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Neighbourhood space for formal housing based on social cohesion in Jember Region

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Abstract. Nowadays "community without closeness" does exist and makes the closeness to space is no longer important for social relations such as in formal housing in Jember Region. The housing area in Jember Region divided into two types, such as high density housing and low density housing which are influenced by their type of house. Qualitative analysis method that is used in this research are synchronic reading and typology. Synchronic analysis technique based on maps, observation, and interview to several source and used in this research to describe settlement pattern. In the fact, the community who live in formal housing prefer to spend their time in home without paying attention the socialization with their neighbourhood and using public open spaces. It makes segregation and weaken the social cohesion. Therefore, this research is needed to provide a social model of environmental space based on social interaction patterns and location points of interaction in low and high density formal housing in Jember region. Based on the result, it is known that the developer need to designing enclave on formal housing road spaces that are used for social interaction and control each other in housing security, according to the concept of defensible space and neighbourhood space model namely "Enclave Transpatial"

1. Introduction

Phenomena that occur in cities show that the community tendencies are heterogeneous and the social relations do not always account for proximity to space because of the development of communication technology [1]. Based on the phenomena above, there was a research about social space and neighbourhood space which study about the correlation between proximity space and social relations. Nowadays "community without closeness" is possible, it makes the closeness to space is no longer important for social relations [2] in [3]. The area of the environment where the housing exists is very important to maintain the quality of life, so the distance to space becomes important [4] in [3]. Basically, the relationship between the road network and the building that forms the road space as a social space will affect the neighbourhood space model. The neighbourhood patterns play a role in the formation of social interaction [5].

Jember Region well known with the agriculture and plantation product. In line with its development, nowadays Jember Region has begun to be noticed, especially by developer of formal housing. Housing area has the second biggest land use in the cities area of Jember Region with total housing area are



3.130 ha. The built area are concentrated in Kaliwates (1.178 ha) and Summersari (1.102 ha). It used for residential housing area and commercial area. Many new residences are developed by formal developer or personal resident using agricultural areas which is changed its functions became formal housing.

The residential area in Jember Region divided into two types, such as high density housing and low density housing which are influenced by their type of house. Generally, the housing or residence built by developer (formal housing) has build every building with good facilities such as road and public open space. The arrangement of housing layout such as road network and the width of the road has influence on the intensity of their social interaction. Social interaction is supported by the potential of social cohesion as behavior modal and community activities. Social cohesion covers sense of belonging, social trust, and generalized reciprocity and cooperation, and also social harmony [6]. Public open space in this research associated the road and the open space of housing facilities. The open space, is not only a place for recreation, but also to help for improving social cohesion and give advantages of quantitative environment [7]. Public open space should be used as socialization area with others, or community with other communities. But, the fact that public open space is less used, it made the level community socialization directly become weak. Eventhough, public open space is node and communication facility of social connective to create interaction among community groups [8]. For example, between young generation and older generation, ethnic, religion, social class, economy, and etc. While nowadays the community who live in formal housing prefer to spend their time in home without paying attention the socialization with their neighbourhood. The underutilization of public open spaces has made the level of socialization of the community directly weakened, it makes segregation and weaken the social cohesion. Therefore, this research is done to know the neighbourhood space model in formal housing and the influenced factors are related with potential of social cohesion in that environment. In addition, there were concerns related to security in formal housing so that residents built many portals unplanned. Therefore, a study is needed to provide a social model of environmental space based on social interaction patterns and location points of interaction in low and high density formal housing in Jember region.

2. Study area

Administratively, study area in this research is cities area of Jember Region, including two districts which haspotention the growth of formal housing, such as Kaliwates and Summersari district. The delineation of its territory can be seen in the figure 1 as follow:

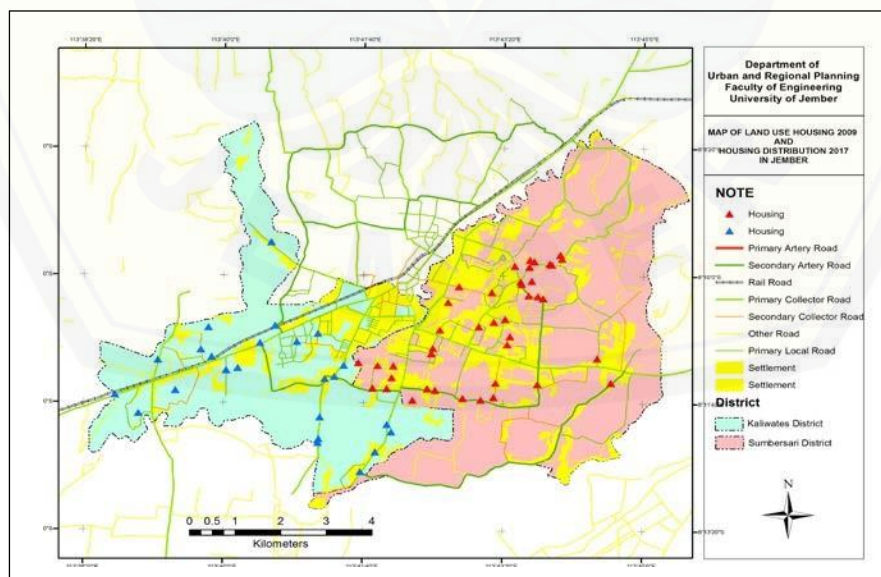


Figure 1. Research Area Delineation

Source: Digitization Result, 2018

3. Method

This research used qualitative descriptive to describe systematically, factual, and accurately about fact and population characteristic in certain area [9]. Qualitative analysis method that is used in this research are synchronic reading and typology. Synchronic analysis technique based on maps, observation, and interview to several source and used in this research to describe settlement pattern [9]. Synchronic reading model is used to read the potential of community social cohesion related with spatial concepts. The aspect that is seen later, including shape and place, elements comparison spatially (length and width), percentage of environment is limited by time limitation, and opening spatially. Survey technique “static snapshots” is one of the technique or observation method/survey which is used to write people’s movement activities and people static activities related with space used [10]. Static snapshots method in this research is used to know the community interaction pattern in formal housing related with space used. Formal housing that is surveyed in Kaliwates and Summersari grouped based on same type of road space and availability facilities of open space.

4. Result and discussion

4.1. Housing condition

Based on the survey result, formal housing area (housing that is built by developer) in study area is divided in housing area with density and low density housing that is influenced by plot area and type of house. Based on the density and house type, it is grouped in 2 groups in each Kaliwates and Summersari district which is clustered from survey result on 80 housing. Formal housing characteristics in study area is reflected in the planned arrangement and also completed with good facilities. Each housing parcels has the average of base shear coefficient (BSC) 80-90% with very high density and base shear coefficient (BSC) 70-80% with low density.



Figure 2. Formal settlement

Source: Jember Spatial Document 2015-2035

4.2. Neighbourhood space and social cohesion in settlement formal Jember

Perception of social cohesion is contributed by the use of public open space. In one of the research is found that 60% from 116 respondents stated that the use of public open space is contact with low intensities, such as see and watch other people, give or information, or give comments casually [11]. However, this contact ass the first steps and fundamental to create the variation of interpersonal and social relationship. Later, this interaction and social relation will meet the social cohesion [12].

Nowadays, the trend of living at housing in Jember raised concerns related with social cohesion in housing area. Based on the survey result in housing, it is known that influenced factors for weakening of social cohesion on formal housing in Jember such as:

1. Communities are limited their social interaction space because of fenced house that limits the house accessibility.
2. Communities taste at modern living, instant, practical, and efficient, make developers provide the housing which is designed to fulfill basic needs of residence without pay attention for social interaction need of housing community.

3. Practical design and highlight interest for each the housing owner make the interaction between them is difficult to build.

Based on the observation on formal housing in Jember with high density, then the points of location for community who live in housing to do their social interaction is at the road space. The social interaction on the certain time, such as at 06.00-08.00 a.m. when mobile vegetable traders and at 15.30-17.00 p.m. when some of women enjoy their leisure time while invite their children to play. The characteristic of community social interaction on housing with high density similar with the social interaction of communities who live in village.

The lack of open space, especially on middle and lower class of housing, but the community of housing is still can do their activities together, so the chance to know, is known and interact with others. Spill market also as generator for social interaction activities, especially in housing with high density. Spill market is farmed because of mobile vegetable traders activity who has many consumes, so their activities in the long time, that is known static activity.

Based on the observation at formal housing in Jember with low density, then many social interaction is done in public open space in this housing, because of housing public facilities are really designed according to it's function.

Housing residents used public open space to do exercises in the morning at 05.00 – 06.00 a.m. The road space is really used as circulation. The social interaction on formal housing in Jember proved that human as social creatures, with limitation of fascilities as area in doing social interaction because of fenced house design and limitation of public open space, then housing residents keep doing the social interaction although with limited time. Spatially, social cohesion in formal housing in Jember Region can be seen in figures 3,4,5 and figure 6.

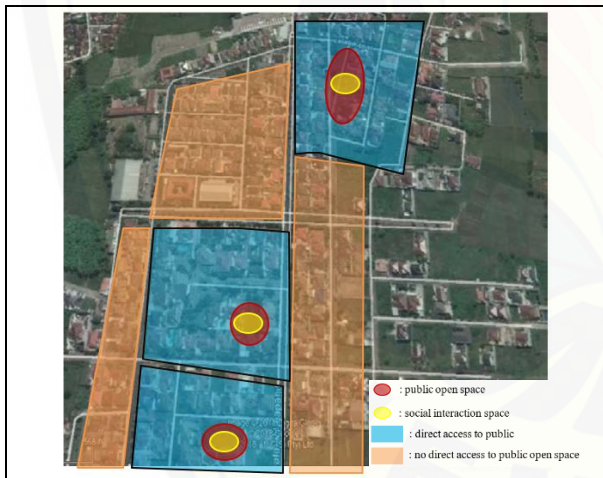


Figure 3. Sempusari Housing

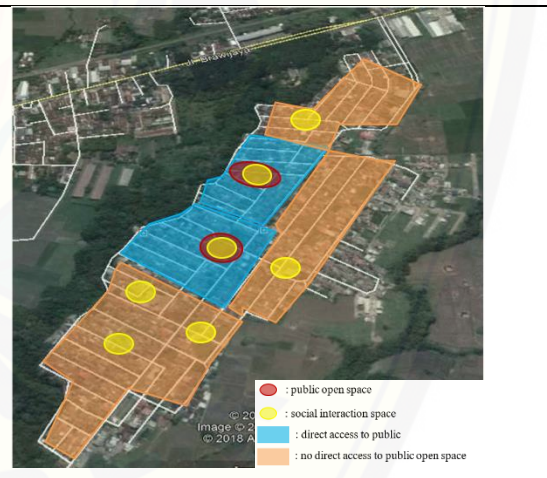


Figure 4. Griya Mangli Housing



Figure 5. Gunung Batu Housing

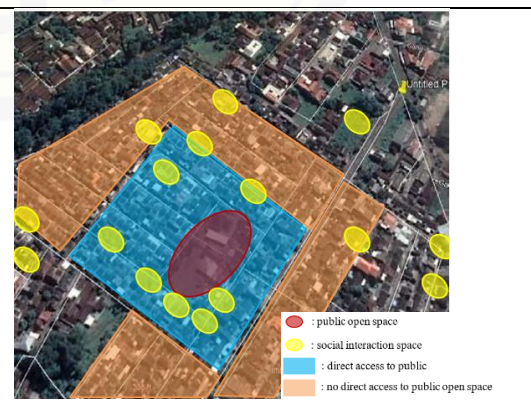


Figure 6. Mastrip Housing

Sempusari housing in Kaliwates Subdistrict and Gunung Batu Housing in Summersari Subdistrict is a low density type housing with gate community, because to enter housing is monitored in the guard post and above 21.00 certain roads are closed portal for housing security.

Public open spaces are used housing resident for sports activities as well as social interaction with other housing residents who both take advantage of the function of open public spaces, residents who are far away with the location of open public spaces will be constrained by direct access to public spaces.

The Griya Mangli housing in Kaliwates Subdistrict is a high density type housing that has easy access to enter the housing. The security aspect is low because there is no gate community, so many portals are installed. Public open space is limited, so that it utilizes the road space for social interaction at certain hours, namely the morning dominated by mothers and evening dominated by children. Economic activity as a generator of social interaction. Social interaction activities at the location point of the presence of vegetable vendors around the street space, so that mothers when shopping as well as caring for their children

Theory about open space many put forward by experts, one of them is definition that open space is social space schome combines social components and physical of environment become a single scheme. Basically, open space give a chance for community to have reaction then the at the end they will create a city community. As definition, open space has different characteristic in accordance with the scale. Neighbourhood space is open space which is developed in housing environment to do public activities, such as playing, doing sport, enjoying the leisure time like the activities in formal housing complex.

Weakening of social cohesion on housing environment can be caused by the developer do not provide an available interaction space/neighbourhood space. Healthy social space is usually not become an important part from planning. Where as in essence, neighbourhood space can help housing communities to meet others.

Modern formal housing tend to eliminate the availability interaction space based on efficiency reason with build the house corncidental. Housing is also often do not provide on open space that can be used together by communities. The weaknessess of this social cohesion create a social gaps in formal housing. And it can be solved by good social interaction between housing community. Home design and location, facing each other can help neighbours to watch others, so the orientation of housing residents not only at home.

Economy activities as generator of social interaction. Social interaction activities in the location point is the presence of mobile vegetables traders, then some mothers buy vegetables while they nurturing their children.

4.3. Neighbourhood space model

The similarities and differences in social interactions from the results of research on high density and low density formal housing in the Kaliwates and Summersari Subdistricts, explained in Table 1 which explains the conditions of weekend and table 2 which explains the weekday.

Table 1. Social Interaction Activities

Description	High Density Formal Housing	Low Density Formal Housing
Differences		
Social Interaction Activity	Weekend is used by residents to interact among residents, including social interaction when shopping at vegetable sellers, sports activities and at meetings in one of the housing residents.	During the holidays, many residents do activities outside the housing, including recreation out of town, lunch and dinner outside the house, so that only a few residents go shopping at vegetable sellers. On weekdays the interaction between residents is reduced due to their activities at their workplaces.
Static activity	Static activity generated by vegetable sellers is active in a place on a residential	There is no static activity that is raised by the vegetable seller on a holiday because the

Description	High Density Formal Housing	Low Density Formal Housing
	road starting at 05.00 am - 09.30 am and it is carried out every day both weekdays and weekend	residents of low-density formal housing on holidays are more active outside the housing, including recreation. Static activity occurs during weekdays starting at 5:00 a.m. - 9:00 a.m. Static activity generated by vegetable seller active in a place on a residential street starting at 05.00 am - 09.30 am and carried out every day both weekdays and weekend
Social interaction time	The time of social interaction occurs between 05.00 - 09.30 both weekdays and weekend	The social interaction time of some non-Muslim residents in housing occurred at 7:00 a.m. to 9:00 a.m. during activities in the church in the housing. Most of the other residents carry out activities outside the housing.
Distance point of social interaction activity	The distance of the residents' social interaction activity points is an average of 50-75 meters	The distance of the residents' social interaction activity points is more than 100 meters
Housing Security	There are many portals on several ends of the road that are not properly conceptualized.	There are many portals on several ends of a well-planned residential road, so that residents can only get out and enter the housing on the main route which is easily monitored by the housing security guard.
Similarity		
Social Interaction Activity	The types of activities in both housing are the same, namely shopping and sports and children's playground	
Static activity	Both activities are generated by vegetable sellers starting at 05.00 am - 09.00 am, except on Sundays there are no vegetable sellers in low density housing	
Social interaction time	Most of housing residents doing sports and shopping at the vegetable sellers shop at vegetable sellers at 5:00 to 7:00. At from 5:00 to 7:00 a lot of people had started walking towards the church in the housing.	
Housing Security	The portal closes from 10:00 p.m. to 5:00 p.m.	

Based on the analysis of empirical conditions, basically social interactions carried out by residents mostly use the road space. only a small percentage of residents live in the vicinity of open spaces that make direct use of open spaces as housing facilities. Based on the analysis, it is necessary to plan a neighbourhood space model both in formal high density and low density housing, namely: 1) the concept of space that accommodates static activity generated by vegetable sellers; 2) the concept of small open space at some points on the residential road that are semi-public open space for the social interaction among housing residents; 3) Applying the concept of defensible space as a concept of space design to improve the housing security. Based on observations, it was seen that there was a gathering point for housing residents during vegetable shopping activities, so a neighbourhood space design that utilizes street space and open space refers to the concept of defensible space described in Figure 7 as follows.

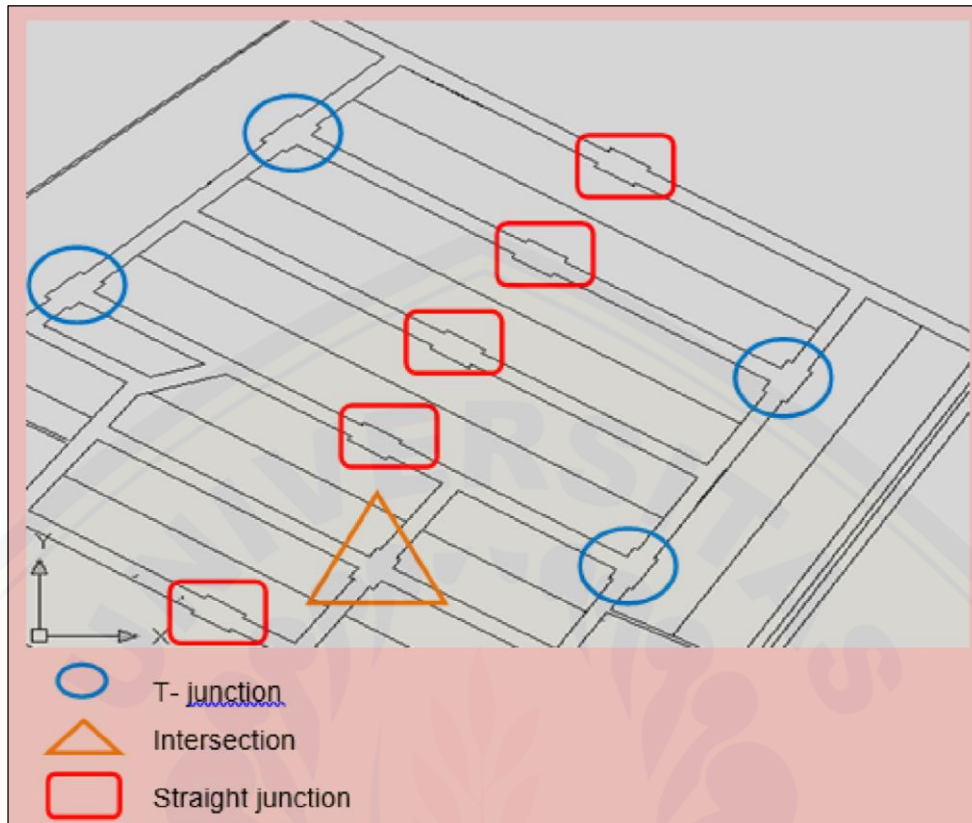


Figure 7. Neighbourhood space model in formal housing

Designing enclosures on formal housing road spaces that are used for social interaction is also a citizen effort to control each other in housing security, according to the concept of defensible space [14] with the main principle, namely territoriality; natural surveillance; image and “milieu” or environment.

5. Conclusion

Based on the research result, there was 3 (three) elements in establishing a neighbourhood space to develop social cohesion. Such as road space, spill market in formal housing that is static activity and public open space. Social cohesion in formal housing is need to be increased, where the housing layout with road pattern type is very influenced to evoke social interaction activities, especially housing with high density. The placement of public open space that is potentially to evoke social interaction activities should be design in the area center of housing that is surrounded by a road, so the housing community who has activity in public open space can supervise the housing condition. The developer need to designing enclave on formal housing road spaces that are used for social interaction and control each other in housing security, according to the concept of defensible space and neighbourhood space model namely “Enclave Transpatial”

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