Architecture Expression: Synthesized Architectural Expressions in Mayor’s Office Building of Kupang City

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Abstract

Efforts to display the expression of the functions and local identities of buildings are merely copying ornamental variations of vernacular architectural elements. As a result, the relation among function-form-meaning remain unseen. This study aims to explain the application of the concept of synthesized architectural expressions on government owned buildings. Based on the research objectives, the Mayor’s office building of Kupang City was chosen as the object of this case study. The initial step of this research is to elaborate the theory of archetypal anatomy and the relation of architectural function-meaning-functions. Furthermore, the observation unit is redrawn in three dimensions and analyzed based on ordering principle of balance and orientation. The analysis shows that the interpretation of the appearance of Mayor's office building of Kupang City displays monumental, formal, local expressions and represents democratic ideologies. Interpretation of synthesized expressions occurs in the dominant aspects of local architecture in the elements of the roof, walls and entrance columns. The results of this study confirm that the concept of synthesized expression plays an important role in the midst of change pressure and for the sustainability of architecture nowadays.

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1. INTRODUCTION

Architecture as one of the cultural artifacts (Arbi, 2008; Koentjaraningrat, 1993), did not escape the influence of the times (Pawitro, 2010), development of knowledge (Putra, 2018), as well as the development of the ideological meaning of society (Heryati, 2011). Discussion on the development of architecture is also influenced by the phenomenon of globalization (PurnamaSalura, 2015a) which allows all changes due to the exchange of
digital information. The impact of the globalization era on architecture is universal style (Sudradjat, 2012), so that many architectural forms are found that only use a single concept in appearance design (PurnamaSalura, 2015a; Lake, Purbadi, & Harmans, 2020).

The popularity of single architectural phenomena is seen in various building functions (Amar, 2009), for example office buildings (Dananjaya, Priyatmono, & Raidi, 2015), education institution buildings, residential buildings and government buildings. In Indonesia, an example of a government office-building dominated by a single architectural style is the South Tangerang Mayor's office-building with a modern concept, and the Roka Hilir Local House of Representatives (DPRD) office building is similar to the US Capitol Building (Winarno, 2014).

The DPRD as a legislative institution and the Mayor as an executive institution accommodating the aspirations of the people of a district should act as a formal representation and become the identity of an administrative region (PurnamaSalura & Clarissa, 2018). The expressions displayed by the building form of the Mayor's office building must be able to express its function as a symbol of government, namely a monumental, formal and democratic expression and represent the socio-cultural identity of the local community (Clarissa, 2016).

The universal style issue of appearance and similarity in architectural form is an interesting research issue to study. A number of previous studies have examined the issue. Unfortunately, previous studies of the same issue have not observed in depth about the concept of synthesis of expression as the main issue (Andersen, 2007), the lack of understanding of design and local architectural references as a source of design (P Salura & Fecianti, 2015). For example, research conducted by Tjahjono (2003) about the diversity of vernacular architecture in Indonesia (Tjahjono, 2003); Ryadi Adityavarman (2014) revealed the identity of Indonesian architecture originating from traditional architecture in Indonesia (Adityavarman, 2014); Fangqing Lyu (2019) states that the architecture is a medium of human knowledge of spatial identification, nature and culture (Lyu, 2019); Siti Fatimah's research (2017) about the porch of the traditional Malay house of Negeri Sembilan can be used as a multifunctional space (Hj Abd Latif & Kosman, 2017); Noor Cholis Idham's research (2018) concerning synchronization of vernacular architecture with the social character of society (Idham, 2018); research Salura, et. al. Sundanese vernacular architecture is used as a design concept of modern buildings in Bandung (Purnama Salura, Clarissa, & Lake, 2020) and research conducted by Anh Tuan Nguyen (2019) concluded that vernacular architecture is very flexible to meet human needs in responding to the climate, nature, identity and image of a civilization (Nguyen, Truong, Rockwood, & Tran Le, 2019; Widodo, 2019; Subroto, 2019). Based on these studies, the potential of local architecture can be used as a source of design for architects, so that an in-depth understanding of the process of synthesis of local architectural expressions is needed to address the phenomenon of the single issue of current architectural forms. However, all those studies have not observed in depth about concept of synthesized expressions (Andersen, 2007). Yet they only highlighted the lack of people’s understanding on design and references about local architecture as sources of design (P Salura & Fecianti, 2015). The purpose of this study is to observe the synthesized expression of the Mayor's office building expression of Kupang City.

It aims to reveal elements of local architecture in East Nusa Tenggara that have been synthesized with other architectural elements in the architectural and expressed on the Mayor’s office building of Kupang City. The findings of this study provide input for architectural science and most particularly about the processes and methods of
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architectural synthesis of local architectural elements with other architectural elements. The findings of this study can also be a reference for the creation of other architectural designs that use the process and methods of architectural synthesis.

2. MATERIALS AND METHODS

Case Study

The development of a single architectural form is a part of the adoption of western architectural forms that have begun since the 19th century, in the period of Dutch Colonialism (Kurniawan & Kusumawardhani, 2012). At that time, Dutch architects adopted European architectural styles in public buildings and government buildings in Indonesia as an association of modern architectural styles (Kusno, 2000). In the midst of the rise of a single architectural form in Indonesia, there is a Mayor’s office building that appears different because it is able to express its function as a government building as well as a symbol of regional identity, thus integrating the synthesis of local architectures. This building is the Mayor’s office building of Kupang City located in East Nusa Tenggara Province, Indonesia.

The Mayor’s office building of Kupang City was inaugurated in 1996 as in the same time as the inauguration of the Municipality of Kupang, East Nusa Tenggara Province. Indonesian history records that since 1980 the Indonesian architecture has been dominated by the construction of buildings to accommodate government activities (Ismail, 1989). Since then, the building concept of Nusantara architectural identity has been launched by the government (Sopandi, 2009; 2017). The presence of the building of the Mayor’s office building of Kupang City has responded to the issue of the development of the identity of Nusantara, as the main concept proposed by the designer is to present the appearance of buildings characterized by local architecture in East Nusa Tenggara.

Today, the physical condition and function of the Kupang Mayor’s office building is still good. Of this criterion, this building is chosen as the object this case study. The following figure shows the location of the building, as well as a re-depiction of the floor plan, building height, cutout drawings and perspective of the case study building (Figure 1, 2, 3, 4, 5, 6).

![Figure1. The location of Mayor’s office building of Kupang City in East Nusa Tenggara Province](image)
Figure 2. Floorplan

Figure 3. South elevation

Figure 4. East elevation

Figure 5. Section
Analytical methods

Elaboration the archetypal anatomy theories (Purnama Salura, 2018) and the relation of architectural function-meaning forms (Purnama Salura & Fauzy, 2012) is the first step of analyzing the synthesized architectural expression in this case study. The observation unit will be based on the local wisdom approach of ideas, medium, expressions mentioned by Salura – Fauzy (Purnama Salura & Fauzy, 2012). It is believed that the architectural medium, commonly called form, is always created from ideas or functions to accommodate activities (Purnama Salura, 2005; Lyu, 2019). Forms that exist due to specific activities will display expressions as specific meanings (Purnama Salura, 2012). Therefore, the focus of this study is the relation building shape and the meaning of its appearance.

Synthesis interpretation and architectural expression from previous studies can be done with a phenomenological, structural and semiotic approach. Starting from the phenomenological approach, Thiss-Evensen reads the expression of architectural elements from the nature of an architectural element related to its weight, nature of motion, and surface quality (Thiss-Evensen, 1987). The structural approach put forward by Salura states that within the subject there is always the meaning of the principle of order regarding balance and orientation based on the essence of man and nature (Purnama Salura, 2010). Whereas Peirce developed a semiotic approach to reading an object based on cause-effect relations, similarity, and conventions of the degree of similarity that prevails in reality (Peirce, 2012; Zoest, 1993).

Based on the elaboration of the theoretical approaches, the stages of analysis are: First, the case of this study is recorded empirically through a three-dimensional re-drawing so as to facilitate the decomposition of archetypal anatomy elements as observational units, namely sub-structural elements (floors as scopes of space associated with soil), upper structure elements (walls as elements associated with horizontal scopes), and super structural elements (roofs as elements related to vertical scopes) (P Salura, 2018); Second, operationalize the function-form-meaning approach based on the principles of
identification, balance, and orientation - hierarchy. The principle of identification of mass and shape includes weight, motion, and surface quality (Park, 2001). The principle of balance focuses on the composition of symmetrical, datum, rhythm and repetition to find the building mass axis (Purnama Salura, 2010). The principle of orientation - hierarchy for clarity of position (up - down, left - right, front - back), distance (near - far), and mass (large - small) (Purnama Salura, 2015b); Third, interpret the results of the analysis whether the synthesis of building forms can present monumental, formal, and democratic expressions in the Mayor's building and become the identity of a region.

3. RESULT AND DISCUSSION

Interpretation of the Expression of the Meaning of the Appearance of the Building

The building order principles are the basis for the analyzing of all the composition of elements that make up the Mayor's office building of Kupang City. Those two main principles are. Firstly, the principle of equilibrium, consisting of: axis, binding, repetition and rhythm; Secondly, the principle of orientation, consisting of a top-down, front-back, and far-near hierarchy. The two principles are analyzed and followed by interpreting the substance, and nature of the elements and the structure of the building. The following is a picture of the decomposition of the elements and the structure of the Kupang Mayor's office building (Figure 7).

![Figure 7. Decomposition of elements and structure of the Mayor's office building of Kupang City](image)

Based on the re-description, there are twelve elements in the Kupang Mayor's office building.

The building elements are:

01. The main roof cover element is in the middle of the building;
02. The main supporting frame roof element in the middle of the building;
03. Elements of wall covering the third-floor office room;
04. Roof cover elements of the second-floor building entrance;
05. Elements of the walls of the building stairs area;
06. Elements of wall coverings of second floor offices;
07. Supporting elements of the roof of the second floor of the building;
08. Elements of a wall covering the first floor of an office;
09. Element roof cover building entrance;
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10. The column element in the building entrance;
11. Floor elements as high as one fifth of a wall (element 8);
12. The staircase element at the building entrance.

Analysis of the principle of balance

Observation of the shape of the building is done from the scale of the building to the site. Observations at this distance allow observations of the overall mass shape consisting of the roof, wall and podium elements. The wall element in this building is a very dominating part of the overall appearance. The biggest proportion compared to the roof and podium. Related to the clarity of the axis, symmetrical composition that creates a vertical axis is found in the elements of the roof, entrance columns and walls of building stairs. The horizontal axis is seen on the walls of the building floor and the listplank element as a boundary between the building's mass floors (Figure 8). The binding clarity can be seen that all mass elements are bound by the middle mass element (second floor) and the main roof is soaring high (Figure 9). The mass rhythm repetition is found in the listplank mass element as the end of each building's mass floor, trapezium supporting frame elements on the third floor listplank and on the second-floor wall and rhythmic repetitions of the round columns at the entrance of the building (Figure 10).

![Vertical axis](image1)

**Figure 8.** Vertical and horizontal axis in the Mayor’s office building of Kupang City

![Second-floor mass and main roof binding](image2)

**Figure 9.** The second-floor mass and the main roof bind the entire mass of the Mayor’s office building of Kupang City

![Repetition rhythm](image3)

**Figure 10.** (a) Repetition-rhythm of mass ornament elements and (b) entrance columns
The interpretation of form expressions based on the principle of equilibrium can be described as follows. The formal impression is successfully displayed through the composition of the stable form elements and the strong vertical and horizontal axis. The difference in the volume of the shape of the mass of the building makes the building memorable monumental, and the presence of elements of the stairs from the front still strengthen the vertical impression that supports monumentality. Even though in terms of quantity the area of the wall is greater than the area of the roof, but the dominance of the roof element is clearly seen from the scale of the site and the surrounding environment. Because the principle of the towering shape of the roof meets the composition.

Analysis of the principle of orientation

The position of the center and left-right of the building mass is dominated by the mass entrance element as central because it is in the middle of the overall composition of the building mass. The affirmation of the mass entrance element has a different composition, that is the composition of the mass element moves towards the front. Entrance orientation is very clear. The middle part of the facade of the building has a higher dominance than the left and right (Figure 11). Middle and top-bottom orientation shows that the entrance mass element has an open expression value, and is inviting so that it is different from the heavy middle mass which is given a lot of ornament.

![Figure 11. The middle part of the building has more dominant than left - right](image)

Based on the analysis of the orientation principle, it can be interpreted as follows. The central mass of the building has a higher dominance than other building masses. The roof element from the center of the building mass is part with a hierarchy of markers of the overall building mass. The lower element is the entrance of the building because of its ease of attainment, and is also a face marker with the composition of the entrance mass element moving forward.

Interpretation of the expression of synthesis of local identity

The elements of each building mass can be signage that signifies a special meaning. The results of analyzing the decomposition of each element and ordering principle, reveal three main parts that provide signage. First, the roof is the dominant element describing the signage of the overall signage composition. Second, the wall parts which are given ornaments from concrete construction as signage of activity inside the building. Third, the entrance column which is a sign element of the building mass zoning function.
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1. Roof Elements

The roof elements are divided into three parts. First, the main roof in the middle of the building mass is a signage having a hierarchy and a higher value than other roofs. The main roof section is categorized as an icon. The shape of the main roof with ornamentation on it refers to the shape of the umabamenara roof on the island of Sumba (Figure 12). The characteristics of the umabamenara roof is towering, monumental, giving the impression of broad and sturdy. The synthesis that was successfully applied to the main roof of the Kupang Mayor’s office building conveyed a message symbolizing a monumental and formal impression.

![Figure 12. The resemblance between the umabamenara roof with the roof of Mayor’s office building of Kupang City](image)

Second, the roof on the second floor of the building mass becomes the signage of the entrance area directly by the main guest or the direct circulation by the Mayor of Kupang from the main entrance on the ground floor. The form of the second-floor roof is equipped with buffalo horn ornament which refers to the shape of the Sa’O roof that is in the EndeLio area (Figure 13). The characteristics of Sa’O’s roof are dynamic because the roof edges are curved, give the impression of lightness, and friendliness (Reginaldo Christophori Lake, 2015a). The synthesis that was successfully applied to the roof of the second floor of the Kupang Mayor’s office building conveyed a message symbolizing the impression of receiving.

![Figure 13. The resemblance between the Sa’O roof with the roof of Mayor’s office building of Kupang City](image)
Third, the roof at the entrance of the building is an index signage and hierarchical position of the mass face of the building. The roof part of the entrance refers to the shape of the *umelopo* roof from the Timor area (Figure 14). *Umelo* is the vernacular building of the Dawan tribe on the island of Timor, as a building intended for men (Lake, Boli, Djonda, & Siwa, 2018; Purbadi, 2010; D. Purbadi et al., 2016). The function of umelopo is to receive guests because its shape without walls gives the impression of inviting (PurnamaSalura & Lake, 2014; ReginaldoChristophori Lake, 2015b; Harmans, 2016).

![Figure 14. The resemblance between the *umelopo* roof with the roof of Mayor’s office building of Kupang City](image)

2. Wall Elements

A massive wall with a square opening with a trapezium-shaped concrete ornament visible from afar is an iconic signage of the shape of *oko mama* (betel nut box). *Oko mama* is square, it functions as a place to store betel and areca nuts for traditional communities throughout the East Nusa Tenggara Province (Figure 15).

![Figure 15. The resemblance between the *oko mama* form with the wall of Mayor’s office building of Kupang City](image)

3. Column

There are eight round columns at the entrance of the building. The shape of the round column refers to the form of the *umelo* column in the vernacular Dawan building on Timor Island. The round column reinforces the entrance value of the Kupang Mayor’s office building because it is equivalent to the *umelo* function of the traditional reception building (Figure 16).
The analysis concluded that:

First, this research puts forward a new method for analyzing the synthesized expressions displayed by architectural forms in general and the Mayor's office building of Kupang City in particular. The method of analysis consists of three stages namely physical recording of buildings based on the site scale, descriptions based on the principle of balance and orientation, and interpretation of the synthesis of building form expressions.

Second, the Mayor's office building of Kupang City is able to display monumental, formal, local expressions, while at the same time representing democratic ideology. The dominance of the overall composition of the building is the roof element which refers to the shape of the umabamenara, Sa'O, and unelopo roofs. While the wall element refers to the shape of oko mama and the column element from the entrance refers to the form of the unelopo column. Thus, the results of this research analysis confirm that the synthesis of local aspects and the treatment of architectural synthesis concepts strengthen the expression of local identity and democratic ideology.

Third, the concept of architectural synthesis is believed to be a basic idea and reference for designing public buildings that creatively display elements of local architecture. This study is a novel work that displays the richness of local architecture and significantly contributes to preserving the local architecture.

The implication of this study is that the concept of architectural synthesis is appropriate to be used in building of public facilities that creatively display expressions of culture and local architecture. Community pride towards the appearance of local architectural features become a strategic part in building national pride in the field of architecture.

References
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