



THE HERITAGE OF LIGHT AND SHADE IN CAIRO

The missing principle for conservation in Islamic historic cities

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ABSTRACT: Conservation principles and practices were introduced to Islamic historic cities by European orientalists in the late nineteenth century and early twentieth century. While they played an important role in the conservation of the historic built heritage, they paid little or no attention to some intangible aspects of that heritage. The place of light and shade in the city is one of these missed aspects in practices of conservation in Islamic historic cities up to the present. Perhaps this was caused by the difference in symbolic meanings and significance of light and shade between Western and Islamic worldviews.

The aim of this paper is to develop an understanding of the significance of light and shade from Arab-Islamic viewpoint. A theoretical essay is developed by examining the values and meanings of light and shade within the cultural context of the Arab-Islamic worldview and value system. Then, brief observations are made on the light and shade as treated by conservation projects for the built heritage of Cairo. The paper concludes with recommendations regarding light and shade for culture-specific understanding, conservation, presentation and management of the Islamic built heritage in Cairo and other cities within the Islamic world.

KEY WORDS: Light and shade, Arab-Islamic values, Historic Cairo, Conservation of built heritage

Introduction

Light and shade seem to be kept as an afterthought in the understanding, conservation, presentation and management of built heritage in Cairo and other Islamic historic cities. This could be due to the influence of Western approaches to cultural heritage, which separate tangible and intangible heritage with great emphasis on the tangible. Another impact of applying Western approaches is that they have no place for culture-specific Islamic and Arabic meanings and values.

The notion of cultural heritage within an urban context in modern times and its treatment as different from the rest of the city was introduced to most Islamic historic cities by European colonizers in the nineteenth and early twentieth century. The intangible attributes were, therefore, not always fully understood either due to insufficient knowledge of the Arab-Islamic culture and language or due to colonial snobbery. From this point of view, the critical addressing of light and shade in Cairo, as a case study for Islamic historic cities, is a decolonization endeavour.

This paper suggests introducing a principle addressing light and shade in public spaces in Islamic historic cities by using examples from Islamic Cairo. The rationale for addressing the subject is as follows:

- Light has different symbolic meanings articulated in the Qur'an and for Muslims;
- Shade has a positive symbolic meaning in the Qur'an and for Muslims;
- The balance of shade and light used to be a significant characteristic of historic architecture and of the organization of public spaces in Islamic historic cities;
- The balance of shade and light is essential for human comfort in hot climate zones, where the majority of Islamic historic cities are located.

The paper concludes by suggesting initial recommendations for a principle pertaining to shade and light that is specific to conservation practices in Islamic historic cities.

Meanings and Significance

Light

Light is of high symbolic significance in Islam. God is described as "Allah is the Light of heavens and the earth"¹. There are two Arabic words for light: *Nour* and *Daw'*. Both are used in the Qur'an and in everyday language. *Nour* is used often in a symbolic fashion and is considered more holistic. *Nour* is used in the Qur'an to refer to God and to mean enlightenment while *daw'* is used to refer to less holistic and more practical lighting, including artificial lighting.

Sunlight is important for daily Islamic rituals, such as the five daily prayers and the start and end of fasting in the month of Ramadan. The moon is important for knowing the beginnings and ends of months according to the Islamic lunar calendar (*hijri* calendar). This is particularly important for Islamic rituals and events, such as the beginning and end of the month of Ramadan, the days of the hajj pilgrimage to Makkah and other different Islamic occasions.

¹ *The Holy Quran* – English: <https://surahquran.com/English/> accessed on 29.03.2023, (ch.24 v.35).

In Cairo, natural light from both the sun and the moon is strong due to its geographic location in a hot arid zone, where natural light is rarely hidden or reduced by clouds. Throughout premodern times, solutions were sought for efficiency and human comfort to control the entry of natural daylight in the interiors as well as to control its impact on external spaces.

Shade

Shade is as important as light in hot climates. It is the control of light to keep it useful and appreciated. It has an important function for the people in the city both visually and to improve the microclimate for human comfort.

Not only is shade important functionally in a city that is located in a hot arid zone, but also symbolically it is highly significant for Muslims. Paradise is described in the Qur'an as a shady place². In the hereafter, the pious will be under the shade of God. For example, one of Prophet Mohammad's sayings: "Whoever gives respite to an insolvent person or remits part of his debt, Allah will shade him on the Day of Judgement in the shade of His Throne, on a day when there will be no shade but His" (Hadith). The positive value and meanings of shade for Muslims and in Arabic cannot be over emphasised. This is contrary to references to shade in Western languages: In English, a shady person refers to a bad person and a shady place could be unpleasant or dangerous. There is hardly any shade in the image of paradise in Western popular culture as it is often imagined as a sunny place in the open air maybe by the sea or on an island³.

The length of shade was used to indicate the time for Muslim prayers. The midday prayer (*dhuḥur*) is due when there is no shadow for vertical objects while the following prayer (*ʿaṣr*) is due when the shadow of a vertical object is the same length as the object or double the length (depending on the Islamic school of thought). A passer-by in a street would recognize the time for prayers from observing the length of the shadow of vertical objects. A more precise way was by sundials.

In Cairo, the entry of natural light to interiors was controlled by different architectural elements, such as *mashrabiyyahs* (wooden projections on facades that permit the entry of light through a lattice wooden screen) and *qamariyyahs* (stained glass upper windows that are made of coloured glass held by gypsum). Introverted buildings around courtyards were another way to control light as well as to improve the microclimate in a building. As for streets and external spaces, light was controlled either by temporary shading structures (Fig. 1) or by permanent architectural features such as projections in facades at upper floors, *sabats* (a room or more on upper floors connecting two buildings across a street), or wooden shading structures that usually covered commercial parts of streets (Fig. 2).

² *The Holy Quran* – English: <https://surahquran.com/English/> accessed on 29.03.2023, (ch.37 v.55-6).

³ Decard S. (2010). *Paradise Discourse, Imperialism and Globalization: Exploiting Eden*. New York and London: Routledge, (p. 12).



Fig. 1 Temporary shading in a street in Cairo.
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Fig. 2 Wooden shading structure with skylights,
Qasabet Radwan, or Al-Khayamiyyah, Cairo.
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Arab-Islamic worldview and values

Islamic principles as defined by the Qur'an and Sunnah were the basis on which Muslims founded cities or adapted existing cities that they lived in and managed⁴. Arabic language, as the language of the Qur'an and Sunna as well as major Islamic influential texts, expresses culture-specific Islamic concepts in a unique way that should be examined in order to fully comprehend the concepts in question within the Islamic worldview. Selected verses from the Qur'an, sayings of the Prophet and Arabic words that are relevant to light and shade in the city should therefore be examined.

⁴ Akbar J. (1988). *Crisis in the built environment. The case of the Muslim city*. Singapore: Concept Media Pte.; Al-Hathoul S. (1985). The role of the shari'a in the transformation of the physical environment of Arab-Muslim cities, [in:] *Proceedings of the conference on the preservation of architectural heritage of Islamic cities*, 22-26 April, 1985, Istanbul, (pp. 21-27); Hakim B. S. (1986). *Arabic-Islamic Cities. Building and Planning Principles*. London: KPI; Mahdy H. (2017). *Approaches to the conservation of Islamic cities: the case of Cairo*. Rome: ICCROM. https://www.iccrom.org/sites/default/files/2017-12/web-email_hussam_book_17112017.pdf

• *Wasatiyyah*: It could be translated as the middle way. The Qur'an defines Muslims as the nation of the middle way and instructs them to avoid extremes. Muslims should follow the middle way in all aspects of life⁵. One major determinant of urbanization and architecture in Muslim cities is the implementation of the middle way by observing the rule stated by the Prophet's saying "there should be neither harm nor reciprocating harm" (Hadith).

Wasatiyyah is implemented by attempting to reconcile opposites and potentially conflicting issues. A Muslim should follow the middle way and seek to achieve a balance of religious and secular matters and purposes⁶. An integration and balance are sought in order to do justice to all concerned. The following are a few examples of the balance that is sought in Islamic built heritage between potentially conflicting issues:

- The interests of the individual and those of the community;
- Work and leisure;
- Exploiting the environment and natural resources on the one hand and their protection and conservation on the other;
- Tangible and intangible values;
- The interests of the poor and those of the rich; and
- The needs and interests of different age groups in the community.

• *Ihsan*: Beauty, function and goodness are all included in the meaning of the single Arabic word *ishan*. It expresses the Islamic concept of dealing with all three values as the three dimensions of a single action or object. The integration of the three qualities in one concept means that whenever *ishan* is observed, humans' comfort and interests are prioritized. However, as an Islamic notion, the centre of all actions that seek to achieve *ihshan* is God and not the human being. In other words, it is not totally left to the people to decide. There are rules and constraints that are defined by Islamic *shari'a* and detailed by *fiqh*.

The implementation of *ihshan* was practiced throughout the history of Islamic civilization both for tangible and intangible purposes. For example, the development of sophisticated calligraphy styles and techniques were aimed both to facilitate the function of reading and at the same time to produce a high quality visual art. This calligraphy was mainly developed for writing the Qur'an and for inscribing some of its verses on buildings and objects to offer moral guidance to Muslims. The intangible tradition of calligraphy and the tangible scripts in books and on objects and buildings were based on the notion of *ihshan*.

⁵ *The Holy Quran* – English: <https://surahquran.com/English/> accessed on 29.03.2023, (ch.2 v.143 & ch.4 v.135).

⁶ *Ibidem*, (ch.25 v.67).

In the city, *ihsan* could be seen in charitable foundations such *sabils* (free drinking water fountains), *kuttabs* (charitable schools for orphans), hospitals and other buildings that aimed to serve the community. Beauty, function and goodness were all very closely observed in their design and construction. The sustainability of their *ihsan* was secured by the waqf system⁷.

Wasatiyyah and ihsan by Light and Shade

Both *wasatiyyah* and *ihsan* were crucial in the design and implementation of light and shade in Islamic built heritage. Their *wasatiyyah* is seen within the balance of day and night as a manifestation of God's mercy⁸. The balanced integration of light and shade is *ihsan* as it fulfils its three aspects of beauty, function and goodness. During the day, the distribution of light and shade introduces aesthetic quality and climatic improvement as well as human comfort to spaces, both internal and external. This was implemented inside buildings thanks to the *mashrabiyyahs* (Fig. 3) and *qamariyyahs* (Fig. 4) as well as in streets and open spaces in the city, thanks to different shading structures (Fig. 1, 2).



Fig. 3 The aesthetic quality and human comfort in the interior by a mashrabiyyah in an Ottoman house in Cairo. ©Hossam Mahdy

⁷ For the explanation of the waqf system see: Ghazaleh P. (2011). *Held in Trust. Waqf in the Islamic World*. Cairo: AUC Press.

⁸ *The Holy Quran* – English: <https://surahquran.com/English/> accessed on 29.03.2023, (ch.6 v.96).



Fig. 4 The aesthetic quality and human comfort in the interior by qamariyyahs in a traditional house in San'a'. ©Hossam Mahdy

During the night, the controlled infiltration of the moonlight into the interiors of buildings through *mashrabiyyahs* and *qamariyyahs* offered a pleasant ambience, which was complemented by artificial light. Meanwhile, in streets and public spaces, the outward infiltration of indoors' artificial lights through *mashrabiyyahs* and *qamariyyahs* embellished the exterior with a magical atmosphere (Fig. 5) which was complemented by street lighting and above all the moonlight. Besides its aesthetic qualities, light in public spaces at night offered security for passers-by as well as way-finding, which was supported by the lighting of minarets.

Aesthetically, both shade and light play an important role in giving buildings and public spaces pleasing patterns and dynamic vibrancy as they move and change during the day, from day to night and in different annual seasons. Decorative elements on Islamic historic buildings make good use of the play of light and shade, and are often functional as well as decorative. They often have a function. For example, the stalactites (*muqrnasat*) are often used to support projections in facades and for the balconies of minarets; as wood is scarce in hot arid climate, projecting elements were supported by successively projecting rows of stalactites (Fig. 6). Water chutes from the roof and their shade were integrated into the aesthetic composition of a façade. The integration of beauty, function and charity are inspired by and endeavoured to achieve *ihsan*.



Fig. 5 The lighting of *qamariyyahs* from a street in San'a', Yemen. ©Hossam Mahdy



Fig. 6 The play of light and shade by stalactites in the façade of Mahmoud Muharram Mosque, Cairo. ©Hossam Mahdy

Observations on conservation practices in Cairo

Minarets

The symbolic role and meaning of minarets are not taken into account by conservators, architects and town planners. A minaret is the English transliteration of the Arabic word *manarah*, meaning a lighthouse. Egyptian minarets borrowed their essential shape from the famous Pharos Lighthouse⁹, which was located in Alexandria and considered one of the seven wonders of the classical world. Like a lighthouse, a minaret is meant to give light – not to receive it. This role is magnified during Ramadan and other important occasions with extra lighting. Historic minarets had wooden structures on their tops to hang lanterns and small mechanisms to lower a lantern for lighting or extinguishing the light. These could be seen in some of the drawings and paintings by travellers in premodern times. Today we hardly see these wooden structures in restored minarets. The usual practice today is for conservation projects to apply flood light to minarets, which changes their role and symbolic meaning in the city from giving light to receiving light.

The location of the minaret within the plan of a mosque reflects its main function as a landmark to help people finding their way in the city or “enlightening” the passers-by and guiding them through the city. This role is emphasised at night by giving light. The floor plan for the mosque, madrasa and mausoleum of Qalawun on the main thoroughfare in Historic Cairo is an example. The location of the minaret is defined, not in relation to the other parts of the building complex, but to the street and the city so that it forms a focal point in the streetscape for the passers-by (Fig. 7). This is one example. Throughout Historic Cairo minarets perform this function as a focal point.



Fig. 7 The minaret of the Qalawun Complex in a focal point of Al-Mu'iz Street, the main thoroughfare in Historic Cairo. ©Hossam Mahdy

⁹ Behrens-Abouseif D. (2010). *The Minarets of Cairo: Islamic Architecture from the Arab Conquest to the End of the Ottoman Period*. Cairo: AUC Press.

The twin minarets of Mu'ayyad Sheikh Mosque offer an interesting example of the role of the minaret as a landmark. They are constructed on top of the two bastions of the adjacent southern gate of Cairo, Bab Zuwayla, rather than on top of the actual mosque, signifying their role as a landmark for the whole walled city for those approaching it from the south. The wooden structures on top of minarets could be seen in travellers' premodern paintings (Fig. 8). Today, they have disappeared after multiple restoration projects in modern times (Fig. 9). Restorations in modern times were based on an art historical approach that did not capture the symbolic role of the minaret as spreading light, both visually and spiritually by spreading the call to prayers.



Fig. 8 A painting of the twin minarets on top of Bab Zuwayla by Robert Hay, 1840. Source: <https://www.invaluable.com/artist/hay-robot-3dbafia2gr/sold-at-auction-prices/> accessed on 29.03.2023)



Fig. 9 A recent photo of the twin minarets of Bab Zuwayila from the same angle as the painting of Robert Hay in Fig. 8. ©Hossam Mahdy

Shading and the control of light

Shading was created in Cairo's public places by permanent structures. It is also brought to some public places by temporary structures. The advantage of temporary structures is that they can respond to the different times of the day and the different seasons of the year, folding or unfolding the shading material as needed. Shade is also introduced to some public places by narrow streets and alleyways (Fig. 10) and bridges between buildings (*sabats*) and projections (Fig. 11).



Fig. 10 A narrow alleyway in Cairo. Shade is extended by the upper floors projections. ©Hossam Mahdy

Fig. 11 Bridge (*sabat*) between two houses. Anderson Museum, Cairo. ©Hossam Mahdy

The projection of upper floors add space to the interiors and offers shade to the exterior. Projections also permit buildings to follow the street line on the ground floor even if this would not offer a geometrically regular space in the interior. As for upper floors, projections are used to adjust the internal space to form a geometrically regular area regardless of the footprint of the street (Fig. 12).



Fig. 12 Upper floor projection in the façade of an Ottoman house in Cairo. ©Hossam Mahdy

Shade is often totally left out of conservation interventions as they are based on an art historical approach. It is interesting to compare a street scene in Historic Cairo in a 19th century painting (Fig. 13) and the same street in a recent photo (Fig. 14). The major difference in the new scene is the absence of shade, the presence of cars and the less vibrant and enjoyable space for humans.



Fig. 13 Painting by Robert Hay of Bayn al-Qasrain in Cairo, 1840 (source: <https://windsweptwords.com/2011/07/06/the-legend-of-saif-ul-malook-part-i/> accessed on 29.03.2023)



Fig. 14 A recent photo of the same view as the painting of Robert Hay in Fig. 13. ©Hossam Mahdy

In the evenings and nights, streets and public spaces were lit with the aesthetically controlled light coming out of *qamariyyahs* and *mashrabiyyahs*. This effect is not taken into consideration in conservation efforts in Cairo and would be difficult to feel due to the overwhelming modern lighting pollution. But it could be experienced in Yemen (Fig. 5). The impact of the stained glass windows is felt in the streets and public spaces in San'a' and other Yemeni historic cities and towns. The word *Qamareyyah*, is from *Qamar*, the Arabic word for the moon. This is fully understood when one is in the interior at night and the moonlight brings these windows to life. This also makes sense in the exterior when the light from *qamariyyahs* is experienced in public spaces together with the moonlight.

Recommendations

The following are recommendations for a principle pertaining to shade and light that is specific to conservation practices in Islamic historic cities:

- The understanding of light and shade, their meanings, values and significance within their urban and cultural contexts should be carefully and sensitively addressed in urban conservation and revitalization projects.
- *Ihsan*, the Islamic notions of integrated beauty, function and goodness should be included in the significance assessment of the built heritage.
- *Wasatiyyah*, the Islamic notion of observing the middle way and a balance should be included in the significance assessment of the built heritage.

- The dynamic nature of light and shade throughout the day and night and in different seasons of the year should be taken into consideration in understanding the historic environment.
- An art historical approach is not capable of fully understanding and appreciating the significance of light and shade in Islamic historic cities. A holistic approach should be adopted including both tangible and intangible attributes of the built heritage to capture all aspects within their urban, cultural and historic contexts.
- Urban built heritage in Cairo offers many lessons for future on sustainable development. They should be noted and built upon within the management and conservation of the historic urban fabric as well as for new architecture in the same climate and cultural context.
- Guidelines should be developed to integrate light and shade into the study, planning and implementation of urban conservation.
- Some aspects of the significance of light and shade in Cairo could be extended for examination in other Islamic historic cities and maybe beyond.

Conclusion

The meanings and significance of light and shade merit careful study and consideration in the assessment of significance for the built heritage in Cairo and other Islamic historic cities. The balance of light and shade and their function, beauty and goodness are formed by – and fulfil – two important Arab-Islamic notions: *ihsan* and *wasatiyyah*.

Modern conservation practices in Cairo have not been including the culture-specific symbolic meanings and values of light and shade. This paper recommends a change of current practice by introducing a new principle for conservation in Cairo and for consideration in other Islamic historic cities.

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