Impact of Online Taxi Bikes Presence on Margonda Street, Depok

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Abstract. The online taxi bike gives some convenience to customers since its first launch. The demand for using online taxi bike from the public is quite high. Unfortunately, the high demand is not accompanied by the adaptation of urban space. Streets and circulation nodes begin to be filled with online taxi bikes which are hanging or waiting for passengers. This activity causes congestion and misuse of urban infrastructure. This development must be maintained by the government so that the presence of online taxi bike can run optimally without harming any parties. This study will examine how significant the impact of the presence of online taxi bike in urban areas is related to the use of space and urban infrastructure. This study uses qualitative method and is done by observing several strategic points in the city which were synthesized through the map. The research is complemented by literature studies and enriches the latest information through the city news. The results prove that the existence of online taxi bike can reach the blank spot of the city and complete the public access to the destination. Nevertheless, its existence can lead to conflict, especially with other public transportation services. On the passenger’s point of view, the presence of online taxi bike makes the trip easier. To reduce potential conflict, the meeting between online taxi bike community and conventional taxi bike can be arranged by the government.

1. Introduction

Human activity has been made easier by the presence of technology because space and time can be reduced. With technology, we can now order whatever we need through our hands without stepping out of the house. In terms of transportation, now we no longer need to step into the taxi bike base to get the services, the taxi bike will approach us. Previously, to get these transportation services, passengers had to walk or visit the terminal or taxi bike base. Nowadays, with the sophistication of connectivity technology, certain spaces can turn into proximity. We know it by the term, online-based transportation. This research will examine how space can be formed through social processes and also with the intervention of technology. The case study in this issue was an online taxi bike. The formation of online taxi bike spaces is observed from the production process of space in the city, a review of social space and its impact on space.

The area of the study is Margonda street, Depok, agglomeration area from the capital city, Jakarta. In observations on the field, there will be many objective results from the author. From the book “The Production of Space”, Lefebvre said that space is a product of social activity [1]. Understanding of space production according to Hegelianism, human beings living in the world by working to produce history, science, and self-awareness (Lefebvre, 1974). We can understand that the
civilization of human life originates from a long and undefined history of space production because humans can only reach the world to the extent that it can be sensed. People can recognize how space is formed by probing its origin, that is a human social activity. According to Lefebvre, there are 3 concepts for humans to create space according to the way they live in social life. First, perceived space is all physical space that can be sensed by humans. Perceived space or spatial practice is the first space where the occurrence of social interaction between humans formed the human civilization for the first time. Second, conceived space is all the space that comes from non-physical aspects which only exists in one's mental state. The second space is only formed after real social interactions occur in physical space. The space develops because humans use their minds to make ideas and make their own perceptions about their experiences. This perception will shape the way every human being acts in physical space. Physical space that has been reinterpreted by humans then gradually changes the shape of existing spaces, it is called lived space. The three meanings of space do not occur linearly, the process can be intervened by anything included technology. These three concepts of space are commonly called Triad of Social Space. If the production of space has reached lived space, then humans will stay in it and eventually become accustomed to interpreting the lived space to become the new perceived space. From ancient times to the present, humans and space are constantly changing. Changes and additions in this space are interpreted as a reproduction of space or can be called the effect of surplus production. The surplus of production is not a separate space, but a new idea in interpreting his space. The definition of production includes various kinds of activities and forms of space. The production concept is simplified into three concepts, which are actor (labor), production process (production), and product (product). In this case, space becomes part of a historical production, which includes the intersection of time, space, and social beings.

![Figure 1. The process of space production](image-url)

Production of space in the city cannot be separated from the social relations between the actors themselves. The conflict that occurred and the driver's personal life in the community certainly had an impact on the space production process that occurred in the city. Personal social relationships of online taxi bike drivers allow them to get a place to stay. The presence of technology is intended in a way that humans can make smaller efforts for results that are equal or greater and more accurate. Technology not only makes work easier, saving time, reduce the needed space, and energy, it also shapes human activities and changes the pattern of activities and the space it produces. Technology also has the power to change the movements and space produced. The following is a diagram that explains the changes in space that occur in terms of Triad of Social Space.
According to Lefebvre in The Production of Space, in the context of space production, a city is a space formed and invigorated by social activities for a limited period and then changed again in the future. The city consists of physical elements, social systems, and individuals who act in cities (Wirth, 1938). Factors that affect the physical city include economy, social, politics, culture, security, and the development of science and technology. The city consists of buildings and activities that are above the ground, sub-surface installations, and above-ground activities. City design can control and limit a person's movement, can even decide and intervene (Lynch, 1960). We can experience the city with vision, hearing, smell, and other senses. More than that, the city presents interesting sights and layouts to explore (Lynch, 1960).

A city is formed from every activity carried out by the community. They act in it, organize space, work together and try to create a better space for the future. This is what is called the social system in the city. In terms of population, cities have been densely populated with heterogeneous populations, and have political, economic, religious, and cultural organizations (Sirjamaki, 1964).

A good city is a city full of opportunities and expectations. There is room for fulfilling the main, secondary, and tertiary needs. Inside is an infrastructure that can connect one place to another, both by walking and riding a vehicle. Without supportive infrastructure, the development of the city becomes slow and human activities become hampered. The network makes all the potential in the city connected to each other and creates greater opportunities for human life. Each city should have and implementing their spatial planning, but no region is fully organized by the authorities. Unoccupied areas make development of the informal sector in certain areas is possible, like street vendors and online taxi bike drivers.

2. Methods
The research begins by examining the theory of space production from Lefebvre's perspective. The author shows how social interaction forms a space divided into the triad of social space. Furthermore, The Production of Space theory associated with the current conditions, that is the era of technology use. It can be seen how space can change because of social activities that are intervened by technology. Data is obtained from direct observation at six spots with different type of space production. The interviews about taxi bikes activity is done with the drivers. Data analysis was carried out by mapping synthesizing field findings. To find the specific impact of online taxi bike, the author compares the presences of online taxi bike and conventional taxi bike.

The area of the study is along Margonda Street, Depok City, an agglomeration area of Greater Jakarta. The Margonda area is filled with retail and housing (rented or apartment) that have been growing throughout the year with the existence of two major universities around this road. The availability of various needs in this place makes many people visit to buy their needs or just layover.
3. Discussion
Taxi bike is a bicycle or motorbike that is added by riding passengers or renters. In this discussion, taxi bike drivers act as central actors forming space. The personal life of actors outside the work area influences the choice of space (Lefebvre, 1988: 78).

3.1. The Base of Conventional Taxi Bike
The taxi bike base is present in an area through a long unplanned process. The process starts with a group of productive-aged citizens who live in an area. They have gathered to carry out social interactions including room negotiations until finally they routinely carried out taxi bike activities in the room. The space that chosen for the taxi bike base is usually at the junction or intersection and make sure its position can be seen from various angles, so that the passengers can easily find their presence. Taxi bike bases usually operate and deliver passengers around the base area. They rely on space knowledge as a signpost. Passengers who use their services must walk to the base first to get a taxi bike. After arriving at the base, passenger can get a taxi bike easily because the base is usually occupied by more than 3 taxi bike drivers. To get to the destination, the passenger tells the destination place by mentioning the spatial code to the driver. The spatial code can be a street name, an interesting thing or the closest node or the name of a district location. After that, passengers and drivers negotiate prices. When they have reached to an agreement, then they leave for the trip. Therefore, the space produced by taxi bike drivers (bases) is considering district, lane, knot, interesting things, and the edge of an area. The base that have been built do not damage the existing and disturb other activities that occur there.

3.2. Online Taxi Bike and Smart Phone Applications
In this digital era, the taxi bike has begun to transform. The newest taxi bike management system has emerged, they use application to finding taxi bike services is provided by third parties (taxi bike drivers). The smartphone application makes online taxi bike drivers possible to work anywhere without meet each other and they can get passengers from the closest radius of their existence. It also makes online taxi bike access or pass by the territory of the taxi bike base. This is often made conflicts between online taxi bike drivers and conventional taxi bike drivers who maintain power in their territory. Online taxi bike drivers can stop somewhere because the place belongs to a friend or unmaintained place that make it easy to occupy.

Figure 3. The order queue of conventional taxi bike.
3.3. Online Taxi Bike and Smart Phone Applications
Technology injection in conventional human activities produces a different space than before. Conventional taxi bike drivers need a certain amount of space that is fixed for their activities. They need the space that make their presence in the city space easy to realize by the local people, so they could use their services. But for online taxi bike drivers, the function of the base as a media of existence is replaced by smartphone application technology. Therefore, the space produced by online taxi bike drivers is not the space for residents to realize, but as a place to rest and wait for the next call. Here is a comparison table of the behaviour of online and conventional taxi bike drivers in city spaces.

| Variable        | Conventional                                      | Online                                                   |
|-----------------|---------------------------------------------------|----------------------------------------------------------|
| Former          | Neighborhood                                      | Company                                                  |
| Base            | Conventional taxi bike gets their base from negotiation with the landlord to occupy the place. Uses in the long time (average 3-8 hour). | Nomad online taxi bike base. They usually can stop anywhere with negotiation or not. Uses in the short time (several minutes, average not more than 1 hour). |
| Getting customer| Rely on existence on the base                     | Rely on smart phone (applications, internet signal access, telephone, or SMS) |
| Price           | Standard and flexible prices                      | Price depends on distance (km) and congestion level       |
### Variable | Conventional | Online
--- | --- | ---
**Destination** | Use spatial code to get to the destination, it usually near surrounding area/district. | Use spatial code if any and GPS to get to the destination, no more than 25 km.

**Trip** | Operates around the base area and forms a centralized network on the base. | Operates anywhere and form a network not centered in urban space but centralized in cyberspace.

**Drivers information** | Driver data cannot be obtained directly | Driver data can be accessed through the smartphone application, so the passengers can feel secure.

**The production of space** | The resulting space is permanent or semi-permanent with a simple shelter | The space produced is semi-permanent or just stops (overlaps with other space functions)

3.4. Findings

The presence of information technology that is so easy makes the structure of activities not always centered on physical space. Before the presence of an online taxi bike, we have to walk to the taxi bike base to get a taxi bike. That means the taxi bike base is a center for finding transportation services. Since the presence of taxi bike online applications, passengers do not need to walk to the taxi bike base. They can order the taxi bike services through mobile phone, then the taxi bike will come to pick up the passenger. This indicates that the center is almost merged or decentralized.

Discussion of human activities in the city space certainly depends on where they are. The scope area of study is Margonda Street, Depok, the primary arterial road in the city of Depok, which is known for its high density. This road is the main access point for the driver to Jakarta or from the direction of Jakarta to Depok. At 07.00-08.30 AM and 16.30-19.00 PM, several points on this road are crowded by passing vehicles. Online taxi bike also colored the traffic on the morning and evening on Margonda Street. The author observed the link between space and activity that occurred.
4. Conclusions

The existence of conventional taxi bikes in a crowded place can be understood that they are looking for passengers by showing themselves, while online taxi bikes must be ordered through the application. The differences of online taxi bike are using application to get orders helped by GPS radar, it will detect the passengers. The impact of emerging online taxi bikes trips to city space is wider access to go anywhere. No need to leave the house to get what we want. From the observations, technology really helps human activities to improve the space carried out both mentally and physically. Social space is formed because of the social activities of the community, which are usually hit by conflict because they are not aware of whether the community is aware of the space negotiations that occur. The space that formed by online taxi bikes can develop in a relatively fast time, cause pros and cons from the surrounding community because of their impure participation through social activities.

Taxi bike dares to use technology and social relations in forming space in the city. Courageous of taxi bike drivers cannot be chosen as anti-social spaces, because attending to it still considers the social aspects. As at the first point, the social relations between former base taxi bike drivers and relations with coffee shop owners make it easy to get a decent shelter.

The space making by online taxi bike (temporary base) is done spontaneously. They occupy the weak of guarding space near the transit points and public anchor, these are the courtyard of a building with
low sidewalks; shophouse without fence or iron chain barrier; and on the circulation path of vehicles without police/security guards / regional thugs who control vehicles. The production of taxi bike spaces is one of the adaptations to the environment and response to social relations, which ultimately makes the urban life of the city more dynamic.

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