
PLACE IDENTITY GENERATED BY FACADE COLOR OF URBAN BUILDING

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ABSTRACT

Color as a spatial dimension plays an important role in shaping human perception of the identity of a place. The urban public environment is usually characterized by crowds of people and many buildings. The color of the facade on the building which is not well planned makes it even more visually busy. This research aims to explore the identity of a place that can be seen from the color of building facades in urban public environments. The case study in this research is the public area of Jalan dr. Rajiman Surakarta. Even though it looks busy, researchers will try to map the colors of the existing facades by documenting the colors of the facades along Jalan Dr Radjiman from photos. This data is processed using graphic design applications and facade color mapping to find color patterns that lead to the identity of the place. The results of the research are that even though the area has busy building facades, based on the color of the facades, several color templates were found that show similar identities.

KEYWORDS: color, façade, place identity, urban public color

Warna sebagai dimensi spasial memainkan peran penting dalam membentuk persepsi manusia terhadap identitas suatu tempat. Lingkungan publik urban biasanya ditandai dengan keramaian orang dan banyaknya bangunan yang ada. Warna fasad pada bangunannya yang tidak direncanakan dengan baik semakin membuat ramai secara visual. Penelitian ini bertujuan menelusuri identitas dari tempat yang dapat diperhatikan dari warna fasad bangunan lingkungan publik urban. Studi kasus pada penelitian ini yakni area publik jalan dr. Rajiman Surakarta. Meskipun terlihat ramai, peneliti akan mencoba memetakan warna fasad yang ada dengan dokumentasi warna-warna fasad sepanjang jalan dr Radjiman dari foto. Data tersebut diolah menggunakan aplikasi desain grafis dan mapping warna fasad untuk menemukan pola warna yang mengarah ke identitas dari tempat tersebut. Hasil dari penelitian, yakni meskipun area tersebut memiliki fasad bangunan-bangunan yang ramai tetapi berdasarkan warna fasadnya, ditemukan beberapa template warna yang menunjukkan identitas yang serupa.

KATA KUNCI: warna, fasad, identitas tempat, warna publik

INTRODUCTION

Many emerging architectural styles are becoming similar in fast-growing cities, resulting in the loss of urban color identity (Ren, X., 2011). This phenomenon also occurred in the area of Jalan dr. Rajiman. This area is an area that has historical value and is one of the areas of the Solo Keraton. The keraton area is developing very rapidly, attracting the interest of traders to sell in the surrounding area, making conditions around the area very busy and filled with shops for selling. Because it is chaotic and mixed up, its identity as a keraton area is starting to disappear. The condition of the surrounding area becomes similar to public space areas in other cities so that its identity is increasingly lost.

The color of facades on public buildings needs to be considered in the construction of public spaces because color is part of place identity (Xu J. , 2020).

Another study also suggests that city planners, architects, should consider color in the city planning stage (정창석, 1986). Apart from this, color plays an important role in forming the identity of a place, influenced by physical location and human perspective (Xu J. , 2020). This study also provides a framework for analyzing the impact of color identity in urban environments.

Color can also act as a local identity (Xu J. , 2017). Color is an important element of design that expresses a unique visual and psychological identity in architecture (Suvari, Okuyucu, Coban, 2021). The area of Jalan Dr. Rajiman was chosen as a research study because this area is an area close to the city's local icon, namely the Surakarta Keraton. Keratons- especially the Surakarta keraton-are usually marked white because they are painted with limestone. The white color is still maintained because the keraton is a cultural heritage building and its existence is a

historical node of civilization as well as a node of Javanese-Islamic culture in Surakarta and Indonesia. Because of this strong local identity, color planning in the city landscape needs to be carried out by emphasizing the importance of understanding and utilizing local color identities for cultural promotion (Bianconi & Filippuci, 2019).

This is done so that the identity of the color, landscape, building facade, and room color is maintained. As Xu (2020) said, in urban environments, color contributes to the construction of place identity. This means that the use of a systematic plan for coloring building facades is considered so that the identity of the environment is created. Color itself is part of something tangible. In the author's previous research, a tangible or intangible aspect was part of the boundary mechanism that influenced the interiority of the existing space (Maulina & Susanto, 2022). This determines whether the colors of the facade can make the building interiority in the form of familiarity of the place.

This research aims to review whether the color of the facade of the research study area still shows the identity of the place based on the colors of the facades of the surrounding buildings. This will help with discoveries related to place familiarity for further research.

RESEARCH METHODS

Data collection in this research was divided into two stages, namely collecting data on buildings in the area and their functions. The data on color photos of the facades of surrounding buildings.

Building Function Documentation

- a. Classification of the identity of buildings based on their function,
- b. This data is then processed with data mapping of facade colors and location when collecting data on photos of building facades

Building Facade Photos Document

- a. Collecting data on photos of building facades uses the Open Street Map from GMaps to assist with coordinates and determining the location for taking figures. Data collection is carried out using a camera. Videos and sketches of building facades were also taken as supporting data.
- b. The photo data is then reprocessed by removing several temporary aspects taken on buildings such as billboards, large cars, and event posters.
- c. The data that has been processed is then grouped based on the color of the building façade.

The data collection can be seen in the figure below for a data processing diagram of the facade photo.



Figure 1. Data Collection Diagram. (Source: Author Diagram, 2023)

RESULT AND DISCUSSION

Facade color mapping

Researchers and their team collected data around the area of Jalan Dr Radjiman around the Klewer market. Photos are taken from point 1 to point 2 and vice versa for the opposite side (North side and South side areas). Using photos recorded on Google Street on Gmaps, photos of facades were collected along the area. view figure below.



Figure 2. Areas of the Data Collection (Source: Author Diagram, 2024)

The results of photo documentation on the north side of the building facades around the road are as follows;

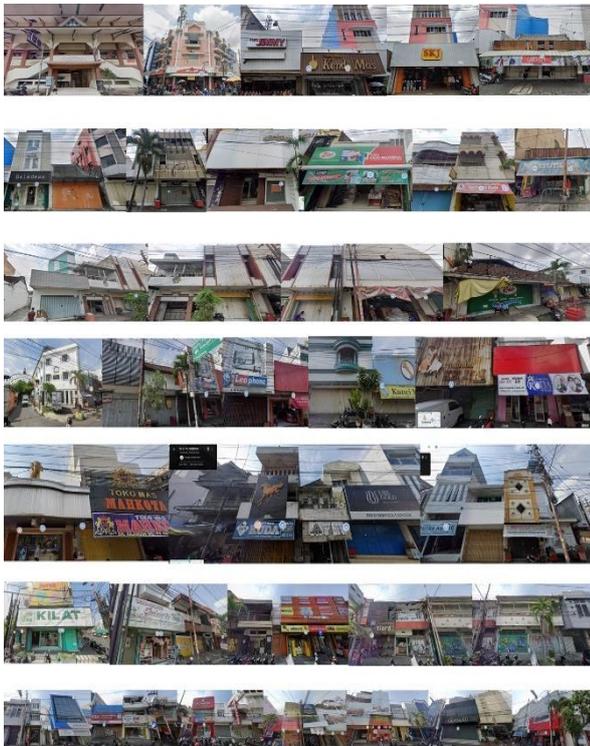


Figure 3. Result Building Façade Color in North Side
(Source: Google Maps, accessed May 2023)

And the figure results for the south side area are as follows.



Figure 4. Result Building Façade Color in North Side
(Source: Google Maps, accessed May 2023)

Data on the photos that have been taken are then carried out by data cleaning to sort out several photos that are covered by temporary elements and elements that cover facades such as large cars, billboards, campaign and event boards and trees. The results of the clean photos were then mapped by the author based on the building function data that had been obtained. Data on building functions as the identity of buildings in the area around Jl Dr Rajiman produces a certain classification (see table 1)

Table 1. Classification of buildings based on their function

Building Classification	Description
Cultural Heritage Building (Blue)	Local cultural heritage buildings such as keraton and the environment around the keraton.
Local Icon Building (Blue)	In the form of a gate which has a color related to the local identity of the surrounding area
Commercial by the Government (Orange)	Commercial buildings such as markets and malls are managed by the Surakarta Government
Private Commercial (Red)	Commercial buildings are mostly shops that are managed by the private sector or are privately owned
State Institution School (Green)	Educational facilities managed by the Ministry of Religion (Kementerian Agama)

(Source: Author Diagram, 2023)

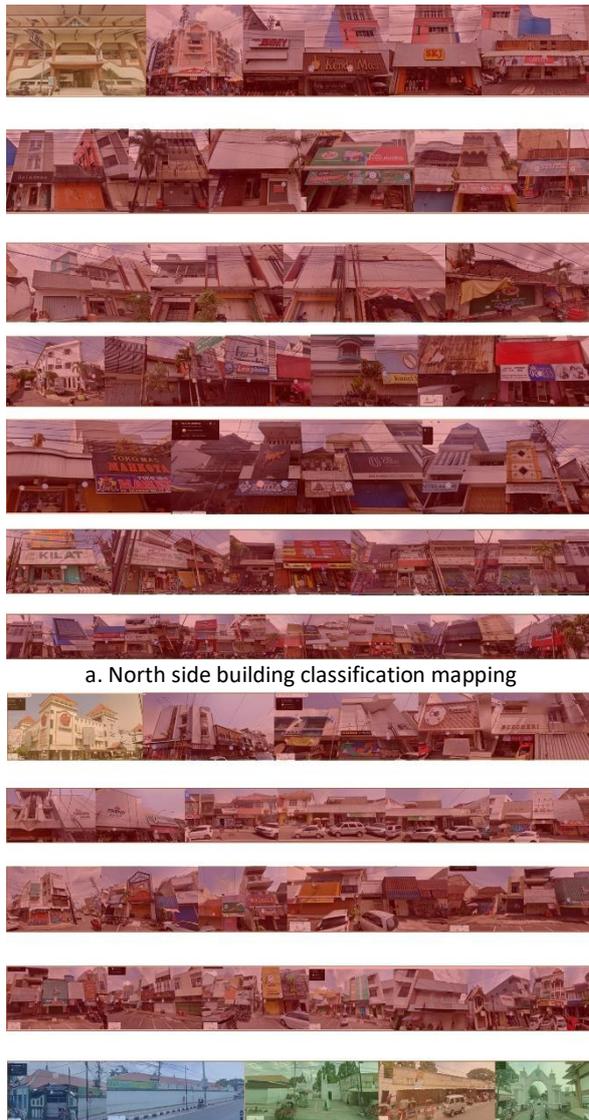
The process of mapping facade colors is then combined with building classification data. Each classification is marked with a color, namely Commercial by the Government (Orange), Private Commercial (Red), State Institution Schools (Green), Cultural Heritage Buildings, and Local Icon Buildings (Blue).

From this, mapping on the north and south sides is obtained as below.



Figure 5. Diagram Mapping The North and South Sides based on Building Classification.
(Source: Author Diagram, 2023)

When mapped, the distribution of facade colors for each building produces the results below (see figure 6)



a. North side building classification mapping

b. South side building classification mapping

Figure 6 (a) and (b)

(Source: Google Maps, accessed May 2023)

From data mapping the function of the building and ownership of the building. It was found that there are similarities in the colors used on building facades based on function and ownership, which shows the identity classification of the place.

Social and commercial facility buildings managed by the government use soft cream and red facade colors. Privately owned commercial buildings use facade colors according to the branding of the goods they sell. Educational facilities managed by the Ministry of Religion wear green, typical of Islamic identity, and light blue. The colors of the keraton buildings match the local keraton colors of light blue and white as well as dark green and golden yellow for some of the gates and gates of the alleys on the road.

Place Identity due to Local Historic Buildings

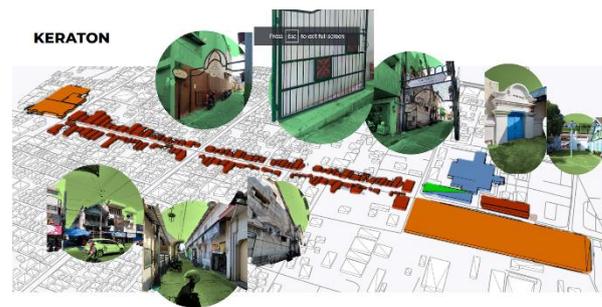


Figure 7. Distribution of areas of cultural heritage buildings and local icons
(Source: Author Diagram, 2023)

The first facade color classification is light blue and bright bone white. According to information on the Surakarta City Government website, the blue and white colors of the keraton (<https://surakarta.go.id/?p=28199>, accessed 23 May 2023) are colors that are considered to symbolize repelling evil or all evil things. This color is the identical color of the Surakarta Keraton buildings

Uniquely, the keraton in Surakarta is divided into Kasunan and Mangkunegaran keratons. The color of the facade at Mangkunegaran has its own color identity, namely dark green and golden yellow. According to information from the same website, this color represents a symbol of fertile life. The meaning of the gate that can be taken is the hope that the Solo City area has the potential to make its citizens prosperous. This color is similar to the color of the Jogja keraton. Although the meaning contained is different. The green and yellow colors of the Jogja keraton mean prosperity, prosperity, and honor. Meanwhile, the golden yellow color means authority and glory (Laras, 2015).

The white color of the keraton itself is because it still maintains the original color of the building, which is a cultural heritage building. So it needs to be preserved. In the past, buildings were still painted using white limestone. So even if the keraton buildings are repainted, the paint used must have a matching color. The colors are light blue and white. This color is the result of historical construction as found by other research, where historical places in urban areas have color choices in harmony with the climate to address color issues in urban spaces, and the use of complementary colors to enhance visual richness and emphasize landmarks (Tadayon, Ghalehnoee, & Abouei, 2018).

The color of the facade is what probably makes the identity of the keraton building visible in that area. The color standard for the keraton which still

maintains its white color also creates a perception formed by local people that the building is an old building that needs to be maintained (Danaci & Kiran, 2020). The Mangkunegaran green color can be seen at several gates in the area leading to Kauman village. Kauman Village itself is a historic old village in the city of Solo. This village is known as the batik village and batik is the identity of the city of Solo. This indicates the local identity of Solo City from the color of the facade at the Kauman village gate (see Figure 7).

Place Identity of a Commercial Place Government owned.



Figure 8. Distribution of areas of Commercial Place Government owned.
(Source: Author Diagram, 2023)

Commercial buildings owned by the Surakarta city government generally use cream and red colors (see the distribution of buildings of this classification in the figure). This color may be used as a template color for public facility buildings such as markets in the city of Surakarta. This is because it was obtained from mapping data on the color of the market facades in the city of Surakarta, it turns out that they use this facade color uniformly. This may be because color harmony and color diversity should be well-considered in urban planning (Zhai, Gong, Huo, & Fan, 2023). See the color data table for the facades of Surakarta City markets below.

Table 2. Figure of market facades in Surakarta

Market Name	Figure
Pasar Gede	

Pasar Nusukan, Surakarta	
Pasar Kadipolo	
Pasar Legi	
Pasar Kliwon	
Pasar Nongko	
Pasar Harjodaksino, Gemblegan	
Pasar Gading	
Pasar Kleco	
Pasar Jebres	

(Source: Google Maps, Accessed May 2024)

Almost all of the colors on the facades of these markets have the same type of color. Cream and red are the basic colors on the facades of these buildings. Because of the similarity of these colors, the identity of cream and red has become the identity of the market colors in the city. So people may immediately understand that a busy building with such a colored facade is a building that has a function as a market. Apart from that, several aspects of the objects being traded are also visible when each shophouse is open. This also helps strengthen identity and serves as a familiar color cue following the study (Davis & Therrien, 2012) that buildings with this color are markets.

This is also following studies that found that there is a strong relationship between the function of buildings managed by the government and the color patterns of the building facades (Foote, 1983). So the facade color template may also apply in several cities other than Surakarta. Another study also suggests that the facade color arrangements should reflect the features of the region and buildings (Ünver & Öztürk, 2002).

Place identity due to private ownership



Figure 9. Distribution of areas of Commercial Private ownership.
(Source: Google Maps, accessed May 2023)

The next classification of facade colors is the colors of commercial buildings such as shophouses and shops that are privately owned or privately owned (see figure 9). The colors seen based on the data are varied. This color variation is because the facade color is chosen by the respective building owners according to the shop branding and the goods they sell. This makes the identity of privately managed or privately owned shopping buildings have colorful colors by preferences and color psychology considerations following the branding (Sadeghifar, 2018)

For example, some shops that sell gold have gold or bright yellow colors on their building facades. Commercial buildings that sell certain specific products use the brand's colors, such as Momoyo stores and Rider underwear stores.

The results of the mapping show that the many colors of privately owned facades still show the crowds in the area. even though studies suggest that there is

importance in preparing color schemes based on color-emotion associations in urban design (Manav, 2017)). This allows for consideration regarding local regulations as to whether there is a need to set standard colors in certain areas so that the facade color which can become a local identity is not lost.

Place identity due to organization/religious branding



Figure 10. Distribution of areas of organization/religious branding
(Source: Author Diagram, 2023)

The facade classification of this building is green and blue. Green is considered the color synonymous with Islam. Because the school is under the Ministry of Religion, namely an Islamic school, green was chosen as the color for the building facade. This color is also considered cool and fresh visually. This makes it possible that this color also influences the psychology of the user (Rahmatajadi, Teimouri, & Azar, 2011).

Table 3. Façade color of Islamic School in Surakarta.

School name	Façade Color
MAN 1 Surakarta	
MAPK MAN 1 Solo	

MAN 2
Surakarta

(Source: Google Maps, Accessed May 2024)

The color green itself is considered by local people to be the color of Islamic religious identity. Green itself is believed in Islam to be the color favored by the Prophet and is the color described as the color of heaven in the Islamic religious book, the Koran. The green color itself is used for all facades and interiors because the choice of the facade also influences the interior of the building (Danajaya, Priyatmono, & Raidi, 2013).

This is what makes the green facade color for buildings that are quite large, namely low-rise buildings, have an identity as the color of the Islamic Ministry of Religion. Meanwhile, the blue color found in the school is due to the keraton's color markings that are still attached (See Figure 10). This is due to the location of the school which is still in the keraton area which has a strong identical blue color.

CONCLUSION

Based on the results of mapping facade colors which are linked to building function, place identities are found based on building classification and facade color. There are 4 place identities that have been discovered, namely;

- a. Place Identity due to Local Historic Buildings,
- b. Place Identity of a Commercial Place Government owned,
- c. Place identity due to private ownership, and
- d. Place identity due to organization/religious branding

This shows that, even though the Jalan Dr Rajiman area is a very busy public area in terms of the visuals of the building facades, the identity classification of the place can still be found from the color of the building facades.

This leads to further research,

1. Research related to whether the colors of the facades are related to the familiarity and comfort of public space users to find out the identity of each building and,
2. Whether the colors of the facade will affect the psychology of users around the public place.

REFERENCES

- Asylgaraeva, M., & al, e. (2018). What color is the red house? An invitation for multicultural research on color and architecture.
- Bianconi, F., & Filippuci, M. (2019). Landscape and Colours: From Dyelab to Colour Plan.
- Danaci, H., & Kiran, G. (2020). Examining the Factor of Color on Street Facades in Context of the Perception of Urban Aesthetics: Example of Antalya. *Semantic Scholar*.
- Danajaya, A., Priyatmono, A. F., & Raidi, S. (2013). Identifikasi Fasad Arsitektur Tropis pada Gedung-Gedung Perkantoran Jakarta (Studi Kasus pada Koridor Dukuh Atas-Semanggi). *Sinektika Jurnal Arsitektur*.
- Davis, R., & Therrien, B. (2012). Cue color and familiarity in place learning for older adults.
- Foote, K. E. (1983). Color in Public Spaces: Toward a Communication-Based Theory of the Urban Built Environment.
- Manav, B. (2017). Color-emotion associations, designing color schemes for urban environment-architectural settings.
- Maulina, W., & Susanto, D. (2022). Biophilic Design: Virtual Nature Application in a Windowless Room. *Sinektika Jurnal Arsitektur*.
- Rahmatatabadi, S., Teimouri, S., & Azar, F. N. (2011). Psychology of Colors and Architectural Façade and Interior Color Selection. *Semantic Scholar*.
- Sadeghifar, M. (2018). An Exploration of the Relationships Between Urban Building Façade Visual Elements and People's Preferences in the City of Gorgan, Iran.
- Tadayon, B., Ghalehnoee, M., & Abouei, R. (2018). Proposing a Method for Analyzing the Color Facade and Adopting it as Pattern in Historic Urban Spaces' scape Case Study.
- Ünver, R., & Öztürk, L. (2002). An Example of Facade Colour Design of Mass Housing.
- Xu, J. (2017). Notes on Interdisciplinary Perspective of Local Colour Identity.
- Xu, J. (2020). Colour as Place Identity: A Case Study of Leicester.
- Zhai, Y., Gong, R., Huo, J., & Fan, B. (2023). Building Façade Color Distribution, Color Harmony and Diversity in Relation to Street Functions: Using Street View Figures and Deep Learning. *ISPRS Int. J. Geo Inf.*
- 정창석, 박. (1986). A Study on the Building Color Scheme as an Urban Design Methodology.