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GEOMETRIC PATTERNS WINDOWS AND DOORS MASJID JAMEK SULTAN ABDUL SAMAD KUALA LUMPUR

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ABSTRACT

The growth of Islamic visual arts in Malaysia has been strongly influenced by Islamic culture. A few visual arts elements have been produced in accordance with Islamic art guidelines. The mosque's architectural style highlights three characteristics of Islamic art: calligraphy, arabesques, and geometric patterns. There are advantages to everything. The study focuses on the application of Islamic geometric patterns that are visible in the mosques at Masjid Jamek Abdul Samad in Kuala Lumpur. Islamic geometric is used as a mark of identity in the decorative window and door. Observation and case studies are the qualitative methods used in this study to gather data. Every mosque features a minaret, pulpit, and an archway in addition to these three components. The findings showed that the geometric designs of Islamic mosques differ in each state of Malaysia. This is since certain state mosques in Malaysia do not give the mosque's Islamic architectural component a high priority.

Keywords: *Islamic, geometric, pattern, symbolize,*

INTRODUCTION

The history of Islamic art begins with the emergence of Islam in the 7th century CE when the Prophet Muhammad received revelations from Allah. The tenets of Islam, encapsulated in the Quran and the Hadith (the sayings of the Prophet), laid the foundation for a distinct visual language that would evolve over time. One of the earliest challenges faced by Islamic artists was the prohibition of depicting living beings, particularly in religious contexts. This prohibition led to the development of alternative forms of artistic expression, such as intricate patterns, calligraphy, and architectural marvels. According to Broug, E. (2013) Islamic geometric art finds its origins in the early Islamic period, particularly during the Umayyad and Abbasid caliphates (7th to 10th centuries).

Islamic architecture is rooted in Islamic teachings, values, and ideals. In Malaysia, Islamic architecture for commercial buildings and mosques draws inspiration from countries such as Turkey, Arabia, Persia, India, and China (Yusof et al., 2014). Islamic art in the Southeast Asian context challenges the assertion of the unity and universality of Islamic art (Fina, 2018). The combination of Islamic architectural influences with other styles has resulted in unique buildings in Malaysia. Study Abdullah et al., (2021) mentions that since ancient times, Malay and Islamic arts have been expressions of people's devotion to Allah's creation.

Architectural elements were intentionally designed to both facilitate and express respect for Malay culture (Nasir A. H., & Wan Teh, W. H. (1994); Jenkins, W. (2010). The design structure and ornamentation serve as symbols of a community's elevated social status (Norhaiza, M., 2009). Prominent decorative elements can be found in the palaces and homes of affluent Malays (Zuhamiran & Ismail, 2008).

LITERATURE REVIEW

The focus of this study is on Islamic geometric patterns. According to Che Mat, A. A., et al., (2019), Islamic geometric patterns emerge through repetition and illusion, creating symmetry and two-dimensionality to form patterns. The intention of the repeated pattern is to cover as much space as possible. As highlighted in Dabbour, L. M. (2012), geometry is applied in Islamic culture as a universal language and is a significant multicultural symbol in design. Islamic art is also closely related.

In a study by Cromwell (2021), the model of local symmetry centers predicts that stars with odd or even numbered positions in the pattern have the most impactful effect on geometric patterns. Islamic geometric patterns have been used as decorative elements on walls, ceilings, windows, doors, and minaret mosques (Abdullahi & Embi, 2013). The use of geometric patterns for decoration is common in commercial buildings, symbolizing Islamic art in Malaysia. Figure 1 depicts the basic

shape known as "Khatem Sulemani," meaning Solomon's seal (Abas & Salman, 1995). Few studies cailigraphy in quranic verses, has executed the cailigraphy found in many different forms of art and architecture (Osim, 2021)

Patterns primarily consisting of hexagonal, or hexagram parts are categorized as 6-point geometrical patterns; a star is referred to as a 6-point star (Fig. 2). Patterns with 8, 10, 12, and more points are categorized accordingly. As shown in Figure 2, at a certain level, the sides of the two neighboring rays of the 6-point star start to parallelize or diverge, resulting in a distorted hexagon (resembling the petals of a rosette). Intriguingly, the development of Islamic Geometric Patterns follows a complex construction path, where polygons are built from the simplest shape (hexagon) to more intricate polygons and stars.

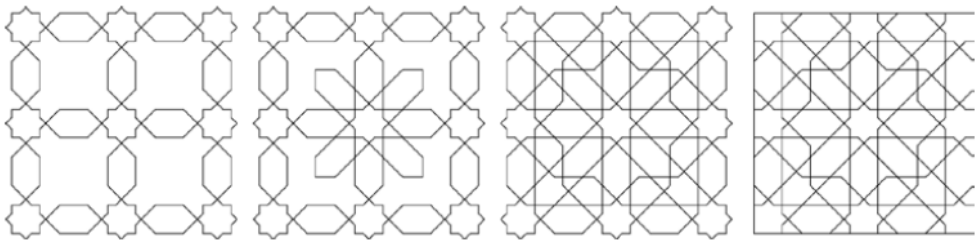

Figure 1: Khatem Sulemani meaning Solomon's seal (Abas & Salman, 1995)

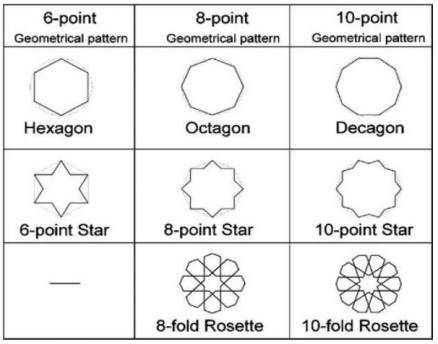

Figure 2: Geometric concept in Islamic art
(Source Source: Abdullahi & Embi, 2013)

METHODOLOGY

This study approach method observation and case study building Masjid Jamek Abdul Samad Kuala Lumpur. The observation to define the element pattern geometrical of building Masjid Jamek Abdul. Case study to show the physical of building type of window and door decorative geometric pattern have been apply at all window and door.Generally case studies of Masjid Jamek Abdul Samad is at the

confluence of the Klang and Gombak river, with main access to the mosque from Jalan Tun Perak. This mosque was designed by Arthur Benison Huack and built-in 1909 open this building. The Architecture styles Islamic architecture, Mughal architecture, Moorish architecture and colonial architecture. The capacity for prayer in this mosque is around 1,000 worshipers/congregation.

Figure 3 show the oldest floor plan of Masjid Jamek Abdul Samad three space inside this mosque praying area, a praying hall and ladies' praying area, two entrance and one mihrab. Figure 4 shows the latest photo side view of Masjid Jamek Abdul Samad Kuala Lumpur. Collection data to define geometric patterns at window and door. This building mosque Masjid Jamek Abdul Samad has 23 opening windows surrounding the prayer hall and ladies' prayer hall.

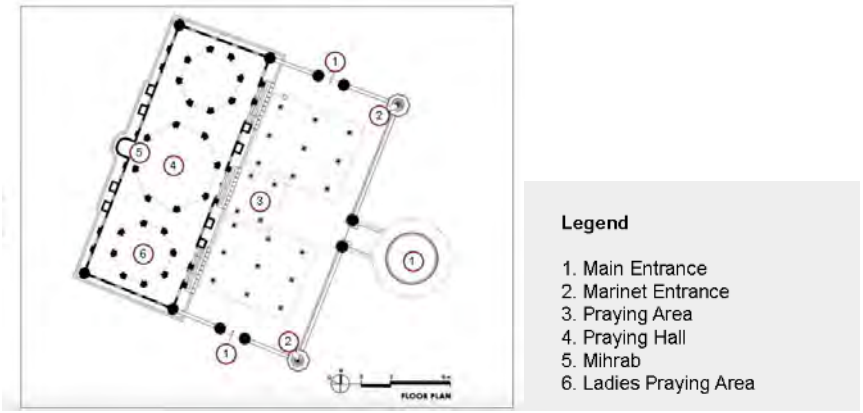

Figure 3: The first-floor plan of Masjid Jamek (oldest one)
(Source Google https://belimkony.files.wordpress.com/2013/12/6.jpg)

Figure 4: Masjid Jamek Abdul Samad Kuala Lumpur 2022

To define the geometric patterns, present in the architecture of Masjid Jamek Abdul Samad, the observation method was employed. This method seeks to identify and classify geometric patterns through the observation of shapes and the interpretation

of objects, focusing on geometric criteria, as highlighted in a study (Maria Amerigo, 1997).

FINDING AND DISCUSSION

The findings from the observation indicate the significance of the building's orientation in relation to lighting effects on windows and doors, enhancing the decorative beauty of light reflections within the mosque. The western orientation of the building aligns with the confluence of the Klang and Gombak rivers. The interior of the building remains shaded and cool, as the prayer area is situated before the entrance to the prayer hall, allowing ample airflow from north and south through numerous open windows.

The Geometric Patterns Used in the Building

The geometric patterns utilized in Masjid Jamek Abdul Samad encompass a 6-point hexagon and a 6-point star, as well as an 8-point octagon and an 8-point star. The windows, designed as center-pivot types, are adorned with decorative geometric patterns, featuring both the 6-point hexagon and the 6-point star refer fig. 4. This amalgamation of patterns embodies a simple yet profound expression of Islamic art. Notably, the upper door embellishments showcase a distinctive geometric motif, employing an 8-point octagon and an 8-point star, complemented by an 8-fold rosette decoration that highlights exceptional craftsmanship refer fig. 4. The mosque's ornamental motif centers around two primary geometric patterns: the 6-point and 8-point designs. The selection of these patterns is rooted in design aesthetics, with an emphasis on simplicity rather than intricacy.

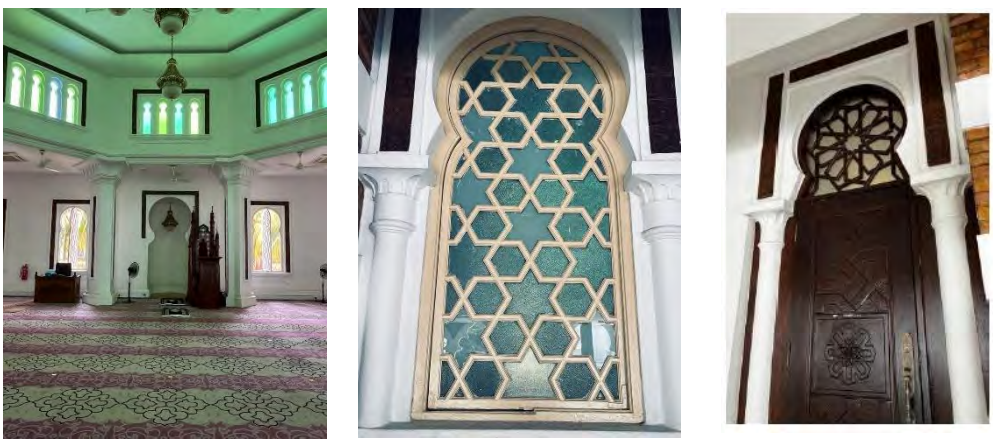

Figure 5: Center Pivot Window and entrance door to the prayer hall

CONCLUSION

This study highlights the Islamic art patterns within Masjid Jamek Abdul Samad, which stem from basic geometric shapes. These shapes evolve into intricate designs, such as the 6-point star and octagon, eventually giving rise to the 8-point star and the 8-fold rosette pattern. The history of Masjid Jamek Abdul Samad's construction demonstrates a combination of architectural styles, with Islamic art's influence being particularly prominent. The building, erected in 1909, resonates with the architectural preferences of its era, opting for elegantly simple geometric patterns. In Malaysia, Islamic geometric patterns encapsulate not only aesthetic beauty but also cultural depth and spiritual significance. Beyond being decorative elements, these patterns represent the synthesis of Islamic principles with the nation's diverse cultural fabric, evident in their presence on mosques, palaces, and heritage sites. These patterns contribute significantly to Malaysia's cultural identity, fostering unity and a strong connection to tradition, faith, and aesthetics. Additionally, these patterns hold economic potential by attracting tourists interested in exploring Malaysia's architectural treasures, reaffirming their relevance in both historical preservation and contemporary artistic expression.

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