). With the depiction of Prometheus bringing the fire employing a torch, the renewal of the sacred fire in the festivities held in the name of Athena and Hephaestus occurs through the torch brought by running from outside the city (Thomson, 1990). Even today, the torch carries the Olympic flame (Şentürk & Özdilek, 2007).
- c. Kerion/Keros/Candela/Sebare/Cerea: They are candles and candle lamps. After the 7th century, oil lamps were replaced by candle lamps in Istanbul (Kuban & Toprak, 1994).
- d. Lykhnouhoi: These are the statues carrying torches or candles (Çokay, 1996).
- e. Laterna/Lampeter/Phanos/Hypnos/Lanterna/Mykonos/Phanaria: Today, these tools protect the candle or oil lamp inside from external factors, and they are made with the lantern logic (Çokay, 1996).
- f. Oil lamps and candlesticks: For centuries, candles and oil lamps have been used for lighting in residences in Istanbul. In Istanbul, the first glass oil lamps appeared in Turkish baths, mosques, and similar places. After the 16th century, oil lamps were made of brass, bronze, silver, gold, or copper (tombak) polished with mercury. As seen in Figure 2, oil lamps consist of five parts; the body containing the oil reservoir, the nose where the wick is placed, the mirror, the shoulder surrounding the mirror, and the handle opposite the nose (Çokay, 1996). Parts of oil lamp, as seen in Figure 2.

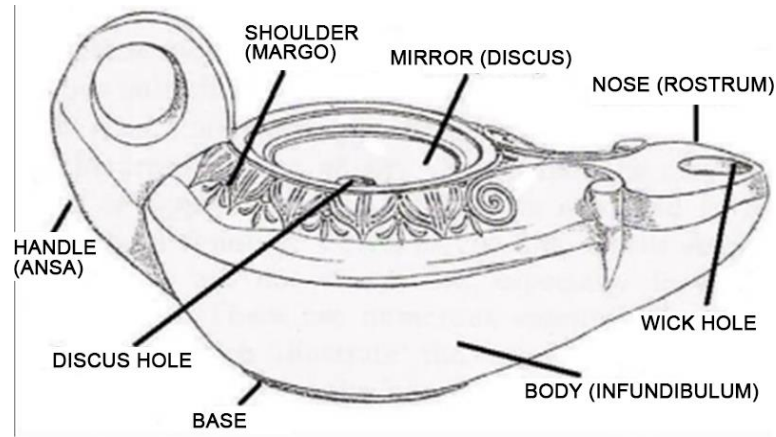
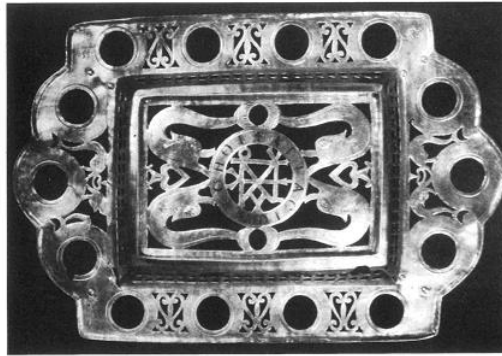


Figure 2. Parts of oil lamp

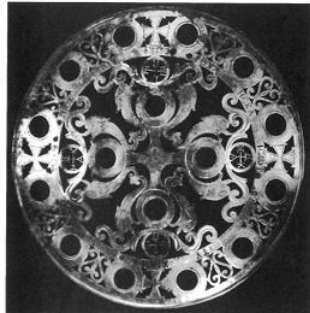
g. Polycandelon/polykandelon/polycandela/polykandela: They are chandeliers made of highly waxed glass and metal (Sirel, 2016; Acara Eser, 2000). As can be seen in Figure 3, either the polykandillions or the chains of them are embroidered with many symbolic meanings.



Bronz polykandilion, Berlin Staatliche Museen (Weitzmann 1979: no.558)



Gümüş polykandilion, Kumluca Hazinesi, Washington, D.C. Dumbarton Oaks Collection (Boyd-Mango 1992: no.S31.1)



Gümüş polykandilion, Kumluca Hazinesi, Washington, D.C. Dumbarton Oaks Collection (Boyd-Mango 1992: no.S25.1)



Gümüş polykandilion, Kumluca Hazinesi, Washington, D.C. Dumbarton Oaks Collection (Boyd-Mango 1992: no.S28.1)

Figure 3. Polykandillion details (in order from left to right, Weitzmann, 1979; Boyd et al., 1992; Boyd et al., 1992; Boyd et al.,1992; cited in Acara, 1997)

- h. Candelabra: Large candlesticks used in church altars that sit on the floor; in other words, candelabra, are mostly made of silver (Sirel, 2016). They are placed in the Candelabrum, which functions as a carrier plate that raises the walls from the ground to illuminate them (Çokay, 1996).
- i. Kaniskia: It is a different oil lamp. Lanterns with many oil lamps are hung around the church (Sirel, 2016).
- j. Spermaceti wax: Spermaceti wax, made with oil extracted from a whale's head, replaces those made with tallow in the early 19th century. Spermaceti means whale in Latin and Greek (Kuban & Toprak, 1994).

Kuban & Toprak (1994) briefly expressed the important times for lighting as follows: When the Spermeçet candle factory was established in Beykoz in 1863, two types of light sources were used in mosques. Large candlesticks placed on both sides of the mihrab and chandeliers hung on the dome with chains corresponding to the polykandelon of the Byzantine period, which is the main light source of the mosque, are also called cannon oil lamps. The root of the word "chandelier," which is used to mean a large oil lamp, comes from Persian and means "hanging up" (Kuban & Toprak, 1994).

Although not certain, Hatay's Kurtuluş Street, formerly known as Herod Street, is the first street to be illuminated worldwide (Dönmez & Uşma, 2023). In Figure 4, important places and dates for street lighting from past to present are expressed (Sirel, 2016).

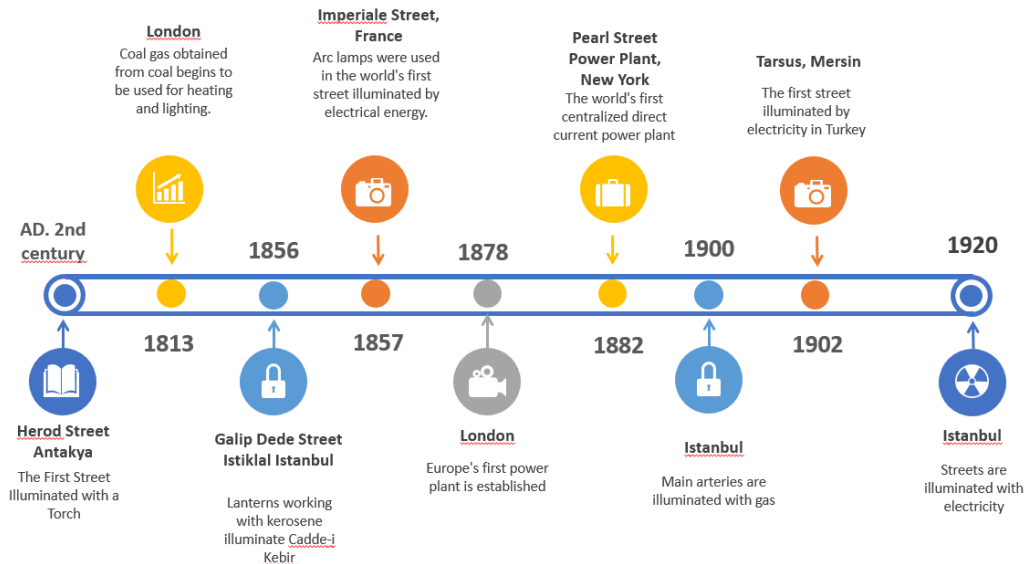


Figure 4. Important years and places for street lighting

Coal gas obtained from coal in 1812 was used for lighting in London in 1813. In 1870, small buildings started to be illuminated with the dynamos developed by the Belgian Z. Gramme. On September 4, 1882, Thomas Edison activated the Pearl Street Power Plant in New York and changed the direction of the lighting (Thomas Edison Lightbulb, 2020). By 1878, Joseph Wilson Swan and Thomas Edison accelerated the production of lamps working with electrical energy. Thomas Edison applied for a patent in 1879 for the lamps he made using high vacuum and carbon filament and was entitled to receive a patent (Joseph Wilson Swan, 2020). Figure 5 shows the development of lighting elements from the past to the present (Sirel, 2016).

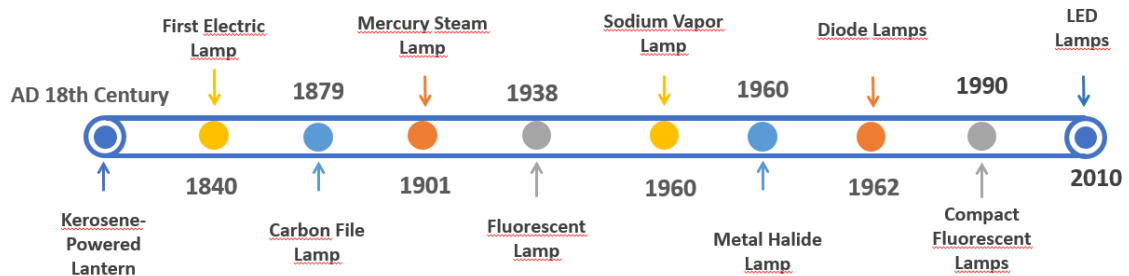


Figure 5. Development of lighting elements

The Ottoman Sultan Abdülmecid built a gas station in the Dolmabahçe Palace in 1853. Dolmabahçe Gazhanesi, built by a French company behind the palace, is the first gas house built in Istanbul by the sultan's order. All the chandeliers and sconces of the palace were lit with gas. The surplus of production at the Dolmabahçe Gas Station, affiliated to the Hazine-I Hassa (private treasury of the Ottoman sultan), was used to illuminate the city in 1855 with the initiative of the Şehremaneti. In 1856, the

streets in Beyoğlu started to be illuminated with gas lamps (Dolmabahçe, 2006). Today's first illuminated streets are İstiklal Caddesi (Cadde-i Kebir) and Galip Dede Caddesi (Kuban & Toprak, 1994). In 1870, the French established Kuzguncuk Gazhanesi and then Yedikule Gasworks in 1881. Hasanpaşa Gazhanesi was established in Kadıköy Kurbağalidere in 1891 (Engin & Gülsoy, 2016, p. 16-17). In the 1910s, there were 3943 street lamps or street lanterns in İstanbul. After the 1910s, coal gas serving only the heating field was produced and distributed by private companies with foreign capital. The production and distribution business was transferred to İETT in 1945 with the transfer law numbered 4762. With the transfer of Beyoğlu Poligon Gas Factory, whose concession expired in 1984, İETT became a monopoly in gas production and distribution. Coal gas was completely disposed of in 1993 due to the backwardness of the technology related to natural gas and the introduction of natural gas (Havagazi, 2020). In Figure 6, the chronological chart of the important facilities established in Türkiye, which is important for the history of lighting, is given (Dolmabahçe, 2006; Sirel, 2016).

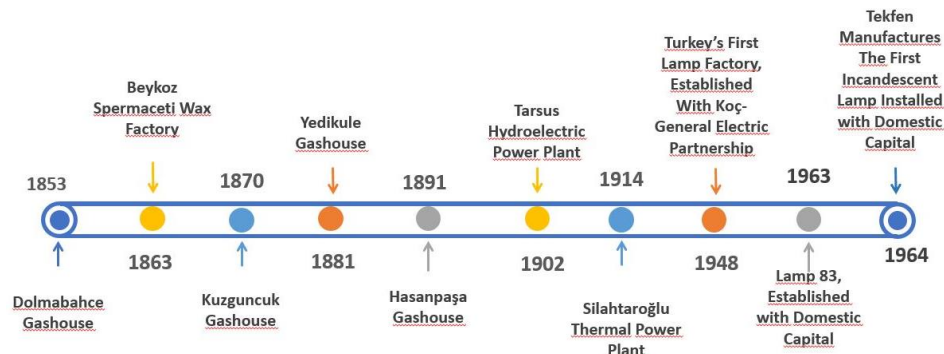


Figure 6. Lighting facilities established in Türkiye

When the first "mercury lamp" was made by Peter Cooper Hewitt in 1901, it emitted a bluish light. It was a new lamp that produced light with a very different technique than an incandescent lamp. Due to its yellow light, the low-pressure sodium vapor lamp produced later was used in a limited outdoor lighting area. Another discharge lamp, the "high-pressure sodium vapor lamp," known in the market as discharge lamps, was introduced in the 1960s. Because its light color was better than "high-pressure sodium vapor" lamps, High-Pressure Mercury" or "Low-Pressure Sodium Vapor" was used especially for road lighting, outdoor lighting, and to a lesser extent, indoors (Çavdar, 1996). A chronological chart of important developments in terms of lighting activities is presented in Figure 7 (Sirel, 2016).

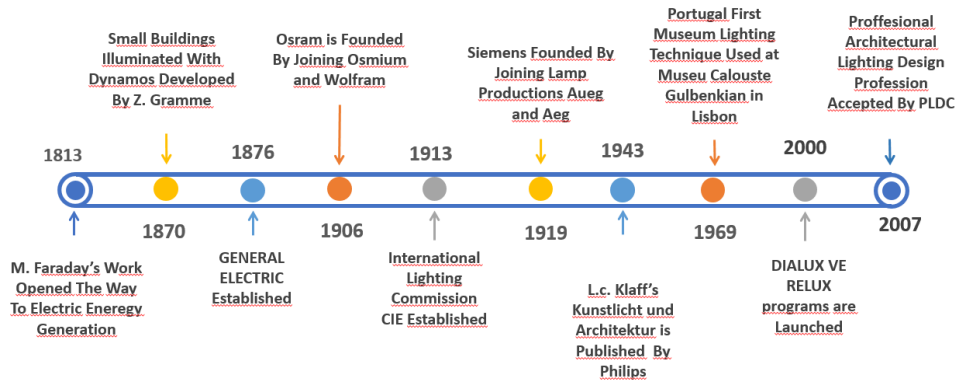


Figure 7. Important lighting activities developments in the World

Since electricity is energy-saving, companies realize that its arrival will decrease the demand for gas, which conflicts with their interests. Considering all these factors, the government is laboring to generate electricity in Tarsus, in an area outside İstanbul for the first time. Established in Tarsus in 1902, a hydraulic power plant started to produce electricity. Electricity was supplied to Tarsus for the first time on September 15, 1902, from the hydroelectric power plant established in the Bentbaşı area

of the Berdan River by the Austrian Dorfs who worked in the Tarsus municipality at that time. Tarsus streets were illuminated first by the electricity produced. The first houses illuminated by electricity were the houses of Müftüzade Sadık Pasha and Kadi Yakup Efendi (Çavdar, 1996). In the Ottoman Empire in 1910, with the enactment of the law called "Benefit-i Umumiyye Mûteallik Privilege," the state opened a tender for establishing a power plant with its initiatives for electricity generation. The Austro-Hungarian capital Ganz Electric Company won this tender and bought the electricity generation-distribution concession from the state for the Rumeli Region for 50 years (Çavdar, 1996). Figure 8 presents a chronological order of important developments in terms of lighting in Türkiye (Sirel, 2016).

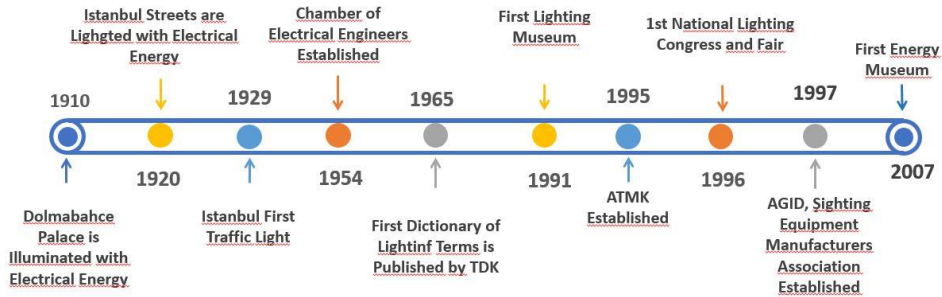


Figure 8. Important developments in Türkiye on lighting

3. Liturgical Characteristics of Lighting Systems Used in Religious Buildings

Civilizations living in Türkiye have left many religious structures that can be considered cultural heritage, reflecting their periods of existence. Interior and exterior lighting elements and artificial and natural lighting techniques that have survived to the present day with religious buildings are also our cultural heritage. The most important point to be considered in interior and exterior lighting in religious buildings is to understand the links between these structures and their symbolic. In religious buildings, two types of lighting are used according to the function of the building and the origin of the light. These are natural and artificial lighting systems. The emphasis on sacred images comes naturally from the oil lamps hanging in front of the icons as the only artificial light source. The weak light given off by the wicks is enough to illuminate the faces of the saints. This weakness of oil lamps and candles is precisely their strength. They only burn the icon and do not illuminate the surrounding area. When looking at the etymological origin of the word Liturgy, which means "rite-worship" in Greek, it means "any service for a common welfare," but in the definition of the church, it is expressed as "a public worship of the church" (Falconer, 2017; Acara Eser, 1997; Ateş, 2021). Today it is widely used in the sense of religious symbolism.

Cassirer (1979) expresses the importance of light and light in developing religious consciousness with these words: "The development of the mythical sense of place is based on the opposition of day and night, light and dark. The dominance of this opposition over mythic-religious consciousness is seen even in the most developed cultural religions." For example, we see Cassirer's belief, in the idea of the universe that emerged from two opposite concepts in Greek mythology, such as Chaos and Cosmos. While drawing attention to the importance of contrasts with the symbol of yin-yang, which is of great importance in Far Eastern philosophy, the principle that life exists with intertwined contradictions is handled (Kılıç, 2005). In Manichaeism, which is extremely important for Turkish culture, the metaphor of light and dark is frequently mentioned with the influence of dualism; light represents power, wisdom, and God, and darkness represents the devil, hell, and evil (Koç, 2020).

According to Cassirer (1979): "As in the case of the Iranian religion, each of these religions can be shown as a perfect development independently of the other, that is, as a global systematization of this opposition. However, even when the idea of difference and contradiction is represented at the dialectical peak, not in determination, this opposition can be considered as one of the hidden motives that are effective in the religious construction of the universe. However, in the creation myths of almost all religions and peoples, the creation process is directly associated with the enlightenment

process. In the Babylonian creation myth, the world is born out of war; Marduk, the God of morning and spring sun, wages this war against the darkness and chaos represented by the monster Tiamat. The victory of the light constitutes the beginning of the world and world order. The Egyptian creation story has also been interpreted as imitating the daily sunrise phenomenon. Here the first act of creation begins with the formation of an egg emerging from the original water. From this egg is born Ra, the God of light; Many different expressions represent its emergence. However, all these explanations are based on the first fact that light originates from night by refracting it. How the awe-inspiring contemplation of this first fact influenced the Jewish creation story and how this contemplation gave its concrete "meaning" to the creation story no longer demands explanation after Herder underlined this relationship and described it in a wonderful and clear linguistic expression". The light of the Menorah, which is also another important notion in Jewish symbolism, symbolizes God (Shemesh, 2020). The Menorah, which will be encountered in synagogues, has become one of the seminal figures of Judaism. The difference from Hanukkah, a 9-branched candlestick used liturgically on the Jewish holiday Hanukkah, is that the Menorah symbolizes the reference to the world's creation in seven days. It veches the luminous and irrepressible divine spirit. On the other hand, Hanukkah is a nine-branched candelabra that is burned with solemn rituals. The branch named Şamaş in the middle is also important, and the order of lighting the candles in the other arms, the burning time, the prayers to be made while burning, and the prayers to be made after they are burned are performed with serious rituals (Hanuka Kuralları ve Yorumlar, 2020; Sönmezer, 2004; Atasağun, 2001).

According to Cassirer (1979): "Herder's ability to place every mental thing not only in the sense of seeing it as products, but in the creative process from which the product's appearance originates, is perhaps most powerful and is perfectly seen only in the interpretation of the first chapter of the Torah. Here, the explanation of the birth of light is the representation of the world's creation. Likewise, the mythical mind re-experiences the world's creation with light at the beginning of every dawn and the birth of every new day. Heraclitus said, "The sun is new every day" is an expression expressed in the mythological mind. In the progression of mythical thought, the contrast of light and dark, day and night, appears as a lively and effective motif. The evolving understanding of the difference between night and day, light and dark, is the most sensitive point in the development of human culture. In "The Names of God," Userer says: "The glory of Light permeates every part of human existence. The main qualities of the glory of light are common to all members of Indo-European societies. They are indeed rich in these qualities; we rule this day mostly unconsciously. Sunlight makes us halfway—awaken from sleep, which is a state of death, to live. "Look at the light," "see the sunlight," and "to be in the light" means to live. "To reach the light" is to be born, and "to lose the light" is to die. Even in Homer's Epic, light is sacred and is salvation; Euripides sees the light of day. Call it "pure."

The construction and layout of the medieval church building reflect the characteristic lines of the symbolic expression of the sky aspects, which are also important for the mythical sense of place. The sun and light are no longer divinity itself. However, they always function as the most immediate and direct manifest signs of the divine, divine redeeming-willing, and divine redeeming power. Christianity's effectiveness and historical victory are due to its ability to absorb and change the pagan idea of reverence for the sun and light." As seen in Figure 9, Holy Ascension Orthodox Church and light.



Figure 9. Holy Ascension Orthodox Church and Light. Photograph by Andrew Gould (Hart, 2015).

According to Hart (2015), A church interior should give the feeling that it is a different place, a sacred space, not from the outside but still separate from the outside world (Hart, 2015). If the interior lighting is as intense as daylight or like a well-lit workplace, then we are reminded that this is a place setting aside. One might think of underlighting as "bringing life where it flows" (Ezekiel 47: 9), where the light of the resurrection is refracted, or the mouth of a spring from which the water of life springs forth." As seen in Figure 10, control of natural lighting in Hagia Sophia.

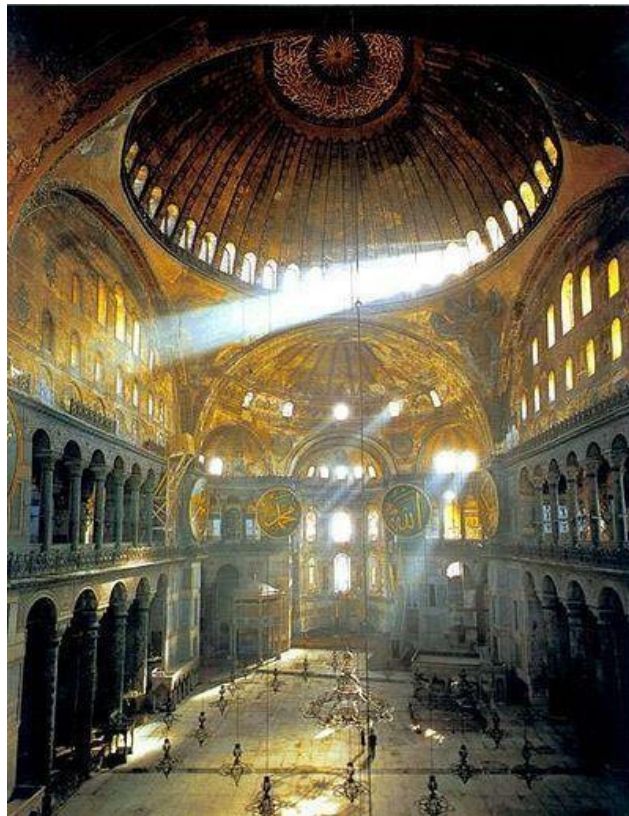


Figure 10. Control of natural lighting in Hagia Sophia (Hart, 2015)

In mosques, on the other hand, the structure in which all surfaces are visible provides the maximum benefit from natural light by arranging the space in a single area where everything can be seen immediately. As seen in Figure 11, interior illuminance level in Suleymaniye Mosque.



Figure 11. Interior illuminance level in Süleymaniye Mosque

There is a mutual interaction between liturgy and architecture in churches. While liturgical influences are clearly evident in the architecture of Early and Middle Byzantine Anatolia, they manifest themselves in the details of the architecture developed after the Iconoclast Period. Architectural details observed especially in churches continue to reflect periodic differences. Ultimately, the liturgy, which underwent a significant transformation with the end of the Iconoclast Period, impacts architecture in various details (Kaya, 2024). In Christianity, different meanings have been attributed to the number of oil lamps: for example, the presence of three oil lamps is a reference to the holy trinity, and the number 12 is a reference to the apostles (Bağbaşı, 2020). Archaeological evidence and detailed descriptions show the importance of oil lamps in sacred areas and religious liturgy (Çakmakçı, 2017). As seen in Figure 12, processing of lettering and cross figures on lighting elements.



Figure 12. Processing of lettering and cross figures on lighting elements (Hart, 2015)

Light as a symbol has a wide place in the Muslim-Ottoman culture and Christian-Byzantine culture. An example of it can be seen in Mehmet Akif Ersoy's poem that he wrote for the Martyrs of Çanakkale. In the poem, "Sureyya with the chandelier and seven lamps hung on the graves of the martyrs" symbolizes the Ülker group (star cluster) consisting of seven stars in the Taurus Sign (Kuban & Toprak, 1994). Religious buildings and tombs are illuminated, and vows are made with candles. In Bektashi

lodges, twelve-sided lamps (sebçerağ) are lit for the twelve imams, and the word "candile," the main light source of those times, has a wide place in daily life or literature. As seen in Figure 13, sebcerag/sebcirag example.



Figure 13. Sebcerag/ sebcirag example (Hart, 2015)

Acara Eser (2000), drawing attention to the liturgical meaning of lighting in the Middle Ages, noted the following (Acara Eser, 2000): "The light, the Sun, is Jesus, which has an important place in daily life and the church because of its function and symbolic meanings. Jesus says, "As long as I am in the world, I am the light of the world" (John 9:5). In addition to light, the means of illumination also have a symbolic meaning; The earliest dated source giving information about illumination in the Byzantine period is the poem by Paulos Silentirarios, in which he describes the opening of the Hagia Sophia church in Istanbul in 563 (Descripto S. Sophiae). In this poem, the author defines "stars of heaven" while describing the oil lamps hanging from the dome (Jabi & Potamianos, 2007; Potamianos, 2019; Crowfoot & Harden, 1931). In the 7th century, Sophonius of Jerusalem said that oil lamps and candles symbolize eternal light in his liturgy. The archbishop of Thessaloniki and the church writer Simeon commented on the symbolic meanings of the lighting in the church; The stars of the lamps hanging on the vaults, the candles, and the correctness and divine light of the lamps indicate that the lamp in the altar symbolizes the church and that there is a correlation between the light in the church and the holy light (Talloen et al., 2017; Galavaris, 1978). He also mentions that the three-light lamps represent the holy trinity, the seven-light lamps represent the seven virtues, and the twelve-light lamps represent the twelve apostles (Bouras, 1982)."

Although the oil lamp is mentioned in many verses, the lamp/light source has different meanings metaphorically:

In verse 13 of Surat an-Naba, the oil lamp is likened to the Sun: "(We made seven layers of solid heaven above you.)...We created an illuminating and warming lamp there."

In the 5th verse of Surah Mulk, the oil lamp is likened to the Star: "We have adorned the nearest sky with lamps. We made them stones thrown at the devils and prepared for them the punishment of flaming fire (in the Hereafter)."

In verse 46 of Surah Ahzab, the Prophet is metaphorically likened to an oil lamp: "O Prophet! We make a witness, a giver of good news, a warner; By Allah's leave, we sent him as a caller to his way and as an illuminating lamp."

In the 35th verse of Surah Nur, the lamp represents Allah's light: "Allah is the light of the heavens and the earth. An example of his light is a lamp holder with a lamp in it. The lamp is in a glass, a star like a glass pearl; (This oil lamp) is lit from a blessed olive tree, which does not belong to the east or the west, whose oil gives light almost even if the fire does not touch it. Light upon light. Allah brings to His light whom He wills. Allah gives examples for people, and Allah knows everything."

In Sufism, oil lamps, candles, and the moon are symbols illuminating the night and darkness (Erol, 2021). The lamp motif is associated with the concept of "light."

Erol stated that the figure of the oil lamp is referred to as "Çerag" in sects and Sufism and has different liturgical meanings (Erol, 2021): "In the Bektashi sect, oil lamps/crags have some special names: for example, Taht-i Muhammedi: While eating twelve candles, representing the twelve imams, in front of it, there is an oil lamp with three wicks in the shape of a crown with a twelve-slice cover called "Kanun Çerağı" or "Horasan Çerağı." The three wicks represent "Allah-Muhammad (s.a.v)-Ali." The only oil lamp at the entrance to the Bektashi square is Hz. Ali symbolizes the light of (Tanman, 2014, p. 405)."

In Sufism, the figure of oil lamps is often depicted and engraved on prayer rugs and test tubes. Oil lamps represent divine light, wise people, or wisdom. Large oil lamps hanging on the prayer rugs, small oil lamps on the sides symbolize the sheikhs, and flowers symbolize the sect's followers (Bayraktaroğlu, 2021). As seen in Figure 14, felt prayer rug and oil lamp motifs are found in Bursa Üftade Lodge. (Photo archive of Directorate General of Foundations; cited in Bayraktaroğlu, 2021)



Figure 14. Felt prayer rug and oil lamp motifs are found in Bursa Üftade Lodge. (Photo archive of Directorate General of Foundations; cited in Bayraktaroğlu, 2021)

4. Conclusion and Suggestions

The differences in lighting and lighting tools from the Middle Ages to the present are different due to the tradition of transferring value judgments with symbolic expression.

The number of lamps in the polykandilions chosen in the liturgical sense is like the narrative space. An attempt was made to preserve the mystery by creating a voluntary dimness in the churches. The light is designed to have a dim ambience at all hours of the day by taking natural light controlled by the saints who are valued in the symbolic narrative. It is thought that this dim ambience pushes the person to relax psychologically. Embroideries and decorations preferred in the Middle Ages are not preferred in lighting elements today. This is due to the transition of lighting fixtures to fabrication production with industrialization.

While a dim ambience is achieved in churches, the effort to keep the brightness level at maximum in mosques, on the contrary, necessitates the use of natural lighting and the interior setup with the highest level of illumination.

This sense of spaciousness in mosques is like the meeting of Surah Inshirah with architecture. Inshirah means "to open and expand, to attain peace" (Karaman et al., 2007). In mosques, natural and artificial lighting elements are used for an immense sense of space. With a need for extremely clear and understandable surfaces, mosques remove all the ambiguity from the space and emphasize the sense of spaciousness, which differentiates from the churches. Even in Süleymaniye, structurally affected by Hagia Sophia, the interior lighting setup makes itself felt even in the distinctions brought by beliefs such as mystery, spaciousness, light path, and the beam of light, giving the user two completely different feelings of light. Therefore, parameters such as the use of lighting elements in the space and the level of luminosity cannot be considered independently of the liturgy and anxiety of the space. This is why the two worshiping buildings, which function equally, differ so much in lighting, even if the

number of users and interior volume is the same. Therefore, while considering the visual comfort standards, the liturgical concern of the space should not be ignored (Jabi & Potamianos, 2006).

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The article complies with national and international research and publication ethics.

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