

URBAN KITCHEN: A FORM OF URBAN SYSTEM BASED ON COLLECTIVE OPERATION

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Abstract. This paper aims to explore various spatial strategies in urban operations, particularly operation of collective kitchen as a form of the urban system. Through the tracing of micro spatial practice, this paper expands the idea of domestic in urban design discourse. This paper uses a case study method to investigate urban kitchen system in Kampung Bustaman, Semarang, Indonesia, where cooking operations are part of everyday life that is carried out collectively. It shows that the kampung's everyday operations generate the system of an urban kitchen, where domestic activities shift from the household to become integrated into society, challenging the dualities between domestic and urban space. The mapping of the everyday operations reveals hidden systems of society where connectivity and spatial negotiations play important role. This paper introduces the idea of the urban kitchen as a form of urban system that is transformative, dynamic, and flexible that is driven by collective domestic operations.

Keywords: urban kitchen, everyday operation, domestic, urban system, spatial strategy.

Introduction

This paper discusses the everyday operations of urban spaces used as large kitchen systems that challenge the duality between domestic and urban space. Discussion of the kitchen in architectural discourses is commonly related to domestic space in the interior of a house that is intimate and private (Betton, 2012; de Certeau et al., 1998; Cieraad, 2002; Kohl & McCutcheon, 2015). In contrast, urban space tends to be defined as an external and public (Carmona, 2010; Reynolds, 2012; Talen, 2013). This paper expands the understanding of the kitchen as a domestic space in a house to part of the urban system.

This study considers the study of urban kitchen systems as the integration of domestic and urban contexts that has the potential to contribute to the discourse of urban design. This study explores how urban space is inhabited by society and how spatial strategies and systems are formed in everyday life. This is in line with the statement from Arefi (2011) that local knowledge from the everyday life of society creates new knowledge. We believe that the idea of everyday “operation” can articulate the action characteristic of users as the dominant element in society. The purpose of this paper is to explore various

spatial strategies in urban operations, particularly collective kitchen operations as a form of the urban system. This expands the discourse of the domestic system in an urban context. Space configuration is seen as part of the whole system as the important basis for the everyday operation performed by society.

Understanding kitchen operations in an urban context involves highlighting various culinary production strategies operating in a more complex space. Cooking can be understood as a domestic operation that occurs in the kitchen with the aim to supply the daily needs of a household (de Certeau et al., 1998; Cieraad, 2002; Robson, 2006). When kitchen operations occur within the larger context of urban space, there is a shift from the kitchen as a domestic domain into the larger domain that involves both women and the entire community in that context (Robson, 2006). This has led to a complex socio-spatial transformation, giving rise to various spatial appropriation tactics that have implications for the social order of the urban environment (Dagevos & Veen, 2020).

The expansion of cooking operations from domestic to urban space has broadened domestic space discourse within the urban context. Because domestic operations in

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urban spaces may produce different conditions from the usual urban spaces (Atmodiwirjo et al., 2015), this study investigates how domestic cooking operations may function in a large kitchen system in an urban space. This paper aims to reveal how the food production operation of the society leads to the idea of an urban kitchen, by exploring everyday operation strategies. This perspective offers a different understanding from the common perspective in studying urban phenomena as geometrical or geographical practices—“that everyday life in urban space shows the different practices refers to a specific form of operations (ways of operating), to another spatiality” (de Certeau, 1984, p. 94). Moreover, looking at everyday operations in urban spaces is relevant in searching for design innovations by accommodating everyday life or transforming the current system (Dagevos & Veen, 2020), because, in everyday life, there is a repetitive system of a series of operations that runs mechanically (de Certeau, 1984). Thus, it supports that operations that occurred in urban spaces have the potential to be seen as forming an urban space system (Atmodiwirjo et al., 2015; Atmodiwirjo & Yatmo, 2019; Yatmo & Atmodiwirjo, 2013).

This study is situated in the context of the urban neighbourhood of Kampung Bustaman, Semarang, Indonesia. This *kampung* is famous for its satay and curry cooking, producing food that is distributed to various parts of the city. The everyday operations in the Kampung Bustaman of Semarang have formed an urban kitchen system, shifting domestic activities to collective activities involving society. This paper is interested in exploring collective food production's role in generating the urban system. Understanding such an urban system may contribute to knowledge in urban studies by seeing from the everyday perspective and domestic characteristics.

This paper consists of three parts. Part one begins with a discussion of domesticity in urban spaces, then part two focuses on the everyday operations that form a kitchen system in an urban space, and part three presents the strategies of everyday operations. Theoretical explorations of domestic kitchens and urban space established a basic understanding of domestic operations in an urban scale. The observation of everyday operations in urban spaces is presented through a contextual overview of the case studies. Mapping techniques of various spatial practices and the redrawing of operations in Kampung Bustaman are used to support the analysis in expanding the domestic understanding of the urban context in this paper. Through the findings from the field study, this paper attempts to present an alternative understanding of the urban system as an expansion of everyday domesticity.

1. Expansion of domestic discourse in the urban context

The knowledge of domesticity, which is closely related to the human body and intimacy, is potentially beneficial for urban design practice based on the micro perspective. The role of the body in framing experience, use, and behav-

our in the context of urban space has not been widely discussed, whereas it has the potential to explore complex micro-social and spatial mechanisms between the body and human space (Simões Aelbrecht, 2019). Thus, exploring domesticity in an urban context has the opportunity to reveal various spatial strategies related to the relationship between the body and urban space. Domesticity can be part of the urban system and vice versa (Atmodiwirjo et al., 2015; Attiwill, 2011a; Cetin, 2017; Mace, 2015). Domestic space has the possibility to be extended in urban space by bringing domestic conditions to the urban space (Cieraad, 2017; Coombs, 2015; Poot et al., 2015). As Cieraad (2017) argues, domesticity in space is more important than its domestic location.

The understanding of domesticity in an urban context offers a more expanded definition of domestic. It has the potential to blur the boundaries between interior and urban design disciplines. It could also foster innovative thinking beyond the fixed dualities of public–private or interior–exterior (Martella & Enia, 2020; Poot et al., 2019). The events and rituals associated with the domestic space can occur outside (Atmodiwirjo et al., 2015; Attiwill, 2011a; Mace, 2015), and the domestic space is increasingly accommodating varied urban functions. It is changing the traditional meaning and creating a hybrid situation (Martella & Enia, 2020). Lawrence (1981) argued that seeing domestic space from a different perspective enables to look beyond the measurable data and seek unique solutions to specific design-related problems. Domestic and urban are no longer limited to physical territorial forms. On the contrary, they encourage deployment, creating opportunities for more spatial choices to meet changing needs and availability (Paramita & Schneider, 2018).

This paper offers an understanding of the kitchen system that cannot be separated from everyday operations in urban spaces, as the kitchen becomes a place for everyday domestic operations (de Certeau et al., 1998). It argues that operations are important to show the relationships, connectivity, and systems carried out by the actors (de Certeau, 1984). Everyday life is a combination of strategies and tactics; strategies can be manifested through a series of activities carried out properly as a part of the social system, while tactics could be understood as various actions carried out based on situation and time (de Certeau, 1984). Both strategies and tactics are considered as arrangement that is not separated but interrelated; therefore, spatial practice can occur as both as a general or specific form (de Certeau, 1984; Highmore, 2002). De Certeau et al. (1998) also explained how strategies and tactics are arranged to produce food that can meet the household's daily needs, which is an important part of cooking operations. In this paper, the idea of operation refers to de Certeau's idea about ways of “making do” or the action of community on the spatial practice which is investigated through the observation of how the urban space arrangement accommodates these operations. This paper focuses on strategies of urban kitchen to reveal community actions that are collective operations. Meanwhile, the tactics

in this paper are traced from changes in the space functions in time-based operations.

The theoretical idea of operation becomes the basis of the investigation of the urban kitchen. The traces of everyday operations are important to see the relationships and systems (de Certeau, 1984). The kitchen's operation has the potential to reveal various food production processes (de Certeau et al., 1998). Through the investigation of such operations, this paper aims to expand the understanding of domestic to the urban space by investigating the inside-outside conditions and to expand on the set of lenses in seeing the spatial configurations of interiority in an urban setting: time, movement, and transition (Poot et al., 2019).

Context of study and methodology

This paper investigates everyday operations in Kampung Bustaman Semarang, Indonesia, to identify the kitchen system in these urban spaces. Bustaman is the name of an urban *kampung* in Semarang. The urban *kampung* is well known as the core production of satay and curry, also called *Sate and Gule Bustaman*. The spatial characteristics of *kampung* include a series of one-two-story houses along narrow streets and alleys as the main circulation spaces (Figure 1). This neighbourhood has the main characteristic of a strong collective social and culture among the inhabitants. This can be seen from their everyday activities that are not limited to privately-owned spaces. All inhabitants in this urban *kampung* have a domestic living strategy by sharing the available spaces outside their houses for

their everyday domestic activities, like cooking, washing, and eating. The investigation takes the everyday life approach that emphasises the importance of understanding how everyday operations may reveal hidden systems and protect certain cultural peculiarities (Highmore, 2002).

This paper aims to reveal the everyday strategies found in urban spaces through exploring spatial practices as an effort to read the systems within them. Departing from what was revealed by Hinkel (2011) that micro-spatial practices have the opportunity to emphasize the uniqueness of urban space. Tracing everyday spatial practices on a micro scale can bring up various mechanisms for appropriating space by people in urban spaces (de Certeau, 1984; Highmore, 2002). In addition, it can show the character of a place through the practices that occur in it. This supports the emergence of urban spatial characteristics Highmore (2002). Through the tracing of micro spatial practice, this paper maps every relationship to the spatial practices that exist in the everyday lives of the Kampung Bustaman community.

The micro-spatial analysis is used to reveal how residents inhabit the space (Hinkel, 2011; Paramita & Schneider, 2018), and how the human body frames experience, use, and behaviour (Simões Aelbrecht, 2019). This paper uses micro-spatial analysis because it explores in more detail how urban spaces are inhabited, not as containers. This method is a spatial analysis that emphasizes internal quality in viewing urban space (Hinkel, 2011). The study observed the movement, spatial strategy, and actors that

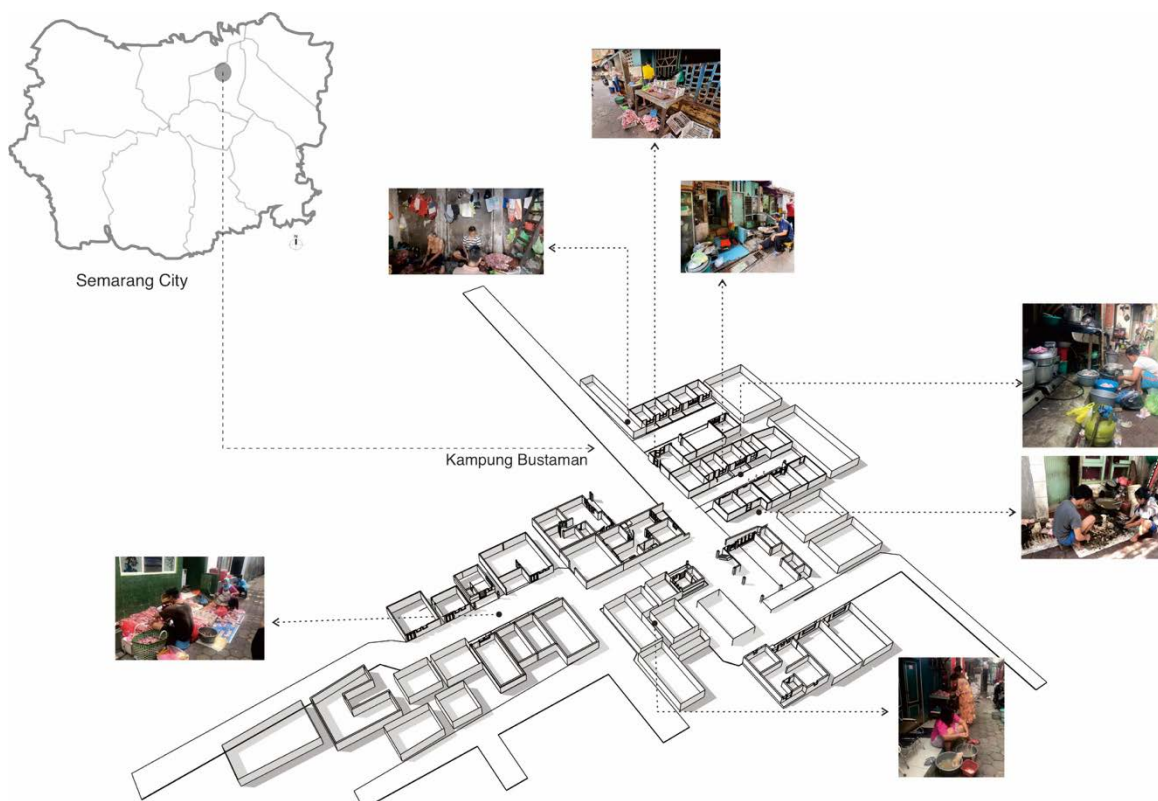


Figure 1. Kampung Bustaman di Semarang, Indonesia as a setting of collective food production

are significantly associated with the production of satay and curry. The operations that occur in the urban space of Kampung Bustaman as a large kitchen system were recorded through everyday spatial practice mapping as common techniques of representation in architectural research based on to the field conditions (Lucas, 2016). This paper focuses on tracing the everyday strategies that occur in the urban kitchen in Kampung Bustaman as a collective operation. The data collection about how the spatial strategy and spatial arrangement are more emphasized than the body-space relation.

Observations were obtained to collect data regarding the space's function and organisation in the *kampung* as a large urban kitchen. The observation, interviews, and visual note-taking were carried out to obtain data on the *kampung's* activity flows and their strategies in relation to the materials (Suryantini et al., 2019). Observations were carried out at different times of the day (morning, afternoon, and evening) to obtain comprehensive information regarding time, actors, space, and activities, in order to trace the sequences, transitions, and connectivity of activities in the satay and curry production processes.

The analysis was conducted by categorising the operations based on a chronological sequence of food production and examining the strategies of allocating the neighbourhood space and time. This study uses diagrams as the media to reveal the connectivity among space, time, operations, and materials. The boundaries negotiation was revealed through the occurrence of inside–outside traversing, rather than just the physical boundaries' characteristics. The emergence of strategies for domesticity in the urban context becomes the focus of the study.

2. Revealing urban kitchen systems

The following investigation of the urban kitchen focuses on the production of curry and satay in Kampung Bustaman Semarang to understand the system of everyday operation. Sharing space in the urban *kampung* context is common in several places in Indonesia particularly due to the neighborhood density. However, Kampung Bustaman has an interesting peculiarity, namely the existence of a spatial strategy in which the actors not only share space but also form a collective system of everyday operations based on the production of satay and curry. In Kampung Bustaman, the operation of cooking satay and curry carried out by the community is not tied to the domestic kitchen, but it extends to the urban environment. This practice reflects the specific local cultural concept regarding the use and understanding of domestic and urban space as integrated and interconnected.

The investigation includes identifying the components involved, strategies used, and how the everyday operation is run as a system. The following analysis will show the system of the kitchen in the urban context by first investigating the connectivity that occurs in the *kampung*, second by examining the time and space strategies, and third by looking into the negotiation of the inside–outside space.

2.1. The components as the basis of connectivity in the urban kitchen

The production of satay and curry is a socio-cultural characteristic in this environment, where the actors in this case is understood as someone who holds the key to the production of satay and curry in Kampung Bustaman. The way of seeing the components and processes of food preparation in the operation of cooking satay and curry is important to get an idea of how the cooking process occurs in a complex and spacious urban space. It shows how the connectivity between various materials and actors is integrated into one system. This connectivity is used to read how collective relationships occur and explore how the positions of these various actors collaborate in a large system set.

Materials and actors play an important role in the operation of satay and curry production. They carry out spatial operations that involve the whole communities and spaces in the neighbourhood. The kitchen area is not limited to domestic space but emerges as an environmental system. The main materials for the production of satay and curry are goat meat (G) and curry spice (S), both of which are supplied from outside. Goat meat is obtained from outside the *kampung* and outside the city through a sorting process to select the qualified materials. The spices consist of several crops and coconuts obtained from the market near the *kampung*. De Certeau et al. (1998) identified this process of collecting supplies as the “shopping” stage.

The actors responsible for the material sourcing stage in the satay and curry production as part of Kampung Bustaman society's everyday operations are *juragan kambing* (goat skipper) and *pembuat bumbu* (spices maker). Goat skipper refers to someone who provides raw materials (oversees the living goats and performs the slaughtering process), while the spices maker plays an important role in the production of curry spices. There are two goat skippers and two spices makers in this *kampung*, identified as GS1, GS2, SM1, and SM2. In overall operation they are connected to each other as can be seen in Figure 2. The relationship among two materials (goat and spices) and four actors (GS1, GS2, SM1, and SM2) forms a connection that links the operational flow of satay and curry production in Kampung Bustaman.

The flow of operations is divided into two forms of connectivity. The first operation starts in the goat pen and slaughterhouse owned by GS1, followed by the slaughtering process. The next process is sorting, which consists of four stages. The first step of sorting is to separate the large parts of the goat's body. The second step is carried out by several actors who clean the leg part and the goat's head hair. The third step of sorting is cutting the lamb into small pieces, and the fourth step is separating the internal parts of the body. The whole process must be done at the same time so that the distribution of raw products can be completed on schedule. A strategy must be adopted to organize the sorting process across several locations in the *kampung* and several actors.

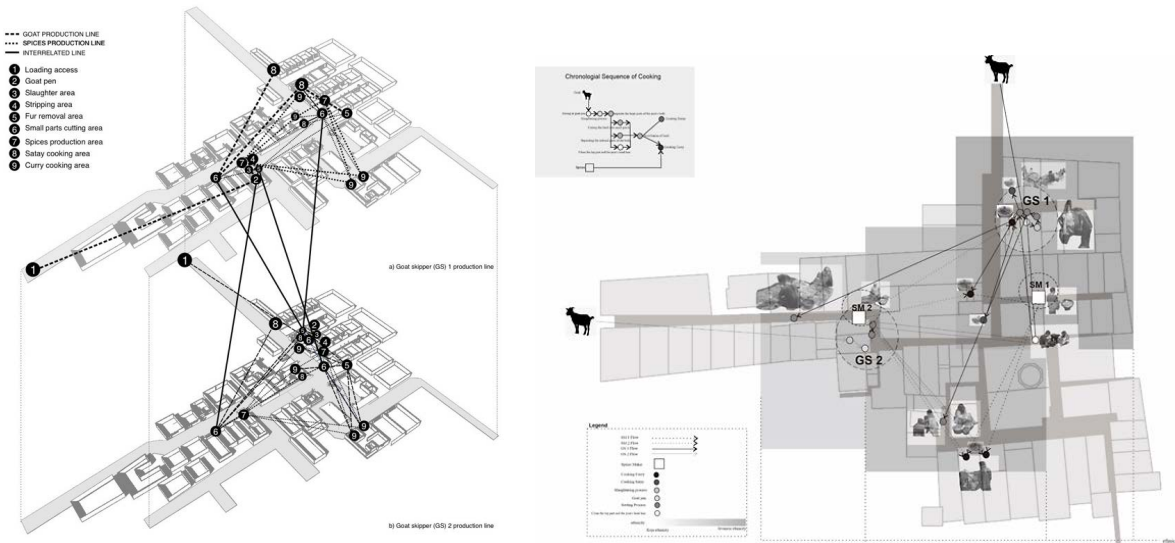


Figure 2. Connectivity on the satay and curry production line (left) and actor's operation (right)

Figure 2 shows the operation of fur removal from the goat's head and leg (number 5), which is done by some actors while others cut smaller parts of the goat in another area (number 6). After fur removal operations are finished, the material is collected in the sorting area (number 4) for the next process. There are three options for the next step: (1) selling the raw processed products, which are taken by traders; (2) cooking the products, which are then taken outside the kampung Bustaman; or (3) cooking the products, which are then taken within the Bustaman to become satay and curry. The third option of the process takes place at location 1 (number 7) and location 2 (number 7) using the spices taken from SM1 and SM2, as illustrated in Figure 2. The final satay and curry products that have been cooked are distributed around the Semarang area.

The second form of operation flow starts from the goat pen and the slaughterhouse owned by GS2. The process is almost the same as the first one, with the difference being only the actors who are involved in different places. It can be seen from Figure 2 that in this flow, fur removal is carried out by the same actor as in the flow from GS1 (number 5), and the material is then returned to the small sorting places (number 4) for further processing. There are three options for goat raw meat products, namely, (1) for traders for resale, (2) for curry Bustaman traders who do not cook in this neighbourhood, and (3) for processing into satay and curry. It can be seen from Figure 2 that the meat from the third option involves four curry locations (number 9), where the cooking process takes place by using spices from SM1 and SM2. After the satay and curry dishes are cooked, they are then taken away to be sold throughout Semarang City.

The diagram shows that the satay and curry production operations in Kampung Bustaman consist of several material flows represented as subsystems that are connect-

ed to form one large system. The flow of spices and goat meat are connected into one system. The crossing among the flow of the spices material shows different connectivity, as outlined in Figure 2. This operation involves various actors and separate places, but a proper strategy must be chosen in the process. The connectivity is not seen in terms of proximity and accessibility in the urban space but rather based on the network of relationships in carrying out everyday operations related to the process of cooking satay and curry. Layers of activities in a space at one time exist in this operation. The flows of material create forms of connectivity among the sequences of operations, temporality, and space in everyday operations in Kampung Bustaman.

2.2. The strategy of space and time usage in an urban kitchen

Cooking operations as a domestic practice in an urban context may present different spatial connectivity. The operation is related to several forms of connectivity systems influenced by materials, equipment, and actors. Materials are imported from outside, while cooking operations occur in domestic kitchens (de Certeau et al., 1998; Cieraad, 2002). The food is processed through various stages involving different tools before it can be served (de Certeau et al., 1998; Lawrence, 1981). A kitchen in an urban context can represent a uniquely complex and interconnected form of a domestic operating system.

The discussion of everyday operations strategies involves the convenience of distribution in its parts, its position, and its movement to facilitate cooking operations to take place (Betton, 2012; de Certeau et al., 1998; Wilk, 2012). Space efficiency as the basis of cooking operations in a domestic kitchen is likely to change in urban spaces, as the operations are more complex and involve many things. Programming in this context is understood as a

strategy in cooking operations, while ingredients, materials, time, and composition are also important for the process (de Certeau et al., 1998).

The idea of an urban kitchen cannot be separated from the flow of material, the actors involved, and how these aspects are connected in everyday operations. This suggests that when the kitchen system occurs in an urban space, a strategy is needed to connect one activity to another, through what de Certeau et al. (1998) called the chronological sequence. This study found that everything is intertwined in one system in a domestic kitchen, which has the possibility to involve several interconnected systems in urban space.

Due to limited space, the society in Kampung Bustaman has a unique way of operating in satay and curry production. The spatial usage strategy is transformative, involving the entire environment without being limited to private belonging and physical boundaries. The chronological sequence for satay and curry production consists of six activities, shopping, saving, preparing, sorting, cooking, and serving, carried out in sequence. Each of these activities has a strategy of movement and a space usage mechanism. The mechanism shows that different activities can be operated within one space, or similar activity can occur in different spaces. The aspect of time plays an important role in this strategy because space usage can easily change at different times following particular activities. The internal street of the *kampung* is usually used for preparation activities between 3:00–5:00 am. The activity on the space changed to become an area for sorting goat-related material between 5:00–07:00 am. From 7:00–10:00 am, some of the street space is used for cooking and serving preparation. Each operation determines the spaces that can be used based on the negotiations. However, this can easily change to expand and shrink according to operational needs.

The connectivity of the satay and curry production process becomes the basis for selecting and using spaces in the Kampung Bustaman neighbourhood. The activity

starts with the supply of materials to the *kampung*, and living goats are collected by passing two different routes: GS1 via Petudungan Street and GS2 via MT Haryono Street. Both routes are used based on the proximity to the pen as a place to keep the goats. The goats are usually unloaded between 12:00–5:00 pm through the two roads led by some Bustaman children to the goat pen. The goat pen owned by GS1 has a separate building, while GS2 has the goat pen integrated with the house. As discussed earlier, slaughtering is carried out on each pen's side during the preparation process between 2:00–3:00 am. The stables and slaughterhouses may be expanded under certain conditions, such as increased orders for goats. Sorting and cooking are carried out in the closest space with preparation to facilitate waste management. The cooking process is performed on the terrace and in near some buildings that may extend to the streets during certain occasions.

Figure 3 shows that the distribution of space use in Kampung Bustaman is related to the everyday production of satay and curry. Meanwhile, the process of cooking curry is indicated by number 9, while the production of satay is indicated by number 8 (Figure 2). The cooking space may expand during certain events, such as cultural celebrations or bulk catering orders. The satay and curry dishes are served on the terraces and streets in the *kampung* area or distributed using a mobile cart and stalls throughout the city. The activities in Kampung Bustaman employs an open-ended space strategy, allowing the space to become more flexible and less rigid. It can easily transform based on the needs, time, and events to facilitate the production of satay and curry.

The sequences of cooking that occur in the Kampung Bustaman are not limited to enclosed spaces as is usually evident in modern kitchen practice. Various actions are carried out in open neighbourhood spaces as a form of spatial practice strategy, not as a performance to show cooking operations to others. It can be seen from Figure 3, that sorting activities like cutting the lamb into small pieces and separating the internal parts of the body are carried

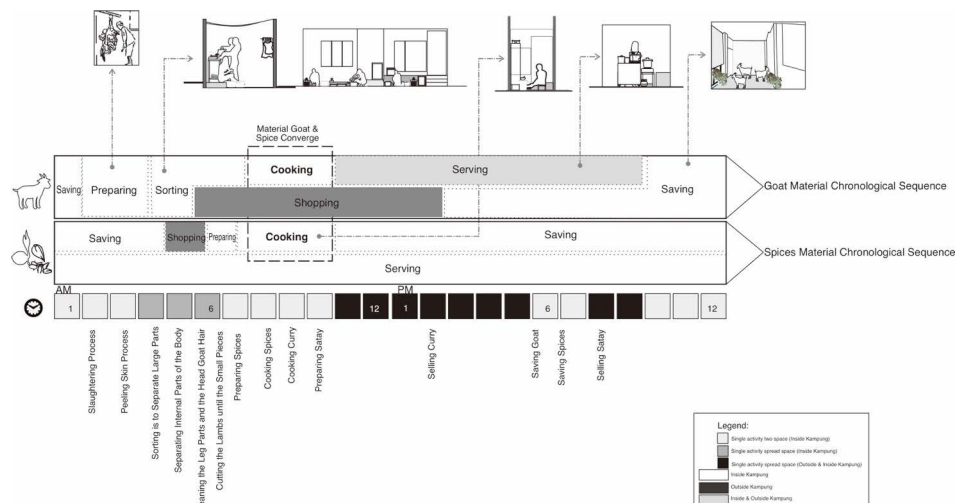


Figure 3. Urban kitchen system in Kampung Bustaman

out on the streets using mats. Meanwhile, the activity of fur removal from the goat's head and leg and is carried out on the terrace of the house and in a sitting position below, with the material (lamb) placed on a bucket and a mat. The most visible thing is the cooking process of spices or curry in the outside space by presenting various supporting objects for ease of cooking. This can be understood as a form of spatial strategy, where the entire village environment can be seen as a kitchen setting.

2.3. Negotiations of inside–outside space in the urban kitchen

The idea of an urban kitchen separates the understanding between inside–outside and interior–exterior because it allows an exchange of conditions, programs, and actions and the movement of objects across boundaries between inside and outside (Atmodiwirjo et al., 2015). The negotiation of inside and outside in an urban kitchen is related to boundaries, aspects of time and progress. This inside–out crossing is deeply embedded in everyday life, and it changes the way we consider domestic understanding in an urban context (Atmodiwirjo et al., 2015; Attiwill, 2011b).

In the discussion of common domestic kitchen operations, cooking and eating are carried out in the house, while the supply of materials is from outside (de Certeau et al., 1998; Cieraad, 2002). The opposite happens in urban kitchen, as found in this study, where some elements are brought from domestic houses to urban spaces, shifting the idea of domestic in urban space. The idea of the urban kitchen system is formed from everyday operations, which is closely related to how people act to determine the system.

The negotiation process of the inside–outside of Kampung Bustaman refers to the alternating relationship between space that is defined as inside and space that is defined as outside in the neighbourhood. Inside space is mostly used only as a place to rest, while outside space is used for domestic spatial practices, such as operations in household kitchens. The material sorting process is carried out in outdoor spaces and not always within the actor's area. Figure 4 shows the inside–outside negotiations in Kampung Bustaman. The kitchen is present on the terraces and part of the alleys when the cooking process occurs. Expansion from inside to outside is not limited to space ownership, as the community agrees to prioritise everyday operations regardless of space ownership.

Figure 4 shows the operations of the urban kitchen that involves the interior and the outside space beyond the house terrace. The spatial operation occurs back and forth between the inside and outside as shown in the diagram. Preparing and sorting are performed inside the house (inside), cooking on the terrace (outside), packaging inside the house, and serving on the street in front of the house (outside). This shows a gradual expansion from inside to outside in urban kitchen operations. Inside and outside are not only related as a single form of expansion, but the expansion occurs through multi-layers of inside–outside spaces.

The expansion of the domestic area to the outside shows the role of everyday operations in facilitating an inside–outside negotiation. It opposes the understanding of boundaries that are only limited to the physical. Cooking activities are mostly carried out on the terraces of inhabited houses. The limited domestic space is not the main reason, as they also need interaction among

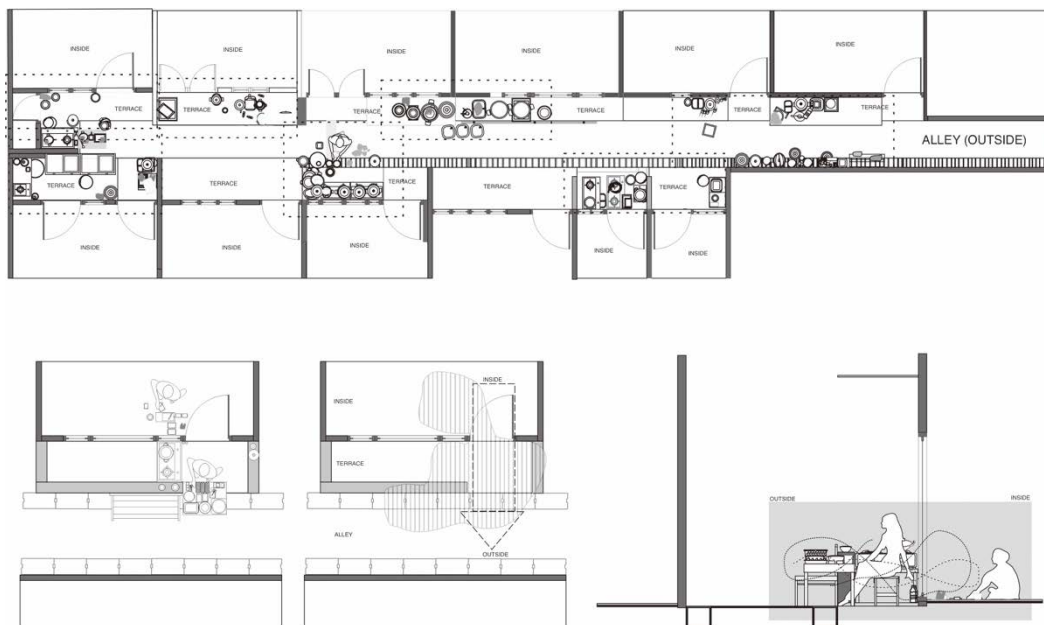


Figure 4. Inside–outside negotiations

residents because cooking is the community's main goal. An example can be seen from SM1 and SM2, who produce the seasonings on the house's terrace. During the process of making the spices, which took a long time, the spices maker spoke with his neighbours who were doing other activities or just passing by. This situation created an intimate atmosphere, creating the interior characteristics of this urban kitchen.

Inside–outside negotiations occur among communities so that domestic boundaries in this neighbourhood are time-dependent and temporary. For example, in the use of kitchen utensils and equipment in Kampung Bustaman, the ownership is indicated by labeling the utensils or equipment, however, they can be used interchangeably. For example, SM1's stove in the morning is used by his son to cook domestic food, but at 8:00 am, the stove will be used to make spices that are part of the production of Bustaman satay and curry. Equipment to support cooking operations is stored at the front of the house to make it easier to use them during the satay and curry production process. Equipment for cooking production is also washed outside, either on the terrace or on the street, using the water pipes in front of each house or even somewhere else where they can wash together.

The negotiation of using space emerged as a spatial strategy in everyday operations in the Kampung Bustaman by prioritising the principle of togetherness. The agreement to prioritise the process of production satay and curry produces various spatial settings that eventually change the meaning of inside–outside. Domestic activities that take place outside aim to facilitate the production of satay and curry which are carried out collectively. This gives rise to various forms of spatiality that are different from other urban *kampung* environments.

3. Domestic system in urban operation

The investigation of the food production practice in Kampung Bustaman suggests that several spatial aspects become the main characteristics of the urban kitchen. First, the study shows the multi-layer connectivity of everyday operations in defining various subsystems related to the process of cooking satay and curry. It is generated from several characteristics, including actors, goat material, and seasoning material. At some point, there is an intersection among these various subsystems. Second, the analysis of the time and space usage strategy indicates the characteristic of flexibility. Domestic and urban spaces are easily shifted depending on the various needs and events at different times. The third characteristic of the urban kitchen is the availability of inside–outside negotiations, including extending the interior to the street, arranging inside objects in outside space, and transferring inside activity to the outside.

The expansion of domestic space in the urban context shows that everyday operations lead to inside–outside negotiations. Furthermore, it contradicts the understanding of the duality between inside and outside. This is contrary

to the public-private concept expressed by Hausmann in the development of the city of Paris (Chapman 2012; McAuliffe, 2020). Hausmann prioritises the beauty of public space by separating the outside and inside settings, that the inside is a private matter while the outside is regulated by the government because it is a public (Chapman, 2012; McAuliffe, 2020). In this study, inside–outside negotiation occurs through the operation of cooking satay and curry as a collective system. Activities not only extend from the inside space to outside but also appear as domestic activities brought outside. Cooking becomes a domestic activity conducted collectively by the community through the expansion of domestic settings into the urban space.

The complexity of connectivity reveals that everyday operations prioritise the network of relationships in carrying out everyday operations. Meanwhile, the strategy of space usage suggests that the duality between interior–exterior, private–public, and ownership is no longer relevant within the system of urban kitchen. This paper argued that the understanding of complexity in an urban kitchen can bring up various strategies in everyday operations and intertwine into a large urban system.

4. Urban kitchen as an alternative form of urban system

The idea of an urban kitchen suggests that a domestic operating system can occur in an urban space in which the dualism between urban and domestic is blurred. Domesticity arises from the complexity of the community's everyday operations and strategies in the production of satay and curry in Kampung Bustaman, where a system is composed of several connected subsystems. This involves not only how connectivity is understood as a system related to proximity and accessibility but also how these operations can work with different connectivity layers.

This paper argues that the urban kitchen as a system presents the ways of operation of the actor through a series of food production processes. It clearly demonstrates how people, their activities, and their relationships become the main basis for the formation of the urban system. At the same time, materials play an important role in the running of everyday operations, besides the involvement of the actors. This paper extends the idea of de Certeau (1984) that strategy in ways of everyday operation requires proper time and space; concerning the urban kitchen, adding materials and actors is another aspect that needs to be proper in everyday operations. In urban kitchen, the existence of various actors and materials has a role in determining the strategy of using space, timing, and connectivity among operations in the series of food production activities.

This paper clearly shows that our understanding of urban space cannot be separated from how various systems form a large system in the urban space. The practice in Kampung Bustaman illustrates various spatial practices that can be seen through the operation of flow spices, the flow of goats, and the flow of time and space that bring together the materials into food dishes. This paper shifts

the understanding of the effectiveness of the main aspects of household kitchens that emphasise layout, mobility, and affordability (Bechthold & Reischl, 2012; Betton, 2012; de Certeau et al., 1998; Wilk, 2012). In the context of urban kitchen, effectiveness is achieved through a dynamic and flexible space. Space can be used in layers, alternately, and together with a sharing system because it is based on a mutual agreement.

Urban kitchen in Bustaman demonstrates the expansion of the kitchen as a domestic activity catering for individual households to the kitchen as collective activity of the whole neighbourhood catering to the entire city. In this way, the urban kitchen operates on an urban scale through the collective production of curry and satay that involve many actors and households. The various everyday operations in Kampung Bustaman showed how the understanding of domestic and urban can transform, not only as entities. They show the emergence of a domestic system on an urban scale. The urban kitchen idea provides a new understanding of urban space settings. Cooking is a collective activity in the Kampung Bustaman that appears in outside space to facilitate the process. This kampung neighbourhood is seen as a macro kitchen setting that involves various types of spaces in its environment. The whole space in kampung becomes the backstage (Goffman, 1959) where collective cooking operations are performed to prepare the food for distribution in the city.

This paper reveals the community's strategy in acquiring the outside of their homes for collective domestic activities. It can be seen from the various operations in the cooking of satay and curry that took place outside. The strategies revealed in this paper expand what was revealed by Highmore (2002) that community strategies are understood as activities carried out by groups and are social systems (Giddens & Sutton, 2011) that are properly regulated (de Certeau, 1984). This paper indicates the using space collectively and the arrangement of inside and outside space as a strategy for the community. The whole neighborhood becomes a kitchen during the operation cooking satay and curry. While the tactics in this paper highlight temporary changes in time and space functions, it shows what de Certeau (1984) that tactics are an activity that exists based on time and situation.

This paper demonstrates how the idea of urban domesticity could be manifested physically through the spatial system involving the dynamic of inside–outside space. It introduces the possibility of a form of urban system based on the temporal condition, in which the operations and space usage occur depending on time, spatial practice, and movement. It is also based on the shifting understanding of some aspects concerning the negotiation of space and time, atmosphere, and intimacy. The urban kitchen system produces the interior atmosphere of intimacy and togetherness through the occurrence of collective domestic activities that are performed beyond the physical boundaries of private domestic spaces and conducted as collective actions of the society.

Conclusions

This paper argues that the idea of an urban kitchen demonstrates the shifting of the dominant duality framework of domestic and urban, by tracing everyday operations that reveal the peculiarity of the everyday activity system. The findings on the urban kitchen in Kampung Bustaman as the main production center of satay and curry suggest three main aspects of the everyday operations strategy. First, subsystems and systems explain operations based on everyday operations. The proper connectivity between material, actor, space, and time shows the community's strategy in its everyday operations. This form of connectivity can change at any time, depending on the conditions that occurred. Second, everyday operations in urban space are based on negotiations transformation between inside and outside space and between the private and public domains depending on the time, spatial practices, and movements. The third aspect is the efficient use of space on an urban scale as a flexible and dynamic space to support everyday operations.

The three aspects of system, operation, and the usage of space above indicate that the understanding of the operations that occurred in urban spaces can reveal how urban spaces are inhabited. It shows how the practice of using space is carried out by society as a form of collective everyday urban strategy. In addition, by broadening the domestic understanding in an urban context, this paper offers a possible form of everyday urban spaces based on the domestic characteristics, uniqueness, and intimacy as inherent in the particular context of the society. The findings offer possible ways of urban design practice which is grounded on the system of connectivity that is emerged from the collective actions of the society. Moreover, these findings can provide a new perspective in the organization of urban space in the negotiation of inside–outside and domestic–urban that does not restrict the traditional view of spatial ownership and territory. In this way, the understanding of urban spatial context is no longer seen as a single entity but becomes dynamic with the presence of multiple layers and collective agreement.

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