

The Importance and Impact of User Behavior on Thematic Park

Andreas D. Handoyo^{1*}, Ratri Wulandari¹, Adji Febrizky Tiara¹

¹*School of Creative Industry, Interior Design, Telkom University, Bandung 40257, Indonesia*

^{*}*Corresponding Author. Email: ashando@telkomuniversity.ac.id*

ABSTRACT

The limited area used for open-spaced greenery in urban cities has become a persistent issue, especially in a developing city. The decrease of open-spaced greenery may or may not be caused by the constant ongoing development and construction in the city that uses space meant for the vegetation. Therefore, more policies are made to achieve the proper greenery to urban area ratio for a healthier city, as a place for the city dwellers to enjoy their respective activities, as an aesthetic touch, and as a better branding to the city itself. One of the phenomena that has happened to tackle this issue is the use of private areas for public activities, more known as urban interior, thematic parks being one of them. This research was conducted through observation and mapping user activities during weekdays and weekends. The park was effectively used until afternoon and many visitors were families with children playing in the pool while their parents sat anywhere around the pool to watch them. This sitting area changed depending on the shading. The space of Taman Sejarah divides users at least into two main groups, the east side is dominated by families that bring their children, while the west side accommodates the visitors who need more limited social interaction.

Keywords: *Urban Interior, Interior Design, Human-Space Interaction, Thematic Park*

1. INTRODUCTION

Following the flow of the ever-changing modern era where technology is advancing on full swing, what follows are the changes of human lifestyle. And with the change of human lifestyle, supporting the change is the environment of the human itself. This change, however is not always good for the other aspects other than the human itself. In some, if not most cases, these changes affect nature in a bad way. These cases, unfortunately, are easily overlooked, with people under the impression that nature don't affect them as an individual, when the truth is that it does affect individuals, en masse.

For example, in a development of a modernizing city, more and more lands are overtaken by buildings and concrete, demolishing lands of greenery in exchange for a, what seemingly, something more useful to the modern human lifestyle. Where in truth, they are sacrificing trees that produces oxygen for them to breath and absorbs all sorts of toxic gasses in the air, green soil that absorbs rainwater, natural shading from the sun, etc. In a few decades in Bandung, the decrease of open-spaced greenery is increasing each year. The amount of open-spaced greenery recorded as of December 2017 was as little as 13%, being significantly behind on the proper standard of 30%.

An urban park plays an important part in the ecology of Bandung city for several factors. It helps filter the air, provides soil for water absorption, and also a recreation place for the citizens [1]. Ir. Iwan Sugiono (2017), states that in the leadership period of Ridwan Kamil as the mayor of Bandung on 2013-2018, some of his project includes adding thematic parks to adorn the city. These thematic parks are made to focus on building the city's image and increasing open-spaced greenery. Despite that, these parks also functioning as a form of tool to the development of social culture, like civil education, public facilities, and all sorts of social activities, all of which could be optimized with the proper design according to the behaviour of the user [2]. This is where interior design fits in. according to Suzie Attiwill [3], interior design in an urban environment, has the potential as a practice to create an interior space in an urban setting. Suzie introduces a new perspective in viewing 'interior design' as something that is not only a practice in a three dimensional spaces. With this idea, interior design could act as an insinuator of a bottom-up design process, where the design revolves around the user, in this case the park visitors.

The idea of overlapping interior and exterior in public spaces sees the users as temporary dwellers, in which the space becomes multi ethnical, with varieties of users to be considered in the process of a design. Other things that could be variables in the performance of the design are mobility, disappearance of the sense of public space, etc. all of which revolves around the user behaviour within the space.

1.1. Urban Interior as a Practice

Interior designing, with its tight connection with furnishing, does not necessarily need four physical walls in order to create a space for the design to take place. Deborah Stace [4] views an interior condition, usually as ‘a form of frame and lid, defined by conditional boundaries and pre-existing void to fill’. In Stace’s study, there are five identified main ideas contributing to a creation of shelter; the existence of an individual space to rest, the existence of a buffer, or a separator between an individual and the outside world, the control of natural lighting, and the use of limited material pallet. One of Attiwill’s [5] student, Alice Kohler, showed in a case study in Australia, where a street artist was seen to ‘dwell’ on the sidewalk to display their works.



Figure 1 Artworks displayed on a sidewalk.
Source: Attiwill, 2011



Figure 2 Chalk drawn on the surface of the sidewalk to create visual boundary.
Source: Attiwill, 2011

The artist creates temporary boundary, drawing lines around their display with chalk, and on the same time creating an obstacle on the human circulation on the

sidewalk. People stop by to see, and some continue to go their way and goes around the drawn boundary to pass through, making a whole new circulation pattern.

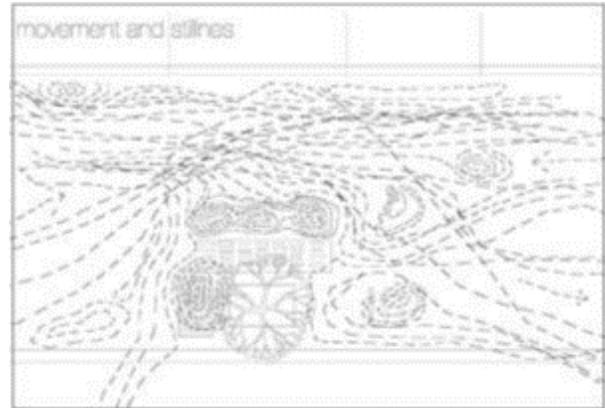


Figure 3 Analysis result on the movement in the circulation space on the sidewalk.
Source: Attiwill, 2011

On the figure above, it is shown how this temporary boundary made by the artist could create a new interior space *in* a public space, this second and new interior space also creates a completely different density, movement direction, and static space around the new boundary made by the artist.

According to Poot, Acker, & Vos [6] about overlapping public spaces in term of accessibility and ownership, accessibility is viewed as a space accessible by everyone. Said space needs to be easily found, not-ambiguous, and everyone must be able to access the space without any hindrance. The characteristic of a public interior space depends on the impact of the ‘second public space’ towards the ‘first public space’ and vice versa, so the elements that builds these urban interior spaces could consists of several public spaces like urban void (plaza, sidewalk, open space, building yard, *etc.*), street furnishing, and other street landscape necessities.

The case study above shows that certain factors could create a disruption, a ‘second public space’ that would create a chain reaction on other users’ activity, making it a valid consideration when designing an urban interior space, like how the artist created a disruption in the circulation flow by drawing their own private border, a group of people could also subconsciously form an invisible border for their own temporary private space, In which other people outside of the group would avoid and thus make a whole new circulation pattern.

1.2 Human Interaction in Urban Interior Spaces

The existence of open public spaces could function as a lot of things, including as a place to fulfil social needs. Cooper & Francis [7] states that there are two types of social interaction that can be done in an open space; interaction with each other for the sake of communicating and interaction done to entertain themselves.

Some aspects need to play part in a public interior space for it to be an appropriate and comfortable environment,

those aspects are; architectural, social, urban, and anthropologic. According to Poot et al [6], there are a few approaches to study these aspects, one of them being the way of behavioural mapping, in which, rather than seeing formal physical ownership, users and the meaning of social or mental ownership determines the public trait of a space, the human scale integrated into a holistic approach.

2. METHOD

This study was performed as a continuation of a previous study regarding the functional change happening in Taman Balai Kota Bandung [8]. From there, this study was conducted with analytic observation approach towards the interaction happening in Taman Sejarah, with surveys and interviews directed towards the visitors of the park.

The observation process is divided into three stages. First, observation were made on weekdays between 8a.m. and 4.p.m.. Second the survey is conducted on weekends. Third, the survey was conducted during the holidays at the same time. Observation was carried out by looking at the activities of the park visitors. In each process of observation, we interviewed 30 random visitors, both who come individually or in groups.

3. RESULT & DISCUSSION

Taman Sejarah, though detached from the main area, is a part of Balai Kota complex. Before the park was built, it was just an extra land on a corner of a street. Because of its location, it is now open for public to be used freely. From an interview from a caretaker of Bandung City Museum, at first, the park was a part of a bigger plan. It is supposed to be functionally integrated with the History Museum, Bandung Planning Gallery, and Taman Balai Kota Bandung.

This park is open operationally from morning and closes on 10PM every Tuesday to Sunday, Monday being the only day the park closes for maintenance. Visitors during morning to noon are usually dominated by groups of school kids, visiting not only recreationally, but also for educational purposes. Whereas visitors during noon to night are mostly teens and young adults.

During the process of this research, we have discovered that the majority of the visitors are parents coming with their family (51,6%). And not only residence of Bandung city itself (45,2%), it appears that the visitors also consist of people with residency outside of the city. While 45,2% of the visitors lives within Bandung regency, 12,9% are from beyond the regency. From the interview, some of these people stated that they came not only to travel, but also specifically to enjoy the park, though the travel cost is one of the main considerations when visiting Taman Sejarah. Most of the visitors has moderate to low income, with 35% of the respondents has the income of less than Bandung's minimum wage, and the other 35% just on the minimum wage – as per February 2019. This may refer to Taylor's statement, where in an urban setting, overcrowding, inadequate outdoor spaces, oppressive and intrusive middle-class attitudes and rules makes working class people start to pursue public recreational opportunities as a means of providing an inexpensive family outing [9].

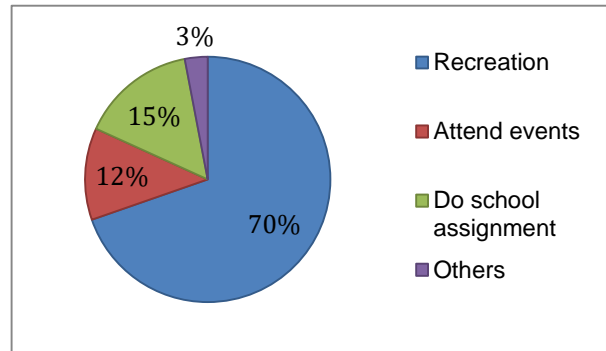


Figure 4 Respondents' answers when asked about their purpose of visiting the park.

As for educational background, most respondents had relatively low education level. As little as 22,6% are college graduates, while the rest are high school (41,9%) and junior high school (32,3%) graduates.

Taman Sejarah, or History park, is one of the many examples of thematic parks in Bandung. And like its name, this thematic park's theme is located in the centre around Bandung's History. Stories about Bandung's history is shown in some wall reliefs, past mayors and narratives about their respective great policies are shown in displays, and other educative traits are scattered around the park, on the landscape elements like, stone stools, stair steps, etc. Although, these elements are frequently missed by the visitors, unless they are aware of its existence.

As a type of restoration park [10], visitors tend to spend low to moderate time in the park. Purpose-wise, 58,1% of the visitors come for recreational purposes. Families come to take their children to play in the park's pool. Almost none of the visitors pay attention to the educational information elements of the park. During the observation, only elders and high school/junior high school students paid attention to these elements. Other than that, these elements are only used as a background for their photos.



Figure 5 A high school student taking a picture of an educational element on the side of a rock stool.



Figure 6 One of the stone stools with an educational element on the side of it.

Social interaction is an attractive activity in leisure activity, a study suggests that social interaction in leisure may benefit individuals by providing a supportive relational environment and a positive context for self concept development [11]. Seeing that most activities in the park are leisure activities, social interaction between two or more people can be found on every corner of the park, making it a valid point to consider in a park design in order to improve visitors' experience in the park with the appropriate facility to support comfortable environment for social interactions.

From the result of the observation, the interaction process in the park could be divided into two parts. One of them is the east area, where the users are more integrated into a crowd in and around the pool, in which social contact between each groups of people are more likely to happen. And the other part is the west area of the park, in which the users are clustered into their own small groups away from each other.

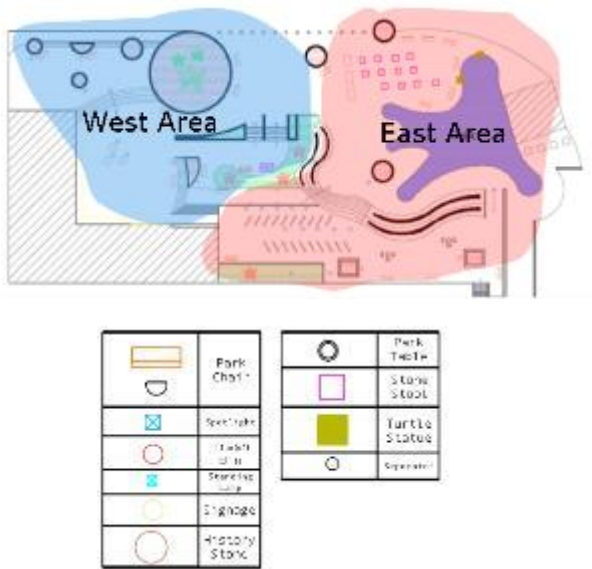


Figure 7 Schematic Map of Bandung historical park (2019)

3.1 East Side Area

On the east side of the park, a shallow pool is open every weekend. From one of the surveys, 51,6% of the visitors came with their families, especially child member of their family to enjoy the pool while the older members of the family sit around the many seating options around the pool, like the stairs and the stone stools. These seating options, along with the amphitheater on the south side of the park, are amongst the favourite spots to sit not only because of the sun shaded positions, but these spots are also a great place for parents to sit while they watch their kids play in the pool.



Figure 8 The shallow pool being the visitors' favourite.

Unlike the west side of the park, the east side seating area is organized in a centralized and adjacent manner. Because of this, the visitors can freely create their own temporary private dwellings for their respective activities like eating, drinking, and socializing within their temporary private space, without eliminating the chance of outside interaction between groups of people.

Although there are not street vendors inside the park, people buy food and drink from outside to eat in the park, causing higher risks of trash and litter. In a research by Setiawan, Sitaningrum, & Mirandia's, it was found that although the public perception towards design creativity on parks in Bandung city is relatively moderate, some expresses how the beauty of the park itself is sometimes disrupted due to the lack of immaculacy of the park [1] [15].



Figure 9 Seating areas on the east side of the park

Thermal comfort plays a big part in people's behaviour in the park, especially considering Bandung is still a city in a tropical country, despite being one of the cooler cities. In tropical and sub-tropical countries, changes in clothing amount are not possible or do not reduce discomfort [12]. On a research in Singapore, a neighbouring and a fellow tropical country, it is found that solar radiation has the

most significant effect on human thermal sensation [13]. Thus the vegetation on the east side of the park plays a great part in visitor's behaviour, although the east side is considered the more shaded part of the park, there are parts of the area not getting any shading from the vegetation. The visitors gradually and unconsciously move throughout the day, crowding the shaded part of the area in

attempt to steer clear of the sun, optioning to sit on the shaded ground than the hot seats. This makes the sunny part of the area almost empty, the seats unused even though visitors would happily choose those seats over the others due to its strategic location near the pool, if it were not for the sun preventing them to sit comfortably.



Figure 10 The shaded stone stools at 8.00AM (left) and at 9.00AM where it is getting more crowded (right).



Figure 11 The visitors gradually moving to a more shaded area at 9.30AM (left) and eventually clearing the stone stools at 11.00AM (right).

3.2 West Side Area

When observing the west side of the park, it is apparent that this area is meant to be an area for more solitary group interactions. There are less seating and they are organized away from each other, making it less likely for cross groups interaction to happen. This matter provide a different process of interaction to happen on the west side area of the park.

Visitors coming to this side are usually small groups of people who tend to keep their interactions limited to their own groups be it their friend, family member, or significant other. These people are mostly teens, junior high/high school students, and elementary school students above the age of 12. They use their time to relax after school or to discuss school work with their classmates. Although sometimes when the park is especially crowded, this area is used as an 'expansion' for the people who come for the pool in the east side.



Figure 12 Visitors from the east side of the park 'expanding' towards the east.

On the west side area, though there are also several seats that doesn't seem to appeal users to use them as much as the east side does. On the ground, we can see some groups of people acquisitioning their temporary private space, some even forming a circle [3]. Due to the lack of attraction on the west side of the park and the lack of tall vegetation to shade the area from the sun, this area doesn't make a very comfortable place to sit and relax when the sun is especially sunny, making it completely deserted of people. Even though the open space is void of any obstruction to air flow, occasional wind can still blow through the space. But like Hsieh, Jan, & Zhang found in their research, tall plantings are still needed for a more comfortable thermal comfort, though they should be properly arranged as to not obstruct air flow [14].



Figure 13 The deserted seating area during a torrid day.



Figure 14 Sitting facilities on the West side of the park.

3.3 Pros and Cons

During the observation, both sides of the park has frequently ‘occupied’ areas and the less frequently ‘occupied’ area. Both in which have their own reasons whether or not it has high density of dwellers.



	Park Chair		Park Table		High density area
	Spec table		Stone stool		Medium density area
	Turtle status		Turtle status		Low density area
	Seating area		Separator		
	Shaded area				
	History Stone				

Figure 15 Schematic Map of Bandung historical park’s crowd density. (2019)

On the map shown above, It is clear that the highest density area is the pool, which is the main purpose of most of the visitors for visiting the park.

This area provides a good amount of shaded area in certain times of the day, the downside of this area is it could be less enjoyable with too many people enjoying the facility at once. Though it could be solved in future cases by finding a way to solve the uneven crowd distribution throughout the park.



Figure 16 The crowd in and around the pool area. On a good day, the pool could be seen crowded with children and their parents, though this is to be expected since this area is the only area providing an interactive recreation facility. Around the pool, the benches are occupied by parents and family members waiting and supervising their kids in the pool. As discussed, some forms their own temporary private space within their own group without closing any opportunity for other people to make social interaction



Figure 17 Seating around the pool occupied by family members

As for the medium density areas, the shadings are moderate to good in some hours of the day. Though not as popular as the pool area, they are preferred by some because of the amount of seating facility in them. Since they are not the closest to the pool, the demography of these areas are less dominated by families, but also friends, lovers, and colleagues, chatting and relaxing. The thing that maybe can be improved in these areas is the amount of shading because some seats don’t get shading at all due to small vegetation around it.



Figure 18 Students sitting on the ground in a shaded area.

The areas with least amount of people dwelling in it is ironically the areas that equipped for educational purposes. One being the stone monument, and the other the informative glass panels. These elements seem to function more as a photo spot, but otherwise they are not the visitor's preferred place to dwell on. The cause of the lack of people around this area may be the lack of interest people are showing towards Bandung's history itself, seeing that almost no one out of the interviewed respondents came to educate themselves, but rather to relax and find entertainment within the park. That, and the stone monument area is void of shading, making it an unattractive place to hang around at even though there are a few sitting facilities in the area.

Since the most popular spot is an interactive area, a solution where the educational element could be improved to an interactive element is logical. Though it may not guarantee anything, it is apparent that families come to the park mostly to entertain their children. Turning educational elements into multifunctioning element could pique the families' interests, making it another option of entertainment and recreation within the park, for examples; educational mazes, games, interactive fountain, etc.



Figure 19 The educational glass panels dedicated to every mayor of Bandung City throughout the years.



Figure 20 History stone monument in History Park.

4. CONCLUSION

The purpose of Taman Sejarah as a means of Bandung historical information doesn't deliver successfully. From the result of the observation, it is apparent that the park is used mostly for recreational purposes. People mainly come for the pool and not for the knowledge elements provided by the park. Some visitors don't even notice some of the more subtly located elements in the park, such

as the writings on the side of the stone stool. This may be solved by changing these elements to suit the interest of the demography, adding an entertainment function to them.

Taman Sejarah divides the users to at least two main groups, which is the users on the east side of the park, and users on the west side of the park. On the west side of the park, visitors come for the pool. Families with children crowded the area in and around the pool. The seating area is organized in a centralized and adjacent manner, the pool being the centre, making it possible for groups of visitors to make their own temporary space. Whereas on the east side of the park, the atmosphere tends to be calmer. This area provides a place for a more limited social interaction within a group because of the way the seating arrangement is organized in clusters and away from each other. Although the behaviour may change when the east side of the park gets over-crowded, making some visitors shift to the west side of the park.

From the result of the observation, other than the pool, the position of space usage is concentrated around the tall vegetation. The trees shading areas from the sun making the visitor shifts along time of the day to the shadiest part of the park, avoiding the area where the sun blazes unshaded. Unconsciously, the existence of these tall vegetations is very much needed to create thermally comfortable spots in the park that also form the visitors' behaviour. They would rather sit on a shaded ground than unshaded bench. This matter of course could be relatively easy to solve with the addition of more shadow maker, like for example more tall vegetation, parasols, or canopies.

As a comparison to Taman Sejarah, another thematic park in Bandung, Superhero park, receives positive responses regarding the thermal comfort within the park [15]. This could be a potential to further this research and look into the factors that could possibly make more positive improvement of Taman Sejarah.

From this research, a conclusion could be made that the user's behaviour could affect the optimization of the park. Not only does it change the flow of the circulation, it also affects how the facilities in the park are used, and not used according to the circumstances.

ACKNOWLEDGMENT

We would like to thank Telkom University for the financial support and all those who agreed to be interviewed during the research process. Thank you also to the Park's Service Authorities and the visitors who came to Taman Sejarah.

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