

Can Architecture Design Solve Social Problem?

S W Ginting^{1*}, E TSB Darjosanjoto², H Sulistyarso³

¹Department of Architecture, Universitas Sumatera Utara (USU), Indonesia

²Professor of Urban Morphology, Institut Teknologi Sepuluh Nopember (ITS), Indonesia

³Senior Lecturer, Department of Urban and Regional Planning, Institut Teknologi Sepuluh Nopember (ITS), Indonesia

*salmina.wati@usu.ac.id

Abstract. Most of architects and urban designers believe physical design gives impact on our social life. For example, a sign or landmark in the middle of a city makes people find orientation easier. In vice verse, most of social scientists believe it is social dynamic that plays role in shaping our space. How people spend their time moving from real space into cyber space is a proof that life style and IT give impact to space usage. This paper argues that interaction between physical design and social change is a two ways process. Both design aspect and social dynamic influence each other. This paper aims to examine how designing of gated community plays important role in increasing or decreasing segregation, both spatially and socially. The paper explores some architectural design principles applied in a gated community called CitraLand in west Surabaya, Indonesia, and addresses segregation between CitraLanders and outside kampung. We find CitraLand is designed openly and fully accessible for outsiders. It provides public spaces and several accessible gates and streets without walls and fences making all places inside and outside CitraLand spatially integrated. What's interesting is it still reinforces social segregation due to its policy on prohibiting using the public park. We believe CitraLand's planning and designing has successfully solved segregation problem spatially not socially.

1. Introduction

There are differing opinions on the relationship between design and social life. Architects and urban designers whose work is creating physical space believe that design affects our social life. For example, Lynch (1960) suggested that the existence of a sign or landmark in the middle of a city would make people find orientation easier [1]. Likewise, Gehl (2013) argued that a lively atmosphere on the streets in the city can be created by designing the buildings' facade to match the walking speed of pedestrians [2].

In the other hand, many social scientists believe it is social dynamic that plays role in shaping the physical space. Bourdieu (1995) said in one of his lectures that social space is an invisible set of relationships which tends to retranslate itself into physical space [3]. Thus, suggesting the idea that social space influence physical space. How people spend their time moving from real space into cyber space is a proof that life style and IT give impact to space usage. However, it is clear that both design (physical space) and social dynamic influence each other and the interaction between them comes as a two way



process, where design can shape our social life and vice versa. As Bickford (2000) stated the spatial relations built into modern life cannot be thought of as primarily a reflection of desired social relations, for they also produce and form those relations [4].

The notion of the importance of design in shaping our social life can be traced back to 1972, when Oscar Newman published his book, *Defensible Space* [5]. He defined defensible space as “sociophysical phenomenon” in which both physical elements and society are parts of a successful defensible space. He argued that physical characteristics of residential environment such as site plan and building layout can be designed so that they can function to allow inhabitants to become key agents in ensuring their security.

Later on, Hillier (1996) researched the relation between physical aspects and social life in his book, *Space is the Machine* [6]. He stated that the built form, with its particular configurations, determines the natural movement of people. His theory came from the assumption that space comes first and that we should try to detect society through space and not the other way around (Hillier & Netto, 2002 in Westin, 2011) [7]. For Hillier, space and society can not be separated, as the space is not one thing and society another, because everything that people do happen in space.

One of the applications of spatial-social relation is how designing of gated community plays important role in increasing or decreasing segregation, both spatially and socially. According to Johnston et al in Firman (2004), spatial segregation refers to the residential separation of sub-groups within a wider population which could be associated primarily with racial groups, ethnicity, religious beliefs or income status [8]. This segregation could exist between housing estates within neighborhoods, between urban neighborhoods, and between cities and its surrounding areas.

Caldeira's research [9] in Sao Paulo (2000) tells us how Sao Paulo was designed as extremely segregated by constructing residential areas, workplaces, and leisure areas with gates, walls, surveillance cameras, and guards that isolate them from the city. However, the level of fear in Sao Paulo is much higher, forcing the residents of high-end gated communities in the city to ride on helicopter to venture outside the safety of the walls. The rich and the poor in Sao Paulo is no longer separated by distance, but rather by high walls and security systems.

Segregation in the city, particularly the ones related to the relationship between a gated community or new town with its surrounding, can be observed from several aspects. Winarso (2015) studied the spatial segregation in the Jakarta Metropolitan Region caused by the transformation of peri-urban areas, and the unequal development of area as potentially creating social conflict between communities [10]. Firman (2004) observed the development of new town in Jakarta Metropolitan Region and how it polarizes the high class of society into enclaves and creates spatial segregation. More recent, in 2016, Basodorf [11] published a paper on the comparison of social segregation and gated communities in Santiago de Chile and Buenos Aires. However, we found that such studies related to new towns and gated communities in Surabaya have never been conducted.

As Newman (1972) and Hillier (1996) has stated physical design gives influence to social life, we assume that by designing a wall-less, fenceless, and fully accessible streets of residential area, the spatial and social segregation between the community and the surrounding can be decreased. The paper examines some architectural design application such as the gates design, the public space, the walls and fences, and the accessibility of the streets in one gated community within high class new town called CitraLand in Surabaya, Indonesia. Segregation will be addressed by analyzing the spatial-social relation between CitraLand and its kampung surrounding. This paper argues it is not only physical elements of architectural design that causes segregation. Some intangible barriers do exist, for example, the police patrol and security guards who questioning visitors. The phenomenon observed in CitraLand indicates that although the physical design of gated community does not create significant spatial segregation, the social segregation still exists.

2. Method

The method we use here is a case study method. As Groat and Wang (2013) wrote a case study is an empirical inquiry that investigates a contemporary phenomenon and setting within its real life context [12]. The method is useful to explain causal links and phenomenon and its data covering and triangular analysis give power to generalize theory.

The concept of how architecture design solves social problem is manifested in researching how design principles of one gated community in Surabaya could explain the segregation process, both spatially and socially. We use three elements of design: gate, public space, and street. Gate will explain how access and openness /closeness occur between CitraLand and kampung while public space definitely a measurement tool of interaction and socialization both for CitraLand and kampung. The use of street indicates how mobility of both communities could explain the segregation process. Data will be collected by mapping, documentation via photos, and interview with respondents.

3. Result and Discussion

CitraLand is one of the new towns in west Surabaya. Located between high-end estates such as Pakuwon and Graha Family, CitraLand is marketed as “The Singapore of Surabaya” with several of the iconic landmarks built in the sites to resemble the original ones in Singapore. The surrounding estates, namely Pakuwon and Graha Family provide towers of offices, hotels and apartments, hospitals, malls, and other high rise buildings. Therefore, CitraLand is a strategic place for residential areas, providing green, clean, safe environment and easy access to the facilities around. CitraLand is an elite residential area, home for expatriates and some of the richest people of the city. The new town is fully equipped with various facilities: school, market, food strips, place of worship, commercial areas, etc. It is surrounded by many kampungs, mainly on the north and south of the town.

3.1. Gate

According to Blakely and Snyder (1998), gated communities are residential areas with restricted access that makes normally public spaces private [13]. Low (2004) also stated that gated communities restrict access to streets and services that should be available for public and private [14]. Bickford (2000) defined gated communities as residential development that limits access to residents, their guests, and service people. Access is controlled by physical barriers, walled or fenced perimeters, and gated or guarded entrances. Thus gated communities are particularly designed as the clear lines between private territories and outside world and are preventing exchange between different race, class, and communities and therefore creating spatial and social segregation.

The gate is function as physical barrier, limiting and restricting access from unwanted people. The gates usually come with walls, fences, and guards. The gate itself can take a variety of forms, from massive wall to barbed wire or a line on a city map. Socially, gates also have different meaning: a gate can indicate safety and security to the residents inside and a warning to keep out to the strangers outside. Bickford (2000) stated that gates construct segregation by functioning to not only keeping people out but also keeping people on each side separate from one another.

As a gated community, the use of gates in CitraLand is unique. CitraLand, according to Ginting et al (2016), unlike any other new towns, CitraLand is fully accessible except for housing clusters [15]. There are gates, walls, and fences, but people can easily access any streets, parks, and facilities inside CitraLand. The design and location of the gates play important role in keeping the CitraLand community accessible and spatially integrated to the city while also sending a message of cluster's exclusivity.

The outer gates of CitraLand can be seen as a landmark, marking CitraLand's ownership of the area. The main gate, located at Jalan Citraraya Unesa, is a famous spot for taking photos for citizen. The gate is beautifully designed, with colorful lighting at night, ditching the traditional massive form of gate. Other gates are also designed more like sculpture and landmark instead of just gates. But as Bickford

stated, the gates may have different meaning socially. For the residents of CitraLand they are welcoming them but for non residents, particularly people living in kampung, the big gates may seem intimidating and, as Richard Sennet said, a symbol of warning to 'keep out!' (Fig. 1).

The location of the gates and how we access them can also be taken into consideration in how they may seem welcoming or intimidating. The main gate, which can be accessed from Jalan Bukit Darmo Boulevard (a wide road connecting CitraLand and Graha Family estates) and Jalan Raya Babatan Unesa (a relatively smaller road connecting CitraLand and Menganti kampung), offer a unique and beautiful sequence if accessed from the former and significantly contrast condition if accessed from the latter.

Imagine riding on a car and going through the wide street of Bukit Darmo Boulevard with modern commercial buildings and malls by the side and welcomed by the gate. The experience will be different if we are to go through Jalan Babatan Unesa from the Menganti kampung and suddenly the streets widen, the buildings changed and there is an architecturally interesting big gate in front. These different experiences may affect the sense of comfort and the feeling of being welcomed for the users.



Figure 1. Location of outer gates (source: Author's documentation, 2016)

By comparison, the inner gates of CitraLand work more like a barrier by physically limiting access to non residents and service people. Located at the entrance of some (not all) housing clusters and guarded all day and night, the everyday passerby does not have the need to go through those gates because almost all housing clusters in CitraLand is in a *cul de sac* system. We call these inner gates cluster portals as they act as a tool to control the access to the housing clusters.

The location and the function of the outer and inner gates of CitraLand are different, and that is mirrored in the design of both. On one hand, the designs may be influenced by the purpose of the gates, both socially and physically, but on the other hand, the designs also have effects on social life. The outer gates, while accessible and have beautiful design, still serve as a reminder of the difference in class,

status, and economic power between CitraLand and the surrounding kampung. While the inner gates (or the cluster portals) which bring the traditional design of gates with fences and guards serve as physical and social barrier between the residents and outsiders (Fig. 2).



Figure 2. Location of cluster portals (source: Author's documentation, 2016)

3.2. Public Space

Legeby (2010) argued that public space is important to the city as it is through public space that people are connected and it is through public space that buildings and neighborhoods are connected or related to one another [16]. The ideal public life in cities for many is free of fear, discomfort, and uncertainty. Susan Bickford (2000) argued that by pursuing the 'purified version of public life', we are enacting deep form of segregation and ignoring democracy in public life.

Public life is a realm of exposure. Many think that to be exposed to a stranger who has different perspective is to be exposed to danger. Bickford stated that by building modern urban life, the possibility of achieving a genuinely public realm inhabited by multiple communities is blocked, because these practices produce the illusion of safety for some by creating actual danger and discomfort for others. It is a way to privatize public space and limit its users to certain groups of citizens by creating uncomfortable environment for others.

In line with Bickford's view, Hillier (in Westin, 2011) argued that spatial design, while does not create interaction, it creates co-presence and co-awareness that will give people a sense of safety, security, comfort, and possibilities. Co-presence and co-awareness in public space do not need the people to talk or to recognize each other, it is just the matter of people being where they are. The potential of a contact or co-presence of residents and strangers or locals and non-locals in public space can also be hindered by the low accessibility for people from other neighborhoods. Thus, the potential for urban life is significantly impaired (Jacobs, 1961 in Ginting et al, 2016; Legeby, 2010).

Public spaces in CitraLand come in form of various facilities (e.g. market, food trips, waterpark) and greeneries (e.g. boulevards, 'Merlion' park, etc). Some of these public spaces are accessible for free and some charge a fee for entrance ticket or service (notably the waterpark and horse riding activity). The most striking feature of the public spaces in CitraLand is that they are not crowded. The lack of people using the public spaces can be attributed to the design of CitraLand which is derived from 'car-culture' point of view, where proximity between places are neglected (Ginting et al, 2016). The car culture does not encourage walking, diversity, and complexity thus limiting the chance of (as Hillier said) co-presence and co-awareness that give people a sense of safety, security, and comfort.

The Merlion Park, the park with lake where the replica of the famous Merlion of Singapore is located, is a restricted area. People are not allowed to enter the park. Taking photos is also prohibited (Fig. 3). Here and there, we can see the guards and local police patrol driving a car around the town. It is unknown as to why the decision to limit the use of the park to a mere landmark and not a public space is in effect in CitraLand. The fear of vandalism or unwanted presence of outsiders doing activities in an area close to the housing clusters may be some of the factors. Nevertheless, the lack of activity and people, in Merlion Park and other public spaces, actually heightens residents' anxiety and sense of isolation rather than making them feel safe (Ginting et al, 2016).



Figure 3. Public spaces but no photography
(source: Author's documentation, 2016)

In the weekends, we can find more people in the public spaces. Most of them are not the residents, they are people from nearby kampung. Children and families can be seen biking around or having a picnic under a tree. From the observation, we can assume that the residents (technically the owners) rarely use public spaces. We also noticed that CitraLand does not provide seating nor resting area in public spaces. The lack of seating area, the presence of guards and local police patrol, and the no photography policy make people uncomfortable and make them feel that CitraLand is not friendly (Fig. 4). We argue these designs are the effort CitraLand makes in order to ensure the comfort, safety, and security of their residents while still keeping their streets open for outsiders.



Figure 4. Children playing and family relaxing in the weekend

(source: Author's documentation, 2016)

In the city where we can find many spatially segregated areas such as the rich and the poor communities, Sennet (2006) offered an advice to make a city more open and less segregated by placing a public space (e.g. a market) in the middle of those communities to serve as a border where they can interact in daily physical and commercial contact [17]. In CitraLand, we can find a traditional albeit cleaner and more modern fresh market at the edge of the town, close to the kampung (Fig. 5). The market serve as what Sennet called as border, where people from different area are able to engage in daily contact. However, the existence of the market is not supported by the surrounding area, with large streets and fast cars passing by, a dangerous condition for pedestrians to walk on or cross the street.



Figure 5. Inside the fresh market (source: Author's documentation, 2016)

3.3. Street

To integrate environment and not to segregate it depends on some factors. One of the key is to make an environment dense and diverse. Jacobs (1961) as cited in Ginting et al (2016) argues that there are four conditions that are indispensable in order to generate exuberant diversity in a city's streets and district. Those four conditions are:

- The district must (or in this case: the whole integrated part of kampungs and new town) serve more than one primary function; preferably more than two.
- Most blocks must be short; that is, streets and opportunities to turn corners must be frequent.
- The district must mingle buildings that vary in age and condition, including a good proportion of old ones.

There must be a sufficiently dense concentration of people, for whatever purposes they maybe there, includes people who are there because of residence.

CitraLand, as a new town, consist of various different functions: residence, commercial, recreational areas, public services, and public spaces. Most commercials and public services are located along the main road and near the edge of town. The functions are quite in variety but less in the density and diversity. Almost all buildings are in same age and same style and act as reflection of modernism and

exclusive of the rich. No old building or site which can be a memorable history because the development was took place in 1990s in such an empty land.

Street and block, according to Jacobs should be narrow and short. Street must not too wide to ensure the limit of speed of vehicles. The narrow street is useful to 'keep eyes on street' as one of Jacobs' main key design. Block should be in range of walking distance so that residents, including children, could easily access every part of the town: park, elementary school, and civic center. As stated before, CitraLand was designed based on 'car-culture' point of view, creating wide streets and wide blocks. Cars run in a very high speed while the too wide street block makes not possible to walk within town (Fig. 6). Green and wide sidewalk or pedestrian is found in every part of the beautiful town but less occupied. Mobility in CitraLand is a mean of the lack of concentration of people in streets, sidewalks, and public spaces. Fulfilling just one out of four conditions stated by Jacobs, it is understandable that streets in CitraLand are almost sterile of urban life. As Ginting et al (2016) wrote: "Even though main streets of Citraland are fully accessible publicly, we feel sense of segregate. One Sunday morning when we were on its street for collecting data, we were stopped by guard who wanted to help one group of golf players to cross the street. We stopped for about 5 minutes and start moving again after the guard's sign."

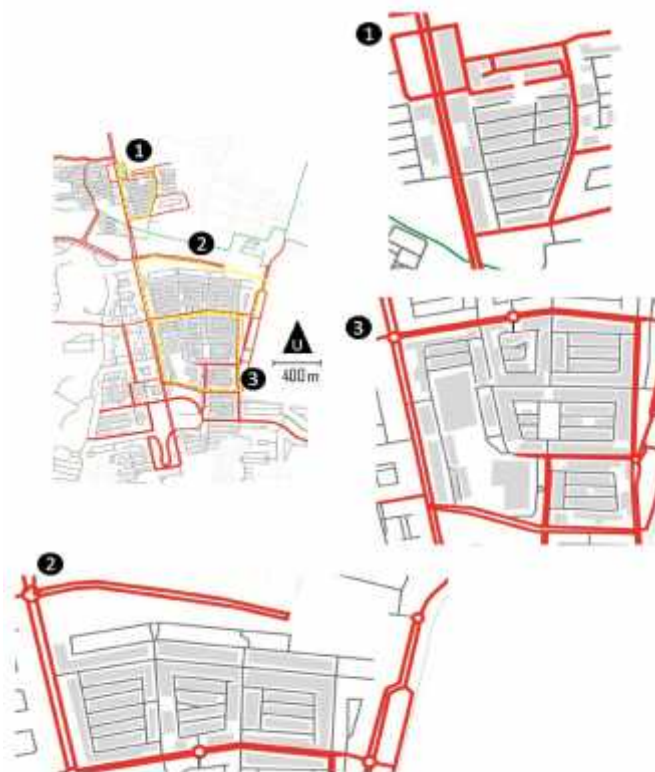


Figure 6. Too wide block

As CitraLand is surrounded by kampungs, we see many entrances and access that directly connect CitraLand and the kampungs (Fig. 6). These connections are supposed to be meeting spot where CitraLanders and outsiders meet and interact. In fact, streets in Citraland are only used by non residents (people from kampung and beyond) as a shortcut and not to be the destination. One of the respondents said that he does not wish to use CitraLand's streets because he does not feel the "belonging" feeling.

He prefers using another street outside the new town because “I used to be on this street since I was young and never expect to change habit... Beside, the new town is so empty and I rarely meet people which is one reason why I love being outside CitraLand mingle with others” – interview with Pak Yono, 11 June 2016, as cited in Ginting et al (2016).

4. Conclusion

The question of “*can architecture design solve social problem?*” is a reflection of how spatial design of gated community solve segregation problem. We find that there are many more factors that give influence in creating spatially and socially integrated communities. Design is only one aspect. CitraLand is spatially integrated, but it is still socially segregated. Some details of architectural design in the new town (e.g. the design of the gates, the width of the streets, and the lack of seating area in public spaces) and its security policies that prohibiting the use of public places and deploying guards everywhere, make people feel uncomfortable and do not belong. Open and easy access can’t guarantee that people would love going to and doing things in CitraLand. We believe that CitraLand’s planning and designing has successfully solved segregation problem spatially not socially.

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