

The Correlation between Apartment's Environment Character with Residents' Sustainable Living

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Abstract

The city is the place where various social class, ethnic and religious groups meet. The complex activities in the city demands the availability a comprehensive facility and infrastructure. This leads to the need of a built environment design to improve the life quality of its human beings. The study of relationbetween the human behavior and the built environment in *Environment Behavior Studies*discusses about environment setting components, user groups and behavioral phenomena. The environment character influences the user behavior. Living in apartments has become a new life style of citizens in Surabaya. The various environment characters underlies the problem of how the correlation pattern is between place setting, user and behavior.The apartment setting place that is immersed within a residential housing area influences the characteristic behavior of its usersespecially the interaction in the utilizing of the supporting facilities in the apartment and environment. The behavior of residents in the apartment's supporting facilities has a major impact on shaping the behavioral character and sustainable livingin the apartment.The sustainable living for the apartment residents isby achieving the social needs of interaction with their environment. This has become one of the indicators for the fulfillment of city service standards in providing urban housing infrastructure that is 'smart', livable, safe and comfortable, as an effort of sustainable living formal housing in Surabaya.

Keywords :*Environment Character,Sustainable Living*

1. Introduction

According to[1], the physical environment determines the behavior of human-beings (environmental determinism), the physical environment provides limitations in which humans can choose (environmental possibilism) or where the physical environment provides choices/tendencies but does not determine (environmental probabilism). A specific character/ environmental design will influence and shape a specific character to the human behavior,“a *system of setting is part of a larger system*”.

As the second largest governmental center in Indonesia, Surabaya has many apartments.When choosing an apartment, it is not only the unit that is taken into consideration but alsothe quality profile including the supporting facilities, operational management, site/location and also the surrounding environment. Meaning that an activity setting character is inseparable from its environmental character. The same type of building, but in a different type of environment will effect in different building user behavior.Place as a place setting cannot function as how the user prefer if there is no inter-influencing link[2].

The apartment quality character and environmental character that represent the object of this study are selected apartments that are in a residential environment setting and its dominant function as a residence. As an apartment that has a dominant function as a dwelling, how is the character of the environment in accordance with the quality profile of the apartment, and in return what is the appropriate character of the environment and supports the lives of apartment dwellers.The owner have more territory than tenants, so the people with higher education have sensitively of quality of space[3].

Apartment is a vertical housing with a special phenomenon. The lives of apartment dwellers focuses on the overview of privacy aspects. Because the fulfillment of the privacy of the dwellers determinesthe quality of the apartment and its environment. Sustainable Housing is a condition of sustainable living that is based on

social conditions by using quality of life and welfare parameters of its residents, based on the quality of the environment. The character around the residential location is designed and built so that social, economic, cultural and environmental interactions can be realized. The character of the reciprocal relationship has an impact on the daily quality of the lives of residents, health, welfare and security, which is not only for the present but also for future generations.

This study would like to formulate the reciprocal relationship between place setting-user-behavior between the character of the residential environment as the setting of the apartment with the user (apartment dwellers). User interaction with the environment can be reviewed in terms of intensity, frequency and proximity. The phenomenon of privacy aspects of the behavior of apartment dwellers takes the main focus. Because privacy aspect is the main behavioral phenomenon in planning facilities in an apartment environment. [4] The privacy mechanism of apartment dwellers, is a special phenomenon that is the sharing of identity, namely through trust and identity tools (Astuti, Susy Budi & Lea, 2019).

Several studies have linked the privacy of apartment residents to the security function and quality of space/supporting facilities. But not many have discussed the privacy of apartment dwellers in relation to interactions with the environment around the apartment. The environment and residents have reciprocal relationships, socially and individually. The environment as a public space is social because it can be accessed at any time by everyone. But it can also mean private / individual, because it can only be accessed by certain individuals or groups. This is in line with the opinion of [5], that discussing public and private spaces is always related to aspects of ownership, access and control. Public space can be accessed by the wider community with various interests while private space is limited to certain segments / populations. More widely discussed by Altman, that public space as a social or private / private environment is a territory that has boundaries. The limit is to communicate ownership of objects or places, namely the interaction in the use of needs for objects or activities in a particular place. The previous studies explained that "*That community ownership can be claimed as private zone*"[6], "*the elements of privacy toward the cultural norm*"[7], "*Personalization as a privacy behavior is a process that adjusts to the needs of individuals or groups*"[8]. So, privacy mechanism is a special phenomenon of behavior [9]

Scannell & Gifford [10] also interpret the environment in physical and social research. Physical as a form of the built environment, while social as a function of symbols or social arenas / facilities. In previous studies, have also described the existence of an organizational framework known as the tripartite model of place attachment. An organizational framework consisting of 3 separate dimensions, but complement each other in understanding place attachments, namely the dimensions of people, processes and places. Prakoso, Susinety [11] attachments to places are routes that represent emotional ties to places based on personal choice, especially those having high mobility.

This research has relevance to the study of the realm of Environment Behavior Studies based on an environment scale. This means that the sustainability of life in certain environmental characters is due to physical and social interactions. Cho's [12] explained that created the concept of vertical housing, treating the need for community space for togetherness. An interaction in order to formulate sustainable living in order to obtain a formal vertical housing row model. The row model will be use for any vertical housing developer as a recommendation for design the vertical housing, especially which will be built on residential housing environment.

The findings in this research would like to open more broadly about the phenomenon of privacy behavior. Privacy is not only meant as security, safety and comfort of individuals in internal or limited environment, but more on the existence of social interaction. Privacy behavior in apartment dwellers is behavior that is present in social spaces.

2. Method

This qualitative research uses a phenomenological approach with observing physical traces, observing behavior [13] and structured / questionnaire interviews. Behavioral observation is done by collecting data through questionnaires. Also coupled with in-depth interviews to find out things that are not observed. This research uses the phenomenon of case studies on typical objects. Using similar / typical cases, more specific (specific) information will be obtained. It was explained that this was to avoid rejection. Based on this, this study uses 6 typical cases / research objects. Case studies / research objects were conducted at 6 locations, namely in an apartment environment located in a residential area in Surabaya. The six locations were chosen in order to obtain complementary variants. The six locations of the research object are the environment around the

apartment: (a) Purimas, (b) Menara Rungkut, (c) Educuity, (d) Puncak Kertajaya, (e) Metropolis and (f) Sukolilo Dian Regency. These apartments are located in / near housing area.

The analysis process begins by examining all data from various sources, namely in-depth interviews, observations of behavior (questionnaire) and observation of physical imprints. The results of data from these sources in the form of field notes, interviews, photo documentation, videos, pictures and so on, are examined in more depth to be able to carry out data reduction. Reduction data will give a sharper picture of the observations, and make it easier for researchers to find back the data obtained when needed. The data that has been reduced is transformed in the form of a display that can be realized in the form of sketches, matrices, and supported by relevant documentation (photos, videos and pictures) so that the meaning is easy to interpret. The results of the interpretation are then made to a provisional conclusion for comparison and truth testing. The stages in the above cycle continue until they reach a strong conclusion.

3. Result and Discussion

a. The Correlation between Internal Facilities and The Sustainable Living of Apartment Residents

Based on Table 1, the quality of apartments in a residential area has the character of the availability of facilities which are dominated by swimming pools, convenience stores / minimarkets, gyms, canteens / cafes, laundry and outdoor parking. The facility is a service of the apartment management to meet the needs of the residents' lives. However, based on the results of the questionnaire (Figure 1), the facilities available in the apartment were responded to by residents differently. The residents' attachment to the apartment's internal facilities is strongly influenced by the user's character and cultural practices. The residents' characters are 95% of productive age, namely 18-25 years, 78.3% of women, and dominant are students. High mobility, more activities outside the apartment. This affects the attachment to the facilities available in the apartment.

Residents really need the existence of minimarket in the apartment's internal environment. Nearly 51,9% of residents use minimarket in apartments. The opposite condition is that residents rarely or even tend to never utilize the swimming pool, gym or cafe / canteen facilities. Nearly 47,8% said they never used the pool or apartment gym facilities. (Figure 1). Another very important necessity for apartment residents is the availability of an ATM machine. Some 90.9% of the residents use ATMs located in apartments.

Table 1 : Apartment Quality Profile based on Provided Internal Facilities

No	Facilities	Apartments					
		Menara Rungkut	Dian Regency	Educuity	Metropolis	Puncak Kertajaya	Purimas
1	Pool	Ready	Ready	Ready	Ready	Ready	Ready
2	Minimarket	Ready	Ready	Ready	Ready	Ready	Ready
3	Laundry	Ready	Ready	Ready	Ready	Ready	Ready
4	Gym	Ready	Ready	Ready	Ready	Ready	Not Ready
5	Food Court	Ready	Ready	Ready	Ready	Ready	Ready
6	Indoor park	Not Ready	Not Ready	Ready	Ready	Ready	Ready
7	Outdoor park	Ready	Ready	Ready	Ready	Ready	Ready
8	Playground	Not Ready	Ready	Not Ready	Not Ready	Ready	Not Ready
9	Garden	Ready	Ready	Ready	Not Ready	Ready	Ready
10	ATM	Not Ready	Ready	Ready	Ready	Not Ready	Not Ready
11	Carwash	Not Ready	Not Ready	Not Ready	Not Ready	Not Ready	Not Ready
12	Barber shop/Salon	Not Ready	Not Ready	Not Ready	Ready	Not Ready	Not Ready
13	Dentish	Not Ready	Not Ready	Not Ready	Ready	Not Ready	Not Ready

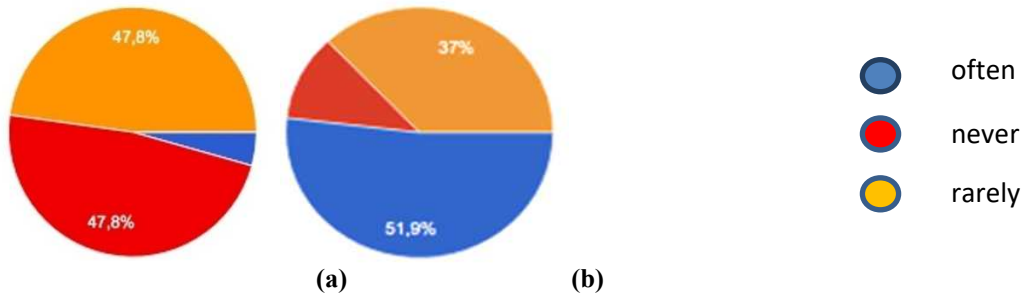


Figure 1 :The percentage of residents using the swimming pool (a) and minimarket (b) in the apartment

b. The Correlation between External Facilities and The Sustainable Living of Apartment Residents

Tabel 2 : Character of external facilities of apartment at radius 400 m

No	External Facilities at Radius 400 M	Apartments					
		Menara Rungkut	Dian Regency	Educity	Metropolis	Puncak Kertajaya	Purimas
1	Shopping Center/minimarket	Ready	Ready	Ready	Ready	Ready	Ready
2	Cafe/Restaurant	Ready	Ready	Ready	Ready	Ready	Ready
3	Education Facilities	Ready	Not Ready	Ready	Not Ready	Ready	Ready
4	Health Facilities	Ready	Ready	Not Ready	Ready	Ready	Not Ready
5	Bank/ATM	Ready	Ready	Not Ready	Ready	Ready	Ready
6	Mosque/Church	Ready	Ready	Not Ready	Ready	Not Ready	Ready
7	Laundry	Ready	Ready	Ready	Not Ready	Not Ready	Ready
8	Printing	Not Ready	Not Ready	Not Ready	Not Ready	Not Ready	Not Ready
9	Others	Ready	Ready	Ready	Ready	Ready	Ready

Tabel 3 : Character of external facilities of apartment at radius 800 m

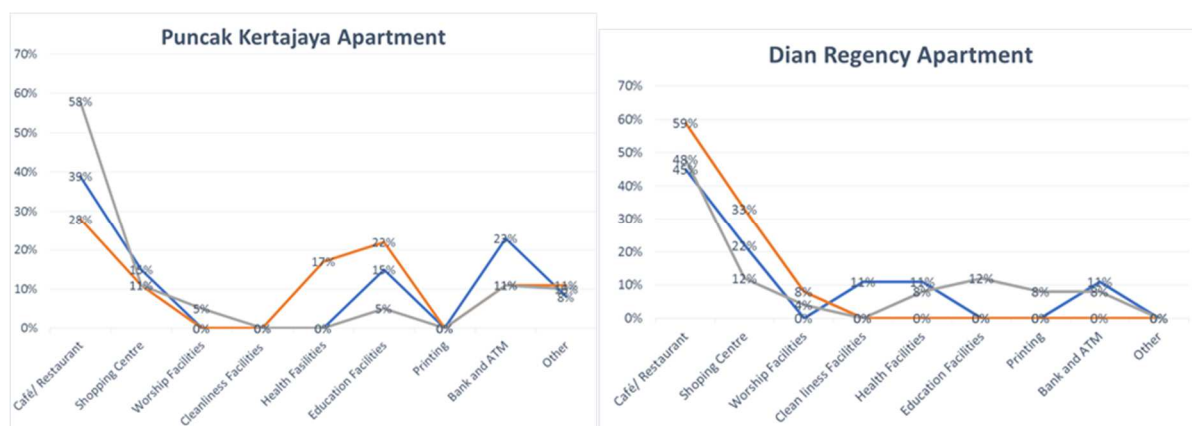
No	External Facilities at Radius 800 M	Apartments					
		Menara Rungkut	Dian Regency	Educity	Metropolis	Puncak Kertajaya	Purimas
1	Shopping Center/minimarket	Ready	Ready	Ready	Ready	Ready	Ready
2	Cafe/Restaurant	Ready	Ready	Ready	Ready	Ready	Ready
3	Education Facilities	Ready	Ready	Ready	Ready	Ready	Ready
4	Health Facilities	Ready	Not Ready	Ready	Ready	Ready	Not Ready

5	Bank/ATM	Ready	Not Ready	Ready	Ready	Ready	Ready
6	Mosque/Church	Not Ready	Ready	Not Ready	Ready	Ready	Ready
7	Laundry	Not Ready	Ready	Ready	Not Ready	Ready	Ready
8	Printing	Not Ready	Not Ready	Ready	Not Ready	Ready	Not Ready
9	Others	Ready	Ready	Ready	Ready	Ready	Ready

Tabel 4 : Character of external facilities of apartment at radius 1500 - 3000 m

No	External Facilities at Radius 1500-3000 M	Apartments					
		Menara Rungkut	Dian Regency	Educity	Metropolis	Puncak Kertajaya	Purimas
1	Shopping Center/minimarket	Ready	Ready	Ready	Ready	Ready	Ready
2	Cafe/Restaurant	Ready	Ready	Ready	Ready	Ready	Ready
3	Education Facilities	Ready	Ready	Ready	Ready	Ready	Ready
4	Health Facilities	Ready	Ready	Ready	Ready	Ready	Not Ready
5	Bank/ATM	Ready	Ready	Ready	Not Ready	Ready	Ready
6	Mosque/Church	Ready	Ready	Ready	Not Ready	Ready	Ready
7	Laundry	Not Ready	Ready	Not Ready	Not Ready	Ready	Not Ready
8	Printing	Not Ready	Ready	Ready	Not Ready	Ready	Not Ready
9	Others	Ready	Ready	Ready	Ready	Ready	Ready

The needs of apartment residents does not only occur in the apartment's internal facilities, but also in the environment up to a radius of 800 meters. The presence of a dominant mini/supermarket up to a radius of 800 meters, is a sustainable of individual needs (privacy) in public spaces (social needs). Its existence which can still be reached by foot, makes it easy to access. Interaction with the apartment environment as a form of individual needs in public / social spaces is also dominated by the availability of food facilities.





Graph 1 : Percentage of Number of Facilities

Based on Tabel 2 and Graph 1 above, the character of apartment environments up to a radius of 1500 meters, 48-59% is dominated by food facilities. This character reinforces the needs of apartment residents who have high cultural mobility practices, that is, most of their time is used for activities outside the apartment. There is a mutual interaction between the social needs of apartment residents with the character of the availability of public facilities, especially food facilities. Nearly 56% of apartment residents eat in the external facilities apartment. Mainly utilizing facilities that can be reached on foot or by delivery.

Apartment residents tend to use the swimming pool in the external facilities. That is because of the ease of reaching and for the needs of public interaction. On the contrary the need for laundry facilities does not take into account the ease of reach. 82.6% chose to use laundry outside/external the apartment because of the speed of the process and lower prices compared to the internal facilities of apartment. This is supported by the presence of delivery facilities, making it easier for residents. So that the quality profile of the apartment is complemented by the presence of facilities in the neighborhood.

Based on the phenomenon of the character of the internal and external environment as well as the behavior of the apartment residents, it is evident that the privacy aspect does not mean to be interpreted as completeness of physical facilities. The completeness of physical facilities is only a profile of the character of the apartment environment, but not necessarily in accordance with what is needed by the occupants. The sustainability of apartment dwellers' lives is the fulfillment of privacy needs that are not limited to the internal environment, but to the external environment. The need for privacy behavior of apartment residents occurs in public spaces, because of the desire for social interaction.

Privacy behavior is a form of control between individuals and the social environment. Namely the existence of open and closed interactions. Based on this understanding, the privacy behavior of apartment residents is an open behavior, because it requires public space for social interaction.

4. Conclusion

Apartment is a vertical residence that prioritizes the privacy aspects of the residents. This is reflected in the availability of apartment internal support facilities. However, the continuity needs of apartment residents do not only rely on privacy needs, but also on social (public) needs. The quality profile of the apartment is not only in the completeness of the supporting facilities available in the apartment (internal), but also by the support of the facilities in the environment (external). A reciprocal relationship exists between the apartment environment and the sustainable living of the residents' of apartment. The sustainable living of the residents' of apartment is dominantly due to the fulfillment of privacy aspects in public spaces for the social needs.

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