

The Synchronization of Hindu Buddhist Spatial and Architecture in Traditional Javanese Mosques

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Abstract

The architecture and space in traditional Javanese mosques are synchronized with previous religions and cultures. Islamization takes the form of synchronization, acculturation, syncretism, adaptation and adoption by Traditional Javanese Mosques of animistic beliefs, dynamism, Hindu Buddhism, and Javanese culture. This research is unique because it compares traditional Javanese mosques with Hindu Buddhist buildings in the form of temples. This research aims to examine the synchronization of animism, dynamism, Hinduism, Buddhism, and Javanese towards the architecture and space of traditional Javanese mosques in three elements. The first element is spatial systems such as land use and vegetation. The second element is the physical system which includes building form and massing, roof, and gate. The last element is the stylistic system, especially for outdoor ornaments. The research method used compares Hindu Buddhist buildings and artifacts in Indonesia and traditional Javanese mosques. The conclusions are there are a synchronization of spatial elements in vegetation, synchronizations of physical elements in roofs and gates, and synchronizations of stylistic elements in the gate ornaments synchronized from Kala to floral motifs.

Keywords: *islamization; mosque; space; vernacular architecture*

Introduction

Before Islam entered Indonesia, people believed in animism, dynamism, and Hindu-Buddhist religion. Dalimunthe (2016) has stated that Islam entered Indonesia peacefully, accompanied by a spirit of tolerance and mutual respect between propagators and followers of the new religion and followers of the old religion (Hindu-Buddhist). The Hindu Kingdom and the Buddhist Kingdom have existed and developed in Indonesia since 400 AD, and Islam entered in Indonesia in 840 AD by

traders from Arabia, India, Persia, and China. Then, the first Islamic Kingdom entered in 840-1292 AD, namely the Perlak Kingdom in Aceh, North Sumatra. The emergence of the Perlak Kingdom in North Sumatra then had an impact on the massive spread of Islam to the islands of Java, Kalimantan, Sulawesi, Nusa Tenggara, and Papua, as well as small islands in the territory of Indonesia (Amarseto, 2015).

The spread of Islam, or the process of Islamization in Java, is the main focus of this research. The spread of Islam on Java Island is inseparable from Wali Songo's role (9 saints). The Wali Songo lived in several important areas around the north coast of Java. The method of spreading Islam carried out by The Wali Songo

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adjusts to regional and community conditions so that the community accepts the delivery of Islam. Wali Songo spreads Islam on Java Island by incorporating an Islamic view of life and guidelines to local traditions and customs. The Wali Songo spread Islam does not Indonesianize the values of monotheism (Tauhid) and Islamic law but incorporates Islamic values into the traditions and customs of Indonesian society. In this way, Islam can be quickly and easily accepted by the people of Indonesia.

The Wali Songo's way of Islamization was through art and culture, education, architecture, and law. According to De Graaf & Pigeaud (1985), The Wali Songos spread Islam through art, fairy tales, legends, architecture, education, and politic to make it easier for Javanese people to accept Islam. Islamization in Indonesia is proceeding peacefully through trade, marriage, education, Sufism, politics, and arts and culture (Permatasari & Hudaidah, 2021). One of the impacts of Islamization by Wali Songo is visible in the architecture of Javanese Islamic buildings such as palaces, mosques, and tombs.

The architectural characteristics of Javanese mosques can be identified using Habraken's theory by reviewing the aspects of the physical, spatial, and stylistic systems. The physical system aspect most easily recognized from the Javanese mosque is the form and mass building. The spatial system on the scale of the mosque area can be seen from the Javanese mosque building settings. The setting for the Javanese mosque is divided into three zones: the courtyard, the mosque building, and the tomb. The stylistic system aspect can be identified through the ornamentation of the building elements (Habraken, 1978). The conclusion that can be drawn from Habraken's theory is that the physical, spatial, and stylistic systems of traditional Javanese mosques are greatly influenced by the beliefs, religions, and cultures in Javanese society.

This research questions are: how is Wali Songo's Islamization (in the form of synchronization) in relation to space and architecture in the traditional Javanese mosques? And what is the character of

traditional Javanese mosques, which have an Islamic character from the beginning of Islam, by comparing them with Hindu Buddhist temples in Java.

This research aims to examine the synchronization of animism, dynamism, Hinduism-Buddhism, and Javanese towards the architecture and space of traditional Javanese mosques in three elements. The first element is a spatial system such as land use pattern, city pattern, circulation, landscape, vegetation, activity, and ritual. The second element is physical system such as building form, massing and building orientation. The last element is stylistic sytem, especially for outdoor ornaments. This research can contribute to the novelty on how space and architecture in Javanese mosques have shifted to Islam since the beginning and how the Javanese mosque is an Islamic character from the beginning.

Literature Review

1. Islamization in Indonesia

Islamization in Indonesia consists of several theories: Gujarat, Arabic, Persian, and China. The opinion regarding the entry of Islam from the Gujarat Theory is due to the encryption related to Islam found in Sumatra, which provides an outline of the connection between Sumatra and Gujarat. W. F. Stutterheim revealed that Islam's journey to Indonesia began in Gujarat in the 13th century AD. This is confirmed by the tombstones of the main rulers of the Samudra Kingdom, especially Malik Al-Saleh, who died in 1297 AD (Mubarak, 2021).

Arabic theory reveals that the emergence of Islam in Indonesia came directly from Mecca, which occurred around the 7th century AD. The Strait of Malacca at that time was busy with Arab traders. They are Muslims, and in the process, they not only trade, especially spices, but they also spread religious teachings. One piece of evidence is that in Barus, South Tapanuli, a tomb was found bearing the letters

ha' and mim' with Arabic numerals in 670 AD (Mursan, 2018).

The Persian theory was initiated by P. A. Hoesin Djajadiningrat, who stated that there was a similar culture between Indonesian and Persian Muslim groups. Evidence of Islamization in the Persian theory is the use of Persian to spell Arabic letters and harakat (the symbols to pronounce Arabic letters) sound signs in recitation (Rumahuru, 2018).

The Chinese theory regarding the arrival of Islam in Indonesia is characterized by Chinese traders who spread Islamic teachings and Chinese culture in Islamic artifacts and architecture in Indonesia. It was found that there is a lot of Chinese culture found in Islamic culture in Indonesia (Amin, 2018).

Based on (Suryo, 2000), Islamization in Java has also fostered a large Javanese-Islamic palace tradition, which has made both the *santri* tradition and the palace tradition a part (subculture) that cannot be separated from Javanese culture. Suryo concluded that Islamization creates socio-cultural life in society, namely *santri*. *Santri* is a religious student or a group of Muslims who carry out their religious worship by the true teachings of Islamic law.

Different things were stated by Geertz (1976) that Islamization has created the same variant of socio-cultural, namely *santri*, *abangan* (people who follow only some of the precepts of Islam and the *abangan* adheres to numerous religious practices that are arguably non-Islamic based on (Boogert, 2015) and *priyayi* (a group of people who have a life orientation in the Hindu-Javanese aristocratic tradition. Meanwhile, Kuntowijoyo in Mughits (2004) argues that Islamization has created socio-cultural variants, namely *santri*, *abangan*, *priyayi*, and *wong cilik* (an underprivileged people).

The mosque is an important part of the manifestation of the king's power in the religious realm. The existence of mosques in

Java cannot be separated from the existence of palaces, markets, and squares, as stated in Aryanti (2013) that architecturally, the mosque is situated in a traditional Javanese spatial constellation borrowed from Hindu-Buddhist traditions that position the palace as the center of power. Mark Woodward in Aryanti (2013) interprets the city square as the symbol of mystical knowledge and the infinity of Allah. The marketplace at the north of the city square as the symbol of people's prosperity, and the mosque at the west of the city square as representing spiritual relations with God. This spatial grouping sits on an imaginary axis that connects Mount Merapi at the north and the South Sea at the south of Yogyakarta as sources of mystical power and passes through the linear path, comprising a series of gates and passages inside the palace. Thus, the mosque's existence in this constellation is pivotal in supporting the sultanate's palace as the Javanese center of power.

From the initial information that has been carried out regarding the process of Islamization, the process of forming an Islamic empire, it can be concluded that the manifestation of Islamization in architecture and space is embodied in various building typologies, one of which is a mosque. Therefore, further research is needed to answer the research objectives and hypothesis regarding the new meaning of Islam to differentiate Hindu-Buddhist in the spatial layout of mosques in Java from the aspects of spatial elements, physical elements, and stylistic elements.

2. Hindu-Buddhist Architectural Character

The temple was one of the most massive Hindu Buddhist buildings built during the Hindu Buddhist Kingdom. Some temples in Java that still stand strong are Prambanan Temple (Klaten), Borobudur Temple (Magelang), Kalasan Temple (Sleman), Suku Temple (Karanganyar), Cetho Temple (Karanganyar), Jawi Temple (Pasuruan), Kidal Temple (Malang), Panataran Temple (Blitar), Singosari

Temple (Blitar), and Candi Jago (Malang).

The temple in Hindu-Buddhist cosmology is a symbol of Mount Meru. The expression of a towering mountain is interpreted as holding the earth and sky. The cosmos environment is indicated by courtyard design arranged in tiers and centrally with the central courtyard at the highest point, the temple as a symbol of Mount Meru is located in the middle as the center of the world. People at that time built temples hoping to live as close as possible to the center and be able to communicate with the transcendental world (Stutterheim, 1931., Eliade, 1957., Soediman, 1985., Wirasanti, 2015). *Meru* roof is found in large temples in Bali with its characteristic high-overlapping roof (the roof reaches 10 m or more), the number of roofs is always odd (1, 3, 5, 7, 9, 11), and only one roof overlaps 2 (Dwijendra, 2008). Therefore the *Meru* roof is a typical roof found in Hindu Buddhist temples with the meaning of the cosmos attached to it.

From the land use aspect, the temple was built on a plateau. This is related to the ancestral belief that a high place is a holy place where God and ancestral spirits reside. Some temples function not only as places of worship for gods but also as places of glorifying a king. From the building form and massing, the temple consists of three parts, namely the feet, body, and head, all three symbols of the universe (Zuraidah, 2020).

The various temples during the Hindu Buddhist era were the *Candi Bentar*, *Kori Agung*, and *Paduraksa*. *Candi Bentar* is the entrance to a complex that is located in the third outermost group to get to the main sacred building. In fact, there are still two entrances that must be passed through, namely *Paduraksa* and *Kori Agung*. *Paduraksa* and *Kori Agung* is a roofed gate that existed in the 8th century AD (Muyasyaroh, 2015).

According to Suwaryadi (1987), temple decorations can be geometric decorations in

the form of lines, human motifs, animal motifs, and plant motifs (lotus flowers, palm trees, etc.), and inanimate object motifs (jars, chakras, and clouds, etc.).

3. Islamic Architecture

According to Utaberta (2006), the Islamic architectural approach is to look into the value system in Islam and then implement it in building design.

Islamic architecture is one of the categories of architecture that exists in the worldwide with Islamic principles. Islamic architecture includes religious buildings and non-religious buildings including mosques, forts, palaces, tombs, schools, fountains, and public baths. The main characteristics of Islamic architecture include forms such as towers, domes, muqarnas, and arches. Decorative elements such as colorful mosaic tiles, Arabic calligraphy, and wooden window frames are typical elements of Islamic architecture. Outdoor features include gardens, walled courtyards, and open halls with roofs supported by pillars.

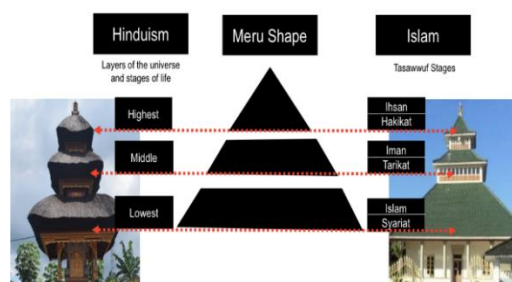
4. Synchronization of Javanese Hindu-Buddhist in Traditional Javanese Mosques

The dome's absence is marked as the main characteristic of traditional Javanese mosques. The traditional Javanese buildings and traditional Javanese mosques are characterized by a terraced or multi-tiered roof (*meru*). The traditional Javanese buildings have Joglo roof. Ancient/ traditional Indonesian mosques have 1 roof, 2 multi-tiered roof until 5 multi-tiered roofs. The roof of a traditional Javanese mosque is a form of synchronization (syncretism, acculturation, adaptation, and adoption) process of a Hindu worship building roof called the *Meru* roof.

The multi-tiered roofs on the temple reliefs in the Majapahit era illustrate its presence in the sacred building complex. Many traditional mosques in Java also have multi-tiered roofs, especially three-tiered roofs (*Tajug Tumpang* roof), as proof of their continuity and

synchronization (syncretism, acculturation, adaptation, and adoption) across time. The realization of the roof of a traditional Javanese mosque in the form of a three-tiered roof (*Tajug Tumpang* roof) is the result of a process of synchronization and continuity over time and objects from the heritage of the Hindu Buddhist Kingdom and Javanese culture (*Kejawen*). Islamization on the roof of the traditional Javanese Mosque can be seen in Figure 1.

Figure 1. Islamization on Roof Types of Traditional Javanese Mosque
Source: Author, 2023



The Demak Mosque (1466) was the first Islamic Kingdom Mosque in Java, which adapted the original building customs to the needs of Muslims it was built by the first King of the Demak sultanate (Raden Patah) together with the *Wali Songo* (Sunan Kalijaga, Sunan Bonang, Sunan Gunung Jati, and Sunan Ampel). According to the massive building's previous local tradition, the Demak Mosque was built similarly to Balinese *Wantilan* (typical Balinese pavilion), which incorporates an inclined-elevated roof supported by wooden posts and beams. A three-level pyramidal roof (three-tiered roof) covers the main prayer building, supported by the four high wooden columns called the *Saka Guru* (main pillars) in the center. These main pillars were such inventions since they had never been applied before, neither in the Balinese *Wantilan* nor in the *Pagoda* (typical Chinese Temple) like Balinese temple (Idham, 2021).

Continuing in 1549, The Menara Kudus Mosque was built 80 years after Demak, and there is a tower adapted from a Hindu temple like in the Hindu Balinese temple and

Javanese Majapahit temple to a new function as a drum tower to announce prayer times. Although the tower is similar to the Javanese Majapahit temple in eastern Java or *Bale Kul Kul* as the Hindu Balinese temple's bell tower, the drum itself was a new tool discovered by Javanese Muslims, neither used in the Javanese *Kejawen* nor Hindu-Buddhism (Idham, 2021).

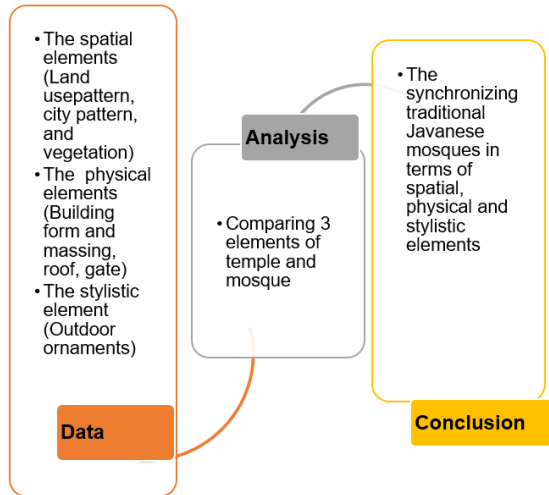
Methodology

The research method used is a comparative descriptive method between Islamic and Hindu-Buddhist buildings in Java. This research took three selected cases. The first case is the Suku Temple in Karanganyar, Central Java, which is a case of a Hindu building. Suku Temple was chosen as a case because it is the last Hindu royal temple in Java, so it represents Javanese Hindu temples. The second case is Uluwatu Temple. The Uluwatu Temple was chosen as a case because it represents a Balinese Hindu temple still standing and functioning.

The third case is the Kauman Great Mosque in Yogyakarta. The Great Kauman Mosque in Yogyakarta was chosen as a case because it represents a Javanese mosque that, during its construction, was influenced by *Wali Songo*, especially Sunan Kalijaga. Then the last case is the Menara Kudus Mosque. The Menara Kudus Mosque was chosen as a case because Sunan Kudus built the Menara Kudus Mosque with Hindu-Buddhist acculturation. The selected cases were observed in the period 2022 to 2024.

The research parameters consist of three elements. The first is the spatial elements (land use pattern, city pattern, and vegetation). The second is the physical elements (building form and massing, roof, and gate). The third is stylistic elements (outdoor ornaments). The process of this research can be seen in Figure 2 below.

Figure 2. The Process of Research
Source: Author, 2024



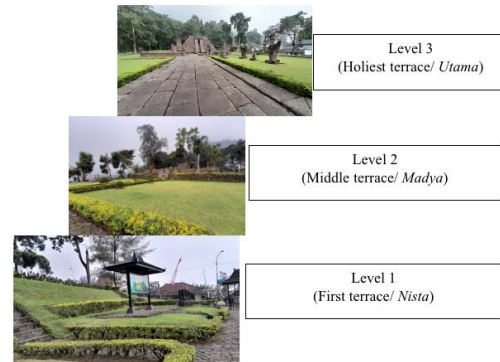
Result and Discussion

1. The Suku Temple

Suku Temple was founded in the 15th century AD and is located on the plateau of Lawu Mountain. This condition is in line with Zuraidah's theory (2020) that the temple was built on a plateau.

The temple complex faces west with a courtyard. In line with the theory of Wirasanti (2015), namely the cosmos environment is shown by the design of the courtyard, which is arranged in tiers and centrally with the central courtyard at the highest point, the courtyard of the Suku temple has three terraces (Figure 3). The three terraces have connotative meaning as the level towards perfection. The yard pattern is a symbol of eternity or perfection realized through religious ceremonies, namely as a means to elevate one's degree to a more holy level.

Figure 3. The Land use of Suku Temple.
Source: Saringendyanti, 2008 with author modification, 2024



Suku Temple, with a trapezoidal main temple (Figure 4), is the only one found in Indonesia. The main building is in the form of a trapezoid with a base of 15 m² and a height of up to 6 m. In the middle of the west side of the building is a narrow and steep staircase leading up to the roof.

Figure 4. Trapezoidal Form and Massing of Suku Temple
Source: Author, 2023



The stylistic element system of Suku Temple is outdoor ornaments. The outdoor ornaments in Suku Temple are in the form of animals such as turtle, elephant (Figure 6), buffalo, bird and snake. The types of plants in the reliefs of Suku Temple are coconut trees, *pinang* trees, *kepoh* trees, *randu* trees, *kalpataru* trees, and banyan trees. The plant relief of Suku Temple can be seen in Figure 5.

Figure 5. The Palm, Kepuh, and Randu Trees on the Suku Temple Relief
Source: Author, 2023



Figure 6. Animal Ornaments of Suku Temple
Source: Author, 2023



In line with Suwaryadi's theory (1987), temple decoration can consist of geometric motifs, human motifs, animal motifs, plant motifs, or inanimate object motifs. The motifs in Suku temples are animal, human, and plant motifs.

2. The Balinese Temple

Uluwatu Temple is located in the Pecatu Traditional Village, South Kuta District, Badung Regency. Hindu believe Uluwatu Temple to be the support of the nine cardinal points where the *Nawadewata* (Nine Gods) are the nine rulers in each direction of the cardinal points in the concept of Hindu religion in Bali. Uluwatu Temple is located on a high place next to Pecatu Beach. In front of the temple, there is a small forest called *Alas Kekeran*, which functions as a buffer for the temple's sanctity. This condition is in line with Zuraidah's theory (2020), which states that the temple was built on a *plateau* (high place).

The Uluwatu Temple section consists of three courtyards: the outer courtyard (*jaba sisi*), the

middle courtyard (*jaba tengah*), and the main courtyard (*jeroan*). In line with Wirasanti's theory (2015) that the courtyard is arranged in tiers, the Uluwatu Temple is also arranged in three terraces.

The roof of the Uluwatu Main Temple is *Meru* and it has 11 roofs. Another Uluwatu temple has 1 *Meru* roof and 3 *Meru* roofs. In line with Dwijendra's theory (2008), the number of *Meru* roof is always odd (1, 3, 5, 7, 9, 11), and only one roof overlaps 2. The following is a picture of the *Meru* roof at Uluwatu Temple (Figure 7).

Figure 7. Uluwatu Temple and its Roof
Source: Swiss-bel Resort Pecatu-Bali, 2024



Candi Bentar gate in Uluwatu temple, in accordance with Muyasyaroh's theory (2015), the various temples during the Hindu Buddhist era were the *Candi Bentar*, *Kori Agung* or *Paduraksa*. Based on documentation in the field, the entrance is in the form of *Candi Bentar* Gate and is made of stone. In front of it there is a pair of statues in the form of a human with an elephant head in a standing position. The front wall of the gate is decorated with very fine carvings with leaf and flower motifs.

Figure 8. *Paduraksa* Gate of Uluwatu Temple
Source: Author, 2024



To the west of the courtyard is a *Paduraksa* gate (Figure 8) which is the entrance to a deeper courtyard. The shape of the *Paduraksa* gate is a gate with a roof made of stone. *Paduraksa* gate in Uluwatu temple, in accordance with Muyasyaroh's theory (2015). The doorway is arched and framed by stonework, and above the threshold is a sculpture of a giant head (*Kala*). The top of the gate is shaped like a crown and is decorated with various carved leaf and flower motifs.

3. The Kauman Great Mosque, Yogyakarta

The Kauman Mosque was founded in 1773 AD. The Kauman Great Mosque was founded on the initiative of Sri Sultan Hamengku Buwono I and Kiai Fakhri Ibrahim Diponegoro as the head of the palace. The design was done by Kiai Wiryokusumo (Yogyakarta City Tourism Agency, 2019).

The land use of the Great Kauman Mosque (Figure 9) in Yogyakarta consists of mosque (buildings for worship), library (symbol of place for studying), *Pajagan* (symbol of security or military), office, cemetery (symbol of remembering death), and *Pagongan*. *Pagongan* is a Javanese traditional musical instrument place and as a symbol of art place. The concept of Kauman mosque land use is in line with Wahid's theory (2019). According to Wahid et.al (2019), the role of the mosque is not only as a religious center, but also covers the aspects of teaching and learning of Islam. Further, the mosque was developed into an Islamic educational center or educational institution. The uniqueness of land use of the Kauman Great Mosque is the existence of buildings called *Pagongan Lor* and *Pagongan Kidul*, which function as a place for playing traditional Javanese musical instruments (*Gamelan*) during the celebration of the Prophet Muhammad's birthday (*Muludan*) and the celebration of 1 Shawwal (*Grebeg Syawal*) as a form of synchronization of Javanese culture Hinduism, Buddhism, and Islam.

The gate at the Kauman Great Mosque is *Gapura Semar Tinandhu*. The *Gapura Semar Tinandhu* at the Kauman Great Mosque has a

rectangular shape with a foundation made higher than the surrounding land and equipped with a roof. Then, The *Semar Tinandhu* Gate has six pillars. The *Semar Tinandhu* Gate has six pillars not found in Javanese and Balinese Hindu Buddhist temple gates. Therefore, the uniqueness of the Kauman Great Mosque gate is that the *Semar Tinandhu* Gate is not found in Javanese and Balinese temples, especially in terms of building shape, roof shape, and number of pillars.

Figure 9. Land use of Kauman Great Mosque
Source: Author, 2022

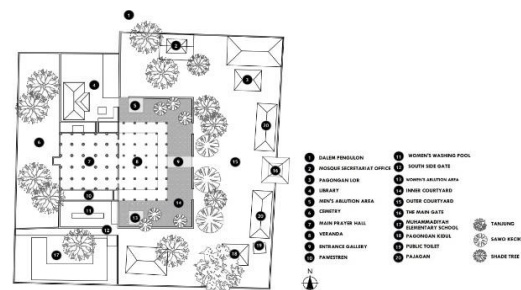


Figure 10. *Semar Tinandhu* Gate of Kauman Great Mosque
Source: Author, 2022



One of the trees in the Kauman Mosque is *Sawo Kecil*. *Sawo Kecil* is identically planted in palaces and mosques in Java. *Sawo Kecil* Tree has a connotative meaning: all good (Based on Nyai Prabasilaksita-Abdi Dalem Keraton Ngayogyakarta). *Sawo kecil* is mentioned in the new Javanese literary work in *Serat Centhini* (one of the traditional Javanese literature) as follows:

*Sêngir santog madu basa |
saparik jambu bang putih |
kêlampok arum drêsana |
tumruno sawo saparik |
soring jandhela kitri |
pacar-cina sêkar arum |
jêmbangan gêng ingingonan |*

*wadêr kok jêlebrah abrit |
sajêmbangan bêranang ngapit paningrat ||*

Figure 11. Sawo Kecik Tree at Kauman Great Mosque
Source: Author, 2022



From the *Serat Centhini*, especially in the third and fourth rows, *Jambu Dersana* and *Sawo Kecik* are trees that appeared in literary works after Islam was introduced. Although *Jambu Dersana* tree is rarely planted in traditional Javanese mosque areas, it is planted in palace areas such as the Yogyakarta Palace. According to the Ngayogyakarta Palace, Hadiningrat (2022), the *Jambu Dersana* tree (*Syzygium malaccense/Eugenia malaccensis*) has the meaning of exemplary (*sinudarsana*).

Kauman Great Mosque's architectural style inherits the Demak Mosque's style. The characteristics of this mosque are the existences of four main pillars or known as *saka guru* with a roof shaped like a *tajug teplok* roof (Figure 12) and the existences of 32 supporting pillars (*saka rawa/ saka penanggap*). The *tajug teplok* roof is the shape of a three-tiered roof. Philosophically, the three levels on the roof can also be interpreted as *Iman, Islam* and *Ikhsan*.

Figure 12. The Tajug Teplok Roof at Kauman Great Mosque
Source: Author, 2022



Figure 13. The Roof Ornaments of Kauman Great Mosque
Source: Author, 2022



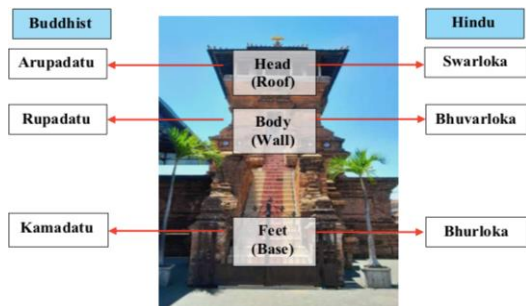
A dome finial of Javanese traditional mosque is a *mustaka*. The *Mustaka* (Figure 13) of the Kauman Mosque is in the form of a *gada* that stands upright. In Javanese terminology, the *gada* is the ultimate weapon to defeat the enemy. In *Wayang* (Javanese traditional puppet) stories, all the knights are always armed with clubs when their weapons are no longer useful or damaged. The *mustaka* of Kauman Mosque is a symbol of unity or monotheism (*tauhid*), the main foundation of Islamic teachings. The moon and star in Figure 13 symbolizes divine light.

4. The Menara Kudus Mosque

The land use of the Kudus Mosque complex is the same as that of other traditional Javanese mosques because it includes a mosque and the tomb of Sunan Kudus. However, unlike in the Hindu-Buddhist Temple area, there is no terrace system.

The synchronization of Javanese Hindu culture in Islam building in Java can be seen in the Menara Kudus Mosque, which was built in 1549. It is said that there is a synchronization of Javanese Hindu culture in the tower of Menara Kudus Mosque because the tower consists of three tower parts, namely the foot, body, and head which are typical of Hindu Buddhist temples. Three tower parts can be seen in Figure 14.

Figure 14. The Synchronization of Javanese Hindu culture at the Tower (minaret) of Menara Kudus Mosque
Source: Author, 2023



The type of vegetation in the Menara Kudus Mosque complex is palm trees. Palm trees are found in the courtyard on the south side of the Menara Kudus Mosque. There is synchronization in the types of trees in the Menara Kudus Mosque, namely the presence of palm trees that are identical to the reliefs of the Hindu Buddhist temple because, in line with Suwaryadi (1987), decorations on temples can be plant motifs (lotus flowers, palm trees, etc).

Figure 15. Palm Trees at Menara Kudus Mosque
Source: Author, 2022



The synchronization of Javanese architecture in traditional Javanese mosques is found in the shape of the roofs of traditional Javanese Mosques. Javanese Buildings roof with *tajug* roofs leading to a central point are only buildings for worship (mosques, *surau* small mosques) and *cungkup* (building to shelter the tombs of saints and kings). The roofs of mosques, langgars and cungkups in Java experience the synchronized influence of *Meru* roofs on Hindu buildings because they have multi-tiered roofs that lead to a central point.

The roof of Menara Kudus Mosque is three tiered roofs (*tajug tiga*). The following is the roof of the three tiered of the Menara Kudus Mosque (Figure 16).

Figure 16. The Three-tiered Roofs of Menara Kudus Mosque
Source: Author, 2023



The shape of the inside gate in the Menara Kudus Mosque is *Kori Agung* (Figure 17). The shape of the outside gate in the Menara Kudus Mosque is the *Candi Bentar* gate (Figure 18). There was a synchronization of Hindu-Buddhist architecture at the inside gate and the outer gate of the Menara Kudus Mosque because these were in line with Muyasyaroh's theory (2015) that the various temples during the Hindu Buddhist era were the *Candi Bentar*, *Kori Agung* or *Paduraksa*. There is a synchronization of the Menara Kudus Mosque gate because even though the gate is *Kori Agung*, there is no *Kala*. *Kala* is the shape of a giant head. Because the *Kala* head is identical to the Hindu Buddhist gate, on the *Kori Agung* Gate as barrier of the Menara Kudus Mosque, the *Kala* Head was replaced with a floral motif.

Figure 17. *Kori Agung* inside Kudus Mosque
Source: Author, 2022



Figure 18. *Candi Bentar* as Outer Gate of Kudus Mosque
 Source: Author, 2022



The *Tajug* roof of Menara Kudus Mosque, the *Candi Bentar* at the gate of Menara Kudus Mosque, and the *Kori Agung* inside of Menara Kudus Mosque are also evidence of Hindu Buddhist synchronization in traditional Javanese Mosque. The outdoor ornament of the Menara Kudus Mosque is the dome. The dome is synonymous with mosques in Middle Eastern countries. The dome near the Hindu Buddhist Tower (Figure 19-Left) is proof of the harmonization and balance between Islamic and Hindu Buddhist architecture at the Menara

Kudus Mosque. Another outdoor ornament is the floral motif on the outer gate. Distilled floral motifs are synonymous with Islamic architecture and Hindu-Buddhist architecture.






Figure 19. Left: The Dome of Menara Kudus Mosque, Right: Floral Motif at Main Gate of Menara Kudus Mosque
 Source: Author, 2023



5. Comparison of Temples and Traditional Javanese Mosques

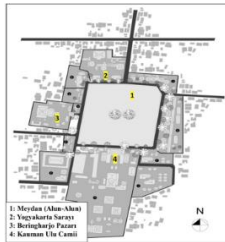
Table 1 below describes a comparison of spatial, physical, and stylistic elements at Suku Temple, Uluwatu Temple, Kauman Mosque and Menara Kudus Mosque.

Table1. The Comparison of Hindu Buddhist Temple and Traditional Javanese Mosque

	Spatial Elements (Land use Pattern, City Pattern, and Vegetation)	Physical Elements (Building Form and Massing, Roof and Gate)	Stylistic Elements (Outdoor ornaments)
Sukuh Temple	<ul style="list-style-type: none"> Sukuh Temple is located on a high place. The Sukuh Temple consisting of three terraces (<i>Nista</i>, <i>Madya</i>, <i>Utama</i>). The land use pattern uses the <i>tri mandala</i> concept.  <p>Land use pattern of Suku Temple</p>	<p>Sukuh Temple with a trapezoidal temple and gate.</p>  <p>Trapezoidal form of Suku Temple</p>	<p>The outdoor ornaments in Suku Temple are in the form of animals (such as turtles, elephant, buffalo) and plants (such as coconut trees, pinang trees, palm, <i>kalpataru</i> trees, and banyan trees).</p>  <p>Relief of Coconut Tree in Suku Temple</p>
Balinese Temple	<ul style="list-style-type: none"> Uluwatu Temple is located on a high place. The Uluwatu Temple section consists of 3 courtyards (<i>Jaba sisi</i>, <i>jaba tengah</i>, <i>jeroan</i>). The city pattern uses Catuspatha concept (palace, square, market, communal space).  <p>City pattern of Balinese Temple</p>	<ul style="list-style-type: none"> The roof of the Uluwatu is Meru (1, 3 and 11 roofs).  <p>Roof of Uluwatu Temple</p> <ul style="list-style-type: none"> There are <i>Candi Bentar</i> gate and <i>Paduraksa</i> gate. 	<p>The top of the gate is shaped like a crown and is decorated with various carved leaf and flower motifs.</p>

Kauman Great Mosque

- The land use of the Kauman Mosque in Yogyakarta consists of mosque (buildings for worship), library (symbol of place for studying), *Pagongan lor* and *kidul* (symbol of place of arts), cemetery (symbol of remembering death).
- The city pattern of Kauman mosque follows *Catur Gatra Tunggal* (palace, square, mosque, market).



Catur Gatra Tunggal as concept of City Pattern

- *Pagongan Lor* and *Pagongan Kidul* are a place for playing traditional Javanese musical instruments (*Gamelan*) as a form of synchronization of Javanese culture Hinduism, Buddhism and Islam
- There is no terrace system at Kauman Great Mosque like in the Hindu Buddhist temple area.
- *Sawo Kecik* tree is an identical tree at Kauman Mosque.

Menara Kudus Mosque

- The land use of the Menara Kudus Mosque complex is the same as other traditional Javanese mosques because there are a mosque and the tomb of Sunan Kudus.
- There is no city pattern concept of Menara Kudus Mosque like in Kauman Mosque.
- There is no terrace system at Menara Kudus Mosque like in the Hindu Buddhist temple area.
- The kind of trees at Menara Kudus Mosque is Palm Trees. This is a form of synchronization of plants in the reliefs of Hindu Buddhist temples towards the Menara Kudus Mosque.

- The roof of Kauman Mosque is a *tajug teplok* roof (3 tiered roofs) with *mustaka*.
- The gate at the Kauman Great Mosque is *Gapura Semar Tinandhu*.
- Therefore, *Gapura Semar Tinandhu* is a typical gate for mosques in Java.



Semar *Tinandhu* Gate of Kauman Mosque

There are a *mustaka* and a moon star in the roof of Kauman Mosque. There is synchronization in the outdoor ornaments by not using animal motifs, but using symbols of monotheism and star-moon motifs which are typical of Islamic architecture.



Mustaka and Moon Star of Kauman Mosque.

- The *Tajug* roof of Menara Kudus Mosque with *mustaka* as the symbol of God is the synchronization of the Hindu Buddhist Meru Roof.
- Replacement of the *Kala* on the *Kori Agung* gate with a floral motif as a synchronization.



Tajug Roof of Menara Kudus Mosque

- Outdoor ornament of Menara Kudus Mosque is the existence of dome and floral motif on the main gate of Menara Kudus Mosque. Dome and floral motif are identical with Islamic architecture.
- There is synchronization in the use of floral motifs, not animal motifs.



Gate of Menara Kudus Mosque

Source: Author, 2024

From Table 1, it can be analyzed that the Islamic character in the spatial elements in Javanese Mosques is found in the land use and vegetation. The typical Javanese mosque land use pattern

that is not found in temples is that in Javanese mosques, there are mosque functions (as a place of worship), library (educational function), pejagan (security/military function), *pagongan* (social and

cultural function), courtyard (social) and tombs. This is in line with Spahic's theory (2014) that the complex of mosque has functions as praying (mosque), economy (market), education (school), health service (hospital), military, and social relation (*hamam*/traditional Turkish bath, *Kervansaray*/ traditional Turkish rest area, etc). According to Istari (2015), one of the relief motifs on Hindu-Buddhist temples in Java is in the form of plant decorations, which are categorized into two types, namely naturalistic forms, namely the plant form has not changed (such as palm, coconut, banyan tree, lotus, bodi tree, kalpataru tree, etc) then plant stylization forms, namely the plant form has been changed.

In the physical element, the roof of a Javanese mosque synchronized with the roof of a temple, namely *Meru* (terraced roof). According to Tjandrasmita (2009), the concept of *Meru* is considered as a sacred building where the gods reside. The use of the *Meru* the roof of the Javanese mosque was an effort by the Wali Songo to avoid causing cultural shock to the local community who at that time still adhered to Hinduism Buddhism.

However, what makes it different is that the roof of this Javanese mosque has its own uniqueness which is not found on the *Meru* roof. The roof of a Javanese mosque only has *tajug 1*, *tajug 2*, and *tajug 3*, while the roof of the *Meru* temple is a roof with 3 to 11 floors. There is a similarity between the Javanese mosque roof and the temple roof from the vertical sacred aspect. Javanese temples and mosques have vertical sacredness from the terraced roofs that lead to one God. The unique thing about Javanese mosques that cannot be found in temples is the *mustaka* on the highest part of the mosque roof, which symbolizes God's oneness.

Javanese mosques external ornaments (dome finial, moon star, and floral motif) show Islamic character because they do not use statues of animal or human elements.

Conclusion

From the data and comparative analysis between Sukuh Temple, Uluwatu Temple, Kauman Great Mosque, and Menara Kudus Mosque, it can be concluded that there is the synchronization of spatial elements in vegetation. There are synchronizations of physical elements in roofs and gates, and there are synchronizations of stylistic elements in the gate ornaments which are synchronized from Kala to floral motifs. The detailed synchronization of each element can be described as follows:

1. Spatial Elements:

Land use in the mosque, especially in the courtyard, has no Hindu-Buddhist synchronization because there is no terrace system. The courtyards at the Kauman Great Mosque and Menara Kudus Mosque are land uses that originate from Islam itself. Namely there is a mosque, an office (symbol of administration), a library (symbol of knowledge), a grave (symbol of remembering death), *Pagongan* (symbol of art and culture), and *Pajagan* (symbol of security/military). The existence of *Pajagan Lor* and *Pajagan Kidul* is a unique land use of the Kauman Great Mosque, which is not found in other traditional Javanese mosques. The city pattern in Kauman Great Mosque follows *Catur Gatra Tunggal* Concept. Then, in terms of plant elements, there is a synchronization of plants in the reliefs of Hindu Buddhist temples towards the Menara Kudus Mosque because in the Menara Kudus Mosque, there is a palm tree which is identical to the relief of the Hindu Buddhist temple.

2. Physical Elements:

The multi-tiered roofs (*Tajug*) of the mosque, both found on the roofs of the Kauman Great Mosque and the Menara Kudus Mosque, are a synchronization of *Meru* on a Hindu Buddhist temple but has its uniqueness because it contains a *mustaka* as a symbol of the oneness of God (Tauhid concept). Then in terms of gates, the existence of the *Semar Tinandhu* Gate at the Kauman Great Mosque

and the replacement of the *Kori Agung* gate at the Menara Kudus Mosque with floral motifs as a synchronization of Islamic values with Javanese Hindu-Buddhist architecture.

3. Stylistic Elements:

The outdoor ornaments of Kauman Great Mosque synchronize by not using animal motifs but using symbols of monotheism (tauhid concept) in the *mustaka* and star-moon motifs, which are typical of Islamic architecture. Outdoor ornament of Menara Kudus Mosque is the existence of dome and floral motif on the main gate of Menara Kudus Mosque. Dome and floral motif are identical to Islamic architecture.

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