

Unity and Multiplicity in Islamic Geometric and Calligraphic Expression: A Photographic and Visual Journey of Space in Nusantara Mosques

Nurhaya Baniyamin*¹,
Zumahiran Kamaruddin²,
Rajabi Abdul Razak³

Department of Applied Arts & Design, KAED, International Islamic University Malaysia¹²³

Correspondence regarding this article should be addressed to:
Nurhaya Baniyamin, nurhaya@iiu.edu.my

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Unity And Multiplicity in Islamic Geometric and Calligraphic Expression: A Photographic and Visual Journey of Space in Nusantara Mosques

Nurhaya Baniyamin¹, Zumahiran Kamaruddin², Rajabi Abdul Razak

Department of Applied Arts & Design, KAED, International Islamic University Malaysia^{1, 2, 3}

Abstract. The paper describes how the experience and philosophy of Islamic unity and multiplicity are heightened through a photographic compilation of surface patterning; geometric and calligraphic in Mosques in the region. It then focuses on two mosques to highlight their particular contributions to achieved a contextualisation of such a universal aesthetic design and expression. Both masjid Negara Kuala Lumpur and the Istilal Mosque, Jakarta, represent key innovation, of prayer hall expression and decoration due to the contextualisation, and regionalization of essential geometric patterning, which departs from the usual stereotypical Islamic geometry to embrace and forward a Nusantara identity that resonates with minimalism and modernization in the industrialized world.

Keywords: Islamic calligraphy, Islamic design, sacred space, spiritual space, unity in design

Correspondence author: Nurhaya Baniyamin, nurhaya@iiium.edu.my, Kuala Lumpur, Malaysia



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Introduction

Unity or belief in the Oneness of God is a principle reflected in the architectural legacy of mankind's past and further reflected in the cosmological underpinnings of arts and design. Hence the sense of Oneness has been linked to sacred traditions in architecture particularly in underlying patterns in surface ornamentation. This notion

was implied in the philosophy of the Greeks and was traced in terms of patterns of art in Middle and Central which became discussed as part of the findings in relation to Bakhtiar's seminal book 'The Sense of Unity'. Such notions on Unity became underpinnings and values in philosophy, art, and architecture of the Classical work and became underlying principles and ideas translated into architecture and masterplans during the Classical and Medieval eras. Yet even in modern times, ideas emerging from a consciousness of Oneness has also underpinned the emergence of a certain divergence from the dominant dogmas, in which the idea of Oneness has given rise to patterns, physical forms and even new forms as it frees a designer from the encumbrance of inherited principles.

Unity in the Qur'an

The use of calligraphy is generally linked to the embedment of Islamic messages and lessons into the surfaces of architecture. Yet the impact of calligraphy is more than that, it elicits a feeling of unity and multiplicity in the perception and emotion of the viewer and visitor. The emotion resonates with the Arabic and Quranic word *As Samad* in the chapter called 'Purity' recalls the notion and belief in the fundamental Oneness of God occurs only once in the Quran. Yet it is profound as the Qur'an describes the Creator as a source as a singularity. Allah is *AsSamad*, to which all depend - Sura *Al-ikhlas*.

"*Samad*" is an Arabic word that essentially gives the meaning of 'a primary' cause of everything and refers to an 'eternal independent Being' to which everything existing and we can conceive of, derives its animated life and will one day return to the Essence and the Source. The Quran describes how all are essentially and unequivocally, dependent on Him for its nurturing its continued life and existence The Quran depicts this clearly and attests all creatures, beings, and creation depend on Allah for their existence and continued existence.

Hence on the one level, human beings can continue to exist physically, eat, drink and procreate, however, they need another level of existence, inner peace, fulfillment, and even spiritual nourishment. Hence the term *AsSamad* can also be related to the creative act, as it refers to the fundamental Cause and the End of everything. Existence is due to this act of creation. Like embers or sparks of fire splinting off from the Primary Torch or Urn, souls came from this source or '*AsSamad*' – these souls are like splinters from Allah, the Primary force or Spirit. The earthiness of the human being just like his structures and construction are, base material of the earth which the physical or the physique are made of, this is due to the '*nafs*', or 'base urges' the inner urges to eat, drink and procreate. The soul is, however, the spiritual part the spark of Divinity that allows humanity to recognize beauty, can judge between good and evil, justice and unfairness, can feel hate, sad, happy, depressed, joy, sorrow, jealousy, have hopes and, dreams.

Unity in nature

Nature is myriad and complex, yet mankind has observed that underlying its complexity is an evident principle and origin of growth, The notions of principle and

origin has been linked to the Greek term 'arche' which means and implies to begin to commence to rule and to govern, An arche is thus a beginning or origin, and it is also a rule and ruling principle. Nature, for example, is growth but mankind always asks what is the origin or principle of growth. Greek Philosophy which began around 580 BC had coined the term 'philosophy' which itself came from the Greek word 'philosophia' which meant 'love of wisdom'. The Greeks had used the term in a broad sense to include their discussion an investigation of knowledge of things human and of things Divine. The Presocratics, for example, began investigations of matters and subjects of astronomy, physics, chemistry, zoology, botany, psychology and so on. On the other hand, they had always asked the ultimate questions: did the universe have a beginning, and if so, how did it begin? What are its basic matter "or composition"? What defines the 'nature and the unity of the universe?' hence the Greeks derived the word 'kosmos' which comes from a verb meaning 'to order', to arrange or to marshal. Hence a kosmos is an orderly arrangement. It also has a connotation of being a beautiful arrangement, the word kosmos in ordinary Greek also means 'adornment' (hence the English word 'cosmetic'). The kosmos is the universe and the totality of the orderly world.

Unity and geometry in calligraphic traditions

The Islamic calligraphy is an abstract expression of Islam. It is a beautifully-written sacred text since it deals primarily with Divine words of God. Many religious buildings in Muslim communities, for example, mosques are adorned with decorative features of Islamic calligraphy which are fabricated in specified shapes, sizes and dimensions. Calligraphy is often contrasted with geometry and mathematics and typically has less symmetry and centredness in patterns which is generally linked to the notion of Unity and Oneness as an origin of form, is always linked to the idea of mathematical sciences as the underlying principles that became images of the unassailable truth. The nature and the true structure of the universe, according to the Greeks, has a certain mathematical affinity. The writings of Islamic calligraphy, when combined with geometric abstraction, is not merely conveying a message, but also a representation of 'mizan' the balance between the body and the emotive and spirituality of man.

The Greek philosopher Plato once said that "God ever geometrizes" and similarly the renowned scientist, Galileo Galilei expresses the same principle when he stated: "Nature's great book is written in mathematical language". Kepler, for example, found mathematical patterns in planetary orbits. For centuries, studies of sacred geometry had its roots in the study of nature and natural forms, and within which, mathematical principles were drawn out, formulated, generalised and analysed. Time and time again philosophers and thinkers found consistent laws to reflect the workings of nature. Many forms observed in nature can be related to geometric principles and equations; including the chambered nautilus grows at a constant rate and so its shell forms a logarithmic spiral to accommodate that growth without changing shape. The famous image of honeybees constructing hexagonal cells to hold their honey is an astonishing geometric aspect of the natural world. These correspondences have been linked interpreted in terms of the sacredness of geometry and were considered to be further proof of the link

between nature and geometric forms. Geometry and its principles within mathematics have been found to govern the formation of patterns of the natural world.

The flow of calligraphy though poetic but is at times, seen as seemingly chaotic, but essentially it has its unity and an essential symmetry. In the quantum world of physics, the way very small particles move in fact, is a chaotic yet rhythmic movement. Compared to the relativistic world of the very large, scientists, who first believed in Newtonian physics, have found that the world is based on quantum principle, which has probability, even chaotic and fuzzy movements. While Newtonian physics is generally related to the mechanical and rational view of nature, the world of quantum is essentially more emotive in nature but with fundamental laws reflected in a kind of symmetry. Recent studies can be linked to the simple questions posed by the human being, what essentially lies at the heart of matter and creation. Muslim mathematicians in the development of algebra had incidentally found an 'unknown' number from a few mathematical clues. These ideas, when expanded, developed and extended are fundamental to today's scientific understanding of the universe and its origins.

Methods

Modern Mosques in the Malay world is primarily, a symbol of Islamic architecture of the highest quality and aesthetic value. Islamic art has been constantly infused in Malay regional architecture thru motifs and ornamentation. The three different motifs are namely floral, geometry and calligraphy configured to convey abstract meanings of Islamic teachings to the viewers, embodying the messages of Allah the Almighty or the sayings of the prophets to the congregations.

Mosques in the Malay region is now synonymous with Arabic alphabet characters, verses from the Quran, religious phrase, Islamic quotes, poems and local Arabic writing called *Jawi* were among the common elements depicted as calligraphic decorative components. The usage and application of the various decorative Arabic scripts concerning art and design is part of a study in identifying and describing major Islamic calligraphic themes, styles and scripts. The study analyzes the styles of Islamic calligraphy particularly used in a mosque (interior and exterior settings). Sites surveyed include observation of selected contemporary mosques as well as an interview of experts including imams and mosque management.

Using a compilation of mapping and photographic documentation of calligraphic surface patterning, through documenting a range of mosque in the Klang Valley, the experience of unity and multiplicity, which represents the notion of Tawhid is experienced. The methodology limits itself to documenting surface expression and particularly a more geometric aesthetic of patternings in mosques including calligraphy. The methodology then highlights two contextualized cases of interior patternings, one within the Masjid Negara of Kuala Lumpur and the second with the Istilal Mosque of Jakarta, Indonesia.

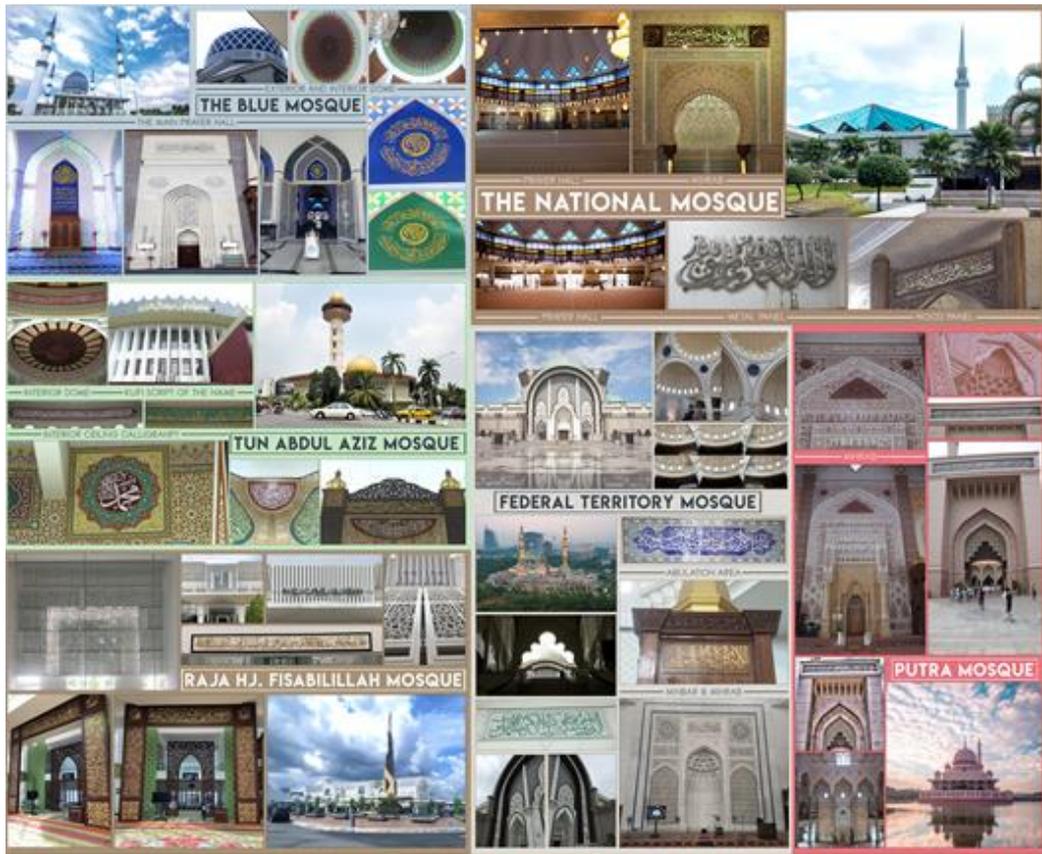


Fig. 1 A photographic journey through local mosques



Fig. 2 and 3 Prayer Hall, Masjid Negara, Kuala Lumpur at different times of the day

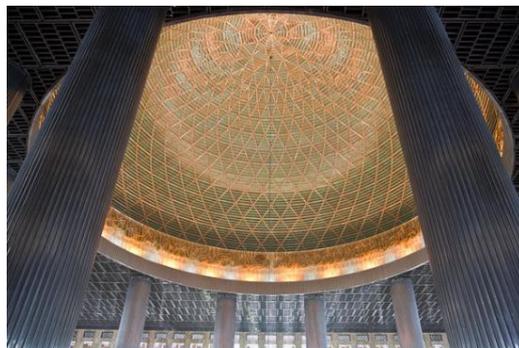




Fig. 3, 4 and 5 The Istiqlal mosque Jakarta, at different times of day and viewpoints

Result and Discussion

It was found that there is a range of combination of calligraphy with other motifs, the traits of scripts in the mosque and their decorative mediums and techniques. The selected mosques reveal different calligraphic decorative component. The results indicated that the aesthetic values, function and appropriate location elevate the mosque in reflecting the superiority of Allah the Almighty.

The usage of calligraphy in the mosques has added spiritual effects on congregation of worshipers in the mosque. It is pleasant to see the Islamic calligraphy with a beautiful shape decorated with the words of Allah surrounding them. For example, The Blue Mosque Islamic calligraphy artworks turn into symphonies of colours and shapes and spiritually inspiring compositions. There are five verses of the Holy Quran written on the Qibla wall by Thuluth styles of the Islamic calligraphy to show the Muslims the monotheism to Allah and the prophet Muhammad his messenger.

Thuluth is the most powerful, luxurious and elegant type of calligraphy. As it is said, thuluth become a requirement for someone to be called " khattaat ", because it is very difficult to learn it. All the verses of the Islamic calligraphy applied on the Qibla wall were written on the white marble and used the blue colour as the letters to make the decoration of the mosque become unique. There is a verse of Quranic scripts which is Surah Al-Baqarah written by the Thuluth Al-jali styles to fill the space of the Qibla wall. This style of Islamic calligraphy placed on the Qibla wall make Muslims focus on the direction of Makkah and al-Masjid al-Haram.

There are many panels of Islamic calligraphy being placed on the main entrance, which surrounds the main prayer hall and the courtyard of the mosque. These panels are only different in colour but the same in terms of the verses and the calligraphy style. The calligrapher insisted to use the exact same verses and style for these panels. This similarity of the panels helps to create a harmony that gives the mosque the unity of forms and content of the aesthetic value of the Islamic calligraphy.

The calligrapher used the Thuluth style of Islamic calligraphy in order to ensure the unification of the panels. In addition, the most are decorated with the Salawat on the top panel that acts as an invocation which Muslims make by saying specific phrases to compliment the Islamic prophet Muhammad and at the bottom of the panel the Dua (prayer), which its meaning indicating the Muslims are seeking forgiveness from the God.

Another example is the Putrajaya mosque. A lot of Islamic Calligraphy scripts can be identified on the mihrab. Thuluth, Nasakh and knotted Kufic. Refer figure 6. The white wall is white marble which absorbs heat and cooling the interior space at the same time. The maroon material or the one used for calligraphy writing is granite combinations. It does make the mimbar looking very rich in design and raised the aesthetic value of Islam.



Fig. 6 The knotted kufic at the mihrab

In the next example, the Raja Haji Fisabilillah Mosque was chosen. The Qur'anic text adorned on the mosque provides the viewer with a message and focus of meditation. The design of the mosque is contemporary modern and incorporates traditional Islamic design elements. It was designed to portray Islam as a progressive religion, as well as to reflect the simplicity and purity of modern Malaysian mosque architecture. Refer figure 7. The design of the mihrab is made of Merbau wood and features decorative of vegetal and calligraphic forms created through the gold-plated plaster. The flower engraving is as references to the lush garden of paradise awaiting the believer. Refer figure 8.



Fig. 7 The entrance



Fig. 8 The mihrab



Fig. 9 The dome

The calligraphic forms are the verses from the Quran written in Thuluth script along with the framing of the panel. The presence of these verses reflects the beliefs and references to the Islamic scriptures as self-protection from the vile things. All these decorative features representing unity, harmony, and a belief in divine order and expansiveness. Raja Haji Fisabilillah Mosque's dome in octagon-shaped with 8 sides is decorated with geometry pattern and calligraphy from the Quranic verses. The calligraphy script written on the qubbah part is Khat Thuluth. Surah Al Zalzalah was chosen to be written on the interior side of qubbah using the common and simplest type of Thuluth. Refer figure 9.

The case study of Masjid Negara Malaysia, also known as a place of a national symbol on worship, faith, and art does reflect the various type of Islamic calligraphy which are Kufi and Thuluth. The calligraphy is mostly portrayed the Quranic verses which reflect on the Muslim's life and their attitude. All of the calligraphy art is written and designed by two famous local calligraphers that had designed calligraphy for many local and Asia country's mosques, namely Muhammad Yusuf Bakar and Sayyed Mahdar Al-Shahab. This Qur'anic verse is written in Thuluth script, decorated on the mihrab of the mosque that is mainly covered with Italian marbles tiles. Refer figure 10.

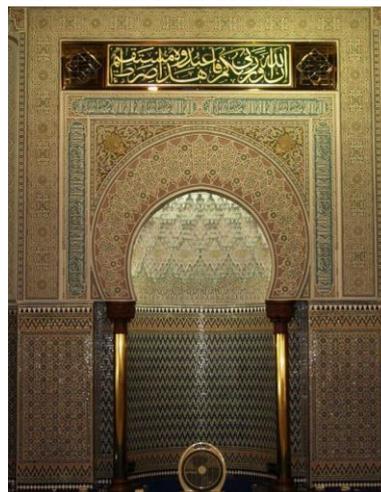


Fig. 10 The National Mosque mihrab

Overall, the various case studies reveal the depth of the relationship between Malay community in Islam and the beauty of the calligraphy in various mediums of expression including plaster, ceramic tiles, woodwork, metalwork, and glass-based products with exclusive plus distinctive features. Further examples can be seen in the mihrab of Masjid Tun Abdul Aziz in Figure 11 and 12.



Fig. 11 Masjid Tun Abdul Aziz mihrab



Fig. 12 geometric and calligraphic patterings

The journey of photographic documentation of modern mosques not only attempted an overview of the combined impact of form, geometric and calligraphic patterings in the spaces of these modern mosques in the Nusantara region, but the impact of light and time across the surface, space and domical shapes. The experience of Unity of God is enhanced through the simultaneous experience of surface and space, in which the design of these spaces afford a different experience of unity and multiplicity. This felt strongly in such a compilation and afford another experience and appreciation of Islamic arts and architecture. Symbolically, the dome is seen as a reflection of the Divine; the integration of domes in spaces reinforces its centric nature and under certain conditions, physical forms are then often linked to the Unity of the Divine. Such forms have been synonymous with the representation of the heavenly realm.

Though the evolution of domes in Islamic architecture has been linked with notions of Unity. Domes were seen as the 'heavenly sphere' surmounted the earthly realm of Islamic architecture. In particular, domes with elicited wonder and spiritual upliftment, through the treatment of its underside with focused patterns including ornamented muqarnas have richly evocative poetic effects where both the dome and the very walls supporting the domes have been extolled as exhibiting the celestial qualities. Hence there is a heavenly association with the dome, at times domes are compared with the rotating dome of heaven, a concept dating back to classical antiquity but still resonating in medieval times. This interpretation is obviously specific to the domes of the Alhambra and can neither be projected backward onto earlier muqarnas domes nor be used to impute an absence of meaning to other domes that cannot sustain such an interpretation.

In Islamic architecture, the centrally configured form, when arranged in a relationship with other elements of space such as geometry and calligraphy have been directly related to the feeling of spirituality aided with reference to the belief in the

Oneness of God. This, for example, can be easily assessed by surveying tourists experience and assessment of a mosque which essentially uses patterns rather than an external form to elicit emotion in their visitors. Based on a survey of the Hasan Mosque in Casablanca the feelings of tourists were compiled. Their responses highlighted the relationship between space, symmetry, calligraphic and geometry is eliciting the feeling of the presence of a higher power and thus, in believers, reinforcing the belief in Unity. These configured patterns and forms range from the typical geometric pattern to calligraphy to a combination of color palettes adorning Islamic interiors. These are argued as reminiscent and reflexive of the Islamic preoccupation with the link between the transcendent and the earthly. These important works link architectural theory to manifestations of the physical, the imagination of form when there is a mention of the word 'Unity'.

Beginning with the Prophet's mosque in Medina, the dome in Islamic architecture, went through a rich history of evolution and enhancement. In 976, the Mosque of Córdoba under the Umayyad Caliph al-Hakam II was built and basically originated a ribbed dome over the mihrab. The Dome of the Rock in Jerusalem finished in 691 under the Umayyad caliph 'Abd al-Malik, originated as a monumental dome on a wooden frame. Later Caliph al-Walid had the Prophet Muhammad's mosque in Madinah reconstructed, where a modest wooden dome was installed over the space in front of the mihrab, to emphasize its spiritual significance. Later the Umayyad caliphs in Syria developed a domed audience hall, known as a qubbat al-khadra' or a "dome of heaven.". By the 12th century, the muqarnas, gave new opportunities and unlocked potentials of decorating interior vaults.

In the 1960s, there was an initial reaction to the impact of modern technology and there emerged architects who wanted a return towards 'first principles'. These were those who represented the departure from the norm and a return to traditional methods and expression. El Wakil, was one such renowned architect whose signature was a consistent approach to create form out of honest methods of construction. Such designs exhibited austerity yet ornamented design features such as bronze chandelier gave a richness, and intricacy to the designs, as these were typically suspended from the dome. While the dome underside itself is understated and of minimalist allusions, its adornments such as chandeliers are the means to highlight again the centrally focused ornamentation to enhanced the dome surface itself. This recalls the singularly restrained emphasis of the dome by his mentor Hasan Fathy in the village mosque, of New Gournia Egypt. The small dome made of whitewashed baked brick rested on articulated squinches, had openings on the octagonal base and in the dome itself created patterns of light and provide ventilation. Fathy's singular aim and focus to keep to the local scale and character.

Conclusions

Basically, the idea of Oneness, or at least a consciousness of it, the 'activating ideal' of design processes in mosque architecture and spatial design. It, to some extent, the intentions and thoughts of the designer become translated into a form which is successful in achieving a degree of 'delight' or 'beauty'. These generative principles cannot be separated from the designer and artists underlying beliefs of Oneness which instilled a clear and consistent position and a sequential structure to the design. Through photography, one's observation becomes more sensitive and one can observe and be sensitized to the extension of the spirit of the architects and designers and how they translate such belief in space and time. In each case, there was a crusade to bring art and values to life and through the technology of the times. Both belief, outlooks, circumstances and intentions collide and collude to produce a piece of art, a design or architecture which are representative of such values and of its era. At the core of the ethos, it is an affirmation of the spirit of creative work, that at a minimum, it must reflect a realisation arising from an awareness of a Higher force, and a contemplation of the universe and at most, an acknowledgement of the Divine. Prophets and messengers are personages of high integrity who are only conveying a timeless message across time and space, thus the message was brought to mankind in various forms and which are designed for various people. Yet a negation is also part of the belief, a negation of other powers which humanity is beholden to, other than its Creator. It is a rallying cry of freedom, a simple, yet powerful in its effect. Its power lies in its potency and its ability to initiate a different path, to sow the seed of bravery which swells into a depth of courage to thread of a different path, and to challenge the conventions and expectations of the mainstream.

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References

- Al-Attas, Syed Muhammad Naquib. *The Concept of Education in Islam. A Framework for an Islamic Philosophy of Education*. Kuala Lumpur. International Institute of Islamic Thought and Civilisation. International Islamic University Malaysia, 1991.
- Al-Qardawi, Yusuf. *Diversion and Art in Islam*. Egypt: Islamic Inc, 1998.

- Amorim, Luiz, and Claudia Loureiro. "The space of architecture and a new conservation agenda." *City & Time*, Vol. 2, No. 3, 2007, pp. 1-10, <http://www.ct.ceci-br.org/novo/revista/viewarticle.php?id=68&layout=abstract>.
- Barrucand, Marianne and Achim Bednorz. *Moorish Architecture in Andalusia*. First Edition. Taschen Publishers, 1992.
- Caroline Swinehart , Abdel Wahed El Wakil vs. Yale School of Architecture, Posted on 23 1 2011 in <http://www.archmaher.com/index.php/blog/30-yale>
- Curtis, William JR. *Modern architecture since 1900*. Phaidon Press, 1996
- Etlin, Richards A. *Frank Lloyd Wright and Le Corbusier, The Romantic Legacy*. Manchester University Press, 1994.
- Fathy, Hasan. *Architecture for the poor: an experiment in rural Egypt*. University of Chicago Press, 2000.
- Harries, Karsten. *An Ethical Function of Architecture, third printing, First paperback edition 1998*. Massachusetts Institute of Technology, 2000.
- Hassan, Mohd Kamal. "The Need to Return to The Qur'anic Paradigm." <http://www.ricoi.org/articles/islam-a-science/111-the-need-to-return-to-the-quranic-paradigm>. accessed 11 May 2019.
- Jencks, Charles, and Karl Kropf, eds. *Theories and manifestoes of contemporary architecture*. Vol. 312. Chichester: Academy Editions, 1997.
- Morrison, Madison. "Pattern as Cosmology in Islamic Geometric Art." <http://www.madisonmorrison.com/topics/pattern-as-cosmology-in-islamic-geometric-art/pattern-1.html>
- Nesbitt, Kate. *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995*. Princeton Architectural Press, 1996.
- Ockman, Jane. "Towards a Normative Architecture." *Architecture of the Everyday*, edited by Steven Harris and Deborah Berke, Princeton Architectural Press, 1997.
- Scully, Frank Lloyd Wright. *Masters of World Architecture*. New York: George Braziller, 1960.
- Smith, Korydon. *Introducing architectural theory: debating a discipline*. Routledge, 2013.
- Zen, Ismawi, Shireen Jahn Kassim and Norwina Mohd Nawawi, (Eds). *An Anthology of Essays in Integrating Islamic Values in the Theory and Practice of Architecture and the Built Environment*. IIUM Press, 2009.
- Zen, Ismawi. *Relevance of Tawhidic Paradigm to Environmental Design*. IIUM Press. 2002.