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SEMIOTICS ANALYSIS OF BETAWI VERNACULAR ARCHITECTURE AT SETU BABAKAN, JAKARTA

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Abstract

In traditional societies, it is not too difficult to integrate the style and symbols of a house because they have a common language of the same yet mutually understandable style. However, this can not be applied nowadays with the development of pluralistic cultures encountered by Betawi people. Semiotic enables community to reflect on various related issues in the form of architecture and spatial arrangement. This research was conducted to obtain information that will be used to complement semiotics analytical methods. Field data collection methods are done both visually through recording of buildings and orally through interviewing some of the residents. This research uses semiotics analysis model derived from Ferdinand de Saussure which was adapted by Charles Peirce and used by Charles Jencks. Semiotics discussion on the style of Betawi house at Setu Babakan area consists of four major parts: building orientation, zoning, building typology, and building ornament. The result of this study confirms that there are several changes on the four major parts to support the shift of the village into a cultural village. These changes the represent sign adaptability of the community to support the preservation and maintenance of Betawi house in this cultural village.

Keywords: style and symbol, vernacular architecture, Betawi traditional house

INTRODUCTION

There are various ways that can be used in analyzing the style and symbol of Betawi house, one of which is by using

This semiotics analysis. semiotics analysis began to be widely employed since the postmodern architectural era when the architects recognized the gap between the environmentalists' elite and layman who inhabited environment (Piliang, 2004). In traditional societies as in Betawi, it is not too difficult to integrate the two elements because they have a common language and understanding of the same yet mutually understandable style (Lakawa, 2015). However, this can not be done nowadays especially with development of pluralistic cultures which is also encountered by Betawi people. Architects encourage people occupy a house or environment to understand their works by communicating (Piliang, 2004) the concept of design with the occupants. Therefore, a common understanding is needed between the occupants and what is understood by those who build the houses.

Semiotics which is the study of the relationship between sign and how humans give meaning to an architectural form (Jencks, 1969 in Botwina & Botwina, 2012) can be used as an alternative help understanding to Betawi's forms and style. Semiotics analysis in the field of architecture was introduced by Charles Jencks in the 1960s (Jencks, 1969 in Botwina & Botwina, 2012). Jencks introduced a new way of survey based on thorough observations and scientific reasoning and logic when interpreting building styles in the field of architecture (Jencks, 1999). This analysis enables building users to understand the forms of buildings or houses so that they are able to interpret the meaning contained in each election of building form and function (Jencks, 1999). Understanding an in-depth review of a representative sign of each element of the house or residence can give a profound and thorough meaning so that the user can use the house in which he or she lives in line with its meaning and function (Jencks in Botwina & Botwina, 2012).

This research was conducted with the aims at finding out the meaning of the sign or style of Betawi house in order to be used as initial step in understanding and completing the lack of information about the existing style of Betawi house so that the sustainability of the house be maintained (Ismet, Muhadjirin, 1999; Saidi, 2002; Saidi, 2012; Lakawa, 2015). It is hoped that the information and knowledge about the symbol and style of the house can generate additional rules related to the construction of Betawi house so that it can be used as a guideline when Betawi people are required to build their houses. Based on the previous explanation, the research question is then developed as "To what extent can semiotics be used to analyze Betawi Houses at Betawi Cultural Village so it can be used as one of the guidelines in building the house?"

SEMIOTICS IN ARCHITECTURE

Semiotics analysis introduced by Charles Sanders Peirce is a modification of a theory also developed by Ferdinand de Saussure (Piliang, 2004). Both of these scholars developed the theories by

which Saussure introduced the term Semiology and developed it in Europe which was further known by the term semiotics dichotomy (Murdiati, 2008). Peirce, on the other hand, introduced the name Semiotics and developed it in the United States which then known as the term semiotics trichotomy (Murdiati, 2008). Jencks took Barthes's idea of signifier and signified originally derived de Saussure. Furthermore. denotation and connotation, and at the denotative level of meaning have a relationship with reference or reality; while in the connotative stage, the meaning of a sign associated with feelings and emotions as well as cultural values and ideology (Piliang, 2004).

Semiotics in the field of architecture enables the community to reflect on various related issues in the form of architecture and spatial arrangement. Therefore, by semiotics analysis, architecture can be regarded as a text that can be constructed as grammatical tool so that society can refer to the following three linguitucs terms (Jencks, 1999):

- 1) Syntax which is a sign of spatial and cooperation between signs.
- Semantics deals with the sign of the relationship between space with its denotatum or which concerns the meaning of architectural forms.
- Pragmatic related to a sign that can be an effect or function of text (architecture) to the user of the building.

The three terms adopted from linguistic fields can help architects and building users in formulating the overall meaning into a unity of a building style. Sign systems in the field of architecture including many aspects i.e., physical form: its parts, size, proportion, space

between parts, materials, colors, and so on. All of these sign systems can be interpreted so as to generate a certain reaction for the community. Thus, the community can fully understand the meaning of what is being represented by a particular sign system. Nevertheless, architects are often unable to utilize semiotics analysis to explore their creativity and thus need to create new codes as offered by Roland Barthes (Piliang, 2004) as: hermeneutic code (code of a puzzle), semantic code (code that explores connotation), symbolic (code code that is unpacking something), proaretic code (code delivered via time sequence or story), cultural code (code that represents knowledge and policy).

As mentioned earlier, semiotics as the basis for communicating meaning by Jencks is divided into two basic concepts: signified and signifier. Signified signs for example refer to concepts, space, social and religious values, architectural functions and ideas, and activities. Whereas, signifier refers to the shape, space, content, color, rhythm, and texture. The two concepts of

the sign revealed in the form of trichotomy and semiotics dichotomy which can be used in helping to generate meaning of Betawi house as it is stated in Figure 1.

VERNACULAR ARCHITECTURE

1. Notion of Vernacular Architecture

The word vernacular derived from linguistics concepts as one of the many terminologies that can also be applied in the field of architecture which refers to a language or dialect spoken by the ordinary people in a particular region (Oxford Dictionary, 2018). Architecture adopts the term vernacular in order to relate its understanding to specific area that covers indigenous people and their know-how which becomes a special dialect communicated by certain group of people (Noble, 2014). Vernacular architecture covers the entire building of indigenous people, farmers, both popular and informal (Oliver, 2006). This includes all the collective policies and experiences of the people concerned, and the norms that have been accepted by a particular group according to their built environment (Oliver, 2006). For

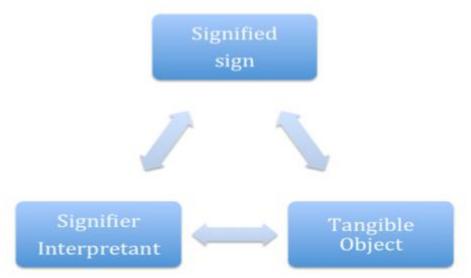


Figure 1. Semiotics Triangle Model of de Saussure and Triangle Meaning Models of Charles Sanders Peirce adapted by Charles Jencks (Source: Jencks, 1999)

simplicity, the notion includes community-based development or a simple definition of 'community architecture, by the people, but not for the people' (Oliver, 2003).

All forms of vernacular architecture are built to meet specific needs, accommodate the economic value, and maintain the lifestyle of sustainable and productive cultures that survive from time to time in certain communities (Oliver, 2003; Lahji & Lakawa, 2017). It also deals with knowledge of the natural environment of climate, topography, seasonal variations, natural hazards, suitable location. Vernacular architecture may include knowledge of building a hereditary home that is passed from one generation to the next without the use of notes/writings, graphic sketches working drawings underlying the design of vernacular architecture (Noble, 2014). The transition of knowledge is often done orally in the form of stories, prose, poetry, pantun, and other forms. The tradition of building a house is usually inherited from generation to generation in the absence of complete and detailed records as it is also happened to Betawi people (Lakawa, 2016; Lahji & Lakawa, 2017).

2. The Architecture of Betawi House

The methods in the field of semiotics described in the previous section and information on the vernacular architecture will be used to analyze the style of Betawi house. Nevertheless, it is necessary to know how the style of Betawi house which is based on the information obtained from available limited literature. The architecture of Betawi house has a specificity and structure that becomes the basis of Malay house in general (Lakawa, 2015;

Lakawa & Walaretina, 2016). The structure of Betawi house consists of three zoning parts, namely the front, the middle, and the back (Figure 2). The front is called an *amben* which can be equipped with *langkan*, and then a private area in the middle room which called *pangkeng* (Saidi, 2012). The area of *amben* and *pangkeng* is bounded by a partition called *garde* and consists of two windows and one door. The kitchen area is called *srondoyan* and usually located lower than the other parts of the house (Saidi, 2002).

The ornaments of Betawi house on the window, door, and vent are influenced by Chinese, Dutch, Portuguese, and Arabic cultures which are nations that have a direct relationship with Betawi people (Saidi, 2002). According to the shape and structure of the roof, Betawi house can be divided into three kinds, namely gudang house, joglo (limasan) and bapang or kebaya house (Cultural Office of DKI Jakarta, 1992). Each piece or shape is related to the division of the floor plan. Nevertheless, there are different views on the roof of Betawi house as expressed by Ridwan Saidi (2002) which consists of jure, joglo, and oksipir.

METHODOLOGY

Setu Babakan is located in Srengseng Sawah Village, Jagakarsa Subdistrict, South Jakarta. This area is designed as a cultural tourist attraction in the form of Betawi Cultural Village which became a Betawi Cultural Heritage by government of DKI Jakarta Province (Figure 2). Local governments developed this region with the aim of becoming a place to learn more about Betawi culture and language (Dinas Kebudayaan, 1992). This place was



Figure 2. The Study Site of Setu Babakan Betawi Cultural Village (Source: Lakawa, 2015)

chosen to be the location of the research because of the complete data sources that can be obtained from the field of architecture of Betawi houses.

To collect semiotics information and data, the methods that were used, i.e. field observations and interviews to the occupants of the chosen houses (Denzin & Lincoln, 2009). These methods are used to obtain information that will be applied in complementing the analytical methods involving semiotics models. Field data collection methods are done both visually through recording of buildings and orally through interviewing some of the residents (Denzin & Lincoln, 2009). This research uses semiotics analysis model originally derived from Ferdinand de Saussure then adapted and refined by Charles Sanders Peirce (Atkin, 2013; Botwina & Botwina, 2012) and used by Charles Jencks in the field of architecture (Jencks, 1999) as it is expressed in Figure 1.

Semiotics Triangle Model of de Saussure (Jencks, 1999) is expressed in the form of Signified Signs, Signifiers and Real Function marks or Nature Properties furnished by Peirce in the form of Triangle Meaning Models in the form of Sign, Interpretant, and Object as in Figure 1. Semiotics analysis in the field of architecture especially after the postmodern period adopted the model used by Charles Jencks (Atkin, 2013). Furthermore, Peirce completed the object by dividing it into three important parts that must be considered and consists of icons, indexes, and symbols as listed in Table 1. This part of the object can be better understood by reading the explanation of each section below. These three types of objects can be represented on just one object. For example the crossroads can be symbols and indexes when viewed in the context of a particular situation.

Table 1. Peirce Triangle Object (Source: Atkin 2013; Piliang, 2004)

Object	Explanation	Example	
Icons	Icons are a sign that has a "likeness" as there is a real form. The iconic representation exists in two ways, i.e., illustrative (in its original form) and diagrammatical (in the form of simplification).	Trees, mountains, leaves, trash cans, books, theater,	
Indexes	Index is a sign that refers to a meaning, which is often referred to as "clues."		
Symbols	A symbol is a sign representing a larger thing behind it, indicating a mutually agreed meaning. All the signs received that are mutually approved.	Company logo, religious symbols (crucifix, mosque building, holy book), the symbol of the country, the rose as a sign of love, etc.	

As further exaplained by experts, icons are a sign that has a "likeness" as there is a real form. The description of icons exists in two ways, illustrative (in their original form) and diagrammatical (in simplified form). For example: trees, mountains, leaves, trash cans, books, theater, pictures of women/men in front of the toilet, etc. Icons are activities that performed based on signs/actions. Index is a sign that refers to a meaning, index is often also referred to as "hint" in the form of road marks, traffic lights, street signposts, etc. Symbols are a representative of sign of a larger thing behind it, indicating a mutually agreed meaning. All signs are mutually approved, for example: company logo, religious symbols (crucifix, mosque building, holy book), the symbol of the country, the rose as the sign of love, etc.

RESULT AND DISCUSSION

The discussion on the style of Betawi house at Setu Babakan area consists of four major parts: building orientation, zoning, building typology, and building ornament (Wahyudi & Prakosa, 2008).

1. Building Orientation

The orientation of Betawi house with the original architectural characteristic was initially river-oriented as a society characterized by a river basin (Saidi, 2012). However, Setu Babakan area which is provided with a lake (setu) does not allow all the houses in this area to lead or orientate to the setu located in the middle of the area. This is because of the location of the dispersed village so that the construction of community houses adapted to the conditions around it (Lakawa, 2015; Lakawa & Walaretina, 2016). Not so with the open space used for art performances and other formal events (Table 2), this open space is facing towards setu.

	Betawi Houses	Setu Babakan
Building Orientation	The house overlooks the river and garden	Most of the houses overlook the street in front of the houses yet some of them overlook the gardens, paddy fields, and the setu.
Zoning	Main, support, garden, and complement zones	Main, garden, complement, support zones as usual and adding by common zones, i.e. recreation, water tourism, culinary, and trade zones
Building Typology	Joglo roof, kebaya roof, gudang and bapang roofs, as well as balaksuji	Houses with joglo roof, house with gudang and bapang roofs, and balaksuji
Building Ornament	Roof, lisplang, langkan, window, ventilation, door, fence	Roof, <i>lisplang</i> , <i>langkan</i> (railing stairs), windows, ventilation, doors, terrace railing

Table 2. The Style of Betawi Houses

In its development, the orientation of the building of Betawi houses was changed mainly due to the relocation of the settlement so that many of the houses were built with the orientation towards the gardens and rice fields (Saidi, 1987). Similarly in the Setu Babakan Cultural Village, some of the people living in this area built their houses with orientation towards the garden or road. In addition, the orientation of the settlements is highly dependent on the economic capacity of the people who are not entirely found from Betawi culture (Lakawa, 2015; Lakawa & Walaretina, 2016). The settlements are equipped with public facilities such as streets or roads following the pattern set by the local government.

Thus it can be proved that the orientation of houses owned by the community in Betawi Cultural Village of Setu Babakan are no longer facing the river or lake but they are facing the road or front yard (Table 2). When associated with semiotics analysis, the orientation of buildings facing roads, yard/garden, and setu indicates that people make changes based on the needs that are also changed in society (Table 3). The symbol of this change in building orientation is a sign that people prefer access to the road more easily. In

addition, the community also changed the use of their front areas of their houses into a place to conduct small economic activities.

2. Zoning

Betawi house has some zones namely, main, support, garden, and complement zones (Syafwandi et al, 1999 in Wahyudi & Prakosa, 2008). The function of each zone can be explained as: the main zone (for the nuclear family room), the supporting zone (for relatives or families living together), gardening zones (for planting typical fruit trees such as manggoes), rambutan, and complementary zones (for fishing ponds livestock). Furthermore, spaces located at front and open spaces without walls which are referred to in Betawi as the amben area, while the living room comprising the rooms which are referred to as the pangkeng area, and the back room which is the kitchen called srondoyan in Betawi language (Muhadjirin, 1999; Saidi, 1987).

Zoning in Setu Babakan consists only of the main zones and supporting zones (Wahyudi & Prakosa, 2008; Lakawa & Walaretina, 2016) largely due to the limited availability of land and the changing needs of major communities living in Setu Babakan. However, from the field observation, the community and the management of the village are developing several other zones: complementary zone, gardening zone, and supporting zone (recreation zone, water tourism zone, culinary zone, trading zone), and general zone (Table 2). This change is due to the growing function and area of zones which is devoted to accommodate the needs of the visitors and the general public.

The addition of this zoning areas is a way to add public facilities so that visitors can feel comfortable when visiting Setu Babakan Cultural Village area. The addition of the zoning area in terms of semiotics can be regarded as a symbol (Table 1) which represents that the needs of the people in this Cultural Village is changing due to the changing condition in the society. This change is necessary to ensure that the continuity of services directed to the general public can up until now be carried out based on the purpose of its establishment as the cultural village of Betawo (Table 3).

architecture. Betawi people usually regard the construction of the house foundation is important which is known as the tradition of salvation "sedekah rata bumi" and is usually implemented shortly after the roof of the house (kuda-kuda) was perfectly established (Wijaya, 1976).

Another important part the is construction of the staircase that is "balaksuji" which was originally found in Betawi stilt house. This staircase of balaksuji is part of the house which is full of philosophical values and many times, the water in its traditional container is placed beside the ladder because people are requested to wash their feet prior to enter the house (Aaron, 1991). Upon entering the house, Betawi people must purify themselves because the house is considered as an area of sanctity. Nowadays, because the form of Betawi house is not on the stilt, the stairs are no longer needed. However, this ladder can still be found in the mosque at the podium in which the preaching sermons is located so that the holiness area can still be maintained (Wahyudi & Prakosa, 2008).

Table 3. The Architectural Style of Betawi Houses

3. Building typology

The architecture of Betawi house with its *joglo* roof is the most dominant house located at Setu Babakan Cultural Village area (Figure 3). Choice of roof pattern is not a rigid rule (Saidi, 1987) in Betawi

The community does not build houses on stilts in which the main material contains of wood merely for practical and economic reasons. This indicates that the symbols and indexes that have been maintained are shifted due to the lack of

timber availability and unreachable prices. This change represents or is the sign of adaptability of the community towards individual needs over time (Table 3).

Setu Babakan Cultural Village use typical Betawi ornaments, the ones which are widely used in the process of building or renovating the houses are lisplang and langkan (railing ladder or

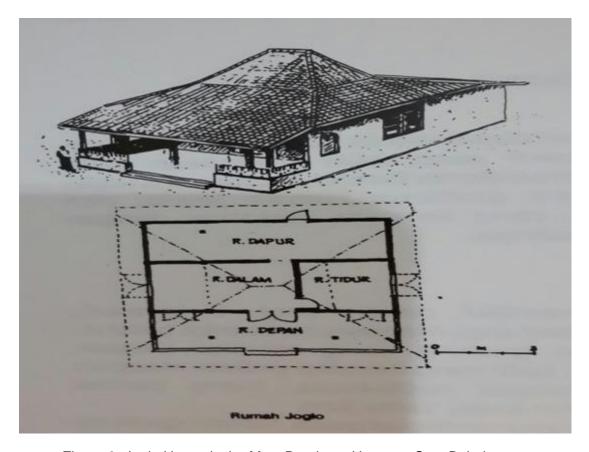


Figure 3. Joglo House is the Most Dominant House at Setu Babakan (Source: Harun, 1991)

4. Building ornaments

The ornaments being applied depict the characteristics of Betawi houses that are commonly used in Setu Babakan, i.e. the ornaments of lisplang (on the roof of the front house) and langkan (the railing of stairs, can also be used as porch barriers) which are all made of wood. Other building ornaments include windows. ventilations, doors. roof ornaments, langkan (railing stairs and terraces) and fences that each show the hallmark of Betawi architectural buildings. Although not all the houses at porch barrier). Villagers add ornaments voluntarily as a marker that they are members of Betawi community.

The willingness to add Betawi ornaments without (Figure aovernment assistance is а sign of cultural preservation although they merely have sufficient financial capability to living their on daily lives. The willingness of Betawi people in providing adequate ornaments of Betawi houses as the representation of Betawi community is based on the desire to maintain the culture. This willingness is a sign or a signified which becomes the signifier by



Figure 4. Building Ornaments of Betawi Vernacular House (Harun, 1991)

Betawi community. This can be further explained by using icon and index which relates to Betawi community (Table 3).

CONCLUSION

The use of semiotics understanding in analyzing how Betawi people reside in Setu Babakan Cultural Village, enables researcher to reveal the style of Betawi house that is still preserved in this area. The analysis helps the public to understand the forms of buildings or houses so that they are able to interpret the meaning contained in each election of building forms and its function. In terms of semiotics, the change of four

major parts of the building and its environment (building orientation, zoning, typology, and ornaments) represents the willingness of community in preserving and maintaining Betawi Cultural Village. The analysis of architectural features can be further summarized into several guidelines which can be applied by the community if they require to further build or renovate their houses as in the following:

 The community realized that it is necessary to ensure the continuity of services directed to the general public. Therefore, the establishment of houses should comply with the Cultural Village in this case the

- building orientation is directed to the garden or the street.
- 2) The management of the Cultural Village incoporates the passageways and other specific spaces into the development of the village. It is necessary, therefore, for the community to maintain the orientation towards the gardens or the streets.
- 3) The addition of zoning area in terms of semiotics can be regarded as a symbol which represents that the changing needs of the people at Setu Babakan Cultural Village is due to the condition in the society.
- 4) The community needs to understand and incorporate the zoning system applied in the Cultural Village when building their houses. They need to accommodate which area is the open, residential, commercial or industrial spaces.
- 5) The community does not build houses on stilts anymore as it is usually happened in the traditional community in which the main material contains of wood. This change was merely for practical and economic reasons due to the lack of timber availability and unreachable prices.
- 6) The community may build their houses by using available materials sudh as brick or limited wood offered in the neighborhood or the environment.
- 7) The change in building typology represents or is the sign of adaptability of the community towards individual needs over time.
- 8) The willingness of Betawi people in providing adequate ornaments of Betawi houses as the representation of Betawi community in this Cultural Village is based on the desire to maintain the culture.

- 9) The Management of Betawi Cultural Village encourages the community to include specific Betawi ornaments when building their houses even in its simpel but unique forms.
- 10) The community and the Management need to develop an indepth understanding to be used as guidelines so that people can recognize and can appreciate the meaning of each element of their houses that they live in. This understanding can be used by any cultural community such as those who live and stay at Setu Babakan Betawi Cultural Village.

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