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## DEVELOPMENT OF DISTRICT ELEMENT IN BALUWERTI SETTLEMENT, SURAKARTA, CENTRAL JAVA

<sup>1</sup>Solikhah, Nafi'ah<sup>2</sup>Department of Architecture, Tarumanagara University, Jakarta, Indonesia  
naff\_flex@yahoo.com**ABSTRACT<sup>1</sup>**

Empathy is inseparable from social and cultural. One district in Surakarta Cities, Central Java that still has a specific character is Baluwerti which is the area for family and courtiers of Kasunanan palace. The problem is the development of the district element in Baluwerti as a result the shift of empathy from its inhabitants. To assess, used synchronic-diachronic reading methods. Assessment of physical aspects reviewed through terms of compliance with spatial concepts of Mataram (Java) state. Assessment of non-physical aspects include: the function of the building, socio-cultural, and ownership status. It is known that a shift in physical and non-physical as the impact from reduced of the occupants empathy towards the Baluwerti existence.

**Keywords:** empathy occupants, Traditional Settlement, Baluwerti in Surakarta

**INTRODUCTION**

Excerpted from Mader (1990), empathy is the ability to share feeling to communicate acceptance and understanding the feelings of others appropriately. Empathy is inseparable from social and cultural elements. Culture affects the activities and habits of the people in accordance with the tradition that adopted, and will formalize a spatial pattern that matches or reflects the characteristics in it. According to Gallion (1992), the orientation of a city is also influenced by the culture and how the spatial give emphasis also connectedness on the part that is important. Spatial patterns of a city influenced by the activity that is in them, the socio-cultur of society, historical aspects, and the orientation of the city.

Traditional spatial structure has the character as an identity that is generally referred to sense of place. More specifically, Lynch (1960) suggests that there are five elements that make up the image of the city, namely: paths, nodes, districts, landmarks, and edges. Traditional settlement will change shape and function in line with the dynamics of the time. In areas that have high value of historical and cultural,

controlling the image of the area required to maintain historical and cultural value.

**Baluwerti: Settlement for Courtiers (*Abdi Dalem*) and Family of Kasunanan Palace**

One district in Surakarta Cities, Central Java that still has a specific character is Baluwerti Settlement, (figure 1). Baluwerti derived from Portuguese *Baluarte* that means fort. Baluwerti in Surakarta has a special relationship with Kasunanan Palace, for the first (since 1745) this place is the settlement for family and courtiers of Kasunanan palace in accordance with their respective positions. Naming the area adapted to the placement of the courtiers (Hardiyanti, 2005)

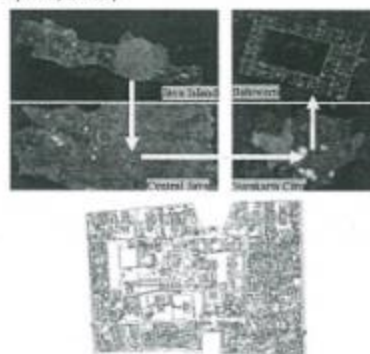


Figure 1. Location of Baluwerti

Source: Redraw by Author based on Survey, 2014

In functional conception, Baluwerti environment intentionally designed to support the existence of the Palace. That is, settlement of Baluwerti as well as a defense area of the Palace (Farkhan, 2004).

Based on the research that I have ever done in 2009-2010, it is known that the spatial configurations of Baluwerti influenced by the spatial concept of Kotaraja Mataram kingdom (Java): the path in the form of regional circulation paths, edges form the fortress, Dalem Pangeran and the district in the form of settlement, activity nodes such as node regions, and landmarks such as Kasunanan palace and house of Royal Family which shifting in its development. There are 5 (five) factors that shift the identity of the region, there are: the physical development, changes in function, economy, social values, status of ownership, and understanding from people

<sup>1</sup> This article is part of the author's thesis entitled *Konsep Revitalisasi Tata Lingkungan Tradisional Baluwerti Surakarta*, Magister Program of Architecture-Urban Design, Sepuluh Nopember Institute of Technology (ITS) Surabaya, 2010

Baluwerti toward preservation activity (Solikhah, 2010, pp.139-152)<sup>2</sup>

The problem is the development of the district element in Baluwerti as the impact of the shift of empathy from its inhabitants. This study aims to assess the development of the district element in Baluwerti, as the impact of the shift of empathy from its inhabitants.

## METHODOLOGY

To identify the development of the district elements, used synchronic and diachronic reading methods through the development study of the region. The results obtained are the information about the development of the district elements in the Baluwerti Settlement in physical and non-physical.

Assessment of physical aspects reviewed through terms of compliance with spatial concepts of Mataram (Java), namely: classification system of traditional Javanese symbolic, pattern of sanctity gradation, defense area, movement patterns, and review the supporting elements of the facade extracted from Lippsmeier and Krier (in Antariksa 2010), namely: the roof, the door (in the context of Baluwerti namely *regol*), the walls, the color of the decorative elements. While the non-physical aspects of the study include: the function of the building, socio-cultural, and ownership status.

Synchronic-diachronic Analysis divided into 4 (four) periods, namely:

- Kotaraja of Mataram Kingdom Periods (1745-13 February 1755)
- Colonialism Periods (13 February 1755-17 August 1945)
- Post Independence-Reformation Periods (1945-1998)
- Reformation Periods-Now (1998 - 2014)

## DISCUSSION AND RESULT ANALYSIS

### Kotaraja of Mataram Kingdom Periods (1745-13 February 1755)

#### Assessment of physical aspects

At the beginning of the period (1745), the Baluwerti region just consists of a complex Kedhaton that is shelter of the king and his family. In 1755, Pakubuwono (PB) III as King began providing settlements for courtiers in the eastern of Palace which is considered a sacred area, namely Tamtaman (Tamtomo soldiers), Carangan (Carangan soldiers), and Wirengan (Wirengan soldiers).

Settlement pattern has a grid pattern by courtiers background and status of the occupants. In grading the sanctity, the district with its settlement pattern is in a *Negarigung* circle.

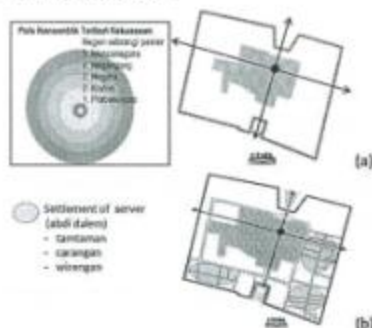


Figure 2. (a) Baluwerti in 1745 (b) Baluwerti in 1755  
(Source: Solikhah, 2010)

#### Roof

At the end of this period, the characteristics of the facade in the district affected by the type of roof construction in courtiers settlements. To create uniformity and equality for courtiers, then almost the entire roof of the building in courtiers settlements in Tamtaman, Carangan, and Wirengan using a roof type:

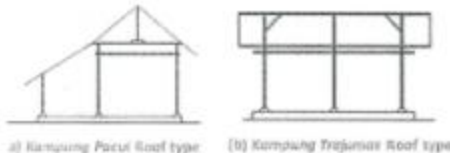


Figure 3. Typology of Roof type in Kotaraja Mataram Kingdom (Java) Periods

(Source: development based on interview (2010), Ismunandar (2003))

#### Door (Regol)

In this period, there is only one regol typology, in the form of a brick wall with one entrance. The uniformity of the facade is formed by walls and door (regol) of settlements courtiers on high level.

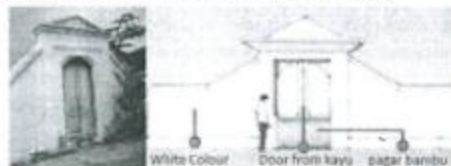


Figure 4. Basic concept of door (regol)

(Source: development based on interview, 2010)

<sup>2</sup> Factors are the result of the author's thesis research. The method used is the Delphi analysis through 4 stages (exploration of factor phase, 1-3 iterations to obtain the consensus of 4 (four) respondents)





### Walls, Colors, and Decorative Elements

Color predominantly white and navy blue for the walls of door (regol). While the residential area, dominated by brown wood color as the primary building material. At the initially concept of Baluwerti Settlement, yet there are details of the ornament due to the development of a Palace physically began in the PB IV (1820). *Sanggabuwana* stage is a height limit measurement, the skyline of Baluwerti looks rhythm. With the customary rules associated with the facade of the building to another, such as colors, fences, regol concept, they create a visual characteristic along the major path.

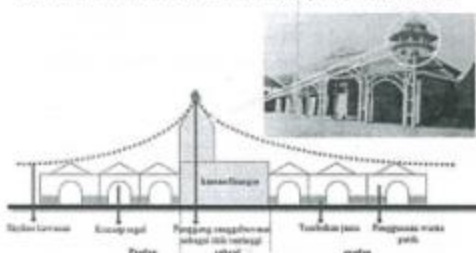


Figure 5. harmonious of skyline

(Source: Solikhah, 2010)

### Assessment of non-Physical Aspects

In the reign of the kingdom, Baluwerti settlement inhabited only by the nobles, courtiers, royal soldier, and public facilities. Order of neighborhoods are composed based on the conception of functional and symbolic-spiritual. Spiritual symbolic patterns seen in the north-south orientation and graded based on the sanctity of an imaginary circle. In the conception of the functional, Baluwerti environment intentionally designed to support the existence of the Palace. Activity in the district only for settlements and other activities related to the profession courtiers (kitchen palace, a place to keep horses, making mountains, etc.).

In the period to the Kotaraja of Mataram Java kingdom, there is still a social bond between people and palace and between people Baluwerti itself. People who living in the limits of Fort Baluwerti deemed to have a higher social strata. Courtiers settlement is the settlement provided for the king's palace courtiers with ownership status "*lungguh/residence*" and "*anggoduh run temurun*". Ownership status is valid for house building, while the soil in the Baluwerti walls be right of the palace.

**Colonialism Periods (13 Februari 1755 - 17 Agustus 1945)**

### Assessment of physical aspects

In this period, began develop the settlements in the west of the Palace (Hordenasan) and some new Prince palace located in the north and south of the

palace. Separation of settlements according to profession and degree of nobility. Grid pattern intended for supervision of the Netherlands. In grading the sanctity, house of royal family located in a negari circle. While the settlement was in the circle pattern negarigung. The pattern of the palace reserved for the prince/nobility, where courtiers/family helpers are allowed to live in the palace with the prince tenant status (*magersari*), thus forming a compound house.



Figure 6. Baluwerti in Colonialism Periods

(Source: Solikhah, 2010)

### Roof

In residential of courtiers develop a modern building with a pyramid (*limasan*) roof and flat roof. In this period, house of prince using the same roof type, namely joglo sinom apitan (*trajumas*).



(a) Limasan and Flat Roof Type



(b) Joglo Trajumas Roof Type

Figure 7. typology of roof type in colonialism periods

(Sumber: Solikhah, 2010)

Despite the development of building elements, but does not affect the skyline pathways because the building is protected by a wall and door (*regol*).

### Door (Regol) and Wall

Development the typology of Door (Regol) for residential courtiers, entrance originally using benchmarks of human body size. In this period began to be considered an element of transportation (cars, motorcycles, tricycles, etc.).



Figure 8. Typology of regol type in colonialism periods  
(Source: Solikhah, 2010)

In the reign of PB IV (1820), began to develop of Prince Palace houses using regols concept. This affects the characteristics in the form along pathways as impact the additional of regol concept.



Figure 9. typology of regol type in colonialism periods  
(Source: Solikhah, 2010)

#### Walls, Colour, and Decorative Elements

In this periods, began used the decorative element for sun shading and door (regol). Colour is still dominated with chocolate, white, and navy colour.

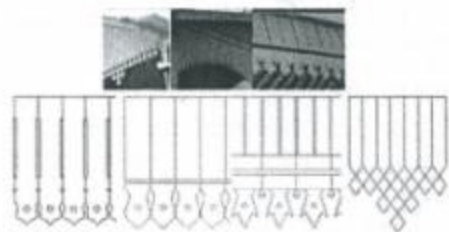


Figure 10. decorative elements in colonialism periods  
(Source: Solikhah, 2010)

#### Assessment of Non-Physical Aspects

Settlement began to change on function according to the activity of the community influenced by the establishment of Klewer Market in the west of Baluwerti region. Function of Pendhapa in a prince houses to accommodate the arts activity of community (gamelan, musicians, etc.).

At this time, there is still a social bond between people towards Palace and between people of Baluwerti itself. So, people who live in limit of the Fort Baluwerti is considered to have a higher social strata. But at the end of the period, the emotional bond between citizens of Baluwerti towards Palace began to decrease. This is related to the status of the Palace which is no longer a holder of government. Emotional bonds between people also began to fade with every passing generation of people who inhabit in the region.

In the reign of PB IV (1820), began developing the Prince Houses. Ownership status of the Prince Houses is "Paringan Dalem/given by King". Ownership status is valid for house building, while the soil in the walls of Baluwerti be right of the palace. In this period also growing district with tenant ownership status (*Magersari*), namely a growing residential courtiers in the palace area of the prince, thus forming a compound house.

#### Reformation Post-Independence Periods (1945-1998)

##### Assessment of physical Aspects

In this period, the traditional settlements began to mix with the modern settlement. At first, the circle *negari* only for prince houses. In this period, in the circle *negari* began to grow settlement.

Settlement pattern develops sporadically and irregular without applying the pattern of north-south and mancapat-mancalima and gradation of sanctity. Wherein the orientation of the existing building is more oriented on ecological elements of the physical environment, for example the direction /size of the lots available, existing trails, and environmental characteristics such as following the pattern of the fort.



Figure 11. Baluwerti in Reformation Post-Independence Period (1945 - 1998)

(Source: Solikhah, 2010)

##### Roof

Shifting of building facade that form the skyline in major path occurs due to start growing the rise buildings in the settlement area. The roof of prince houses was still using a joglo trajumas. While the residential area developed into a modern roof (flat), pyramid, as well as abstraction the old concept in the new building.

In this period began to develop the houses that resembles the prince's houses concept, but on a small scale. Roof forms are used abstraction of the



joglo trajumas, also uses the concept *regol* facade that will affect the minor path.

#### Door (Regol) and Wall

The development of Prince houses also affect the development of the characteristic facade of the minor path (road environment in the settlement).

#### Color and Decorative Elements

In this period, forming the addition of non-contextual elements, such as the use of zinc in the sun shading (previously using wood with certain ornaments).

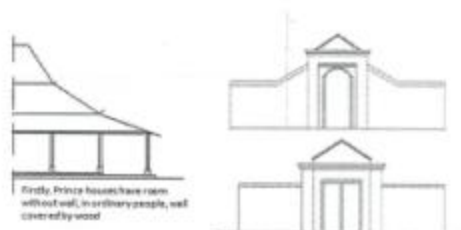


Figure 12. facade of houses in minor path periods 1945-1998

(Source: Solikhah, 2010)

Facade on the main corridor of Baluwerti still according to customary rules, namely: the use of blue and white colors, *regol* ndalem, etc. Customary rules which prohibit the building height exceeds Sanggabuwana had not adhered, so that the area becomes harmonious skyline.

#### Assessment of non-physical Aspects

Currently, functions of settlement and houses in Baluwerti community began to shift. It can be indicated from the new shift of function that is non-cultural (not associated with the palace) which also impact in a shift of identity as a traditional settlement, so when it feels less have a relationship (linkage) with Kasunanan Palace.

From the social aspect, the Baluwerti population in some ways bound by customary rules. For example, their relationships with people outside Kori Brajanala more limited, because kori Brajanala closed between 23:00 pm until 05:30 am (curfew applies in the region). In its development, the social values decline. The existence *butulan* allow access in and out in the region of Baluwati freely 24 hours.

In this period, the status of land ownership began to cause problems. Its linked the merger Palace to the NKRI, so that the status of the land "lungguh, anggadu run temurun, and parangan" become unclear.

#### Period of Reformation-Now (1998 - 2014)

##### Assessment of Physical Aspects

Settlements dominate the region. Magersari settlements growing in the courtyard of Princes houses. The new district is not based on gradation sanctity and courtiers, although the names used are still the same. If the first Baluwerti only for the courtiers, then now may reside outside parties (leases, contracts, boarding, etc.). The development of settlement patterns occur sporadically and without applying the irregular pattern of the north-south and gradation of *mancapot- mancalima* and sanctity. Wherein the orientation of the existing building is more oriented on ecological elements of the physical environment, so that the settlement adapt to the physical elements of the real. For example, the direction/size of the lots available, existing trails, and environmental characteristics such as following the pattern of the fort.

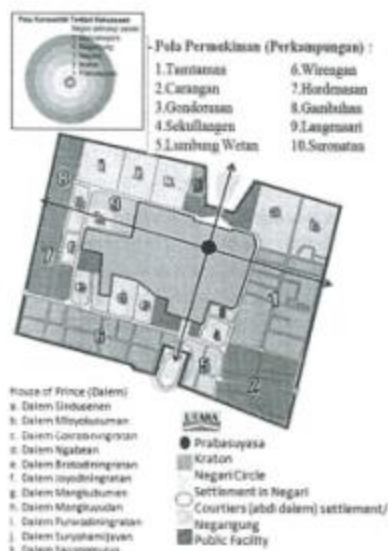


Figure 13 Baluwerti in 1998-2014 Periods

(Source: Solikhah, 2014)

#### Roof

Building facade had not followed the customary rules, begun to develop multi-storey buildings (though not exceeding Stage Sangga Buwana, but reduce harmony skyline). This is related to the absence the rules to control the building and environmental in Baluwerti. Formerly the palace has the authority control through custom rules are adhered by residents, but now the rules are becoming obsolete by residents.





Figure 14. tipology of roof now (2014)

(Source: Solikhah, 2014)

#### Door (Regol) and Wall

In the initial concept, regol using brick walls and wooden doors. However, during this period door using a rolling door because the demands of function, such as for the car garages, shop. Walls also functioned as a business advertisements.



Figure 15. shifting of regol now (2014)

Sumber: Solikhah, 2014

#### Color and Decorative Elements

In this period the color as the elements forming the facade still dominated by the combination color of white and navy blue on walls and doors (regol). In development, there is not harmonious use of colors, such as orange, pink, and yellow

#### Assessment of non-physical Aspects

Development activity occurs in the district affected by socio-economic activity, such as residential use as a boarding house, catering, etc.

Emotional bond between the Baluwerti citizens towards the palace already thinning, because the status of the palace is no longer a holder of government Baluwerti region. Emotional bonds between people also fade with every passing generation of people who inhabit the area, so there is no longer a difference between the social strata who live in the complex with people who living outside.

In this period, the ownership in Baluwerti dominated by tenant status (90%). Tenant settlement conditions become irregular in its development, so that the visual damage and can weaken the region's identity.



Figure 16. Magersari now (2014)

(Source: Solikhah, 2014)

Most of the buyers or tenants in Baluwerti are merchant. In its development, the impact of the activities of lease/purchase partial occupancy also functioned as a workshop. Buyers/tenants come from the outside environment Baluwerti, so the sense of belonging also tend to be weak, thus leading to the development of the modern pattern.



Figure 17. impact of ownership status towards settlement now (2014)

(Source: Solikhah, 2014)

Table 1. result of identification the shifting from district element of Baluwerti settlement

ELEMENT		
DISTRICT	PHYSICAL SHIFTING	<ul style="list-style-type: none"> <li>- Settlement thrive without implementing a north - south and mancapat- mancalima and sanctity gradation.</li> <li>- Traditional Settlement began mixed with modern settlements.</li> <li>- The development of the area tend to fill up the empty space on the grid bag.</li> <li>- Oriented to ecological elements of the physical environment</li> </ul>
	NON PHYSICAL SHIFTING	<ul style="list-style-type: none"> <li>- Start a new shift function is non-cultural</li> <li>- The new district is not based professional courtiers, now may reside outside parties (leases, contracts, boarding).</li> <li>- Social cohesion among citizens and emotional bond residents with palace are thinning</li> </ul>

Source: Authors, 2014





## CONCLUSION

Empathy is inseparable from social and cultural elements. Spatial patterns are influenced by the activity of a city that is in them, the socio - cultur society, historical aspects, and the orientation of the city. In a historical district, empathy in the form of feel in or sense of place is very important for the sustainability of the occupants owned the historic environment. Previously, arrangement of settlement Baluwerti maintained by empathy from the occupants as a historic district, but then its shifting. In the conception of the functional, Baluwerti initially designed to support the existence of the Palace. Configurations of Baluwerti spatial formed influenced by the spatial concept of Kotaraja Mataram kingdom (Java): classification system of Javanese traditional symbolic, gradation pattern sanctity, defense area, *ritual* movement patterns, and supporting elements of the facade. Empathy community towards sustainability of historical district are now starting to shift, understanding of the historical district low. Occupants of Baluwerti assume that the historical district useless to them. So, they need accurate information relating to the historical district and bring their empathy towards Baluwerti as a historical district.

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