

SPATIAL ARRANGEMENT IN MATARAM KINGDOM MOSQUE

The Similarities Between Surakarta Great Mosque, Yogyakarta Great Mosque, and Kotagede Mosque

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ABSTRACT: *Mataram mosque has its own uniqueness in their spatial arrangements that shows clearly the connection between each space and their function. From five Mataram's heritage mosques, we are comparing three mosques, which are Kotagede Mosque, Surakarta Great Mosque and Yogyakarta Great Mosque. The aim of this research is to understand the space organization of each mosques, finding the similarities between them, along with its function. For the main data collecting, we did survey to each mosques and gather information on site by seeing the whole area of the mosques, while also taking pictures and notes. For Kotagede Mosque and Surakarta Great Mosque, there was an interview with narasumber to understand more about the space organization of the mosque. The Result and Discussion chapter used all of the data that we have collected, including the photos. To complete the information needed about the history, architect, style, and location of the mosques, we use secondary data from the internet. Thus, we can conclude that all the Mataram mosques has similar plan design and function.*

Key word: Spatial Arrangements, Islamic Mataram Mosques, Room Organization

INTRODUCTION

Background

Kotagede Mosque, Yogyakarta Great Mosque, and Surakarta Great Mosque have the same founder and characteristics. Sultan Agung is the first King that created Kotagede Mosque as the oldest Mataram Mosque. These three mosques have the same function as a place for people with Islamic religion to pray, and also shows The Glory of Islamic Mataram Kingdom.

Interest and Purpose

We chose "Spatial Arrangement in Mataram Kingdom Mosque: The Similarities Between Surakarta Great Mosque, Yogyakarta Great Mosque, and Kotagede Mosque" because we want to understand more about how the spaces inside a mosque are organized and how it is arranged next to each other to form a functional and proper accomodation to people's needs in a mosque.

LITERATURE REVIEW

Space and Organization

Spaces inside the mosque are composed to one another based on its corresponding functions. According to DK. Ching's book *Architecture: Form, Space and Order* (2015), "various configurations of form could be manipulated to define a solitary field or volume of space, and how their patterns of solids and voids affected the visual qualities of the defined space. They are normally composed of a number of spaces which are related to one another by function, proximity, or a path of movement."

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The arrangement of Mataram's Place (keraton) has a deep connection with boundaries. Boundaries is also an important aspects inside the mosque to maintain Islamic teaching. In Mataram Mosque, it can be seen through different height of spaces, and also how public spaces and private spaces can be recognized by its composition and organization. According to DK. Ching's book *Architecture: Form, Space and Order* (2015), "adjacency allows each space to be clearly defined and to respond specific functional. The separating plane may limit visual and physical access or implied with a change in level or a contrast in surface material or texture."

Mosques of Mataram Kingdom

Kotagede Mosque has an inscription that shows how the mosque built through 2 stages. The first stage is by Sultan Agung and the second one by Pakubuwono X. Sultan Agung designed only a small area of mosque called langgar, then Sunan Pakubuwono II renovated the Kotagede Mosque becoming more wider in 1733 at the same time with the development of Yogyakarta Great Mosque. After that, it was added steel columns by Pakubuwono X. This mosque represent combination between islam, hindu and buddhist at the time.

Due to the Mataram Kingdom being separated, Pakubuwono III in Surakarta started to build "Masjid Ageng Keraton Surakarta" or Surakarta Great Mosque in 1763. It functions not only to pray, but also the center of Islamic Syi'ar, and categorized as Jami' mosque (can be used for prayer in large size of people). The status of royal mosque also makes this mosque support all royal needs related to religion, such as Grebeg and Sekaten festival. The king (sunan) of Surakarta functions as panatagama or regulator of religious affairs.

Then the Yogyakarta Sultanate built the Kauman Great Mosque or Yogyakarta Great Mosque in 1773. It has the same location arrangement with the Surakarta Great Mosque, which is on the west side of Yogyakarta square. Those three mosques have almost the same arrangement with the spatial arrangement of Mataram Mosque.

METHODS

For the main data collecting, we did a survey to each mosques and gather information on site by seeing the whole area of the mosques, while also taking pictures and notes. For Kotagede Mosque and Surakarta Great Mosque, there was an interview with narasumber to understand more about the space organization of the mosque. The Result and Discussion chapter used all of the data that we have collected, including the photos. To complete the information needed about the history, architect, style, and location of the mosques, we use secondary data from the internet. Thus, we can conclude that all the Mataram mosques has similar plan design and function.

RESULT AND DISCUSSION

Spatial Arrangement in Mataram Mosque

a. Kotagede Great Mosque Plan

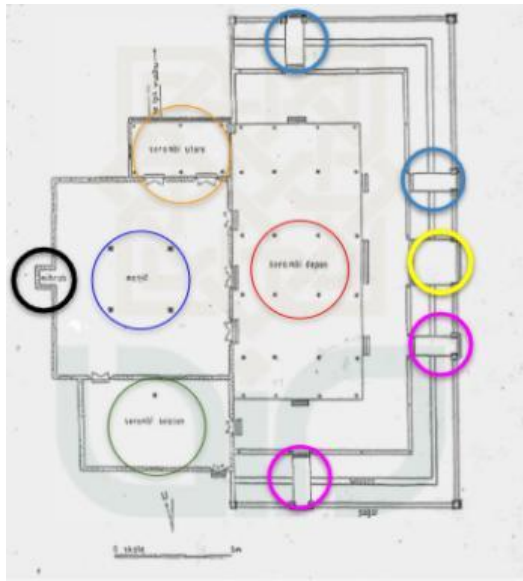


Figure 1. Kotagede Great Mosque Plan

b. Surakarta Great Mosque

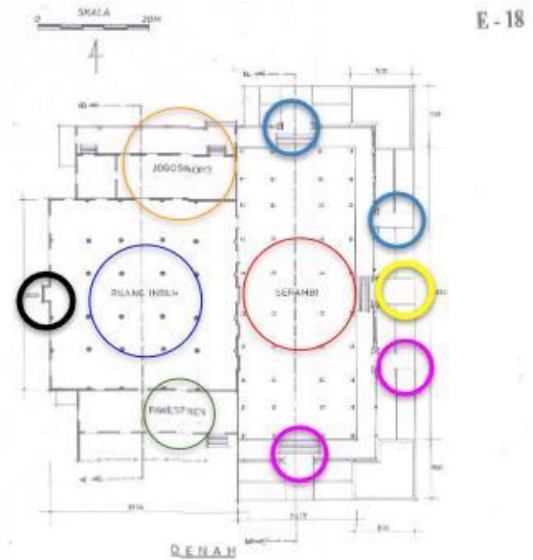


Figure 2. Surakarta Great Mosque Plan

c. Kauman Great Mosque Plan

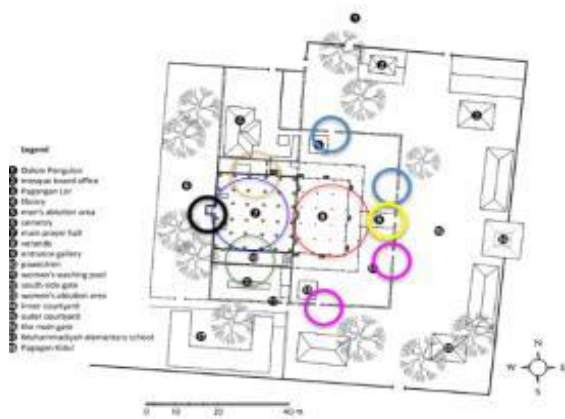


Figure 3. Kauman Great Mosque Plan

d. Conclusion

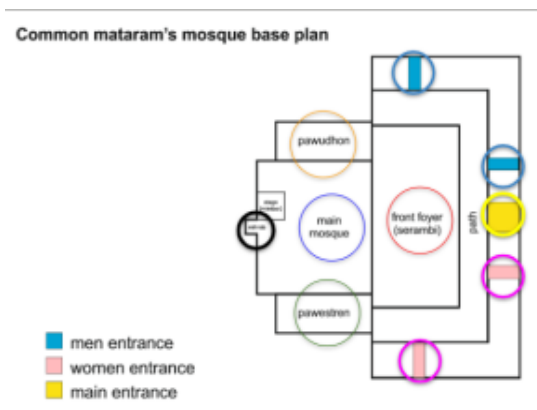


Figure 4. Similarities in Plan

Mosques History

a. KOTAGEDE GREAT MOSQUE



Figure 5. East Facade of Kotagede Mosque



Figure 6. East Paduraksa Entrance

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Kotagede great mosque is located in Kotagede, Special Region of Yogyakarta. Built around 1640 AD, Kotagede Mosque is one of the oldest mosque in Yogyakarta as a relic from Mataram. It was built by Sultan Agung together with the village which mostly were Buddhist and Hindu. It shows tolerance between religious communities at that time. The characteristics of Hinduism and Buddhism can be seen from Paduraksa gate.

The area is divided into two, the main prayer hall and the front hall (serambi). There is a pawestren on the left side of the mosque for women to pray, a storage on the right side, and an ablution area and toilets besides the storage.

b. SURAKARTA GREAT MOSQUE



Figure 7. East Facade of Surakarta Great Mosque

Surakarta Great Mosque, also known as Masjid Ageng Keraton Surakarta Hadiningrat, is located in Baluwarti, Pasar Kliwon, Surakarta. It was built in 1763 AD and finished in 1768 AD. Following Javanese architecture principle, the main prayer hall has seven doors connecting to the front hall (serambi), and supported by four main columns (Saka Guru). Besides the mihrab is a maksura, prayer area for sultan, and also pawestren, or women prayer area.

In 1858 during the reign of Sunan Pakubuwono VIII, wall was built to separate the area from the surrounding neighborhood.

c. YOGYAKARTA GREAT MOSQUE



Figure 9. Yogyakarta Great Mosque

Located in Kauman St. on the west of Keraton and the north of Yogyakarta Square, Kauman Mosque was built on May 19th, 1773. It has a typical Javanese architecture with a triple-tiered



Figure 10. Porch with white and gold interior

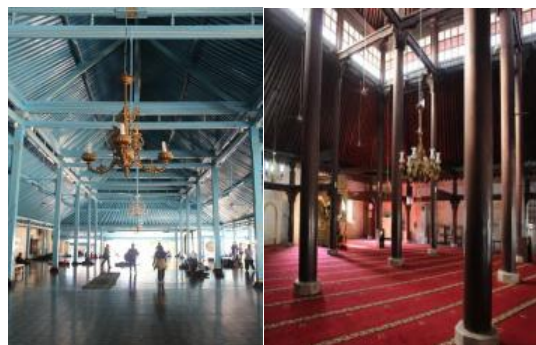


Figure 11. Men's prayer area

roof and front hall (serambi). The distinctive characteristics are on its column, roof, mustaka, and ponds (jagang). It has 4 Saka Guru and 48 escort columns. The roof is tajug-shaped with a square base surrounded by triangular fields. The prayer room consists of five parts, which are mihrab, mimbar, maksura, yatihun, and pawestren.

Spatial Elements

a. GATE AND COURT

There are almost always a front gateway in Mataram Mosque before entering the main court. It is to strengthen the mosque boundaries.

In Kotagede Mosque, there is no spacious front gateway court to show the entrance to the mosque. We can only see the paduraksa gate on either the side or the front of the mosque. This is because of change in mosque front court into a settlement. The mosque is surrounded by brick wall with inside court. The other mosques that were built in Mataram era are all following the fundamental points from Kotagede Mosque.

Yogyakarta Great Mosque entrance gate is similar to a pendapa that can be used to take shelter. The mosque court itself is very spacious with few vegetations and often used for various activities. It is also surrounded with wall all around.

Surakarta Great Mosque is located near to Klewer traditional market. The gate was inspired by Persian architecture that radiates the feeling of entering a kingdom area, which really emphasizes the border with the outer area. The inner court is very spacious with more vegetation and paved pathway.



Figure 12. Courtyard of Kauman Great Mosque



Figure 13. Courtyard of Kotagede mosque



Figure 14. Courtyard of Surakarta Great Mosque

b. GUTTER / WATER POND

Gutter in Yogyakarta Great Mosque, Kotagede Mosque and Surakarta Great Mosque have the same purpose, which is to wash the feet before entering the mosque. At that time they didn't wear any footwear, but to enter the mosque their feet must be clean so they made this gutter. This function is still preserved in Surakarta Great Mosque.

For Yogyakarta and Kotagede Mosque, the old function has shifted into fish pond. We can still see the old construction for washing feet in Kotagede mosque.



Figure 15. Gutter in Kauman Great Mosque



Figure 16. Water pond in Kotagede Mosque



Figure 17. Gutter in Surakarta Great Mosque

c. PORCH

Yogyakarta Great Mosque have a luxurious interior with the use of white paint and rich of ornaments. The flooring use ceramic tiles. Surakarta Great Mosque have the combination of simplicity and elegance. They used 2 main colors, which are blue and white. Woods were given varnish and there were less decorations. The flooring used ceramic tiles with various patterns. Kotagede Mosque is the most plain. They show honesty in material with showing the wood as it is. The flooring only using concrete.



Figure 18. Porch in Yogyakarta Great Mosque



Figure 19. Porch in Kotagede Mosque



Figure 20. Porch in Surakarta Great Mosque

d. CORRIDOR

Corridor is essential to both of the mosques. It is located surrounding the porch (serambi), and used for circulation. Yogyakarta Great Mosque using wood in all column. The corridor roof itself is slanted, following the porch main roof. It has more space for walking. The corridor roof in Surakarta Great Mosque is slanted, following the porch main roof. It has less walking space and bigger stairs. The outer perimeter column use concrete. Corridor roof of Kotagede Mosque is gable shaped. It has spacious area for walking, but the stair is small and short. The outer perimeter column use steel.



Figure 21. Corridor in Yogyakarta Great Mosque



Figure 22. Corridor in Kotagede mosque



Figure 23. Corridor in Surakarta Great Mosque

e. PAWESTREN

The pawestren in Yogyakarta Great Mosque functioned as a storage for the mosque necessity. In Surakarta Great Mosque, the function of pawestren is still preserved as women prayer area. It is connected to women ablution area and the outer area of the pawestren. The pawestren in Kotagede Mosque also function as a storage and place for learning Islam. But it can be functioned as additional prayer area if the main prayer hall is full.

All the pawestren are located in a more secluded and separated area from the men, as this is for islam



Figure 24. Pawestren in Yogyakarta Great Mosque



Figure 25. Pawestren in Kotagede Mosque



Figure 26. Pawestren in Surakarta Great Mosque

f. ABLUTION AREA



Figure 27. Ablution area in Yogyakarta Great Mosque



Figure 28. Ablution area in Kotagede mosque



Figure 29. Ablution area in Surakarta Great Mosque

In Kauman Great Mosque, the women's ablution located on the South side of the mosque near the pawestren, while the men's ablution area located on the North side of the mosque. In Kotagede,

the ablution area located on the South side of the mosque, both for men and women. In Surakarta Great Mosque, there is 2 ablution area for men and 1 enclosed ablution area for women.

g. MIMBAR STAGE

Both of the Great Mosques have mimbar that located near the mihrab and in front of the first shaf. They were made from wood with Javanese ornaments. In Yogyakarta Great Mosque, the mimbar stage decorated with Javanese ornament and colored with gold. Gold itself has a meaning of glory and victory. In Kotagede mosque, the mimbar decorated with more detailed ornaments and finished with wood varnish. In Surakarta great mosque, the mimbar stage has the simplest shape. It is only decorated with simple ornament and wood varnish.



Figure 30. Mimbar stage in Kotagede Mosque



Figure 31. Mimbar stage in Yogyakarta Great Mosque



Figure 32. Mimbar stage in Surakarta Great Mosque

h. MAKSURA

In Yogyakarta Great Mosque, there is a special place for Sultan to pray, made with wood and decorated with Javanese ornament. It is painted with gold that symbolize the greatness of sultan. It also happen in Surakarta Great Mosque. There was a maksura at first, but as time goes by, it was removed and lost. The remaining of it was the top of maksura called mustaka made from crystal and glass.

There is no maksura in Kotagede Mosque because sultan did not do prayer there.



Figure 33. Maksura in Kauman Great Mosque



Figure 34. The *Mustaka* of *Maksura* in Surakarta great

i. MIHRAB

The main characteristic of Javanese mosque is mihrab. In Yogyakarta Great Mosque, the mihrab shape is simple but decorated in luxurious gold paint. Mihrab in Kotagede Mosque is very simple with decoration on top with plain white color. While in Surakarta Great Mosque, the mihrab is also simple, with lesser ornament than Kotagede Mosque. It was made with wood with half arch on top.



Figure 35. Mihrab in Yogyakarta Great



Figure 36. Mihrab in Kotagede Mosque



Figure 37. Mihrab in Surakarta Great Mosque

j. CEMETERY

The cemetery in Yogyakarta Great Mosque is for patriots. Meanwhile the cemetery in Kotagede Mosque is only for the builder of the mosque. The location of both the cemetery is in the back of the mosque.



Figure 38. A gate to Cemetery on Surakarta Great Mosque



Figure 39. A Gate to Cemetery in Yogyakarta Great Mosque



Figure 40. A Gate to go to Cemetery in Kotagede Great Mosque

k. ROOM DIVIDER

Between each space, there must be a separator that makes the area can be distinguished. Thus people will be able to tell the function for each area and what activity can be done in it. In general, it can be concluded that the divider between each space related to the mosques above are:

1. Between court and corridor: entrance gate, surrounded by barrier/fence (Surakarta and Kotagede) and different height (corridor is higher)



Figure 41. A Gate to Go through the Kotagede Mosque



Figure 42. A Bridge at the Gutter



Figure 43. A Gate to go to Surakarta Great Mosque

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2. Between corridor and porch: different height (porch is higher) and stairs surrounding the porch
3. Between porch to prayer area: different height (prayer room is higher, except semi-outdoor prayer area--*pawastren*--in Surakarta which height the same with corridor), doors, stairs to each door, and wall (the opening is the door)
4. Between prayer area and court: wall with windows as opening and barrier/fence (in Surakarta *pawastren*).

CONCLUSION AND RECOMMENDATION

From the research that has been conducted related to spatial arrangement of Mataram Kingdom Mosques between Kotagede Mosque, Surakarta Great Mosque and Yogyakarta Great Mosque, it can be concluded that:

- 1) Both of Surakarta and Yogyakarta Great Mosque are following the basic spatial arrangement from Kotagede Mosque.



Figure 44. Corridor in Yogyakarta Great Mosque



Figure 45 Corridor in Kotagede Mosque



Figure 46. Corridor in Surakarta Great Mosque

- 2) The spatial arrangement itself are fitted to the function that mosques supposed to have, and the space arrangement did not change much throughout the history, means that the composition of spaces are efficient until today.



Figure 47. A wall divided the *serambi* and the Prayer Room at Yogyakarta Great Mosque



Figure 48. A Door to the *pawastren* at Kotagede Mosque

- 3) The boundaries between the spaces are also shown strictly due to its composition (location, height, etc)



Figure 49. Prayer Room
Yogyakarta Great Mosque



Figure 50. Surakarta Great
Mosque prayer room

Thus, we can recommend that for future mosques, seeing Mataram Mosques space arrangement as a reference will help in making an efficient space that is simple and brief, but able to fulfill its function and accommodate the people's needs inside a mosque. It doesn't have to be strictly like what the basic Mataram Mosque plan is, but by taking its important essence and applying it in nowadays mosques.

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REFERENCES

Book

Ching, D.K. 2015. Architecture: Form, Space, and Order -- Fourth Edition. Canada : John Willey & Sons, Inc.

Website

Darban, Adabi, 2013. MASJID GEDHE JOGJAKARTA: SEBUAH SEJARAH RINGKAS.
<http://mesjidgedhe.or.id/profil-masjid/tentang-masjid/> (accessed July 19, 2019).

Silviana, Nanda 2017. Makna Dan Fungsi Arsitektur Masjid Gedhe Mataram, Kotagedhe, Yogyakarta.

Wikipedia, 2019. MASJID GEDHE MATARAM.
https://id.wikipedia.org/wiki/Masjid_Gedhe_Mataram (accessed July 19, 2019).

Wikipedia, 2019. KESULTANAN MATARAM. https://id.wikipedia.org/wiki/Kesultanan_Mataram (accessed July 19, 2019).

http://digilib.uin-suka.ac.id/29787/2/13520023_BAB-I_IV-atau-V_DAFTAR-PUSTAKA.pdf (accessed July 19, 2019).