

## Local Elements Defining Transitional Spaces as a Territorial Strategy at an Urban Village in the City of Yogyakarta, Indonesia



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### ABSTRACT

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Urban villages, known as kampungs in Yogyakarta, are currently experiencing a gradual decline in providing social space due to their spatial transformation to support tourism, including Prawirotaman. Prawirotaman had been a neighbourhood for the Sultan's soldiers in the 19th century; it was later transformed into a kampung for tourists in the 1980s. This transformation affected the territorial claims of the transitional spaces. In contrast, the transitional spaces in Prawirotaman have now become gathering spaces accommodating the daily neighbourly lives. Hence, this study aimed to define transitional space through its local elements relating to the residents' territorial behaviour towards the spatial transformation due to tourism. The data consisted of residents' interaction behaviours and physical settings collected from interviews and observations using GPS and manual drawing. The analysis uses behaviour mapping and spatial configuration approaches assisted by ArcGIS and SketchUp. The observations were conducted based on the Muslim daily prayer times. This research defines that the transitional space becomes a residents' territorial strategy in maintaining their social space amid the transformation due to tourism through their behaviour in using and placing local elements.

## 1. INTRODUCTION

Many urban villages in major cities in Asia have transformed their spatial function to serve tourism activities. This transformation can be seen in Chatang Village in China [1], Chung Cheng historical road in Tamsui, Taiwan [2], Gamcheon Culture Village, Busan [3], and Morten Village, Malaysia [4]. Tourism development has also occurred in the city of Yogyakarta, especially in its urban villages called kampungs, including Prawirotaman. Kampungs in Yogyakarta were built in the Sultanate era and developed spontaneously during the Dutch colonisation [5, 6].

Prawirotaman in the 19th century was dedicated to the residences of the Sultan's soldiers. In the 1960s until 1970s, Prawirotaman was a centre of batik industry. Then, it has become a tourist kampung since the 1980s for low-budget accommodation; batik workshops were modified into tourist accommodation [7], and houses were converted into homestays and other tourist facilities such as restaurants and pubs. The changes in land ownership and space privatization have led to the transformation of transitional spaces, as illustrated in Figure 1. Prawirotaman has faced territory deprivation and territory reinforcement, a territorial conflict between tourism and residents. The urban villages often experience spatial and social problems due to plans and policies [8]; there is physical transformation and change in residents' activities [9]. For the residents, transitional spaces such as streets, alleys, aisles, house yards, and terraces are territories used for daily and social activities. This relationship signifies that kampung residents and transitional spaces cannot

be separated.



(a) space privatization

(b) land ownership change

**Figure 1.** Spatial transformation due to tourism in Prawirotaman

Transitional spaces accommodate pedestrian activities and vehicular traffic simultaneously. For instance, a pedestrian area, a children's playground, a cycling area, and a parking lot occupy the same street [10]. It is defined as circulation and social spaces [11] and shared spaces [12] that play a role in facilitating the residents' social interaction [13]. Likewise, it has become a habit for Prawirotaman residents from time to time to use transitional spaces for community gatherings (see Figure 2).

They understand how to use the spaces in their neighbourhood efficiently and creatively for their purposes [13] and even have a desire to dominate them [14]. For example, the residents placed street furniture in the form of local elements such as *linca* (bamboo seat), *dingklik* (short wooden seat), *badukan* (cement seat), and *tiker* (mat) in the transitional spaces within their kampung. The street furniture

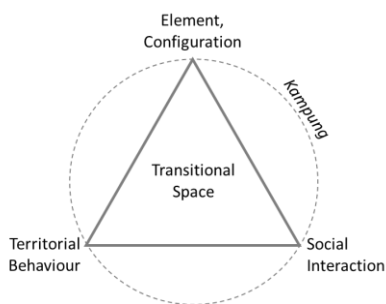
serves as a guide for observing the area’s character, the activities [15], and the place’s function [16]. Benches and other pieces of street furniture build a more pedestrian-friendly neighbourhood [17], contributing to streetscape appeal, comfort, and social productivity [18]. Because of the functions, local elements in the kampung’s transitional spaces cannot be separated from the residents’ behaviour.



**Figure 2.** The community gatherings at the alley in Prawirotaman

Nevertheless, the topic of transitional space is still widely discussed in the scope of walking behaviour [17], public space activities [19, 20], urban greenery [6], and commercial streets [17]. Previous studies have not discussed the relationship between local elements and the territorial behaviour of urban village residents. By observing these focuses on the scope of an urban village, then the transition space is defined (see Figure 3).

Moreover, *kampung* has different characteristics from other urban villages in other regions. In essence, the transitional space is essential to encouraging an urban’s sustainability. This is in line with UN-Sustainable Development Goal; the sustainable cities and communities.



**Figure 3.** Factors in defining transitional space

**2. LITERATURE**

Territorial behaviour aims to create privacy [21], defend areas [22], achieve specific social goals [23], and secure the areas in a transitional space [24]. The concept of a transitional space for interacting among neighbours has become a custom

in the everyday life of an urban village. It is deeply rooted in the community’s daily lives, building a spatial culture [24] and affecting interaction patterns [25]. It has also happened in Prawirotaman. In other words, territorial behaviour can be interpreted as spatial practices that show the relationship between people and their neighbourhoods and the habitual patterns of the residents.

In this study, the scope of territorial behaviour relates to how the residents of an urban village conceptualise the transitional spaces during their neighbourhood transformation due to tourism. Notably, it refers to the use and placement of local elements for everyday social interactions among neighbours.

**3. METHOD**

This study was conducted qualitatively with two main research parameters. They were 1) residents’ behaviour patterns in how they used and placed local elements in transitional spaces and 2) local elements in the transitional spaces that were related to the forming of interaction spaces. The transitional spaces were divided by their territoriality: public transitional spaces, including streets, alleys, and aisles and private transitional spaces, consisting of house yards and terraces.

Firstly, data on residents’ behaviours were collected through snapshot observations and interviews. Snapshot observations can effectively capture activities in a short duration [26] by noting the gender activity [12] and posture [17]. The observations were performed to explore the ongoing interactions between residents in the transitional spaces and habitually used local elements. It is necessary to understand the space-time experience of a community group [12, 26]. Hence, this observation focused on 1) the group of residents and their activities, 2) the time of the activities, and 3) the distribution of local elements in the transitional spaces.

Next, data regarding these three variables were analysed using a behaviour mapping approach. This mapping method explored the residents’ social interactions and local elements used, which were further associated with territorial behaviour.

Second, the physical setting of the local elements in the transitional spaces was also observed. The setting shows how an environment accommodates specific activities and interactions [27] and various activities at different times [28]. It influences people’s activity patterns [29, 30]. The setting variable consisted of the 1) type and 2) layout of local elements. The type of elements in this study aimed to find the residents’ reasons for using them; meanwhile, the layout variable assisted in identifying the habits of residents in using and placing the elements through their positions in transitional space. The layout shows the existence of an object in a space [31]. Therefore, the setting of local elements depicted Prawirotaman residents’ behaviour in occupying, configuring, and interpreting transitional spaces as their territorial practice within the kampung.

Further, the type and distribution of local elements were observed by taking photos, recording in field journals, and marking locations using Global Positioning Systems (GPS) and imported into ArcGIS. ArcGIS is used to acquire spatial and temporal information in an activity [32] and is efficient for understanding spatial behaviour [33]. Simultaneously, the layout of the local elements was observed by drawing manually and then redrew using SketchUp. It is used to

understand a space visually and spatially [34]. These related data were further processed using the spatial analysis method. It shows the interdependent relationship between a space and its constituent elements and predicts people's activity, movement, and land use [26]. Thus, this method assisted in finding the relationship between the setting of local elements and the residents' territorial behaviour patterns in the transitional spaces.

The interviews complemented these methods in exploring the use and placement of local elements during their interactions with neighbours in the transitional space. Interviews are used to find data about people in social space [32]. The interview questionnaire 1) why you use and place the local element here, 2) what do you do when you are here, and 3) how your social experience when you are here. 23 (twenty-three) groups of respondents were interviewed, consisting of women, men, and children. The respondents were limited to residents captured interacting in the transitional spaces.

The observation was conducted based on the Muslim prayer times, namely after morning prayer (*Fajr*) (05.00 am-12.00 pm), after afternoon prayer (*Asr*) (03.00 pm-06.00 pm), and after evening prayer (*Maghrib*) (7.00 pm to 12.00 am). Preliminary observation found that the daily interaction among neighbours in Prawirotaman was apparent during these hours; men in the tavern dispersed after hearing the evening prayer call, or women's monthly gathering started after the afternoon prayer. A kampung community has a unique culture related to the people's religious life [35], and their behaviour is strongly connected to time [36]. There were 45 photos showing residents' interactions in the transitional spaces and 34 photos of local elements. The observations were held on random days and times from January to February and took place in the private transitional spaces, which were house yards and terraces, and the public transitional spaces with various widths, which consisted of streets (5.00 meters), alleys (1.50 to 2.50 meters), and aisles (0.50 to 1.00 meter).

## 4. RESULTS AND DISCUSSION

### 4.1 Residents' behaviour patterns in using and placing local elements in transitional space

The gathering of neighbours was an everyday activity for the residents in Prawirotaman. It happened either scheduled or spontaneous in the transitional space. Social activities were seen daily in the transitional space where local elements were placed, such as *lincak*, *dingklik*, and *badukan*. They served as seats and territorial boundaries. For example, a resident working as a parking attendant placed a *dingklik* on the street for sitting and marking his territory.

Meanwhile, in the inner area of the kampung, the residents placed them at the side of alleys and aisles and in house yards and terraces (see Figure 4). Their action shows that they placed local elements in the private and public territories to accommodate their social need: interacting with neighbours. "I put a *lincak* at the front of my house to make it a living room and a gathering place", said a man named Tejo. A man named Ari said, "At first, we just put chairs here to chat with the closest neighbours, but now it has become a routine place to gather for residents, almost every night". The placement of local elements in the transitional spaces was a form of residents' control over public spaces in the kampung; they marked and extended their interaction territories.

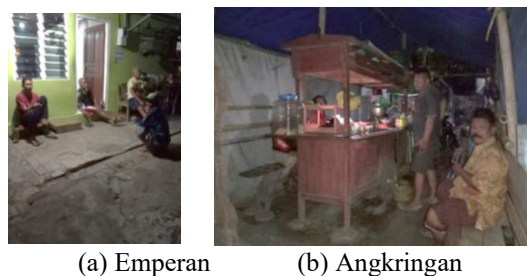


**Figure 4.** The placement of seating elements in public transitional spaces

Local elements were also seen in the private transitional spaces such as house yards and terraces (see Figure 5). These elements were used for sitting and chatting with neighbours during leisure time. A woman named Yayuk explained that she placed the *lincak* and opened the terrace for her neighbours to gather: "Every afternoon, my neighbours come to sit and chat for quite a long time here". It was noted that these local elements accommodated social life among neighbours in Prawirotaman. Moreover, they responded to this social need by opening their terraces and placing the local elements independently and voluntarily.



**Figure 5.** The placement of seating elements in the private transitional spaces



**Figure 6.** The use of social elements in public transitional spaces

Furthermore, the limitation of social space stimulated the residents to optimise the use of local elements. For instance, a group of men chatted and sat on the *emperan* (house entrance) and *angkringan* (cart tavern) in an alley, as illustrated in Figure 6. They used these narrow elements located in the 1.5-meter-wide alley for interacting with neighbours while sharing the space with pedestrians. The use of narrow places shows that the interaction space in the kampung was not determined by the size and location of the elements. This finding contrasts with [17] that the street furniture design must be able to answer ergonomic needs. The kampung residents were more concerned about their gathering habits. Residents formed their social territory unplanned; nevertheless, they considered it as common sense. It shows the residents' competence in understanding and responding to conditions in their neighbourhood [37]. It can be said that the territorial behaviour in the kampung emerged due to the emotional bond between the residents and the transitional spaces. The behaviour built

the various concepts of transitional space based on the residents' perceptions.

Further, each group of residents conceptualised their interaction spaces using the local elements interchangeably. They shared their social territories. For example, the *cakruk* (patrol post) was used by a group of elderly for gathering in the morning, a group of children for playing in the afternoon, and a group of men for patrolling in the evening. Their meetings were influenced by the gathering time of each group (see Figure 7). It was revealed that the interaction spaces in the kampung were continuously and spontaneously shaped. The residents only had an orientation to fulfil their interaction needs at that time, while the requirement for the element was demanded only on its openness to being accessed alternately. This finding contrasts with [38] that the quality of space plays a crucial role in stimulating social interaction. In addition, the alternating use of local elements also illustrated the territorial tolerance between neighbours. The kampung's residents had a set of mechanisms for regulating their environment [39], adjusting the rules to be more flexible [8]. This territorial behaviour in tolerating social space became a neighbourly culture and a social skill of the kampung residents.



**Figure 7.** Alternating use of *cakruk*

The existence of local elements indicated the meaning of the transitional spaces in the residents' social life and daily activities. The image of a space captured by each individual depends on their everyday experience and how the place represents itself [40]. It was found that several activities were rooted in the Prawirotaman residents' lives. These activities dominated the transitional space and formed interaction spaces. For example, residents blocked and placed mats in the alley to perform Friday prayer (see Figure 8a). Simultaneously, the

interaction space was shaped temporarily for around one hour. This circumstance shows that religious activity controlled the transitional space's function and pattern. Nonetheless, it became a commonplace and routine habit in the kampung's life.

Social activities were closely related to the residents' daily lives. For example, they placed a *dingklik* next to a homestay's wall and used it for everyday casual gatherings with neighbours even though the homestay belonged to newcomers (see Figure 8b). The residents perceived the transitional space as their own, and legal ownership did not affect its use. These findings show that religious and social activities strongly influenced territorial behaviour in the kampung.

Likewise, interaction spaces were simultaneously formed along with the necessary activities. Residents performed daily activities under all conditions to meet their life's necessities [41]. For instance, women chatted while cooking in the aisle due to the limited space of the house (see Figure 8c). It shows that the territorial practice of the residents was implemented by expanding private transitional spaces. In other words, residents unwittingly defended their territories amid the spatial transformation due to tourism. Territorial behaviour emerged in line with the insistence of a stimulant.



**Figure 8.** Territorial practices in transitional spaces

The distribution of local elements in the transitional spaces represented the territorial behaviour in Prawirotaman. Table 1 and Figure 9 illustrate that 14 necessary activities, 42 social activities, and two religious activities formed interaction spaces in Prawirotaman. Residents mostly used stationary elements such as *lincak* and *badukan* in the private transitional spaces (house yard and terrace) during their necessary activities (n=4) and social activities (n=23). In the public transitional spaces (street, alley, aisle) for necessary (n=3) and social (n=10) activities, they used stationary elements such as *cakruk*, *emperan*, and *badukan*. Temporal elements such as *tiker*, *dingklik*, *angkringan*, and chairs were used for social (n=9), necessary (n=7), and religious (n=2) activities.

Most of the social activities occurred in the afternoon or after Asr prayer (n=32), during necessary activities (n=8), and

during social activities (n=24). Those were followed by activities in the morning or after Fajr prayer (n=15) and in the evening or after Maghrib prayer (n=11). The local elements used were mainly distributed in the alley (n=26), followed by the aisle (n=25), and the street (n=7). These elements were located surrounding the homestays. This behaviour denoted the residents' power in occupying the transitional spaces in their neighbourhood, which manifested in the placement and use of local elements.

#### 4.2 Territorial behaviour and the setting of local elements

Territorial behaviour in Prawirotaman was seen in how the residents configured the settings of transitional spaces with the local elements. Settings predict the sense of community among residents [42]. It was found that there were three types of local elements in Prawirotaman with their various layouts used by the residents during their interaction with neighbours.

Firstly, the stationary elements in the private transitional spaces, such as *badukan* and *lincak*. The *badukan* was attached and became a part of the terrace's building structure, about 1.5 meters from the fence and was visible from the alley. Two

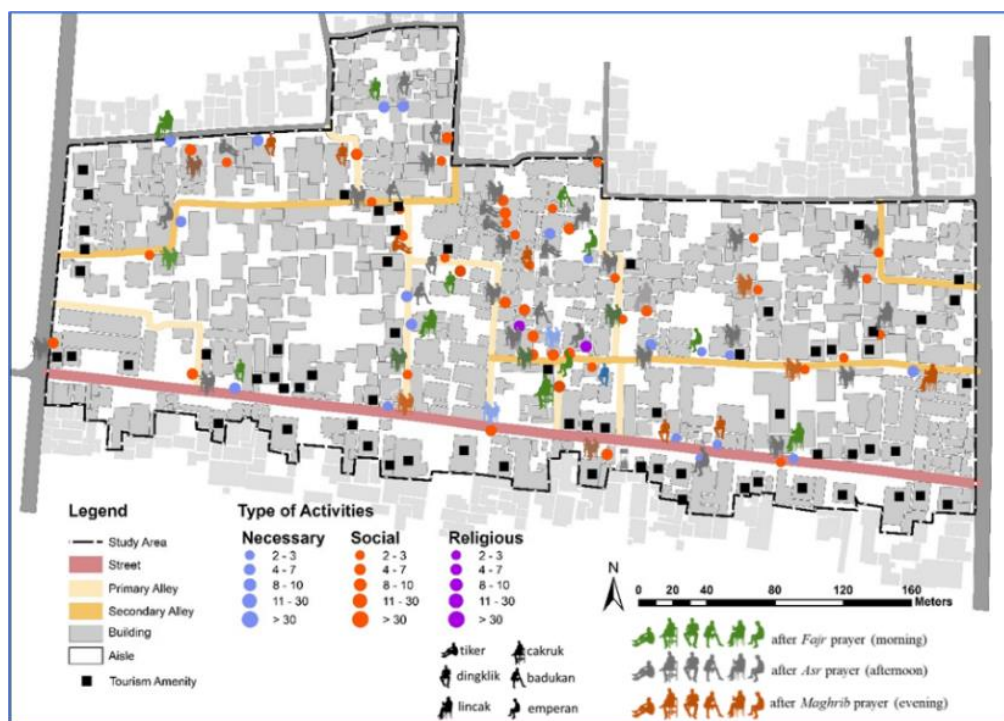
residents sat while chatting on the *badukan*, which served as a seat (see Figure 10a). They preferred to sit on the *badukan* because they did not need to take off their sandals when gathered on the terrace. They constructed a perception of physical features [43] that influenced their experience using them [19]. It was also found that the residents received neighbour's visits while sitting on a *lincak* in the yard (see Figure 10b). The low hedge and only about 3 meters from the edge of the alley caused the high visibility of the *lincak*: "I can see my neighbours walking down the alley from here [*lincak*]; they can also see me. They come over and then join me to sit and chat", said Harso. The openness of the space caused interaction between indoor and outdoor activities [43]. In Prawirotaman, the openness between transitional spaces was also determined by the visibility and affordability of its local element, which resulted in a high possibility of interactions among neighbours. It means that the territorial behaviour was actualised by opening the private transitional space to facilitate the kampung's social life. This behaviour was manifested by the existence of stationary elements that simultaneously formed the image of the private transitional space as a common space.

**Table 1.** The local elements in Prawirotaman transitional spaces: type, time, and distribution

Type of Activities	Type of Elements			Distribution		
	Private Transitional Space ( <i>Lincak, Badukan</i> )	Public Transitional Space ( <i>Cakruk, Emperan, Badukan</i> )	Temporal ( <i>Tiker, Dingklik, Chair, Angkringan</i> )	Street	Alley	Aisle
Necessary	14	4	7	3	6	5
Social	42	23	9	4	18	20
Religious	2	0	2	0	2	0

Time of Activities	Type of Activities		
	Necessary	Social	Religious
After Fajr (morning)	15	6	2
After Asr (afternoon)	32	24	0
After Maghrib (evening)	11	7	0



**Figure 9.** The behaviour pattern in using and placing local elements in Prawirotaman transitional space

The second type of local element is stationary elements in the public transitional spaces—for example, a *badukan* near an alley’s edge where the residents usually gather in the afternoon (see Figure 11a). Social interaction occurred in this 2-meter-long element, including sitting, playing, and chatting. “It has become a habit to gather at the *badukan* in the afternoon, after work, especially for men. We built this together through *gotong royong* [cooperation]”, said Yanti. Moreover, in an aisle 1.5 meters wide, it was found that women sat and chatted while feeding babies at the house entrance, called *emperan* (see Figure 11b). They said there was no need for a specific element in this social activity: “Just for chatting and relaxing, so it can be anywhere”, said a woman named Dwi. The use of *emperan* was also found in other transitional spaces. For example, a group of children sat on an *emperan* at the pocket space in an aisle while watching their friends play football and waiting for their turns (see Figure 11c). “It is shady here, a place to watch. It is like the stands in a football stadium”, said two boys. The limited space and building density encouraged the residents to optimise the functions of the local elements in the transitional spaces. It shows the place attachment between residents and transitional space [44]. The territorial behaviour of the residents was manifested through how they added new functions and claimed temporary ownership of the transitional space to form their interaction spaces.



Figure 11. Stationary elements in public transitional spaces

Third, it was seen that the transitional spaces in the kampung were also equipped with temporal elements, such as *tiker*, *dingklik*, and chairs. These elements were primarily found in alleys and aisles within the kampung. The places where the elements were placed show that the limited space due to tourism drove residents to form their interaction spaces temporarily and spontaneously. For example, a group of men doing night patrol put a mat called *tiker* in the middle of an alley (see Figure 12a). They patrolled while doing other activities, such as chatting, playing cards, and even eating together, on this element from 11 pm until 3 am or before the morning prayer call. This element served as a temporary patrol post initiated by the residents. The previous patrol post was demolished and turned into a homestay. Moreover, temporal local elements were placed in transitional spaces during *tirakatan*, a night to commemorate Independence Day (see Figure 12b). “This event always takes place here every year by placing chairs along the alley”, said Dewi. Further, the placement of local elements aimed to overcome the limitations of the house area (see Figure 12c). Two men sat while reading the newspaper on a *dingklik* at the front of the house in an aisle: “My house is narrow; it has no terrace or living room”, said a man named Kuntil. This interaction occurred in an aisle with a 1-meter width and irregular pattern. This finding contradicts [45, 46]. Thus, territorial behaviour was manifested in how residents occupied and modified transitional spaces. It was meant to maintain the neighbourly life amid the spatial transformation due to tourism.

The temporal element did not only function as a seat but was also a potential interaction node for neighbours—for example, the clothesline in an aisle where women gathered while doing house chores (see Figure 13a). “The houses in this aisle mostly do not have a yard to dry the clothes. We often encounter and chat for a while here”, said a group of women. This finding shows that the kampung’s transitional spaces as a public territory provide flexibility for residents in placing the impermanent local elements.

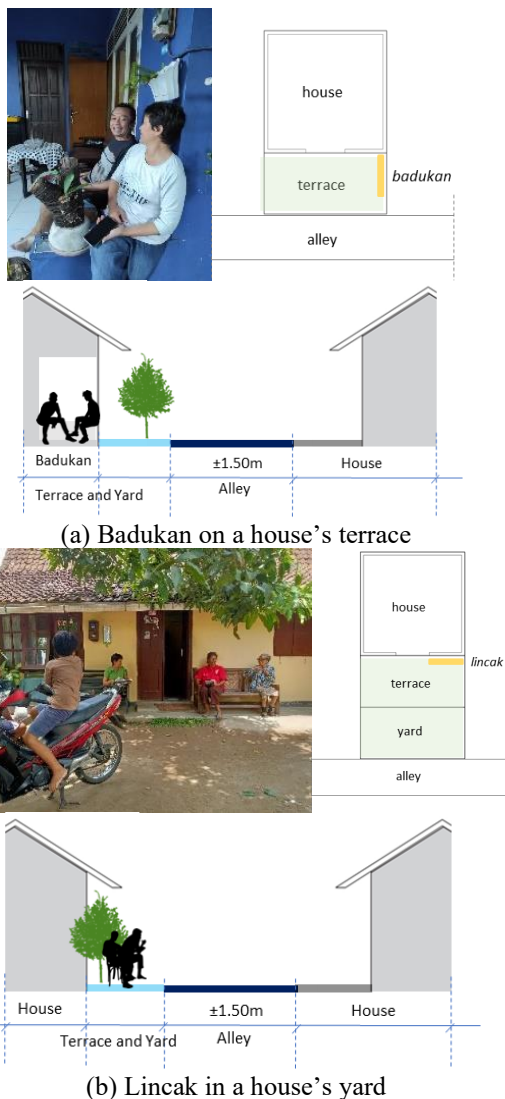
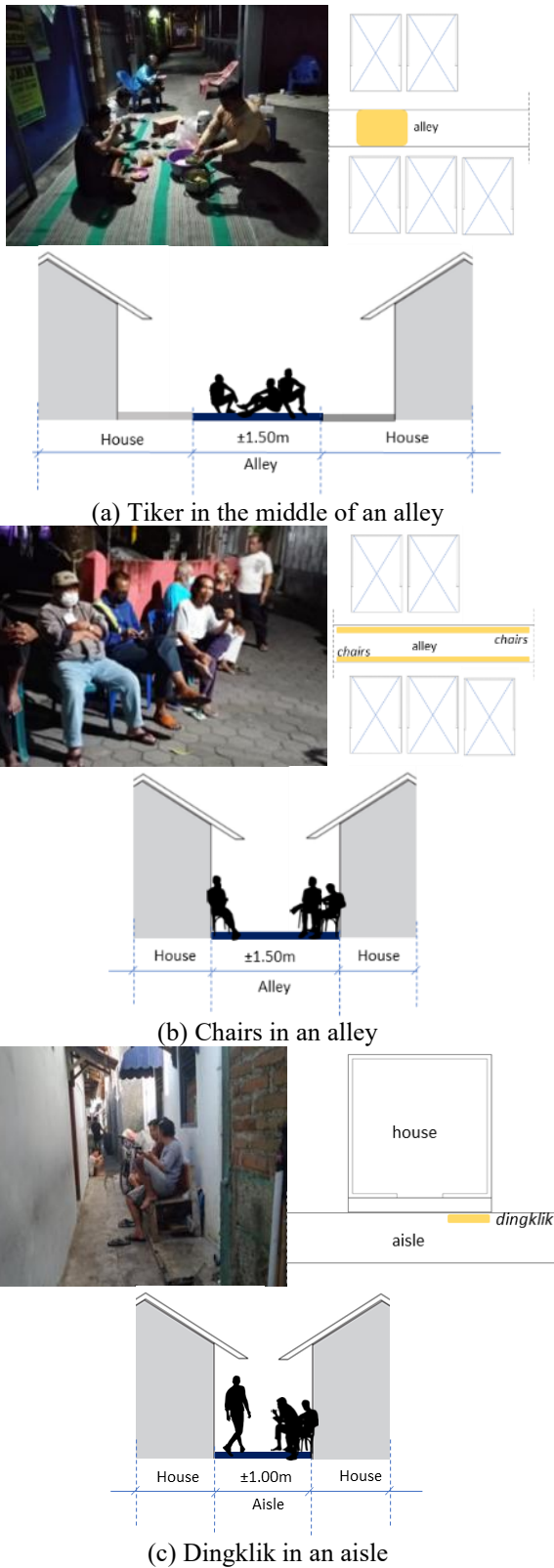


Figure 10. Stationary elements in private transitional spaces



**Figure 12.** Temporal seating elements in transitional spaces

Moreover, the peddler's carts became moving elements that temporarily shaped interaction spaces yet became routine nodes for gathering. For instance, a group of women crouched around a vegetable peddler while chatting (see Figure 13b). It happened every afternoon. Similarly, the interaction space was built when the food peddler stopped in the street (see Figure 13c). The residents shopped while greeting and chatting. "I often encounter my neighbours when buying bakso (food)", said Dana. In short, these moving elements formed an

interaction space everywhere they went along the kampung's transitional spaces.



**Figure 13.** Impermanent and moving elements in transitional spaces

## 5. CONCLUSION

Placing and using local elements in Prawirotaman, such as *lincak*, *badukan*, *cakruk*, *emperan*, *tiker*, *dingklik*, chair, and *angkringan*, were not just a practice of designing the spaces of the urban village. They were more about expressing the habit of neighbourly interaction in the kampung and simultaneously became the residents' strategy in controlling their territory amid the spatial transformation due to tourism. Moreover, the stationary and moveable elements in the transitional spaces demonstrated the residents' territorial strategy in sustaining their interaction spaces within the urban village. Hence, the use and placement of local elements in the urban village are not correlated with the quality of public space design but rather more with how the transitional spaces can accommodate the neighbourly life. In addition, there are no binding rules in its planning. The use and placement of local elements are more spontaneous and flexible, influenced by the territorial tolerance of the transitional spaces. Moreover, this territorial strategy is immersed in their daily life based on necessary, social and religious activities that occur unconsciously.

Therefore, territorial behaviour in an urban village, *kampung*, cannot only be interpreted as privatisation of space. It is more defined as a territorial strategy of residents toward the neighbourhood transformation, formed through the local elements in the transitional spaces. This territorial strategy is immersed in their daily social, needs and religious activities and occurs unconsciously.

As a result, this finding enriches the definition of transitional space that contributes to the architecture behaviour knowledge. Besides, it becomes a basis for urban village planning and policy-making. Transitional space as a micro-spatial has become an important factor in urban and urban village planning. Nevertheless, it currently only becomes a compliment at the macro and meso levels of spatial planning.

The planning of transitional space has not followed with the residents' behaviours, especially as a means of adapting to the transformation. Therefore, it needs an urban village planning based on mutual agreement, culture, and social habits. It aims to provide sustainability of social space within the urban villages, particularly *kampung*. Future research can refer to how this territorial strategy affects community adaptation to changes in the transitional space due to tourism in Prawirotaman.

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