The Change of Form, Function, and Meaning of The City Open Space 
(*Alun-Alun*) in Traditional Cities of Java, Indonesia

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ABSTRACT

In traditional cities of Java, Indonesia, the city open space, known to the *alun-alun*, was an important element; it was the center of activity and a landmark of the city. This study aimed to understand the change of form, function, and meaning of the city open space in traditional cities of Java, with case study: *alun-alun* (city open space) of Demak, Yogyakarta, and Semarang. This study used methods by combining of historical, descriptive, and comparative, based on the relation of form-function-meaning in architecture. The results showed that the change of form, function, and meaning of the city open space in traditional cities of Java occurred with three circumstances. The city open space (*alun-alun*) in traditional cities of Java had changed as follows: (1) not significant, which happened in Yogyakarta city; (2) quite significant, which occurred in Demak city; and (3) significant, which occurred in Semarang city. This research is expected to contribute to global knowledge about the change of form, function, and meaning of the city open space in cities in the world associated with the planning and design of modern cities.

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Keywords: Change, City Open Space, Form, Function, Meaning

1. Introduction

The city open space or *alun-alun* was an important element and a landmark of a city in the traditional city spatial of Java, since the time of the kingdom of Majapahit until before the independence era of the Republic of Indonesia. The Dutch government maked the *alun-alun* as a city center in the city spatial of the district cities in Indonesia.

One of the important documentations on the physical structure of the district city in Java before the Pacific War was *Kromoblanda*’s Tillema done by a geographer named Witkamp. Assisted by two architects named Kazemier and Tonkens, Witkamp completed the project, the typology of the district capital in Java in 1918. With this documentation appeared a spatial center of local and colonial government integrated through the *alun-alun*. On the north-south axis on either side of the *alun-alun*, facing each other residence of resident assistant and regent (*bupati*) who presented the administration of colonial government and local power. To the west of the *alun-alun* was placed a mosque complete with a cleansing place at the front and a cemetery area at the rear. On both sides of the mosque there was a residence of Muslim leaders or religious leaders named *Kauman* and military police barracks with the prisons. Somewhat distant, according to the northwest of the corner of the *alun-alun* there was a *Kamar Bola*, where Dutch associations. Other buildings not far from the
alun-alun were schools, hospitals, residences of important Dutch officials such as tax collectors and heads of courts. While the Chinese village or Chinatown was located close to the main street of the city, usually not far from the banks of the river that flowed in the city; a crowded area around the market, marked by a row of shops belonging to small traders and craftsmen, bakers, laundriers, and cabinets. [1] [2] [3].

After the Independence era, along with the development of the city, the increasing demands of people's needs and desires in utilizing urban space, the city open space or alun-alun changed its shape, function, and meaning. The alun-alun was still a public space, but it was already under economic power, like the alun-alun of Kudus, Ponorogo, Kaliwungu, and Bandung [4] [5] [6] [7] [8] [9]. There was even the alun-alun that changed into a shopping center, like the alun-alun of Semarang [10] [11].

This study aimed to understand changing in form, function, and meaning in the city open space or alun-alun of traditional cities in Java. The approach used was a combination of historical, descriptive, and comparative, based on the relation of form-function-meaning in architecture. Case study: alun-alun of Demak, Yogyakarta, and Semarang. Considerations in the selection of these three cases of study were, Demak was a coastal city of Java, Yogyakarta was a hinterland of Java, and Semarang was an advanced trading city in Java.

2. Material and Methods

2.1. Short history of alun-alun

Based on the early concept, the city open space or alun-alun was an important and inseparable part of the residence of a king or a regent. Prabu Majapahit and the Mataram kings of Islam (including Yogyakarta and Surakarta) deliberately provided the open space in front of his palace to show the political and magical power attached to him to his people. The symbol of power on the alun-alun was later adopted by the Dutch authorities in order to control local rulers in the district towns and residencies of Java.

Hindu / Buddhist cultures had pioneered the spirit of gathering, not for purely ritual activities, but rather on state activities (empire), in a field that was located in front of the palace which was then called the alun-alun. This should be distinguished from the court which was usually located in front of the building of worship such as the temple. In the courtyard of this temple communal ritual activities were held; it was usually associated with things related to the after life – life after death. The temple was not a 'functional' building for communal worship, so it was impossible for communal activities to be held inside the temple building. This was also what distinguished it with the mosque, where in it was functioned as a place of worship. There was a presumption that the existence of temples and mosques associated with death, while the existence of the palace related to life. Therefore, the temple in the town of Trowulan was not located around the alun-alun which became the center of the king's life. Thus, although the data were less supportive, it could be assumed that in the days of Demak and Pajang kingdoms, the existence of the alun-alun that became one with the palace was a must. The last step in the planning and design of the city in Java, after the cities of Trowulan (Majapahit), Demak, Kotagede, Karta, Plered,
Kartasura (Mataram Islam), Yogyakarta, and Surakarta, which made the *alun-alun* as the center of city orientation and emitted symbols of power were cities of districts throughout the land of Java in the Dutch colonial era. [12].

After the Majapahit era ended, Sultan Agung was one of the king of Java who still maintained the meaning of the city open space or *alun-alun*. He as the king of the Mataram Islamic empire had given the example of how to actualize the concept of the *alun-alun* that could keep the meaning of the city of Java through the royal feast, to the kings afterwards. *Sekatenan* or *garebeg* ceremony which until now became the annual agenda of the palace of Yogyakarta was one of the legacies of Sultan Agung. In the *sekatenan*, Javanese traditions from Animism, Hinduism, and Islam could be combined in one ceremony at a time.

The *alun-alun* that became the center of the royal cities and symbols of power in Java, from the time of Majapahit until now, was deliberately formed by the surrounding structures or buildings to form a planned enclosure - a limited open space - which of course the process of formation was not same from one city to another.

Based on historical investigations and archaeological excavations of Trowulan (Majapahit), Pajang and royal cities of Mataram Islam such as Kotagede, Karta, Plered, and Kartasura it was alleged that the cities had the *alun-alun* in front of the palace. [13] [14] [15].

The combination of the *alun-alun* and palace that had created a harmony of function and interdependence between the two, was evidence of a unified design since the beginning of its construction. That was, the *alun-alun* was held because it was needed by the palace; it became one with the palace. So it became a necessity that the *alun-alun* was inside the fort. The *alun-alun* and palace of Yogyakarta and Surakarta are the last remnants of the Javanese heritage that we can still see today. (Fig. 1; Fig. 2; Fig. 3; Fig. 4).
Based on layout of the city center of Pajang, Kotagede, and Plered, it was clear that there were four important elements: alun-alun, palace, mosque, and the market. It could be assumed that these four elements were closely related to each other [16].

The city open space or alun-alun (north) of Yogyakarta, until now, still in the fort. The palace fortress which was once the fortress of the ancient city of Yogyakarta was built in 1782, twenty-seven years after the Kingdom of Yogyakarta established. Before the fortress was built, based on the ancient drawings, it appears that the alun-alun (north) of Yogyakarta city was lined with high wood around it. Long before, Sultan Agung also fenced off his alun-alun with wooden rows.

In contrast to Yogyakarta, the city open space or alun-alun of Demak and Semarang the process of formation began from a field of land. Demak City, although in the south of the alun-alun there was a toponym of sitihinggil, but based on research there was no strong evidence that there was ever a king's palace or the sultanate of Demak.

The development of the alun-alun was somewhat thoroughly demonstrated by the city of Semarang - emerging from open space that loose, with a long process of forming the alun-alun and then disappear. Accompanied by sufficient written data and maps, the study of the ancient city of Semarang had been largely done by experts, among them by Amen Budiman and Liem Thian Joe [17] [18].

![Figure 3: Layout of Kotagede](image)
Source: (Adrisijanti, 2000: 291)

![Figure 4: Layout of Plered](image)
Source: (Adrisijanti, 2000: 295)

![Figure 5: Location of case study](image)
2.2. Research Framework

The form-function-meaning relationship is one of the important themes in the study of architecture. Beginning by Marcus Vitruvius Pollio (1st BC), which mentioned that all buildings had to be built with reference to: durability (firmitas), convenience (utility), and beauty (venustas) [19]. Triumph of Vitruvius was then tested by David Smith Capon. Capon concluded that there were six categories in the principles of architecture: function, form, meaning, context, construction, and spirit. [20].

Purnama Salura and Bachtiar Fauzy developed the concept of form-function-meaning rotation. Each architectural design product should prioritize the elements of the form-function-meaning. The three elements form a triangular build, which was always in a state of change (spinning) [21]. This concept shows that architecture is always changing.

In this study, architecture is understood as the relation of aspects of form-function-meaning that are always in a state of relation between aspects of one another. The relation of form-function-meaning in architecture is used as a theoretical approach to understanding the change of the city open space or alun-alun of traditional cities in Java, which form a building of research frameworks and through the research steps (Fig. 6). The research steps are as follows:

1. exploration of the form of the city open space or alun-alun of Demak, Yogyakarta and Semarang, past and present, within the framework of change.

2. exploration of the function of the city open space or alun-alun of Demak, Yogyakarta and Semarang, past and present, within the framework of change.

3. interpretation of the relation of form and function of the city open space or alun-alun of Demak, Yogyakarta, and Semarang, past and present, and to compare the three cases of study, to reveal its meaning.

Figure 6: Schematic diagram of research framework

3. Results and Discussions

3.1. Alun-alun of Demak: Past and Present

Demak known as the city of wali was once the center of the first Islamic empire in the land of Java in the last quarter of the 15th century. At that time Demak city was very potential located on the north coast of Java, apart from the mountains of Muria. Because of its strategic location on the shore of the strait that separated the mountains of Muria and the land of Java, in
In the 16th century, Demak had become a stockpile of rice trade with calm waters for voyages. But since the 17th century the strait could no longer be navigated because of sedimentation [22]. When in 1602 the Dutch admiral Jacob Van Heemskerck with his four ships appeared in the city of Demak had used Jepara bay as the back of his ships. This meant that Dutch ships could not dock again in Demak's waters [23].

Like other coastal cities, such as Tuban, Cirebon and Banten, based on news from the Dutch, that the original structure of Demak city was surrounded by thick and high brick walls. Making a fence around the possibility aimed to prevent security disturbances from outside the city; thus could serve as a fortress [24].

The central structure of Demak city probably referred to the capital of Majapahit with a smaller scale. In this structure the city open space or alun-alun became the binding space structure for the palace of the ruler (the king or the regent).

In the past, the city of Demak, as reported by visitors of the Portuguese and Dutch, reinforced with strongholds of defense or the wall. In the city center there were the city open space or alun-alun, palace, mosque, and the market. The palace was in the south of the alun-alun, the mosque was in the west of the alun-alun, and the market was in the northeast of the alun-alun. [25].

The function of the alun-alun of Demak city, in the old time, as told in the Babad Tanah Jawi, was a place to prepare war troops (when Demak would attack Majapahit), to hold a person's supernatural powers (when Jaka Tingkir defeated a raging buffalo), to waiting for the royal guests (when Ki Ageng Sela waited under the banyan tree, wanted to meet the king). [26].

At this time, the wall or fortress of Demak city is gone, not even found the remains of the ruins. The city open space or alun-alun remains the center of Demak town. Buildings around the alun-alun: in the southeast there is an Immigration Office; to the east there are Prison, Public Work (Dinas Pekerjaan Umum) Office, Post Office, and the Islamic High School; to the northeast there is a Monastery (Wihara); to the north there are the District Office (Kabupaten) and Pecinan; to the west there are the Grand Mosque and the Kauman Village; in the south there are the Prosecutor's Office, the Local Revenue (Dinas Pendapatan Daerah) Office, Sitinggil Village, and the High School. (Fig. 7).

In the present time, the activity undertaken in the alun-alun of Demak is a week-long night market held every before the Grebeg Besar (10th of Dzulhijjah in Islamic year). Every night for a week, the alun-alun is filled with visitors coming from various areas of Demak city and surrounding areas. Every day, the alun-
alun of Demak deliberately left empty; it is an open space of the city. Since in Dutch colonial times, the alun-alun of Demak was left empty; it was an open space of the city. [27] [28] [29]. (Fig. 8; Fig. 9; Fig 10; Fig. 11).

From the exploration above, the alun-alun of Demak has changed form and function. The form change is shown by the disappearance of the palace, which is substituted for the Sitinggil village. Change in form is also shown by the addition of other buildings (other than mosque, palace/district office, and market), around the


Figure 8: Alun-alun of Demak and the mosque; at a time before independence (a)
Source: (Galestin, 1937)

Figure 9: Alun-alun of Demak and the mosque; at a time before independence (b)
Source: (Fruin-Mees, 1920)

Figure 10: Alun-alun of Demak and the mosque; at a time several years after independence
Source: (de Graaf, 1949)

Figure 11: Alun-alun of Demak and the mosque; at the present time
Source: (Author’s documentation, 2015)

There is changing function of alun-alun of Demak. Formerly the alun-alun was the place for royalty affairs, but now for the business affairs.

3.2. Alun-alun of Yogyakarta: Past and Present

The area that later became the palace and the capital of Yogyakarta had long been known
before the Mangkubumi as Sultan Hamengkubuwono I named the place as the center of his government. The area was known in traditional history or chronicle (*babad*). The place was referred to in the chronicle as a 'city of reinforced walls' in the Bringan forest. After Giyanti's agreement in 1755 was signed, the forest of Bringan began to open. The place was opened for the construction of the royal palace and the houses of the regents. When the forest was opened, the Sultan resided in the palace of Ambarketawang in Gamping Mountain, which is also recorded in Giyanti's chronicle. The place is located approximately 5 kilometers west of Yogyakarta now. Construction of the palace began on October 9, 1755 and finished on October 7, 1756. After the palace was completed, Sultan Hamengkubuwono I moved to the city, which was then named Ngayogyakarta Hadiningrat.

As the ruler of an Islamic kingdom, Sri Sultan Hamengkubuwono I did not forget to build a mosque. The mosque is located on the west of the *alun-alun* lor. Building of the mosque which became known as the Great Mosque of Yogyakarta was completed in 1773. Then added porch to the east in 1775. On the front yard of the mosque, to the south and north are built two places of *gamelan sekaten* which became known as *pagongan*. The *gamelan* was rung for seven days at the time of the *sekaten* celebration, before the *grebeg Mulud*.

In the structure of the ancient city of Yogyakarta, the *alun-alun* was an inseparable part of the city with the palace. *Alun-alun* (north-*lor*) was the front yard of the palace, while the *alun-alun* (south-*kidul*) was the backyard of the palace or also called the *alun-alun pengkeran*.

Today, the northern *alun-alun* is more alive than the southern *alun-alun*. Therefore, in this study will be focused on the northern *alun-alun*.

Around the northern *alun-alun* planted many banyan trees, plus two trees in the center of the *alun-alun*. Central banyan tree in the west named Kyai Dewadaru, supposedly the seed was from Majapahit, and the east named Kyai Wijayadaru, supposedly the seed was from Pajajaran. [32]

The buildings located around the northern *alun-alun* were 19 *bangsal pekapalan*, located on the three sides (east, north, and west) of the *alun-alun*; mosque, located on the west of the *alun-alun*; and the palace, located on the south of the *alun-alun*. Not far from the *alun-alun*, to the north, there was a market. *Bangsal pekapalan* was the place where the regents outside the region run 'tugur' when in the palace was being held a state ceremony, such as the marriage of the royal family, and the ceremony of *malam selikuran*. [33] [34] [35] [36] [37]. (Fig. 12).

Figure 12: The northern *alun-alun* of Yogyakarta; a sketch made in 1771 by A. de Nelly. Source: (Carey, 1986: apendiks)
The function of the northern *alun-alun* of Yogyakarta, in the old time, was the place for the *sekaten* celebration (three times a year: *grebeg Pasa*, *grebeg Besar*, and *grebeg Mulud*), held for seven days; the place for gathering the people to face the king; and the place for the state ceremony.

The northern *alun-alun* also was the place for *pepe*, a protest or complaint made by the community to the Sultan. They wore white clothing with a white headband sitting in the sun between two banyan trees in the middle of the northern *alun-alun* facing the palace. They did this *pepe* would expect to be seen by the Sultan who was sitting in *Sitiheinggil*.

At the present time, the structure of the city center of Yogyakarta still retains its former forms. The palace complex with its two the city open space or *alun-alun* (north and south) is a city center; around the northern *alun-alun* there are *bangsal-bangsal pekapalan*; in the north, outside the fort, there is a market; in the west there are mosque and the Kauman village; and in the south there is a palace. However, the form of the *bangsal pekapalan* building has changed to match the function that has also changed. (Fig. 13; Fig. 14; Fig. 15).

In the present time, the activity undertaken in the northern *alun-alun* of Yogyakarta is a
market held every before the grebeg Mulud or sekaten celebration (12th of Rabi’ul Awwal in Islamic year). When sekaten celebration was held, Every day during a month, the northern alun-alun was filled with visitors coming from various areas of Yogyakarta city and surrounding areas, even from several cities in the Middle and East Java. Every day, the northern alun-alun of Yogyakarta deliberately left empty; it is an open space of the city.

From the exploration above, the northern alun-alun of Yogyakarta has not changed form and function. The four essential elements of the city center of Yogyakarta still exist today: the alun-alun itself, palace, mosque, and the market.

Meanwhile, the function of the northern alun-alun is maintained until now. Since the kingdom of Yogyakarta stood, in the northern alun-alun, has been held sekaten celebration every year. There is function of the northern alun-alun lost. It is no longer a place for gathering of people to meet the king, and a place for royal ceremony.

3.3. Alun-alun of Semarang: Past and Present

Semarang, in the past time, had long been a city of 'transit' or centralization of export and import trade traffic for the residency (Karesidenan) of Semarang, Surakarta, Yogyakarta, Kedu and Rembang. Many European and Chinese trade offices were located in the city of Semarang, as well as representatives of banking, large companies, shipping companies, and industries. Trade traffic was carried out in two forms, namely land traffic (railway and highway) and seaports. [38].

The city of Semarang grew very rapidly ahead of the formation of Gemeente van Semarang in 1906 which also marked the existence of municipal government of Semarang. In 1914, Dutch government began to build new settlements in the hill of Candi area called settlement of Candi Baru which was an extension of the Candi Lama area.

At the time of the mayor of Semarang held by R. Warsito Soegiarto (1967-1973), the city grew rapidly with the construction of public facilities everywhere. The development of Semarang city included: widening the streets within the city and equipping with street lights; curbing villages full of wild houses and improving assainering; completed the Simpang Lima project (which began in 1964-1966) with the surrounding buildings; build hotel Patra Jasa and Metro Hotel; and built the Johar Shopping Center and Yaik Permai shop. [39].

Semarang city had important elements forming the structure of traditional cities in Java at the time of Adiapti Surohadimenggolo II became regent in semarang. He completed the construction of a Great Mosque as a substitute for the Pedamaran mosque damaged by the Chinese War (1741) and inaugurated it in 1756. Since then the city of Semarang really showed morphological features as an Islamic city. There was Dalem Kanjengan in the south of the alun-alun facing north - facing the alun-alun, while the mosque was located on the west side of the alun-alun; in addition there was also a market Pedamaran (also known as the market Semarang) which later expanded into Johar market now. While in the north of the alun-alun was still a field of land which was then called also with the northern alun-alun. [40] [41] [42].

In 1860, the Johar market had emerged, as an extension to the west of the Pedamaran
market. Johar Market was just to the east and become one with the *alun-alun*. To the east of the *alun-alun* there was also a prison building. (Fig. 16; Fig. 17; Fig. 18; Fig. 19).

In the late 1960s, in the north of the *alun-alun* began to be built Hotel Metro complex. The land used by the Metro Hotel complex used to be the northern *alun-alun*. Not long afterwards, there was built also in the *alun-alun* area (south), a complex of shops Yaik Permai. Almost at the same time, *Dalem Kanjengan* was moved to Mangkag. So since then, the *alun-alun* of Semarang has been lost.

In the past, the *alun-alun* of Semarang became the center of the city. The city structure was similar to other cities in Java. The *alun-alun* was surrounded by buildings that became important elements of the city; to the east was the market, to the west was the mosque, and to the south was the district office (*Dalem Kanjengan*).

At that time, in the *alun-alun*, for seven days before the month of Ramadhan (Islamic year), held a crowd and the night market. And on the last day there was a parade of *warak ngendog* (warak laying egg), an imaginative
animal made of colorful paper with wooden skeletons, started from Dalem Kanjengan (district office) in the south of the alun-alun to the center of the alun-alun. There were so many children who came to scramble eggs, because the eggs were included in the procession was a real egg. In the evening, in the Great Mosque located on the west side of the alun-alun beating a pounding drum that occasionally interspersed with the sound of firecrackers as a notification that the next day was the day of the beginning of the fasting month for Muslims. So from the sound of dug-dug-dug from the beaten drum and the der-der-der sounds of firecrackers this tradition was known as dugderan. For many parents at that time, it was a necessity to buy warak ngendog (in small size) and nteng-nteng lamps (such as lanterns with candle lights in it) for his daughter, that were sold in the alun-alun during the dugderan tradition.

Based on the exploration of the form and function of the alun-alun of Semarang above, it can be seen that the form of the alun-alun has changed perfectly; it lost. Similarly, the function of the alun-alun, where there is a change of function, from the social tradition function into the market function.

3.4. Interpretation

Based on the early concept, the city open space or alun-alun was an important and inseparable part of the residence of the king or the regent in Java. Trowulan city, as the capital of Majapahit kingdom, had the alun-alun in front of the palace. The king of Majapahit showed the political and magical power attached to him
to his people on the alun-alun. The symbol of power on the alun-alun was later adopted by Demak kingdom. In the south of the alun-alun was the palace. In the west of the alun-alun added the mosque, and, in the northern part added the market. Yogyakarta kingdom adopted the city structure of Demak and perfected it as a center of the capital of the great empire in Java. Then it was adopted by the Dutch authorities in order to control local rulers in the district towns in Java, including the city of Semarang.

The change of form of the alun-alun of Demak, from a 'front yard' of the palace and district office to the arena of the night market and open space of the city, was caused by the incompetence of the alun-alun carrying the interests of the ruler (because the palace has lost) on the one hand, and its partisanship on business interests. Both factors are also the main cause of the loss of the alun-alun of Semarang. While the form of the alun-alun of Yogyakarta has not changed. This is due to its ability in carrying the interests of the authorities (because the palace still there), although now it is also more inclined to economic activities such as the night market.

Change in the form of the alun-alun of Demak and the disappearance of the alun-alun of Semarang was caused by the change of function or activities carried out in the alun-alun.

Based on the concept of form-function-meaning relationship in architecture, the change of form caused by the change of function, it will be followed by the change of meaning. At first, the alun-alun of Demak, Yogyakarta, and Semarang, can be interpreted as a symbol of the interests of power or politics of the ruler. Now the alun-alun of Demak and Semarang can be interpreted as a symbol of the interests of capitalism or business economy. While the alun-alun of Yogyakarta has a double meaning; it as a symbol of the interests of the rulers and symbols of populist economy.

4. Conclusion

The change of form, function, and meaning of the city open space or alun-alun of traditional cities of Java occurred with three circumstances. The alun-alun of traditional cities of Java had changed as follows: (1) not significant, which happened in Yogyakarta city; (2) quite significant, which occurred in Demak city; and (3) significant, which occurred in Semarang city.

In the case of Demak city, the change of the alun-alun form begins with the loss of its main support palace; it was replaced with residential settlements. So that the function of the alun-alun as a gathering place of people who want to meet with the leaders become lost. And now on it held the people's market at certain times. Thus, the meaning of the alun-alun becomes changed, initially as a symbol of the interests of the ruler, now as a symbol of economic interest.

In the case of Semarang city, the change of the alun-alun form begins from the loss of Dalem Kanjengan and the emergence of the building of Yaik market on the alun-alun land. So that the function of the alun-alun as a gathering place of people who celebrate their tradition (dugderan) to be lost. Thus, the meaning of the alun-alun becomes changed, originally as a symbol of the traditions of society, now as a symbol of capitalist interest.
In the case of Yogyakarta city, if there is a change, the change is not significant, because only changes in form and function on the pekapalan wards. Meanwhile, the form and function of the alun-alun, palace, mosque, and the market is relatively unchanged.

References

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