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Research paper

Changes in the Meaning of Primary Elements of the European Region in Medan City, Sumatra Island, Indonesia

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Abstract

The urban area consists of systems and sub-systems that have relationships with each other like a network. The development and changes in urban space are believed to influence the relationship between systems and also the meaning of all elements forming the urban spatial area. This also happens to the primary elements which are signs for the urban area. Given the changes in the city area, the existence of the primary elements as signs of a city area needs to be explored. The study is carried out on the primary elements in the city area which has a relatively complete city function. The case study is the European region in the center of Medan city, the capital of North Sumatra Province, Indonesia. This is a descriptive-analytical and interpretative-qualitative research. It aims to reveal all relationships that are intertwined in the function, form and meaning of the primary elements. The results of the study concluded that changes in primary elements as signs of the region shifted from symbolic meaning to pragmatic meaning.

Keywords: *expression, function, form, primary elements, changes, meaning of city signs*

1. Introduction

Space in urban areas in major cities in the world today tends to experience rapid development due to economic growth and the effects of globalization. This development can be considered positive if it is associated with the fulfillment of ever-increasing needs. However, on the contrary, the development of urban area spaces can also be considered negative if the spaces created are not following the increasing needs of the community [1]. Negative assessment can be created because the development of the city tends to be foreign to the people who live in it. People get confused or no longer recognize specific signs of the city. Changes in the city area resulted in the loss of the existing signs. This change also makes new signs appear and coexist with signs that still survive from time to time and in the development of other regional spaces [2]. This problem can almost be found in big cities around the world. This implies that the issue of the meaning of city signs is an important issue from the past to the present.

Medan City in North Sumatra Province, Indonesia is a unique city where growth and development are different from other big cities in Indonesia. In the past, Medan City was known as the "Company Town" because it became the center of trade of plantation products from areas spread on western plantations on the east coast of Sumatra [3]. The city of Medan was enlivened by traders and garden workers who came and started forming settlement groups. Gradually, the city of Medan began to grow and develop based on the settlement of ethnic groups [4]. Every ethnic group constitutes a settlement that has specific elements of the city. These specific elements then become a sign of each region. [5]. At present, the primary elements of the region as a sign of each ethnic area in the city of Medan experience changes in their function and form. The same is true for the European ethnic. Unlike other regions; such as the ethnic of Chinese or Malay, the primary elements of the European region are relatively still present and relatively recognizable.

This study aims to explore and reveal all the relationships that exist between the form and function of the primary elements as a marker of the European region in the context of the changing space of Medan's current urban area. This issue is still a rare issue discussed in architectural research. Thus, this issue becomes important to be addressed through an in-depth and careful study. The results of this study can be used for: Firstly, filling the gaps in the theory and methods of primary elements and their role as city signs in the development of urban area. This research could become as the basis for further research on the meaning of city sign specifically; and also the development of city architecture theory in general. Secondly, as strategies for all stakeholders in the Medan city area in particular and other cities in Indonesia with similar characteristics.

2. Materials and Methods

2.1. Case Study

The case study located in the European Region in Medan City in North Sumatra Province, Indonesia. Criteria for the selection of case study in the European region are: Firstly, it is located in the center of Medan and represents the character of the European region. Secondly, the study case must have a complete function of the city which consists of the functions of housing, trade worship, and governmental. Thirdly, has a very strong historical context; Fourthly, the study case has primary elements that can still be explored em-

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pirically. Based on these criteria, three main segments in the European region were determined, namely the segment of Merdeka, the Benteng and the Polonia area.



Figure 1: Indonesian map, Sumatra map, Medan city map, European Region Map

2.2. Research methods

The steps taken in this study are as follows:
The first step is to determine the specific area of the European region by using the elaboration of the Tissue Analysis theory, so that the boundaries of the study case can be traced firmly and clearly [6].
The second step is to identify the primary elements in 3 (three) case studies. This step uses the elaboration of several theories regarding the primary elements of the region. This elaboration is needed to be able to choose the primary elements that are complete and comprehensive [7].
The third step is to determine the dominant primary element and act as a generator of urban area space. This step is an elaboration of city theories regarding primary elements as persistent elements that have properties as components of propelling (development generators) [8].
The last step is to analyze the functions and forms of dominant primary elements based on the theory of composition and property [9,10], then interpreting the meaning of the primary elements in each case of the study using the layer of meaning theory. [11,12,13] Based on these steps, the meaning of the function and form of the primary elements in each case studies will be revealed [14].

3. Results and Discussion

3.1. Determination of Specific Area Limits in the Three Study Cases

The analysis in step one determined the physical boundaries of the three study cases. (see figure 2 a, b, c). These boundaries were determined based on the elements of the city which tend to be difficult to change such as the layout of the city, roads and railroads and natural elements such as rivers. Determination of these limits also refers to the concept of tissue which if part of the network is separated or localized will not disturb other urban area networks and activities. [15]



Figure 2: Boundary Analysis of Merdeka Segment Area, Benteng Segment Area, and Polonia Segment Area

The boundary of the Merdeka segment area is the City Hall street corridor which shows the façade of old buildings with various functions, the Bukit Barisan street corridor which shows the post office façade and a row of Pinang Island street shops, railroads and corridors surrounded by buildings which already exists from time to time. The boundary of the Benteng segment area is the Court Road street corridor which shows a clear skyline between the building of the Court office and Hotel Santika, Maulana Lubis street corridor which shows the façade of Paladium Mall building, Imam Bonjol street corridor consisting of North Sumatra DPRD offices, Bank Mandiri mosques and buildings, and Kejaksaan street corridor that shows the building facade of Lippo Plaza.
The boundary of the Polonia segment area is the Imam Bonjol street corridor, which is surrounded by the HKBP Church as the regional gate, Yaspendhar Harapan school, TNI AU office, housing, Elizabeth hospital, and Ahmad Yani Park which function as a regional generator activity.

3.2. Primary Elements Identified in the Three Study Cases

Based on the analysis in step two, the primary elements in the three case studies were determined. (see Table 1). These primary elements are identified and selected in all elements of the region (both primary and secondary) in the three study cases. These primary elements are classified based on the concepts of Nodes, Paths, Landmarks, and combinations of the three.

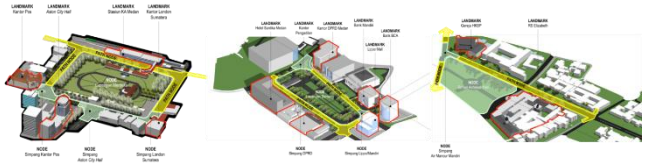


Figure 3: Primary Elements Identified at Merdeka Segment Area, Benteng Segment Area, and Polonia Segment Area

From the observations, the Merdeka segment area has 1 (one) main node and 3 (three) supporting nodes. The main node is the Merdeka Square surrounded by various functions that complement city activities. The orientation of the building towards the main node is also visible from the front of the building, the application of a wide setback and the presence of a single building, the main lines that are emphasized by vegetation, all of which are characteristic of the European region. Next, the main route around the Merdeka Square shows a clear path that connects two supporting nodes (path-node), namely in the corridor of the City Hall and the Lonsum Corridor. Intersections with landmark characteristics on supporting nodes reinforce the main lines and skyline of the area.
In the segment of Benteng area, the identified elements consist of 1 (one) main node and 2 (two) supporting nodes. The main node is the Benteng square which was surrounded by other primary elements. Furthermore, the main routes around the Benteng square are one of the Santika corridors and the DPRD office corridor. The firm path shown by large trees connects 2 (two) supporting nodes (path-nodes). Other main lines show landmarks in several nodes and corridors that reinforce the main lines and skyline in the segment of Benteng area.
The segment of Polonia area has 1 main node and 2 supporting nodes. The main node is the Ahmad Yani square, which is the center of regional activities, surrounded by primary elements with various functions. Furthermore, the main route in the Polonia area shows a path confirmed by large trees, which connects 2 supporting nodes (path-node). The Cathedral Church as landmark, is at the front node as the gateway to the Polonia area. The landmark on the main road corridor consist of: Firstly, the Elizabeth hospital Tower; and secondly, the former Polonia Airport which was located at the end of the corridor.

Table 1: The Primary Elements of European Regions in Medan City Center

	SEGMENT 1 MERDEKA SQUARE	SEGMENT 2 BENTENG SQUARE	SEGMENT 3 POLONIA AREA
Primary Elements of European Regions			
NODE	Merdeka Square City Hall Junction Post Office Junction Lonsum Junction	Benteng Square Bank Mandiri Junction DPRD office Junction	Ahmad Yani Square HKBP Church Junction
PATH	Railway Station Corridor		
PATH-NODE	City Hall Corridor Lonsum Corridor	North Sumatra DPRD Office Corridor Santika Hotel Corridor	Imam Bonjol Street Corridor
LANDMARK	Former City Hall Post Office Lonsum Railway station Grand Ina Hotel	Santika Hotel North Sumatra DPRD Office Court office Lippo Plaza Building	HKBP Church Elizabeth Hospital Forer Polonia Airport

3.3. Dominant Primary Elements as Regional Generators in the Three Study Cases

The analysis in step three determined the dominant primary elements in the three study cases. (see figures 4 a, b, c). These dominant primary elements were selected and determined based on the primary elements of the city area in step two. The selection and determination were based on activities and buildings that are generators for the region. The reason for determining the primary elements as a generator is as follows: Firstly, synchronous to the urban process; Secondly, not assessed by the previous function; Thirdly, the form can accommodate a variety of significant functions all the time.



Figure 4: a. Dominant Primary Elements in the Merdeka Segment Area, b. Dominant Primary Elements in Merdeka Segment Areas, c. Dominant Primary Elements in the Polonia Segment Area

From the results of observations and analysis it was found that the primary elements that become generators in each segment are as follows:

1. Firstly, the dominant primary elements at Merdeka segment area is the element of the main node of the Merdeka Square and the Landmark elements of the former City Hall;
2. Secondly, the dominant primary elements at Benteng segment area is the Path - Node Corridor element of Santika Hotel;
3. Thirdly, the dominant primary element in the Polonia segment area is the element of Landmark HKBP Church.

These dominant primary elements are determined based on the criteria of the primary element as the regional generator. The next step is to analyze the function and form of the dominant primary elements, and interpret its meaning as urban signs.

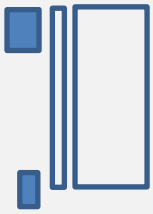
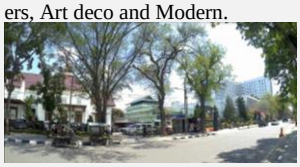
3.4. Functions, Forms, and Meanings of Dominant Primary Elements in the Three Study Cases

Furthermore, the dominant elements were examined based on changes in the forming components physically (form) and non-physical (function), the relationship between the two will show the role of the primary elements as an urban sign in giving meaning to its environment. The discussion of the meanings of the relation of function and form of primary elements was analyzed through the following steps:

1. Firstly, analyzing changes in functions and forms based on the theory of Parts-Whole and Hierarchy on functional aspects; while the theory of property and composition was used to analyze the aspects of form.
2. Secondly, determined the dominance of the component in the dominant primary elements. The dominance could be in the aspect of function or in the aspect of form.
3. Thirdly, interpreted the meaning which underlies the dominant function and the dominant form of the primary elements.

Table 2: The Domination of Functions, Forms, and Meanings of Primary Elements of European Regions in Medan City Center

DOMINANT PRIMARY ELEMENTS	DOMINATION IN FUNCTIONS		DOMINATION IN FORMS		CHANGES OF URBAN SIGNS MEANINGS
	PARTS-WHOLE	HIERARCHY	COMPOSITION	PROPERTY	
LANDMARK ELEMENT IN MERDEKA SEGMENT AREA	Primary Element Functions are now a part	The Primary Element's initial function is the center of government, then it	The position of the Primary Element is on the junction and the dominant Aston	Classic and Art Deco style details are retained by the surrounding building.	Function Domination = Form Domination: Meaning of Commercial Capitalist Ideology

FORMER CITY HALL	and support activities at Aston Hotels area.	changes to the Restaurant function.	Hotel building as its-background. 		(CONVENTION EXPRESSION)
NODE ELEMENT IN MERDEKA SEGMENT AREA MERDEKA SQUARE	Functions are intervened by commercial activities which become permanent.	Primary Element Functions as Regional Activity Centers.	Primary Elements as the center of Building Orientation. 	Primary elements have a symmetry with the Axis main road, and are surrounded by primary buildings around it. 	Function Domination = Form Domination: Meaning of Commercial Capitalist Ideology (CONVENTION EXPRESSION)
PATH-NODE ELEMENT IN BENTENG SEGMENT AREA SANTIKA HOTEL CORRIDOR	Primary Elements are part of the function of the area which consists of commercial and office activities.	Primary elements consist of old and new buildings that have important functions in the area, including the Court office and Hotel Santika.	The road corridor is formed by the Path-Node element, 2 nodes that have corner buildings, and are reinforced by the corridor skyline with the presence of Santika Hotel as a prominent Regional Landmark. 	Streetscape Corridor with a variety of building styles, among others, Art deco and Modern. 	Domination Function>Form Domination: Meaning of Pragmatic Capitalist Ideology (CONVENTION EXPRESSION)
LAND-MARK ELEMENT IN POLONIA SEGMENT AREA HKBP CHURCH	Primary elements function as worship activities which are part of settlement activities in the Polonia segment area.	The Primary Element has a function as a part of regional generator activities.	The Primary Element is the gate of the Polonia area, located at the junction of the street corridor. 	Primary elements have classic styling details, which dominate the European residential area. 	Function Domination< Form Domination: The Meaning of Cultural Signs (ASSOCIATIVE EXPRESSION)

4. Conclusion

This study concluded that:
Firstly, the dominant primary element in Merdeka segment area is the former city hall which serves as a landmark. This building used to be the primary element of the environment, which signified governmental power. Currently, on the aspect of form, this building is relatively unchanged, but accommodates new function of general trade. Its meaning as an environmental sign shifts from the meaning of symbolic ideology (power) to the meaning of pragmatic (commercial) capitalist ideology
Secondly, the dominant primary element in the segment of Benteng area is the Santika Hotel corridor which is a path-node element. In this corridor the changes that occur are in the physical form of the buildings which surround the corridor path and node. If initially the

building was only 1-2 floors, currently the path-node element enclosures are high buildings. Initially the primary element of the this sign is a formal orientation pathway. Now, this primary element has changed its form and function meaningful as a pragmatic (commercial) capitalist ideology. This primary path-node element focuses on existing activities as commercial paths, no longer being orientation directors.

Thirdly, the dominant primary element in the Polonia region is the HKBP Church as a landmark element. Both form and function are relatively unchanged. Until now the landmark element as an environmental sign still has meaning as a gateway to the cultural area.

Fourthly, the results of the study confirm that the method used in the study to interpret the meaning of primary elements as city sign can be used as an alternative new concept for reading the meaning of city sign. But this method still needs to be re-elaborated if it is used to read cases that have different characters.

Fifthly, this research can be used as a foundation that is still open to further research on the meaning of city signs in the scope of Indonesia, or even in a wider scope globally.

References

[1] Louis Wirth. *1938, Urbanism as a Way of Life*.. The American Journal of Sociology, Vol. 44, No. 1.

[2] Nas, J.M., Peter, 2011, *Cities Full Of Symbols, A Theory Of Urban Space And Culture*, Leiden University Press.

[3] Bruner, Edward M.,1961, *Urbanization and Ethnic Identity in North Sumatra*, American Anthropologist, New Series, Vol. 63, No. 3

[4] Passchier, Cor, 2008, *Medan, Urban Development By Planters And Entrepreneurs 1870-1940*, Issues In Urban Development, CNWS Leiden University.

[5] Suryadi Santoso (Jo Santoso) 2008, *Arsitektur Kota Jawa, Kosmos, Kultur & Kuasa.Centropolis*, Universitas Tarumanegara.

[6] Kropf K , 1996, *Urban tissue and the character of towns*. Urban Des Int.

[7] Lynch, Kevin. 1966. *The Image Of The City*, The MIT Press

[8] Rossi, A, 1982, The Architecture Of The City, Cambridge, MIT Press.

[9] Salura, Purnama, 2018, *The Philosophy Of Architectural Ordering Principles*. International Journal of Engineering and Technology, Vol7, No.3, p.218-221.

[10] Salura, P. (2018). Anatomy of Architecture Based on the Creation of Space for Activity. *International Journal of Engineering and Technology(UAE), 7*(2.14), 205–207.

[11] Salura, Purnama, 2015, *Rethinking Architectural Design Studio Education In Global Era*. International Journal of Academic Research, Vol7, No.3, p.52-55.

[12] Salura, P., & Clarissa, S. (2018). Interpretation of the meaning of mosque architecture: A case study Mosque 99 Cahaya in Lampung, Sumatera Island, Indonesia. *International Journal of Engineering and Technology(UAE), 7*.

[13] Salura, P. (2018). Spectrum of Meaning in The Architecture of Catholic Church. *International Journal of Engineering and Technology(UAE)*, *7*(2.14), 318–322.

[14] Salura, Purnama; Fauzi, Bachtiar, 2012, *The Ever-rotating Aspects of Function-Form-Meaning in Architecture*. Journal of Basic and Applied, Vol 2 No.7, p. 7086-7090.

[15] Lubis, Basauli Umar, 2002, *Implementation Of Urban Design In The Development Of A Tourist-City Destination, Case Study Kesawan Quarter In Inner City Of Medan, North Sumatera, Indonesia*. Dissertation.