ASEAN Conference on Environment-Behaviour Studies (AcE-Bs), Savoy Homann Bidakara Hotel, 15-17 June 2011, Bandung, Indonesia

Edited by Mohamed Yusoff Abbas, Anniz Fazli Ibrahim Bajunid, Nik Farhanah Nik Azheri
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ASEAN Conference on Environment-Behaviour Studies
Savoy Homann Bidakara Hotel, Bandung, Indonesia, 15-17 June 2011

Theme
“Communities – Policies, Culture & Behaviour”

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Foreword

The ASEAN Conference on Environment-Behaviour Studies (AcE-Bs) 2011, with the “Communities – Policies, Culture & Behaviour” theme, managed to attract almost 90 full papers from an overall total of 160 numbers of approved abstracts from 13 countries worldwide, namely, Algeria, Australia, Brazil, Indonesia, Iran, Japan, Malaysia, North Cyprus / Turkey, Qatar, Taiwan, Thailand, United Kingdom and the United States of America.

Surely such tremendous response signals the justification and timeliness in organizing the second annual serial conference since its maiden in 2010, with the objective of publicising more behavioural studies involving ASEAN communities living in both ASEAN and non-ASEAN countries. The top three countries which contributed the most number of abstracts were Malaysia (55%), followed by Indonesia (26%) and Thailand (9%).

It has been anticipated that due to financial constraints from those afar, the locals of the venue of the conference shall be amongst the major contributors. Hence, the justification that AcE-Bs be held ‘offshore’ from Malaysian soil, its birthplace. While the major contributions from Malaysia have been consistent, the sudden surge of contributors from Indonesia for AcE-Bs 2011 was thus actually expected.

The full papers received were simply grouped generally under 29 categories, although quite a number could have been easily placed under more than one category. The top three categories of equal popularity involved the Health Environment, Retail & Services Environment, and Way of Life. This was followed by Innovative Planning, and then Learning Environment and Open Space.

On a final note, the Centre for Environment-Behaviour Studies (cE-Bs), FAPS, UiTM, Malaysia, the main organizer of the conference together with the School of Architecture, Planning and Policy Development, ITB, Indonesia the co-host, congratulate all contributors on making AcE-Bs 2011 a tremendous success! Hopefully the conference will inspire and encourage more researchers to participate in our forthcoming conferences to be held annually.

Thanks and hope for an enlightening conference!

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Spatial Arrangement in Chinese and Javanese Shop House in Yogyakarta City

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Abstract

Given the very high percentile of self-provided housing and the increasing number of local family shop house, this paper unfolds how ordinary people manage and appropriate their space. By purposively choosing shop houses built by Chinese & Javanese in Yogyakarta, Indonesia, the analysis focuses on the distinct spatial arrangement which resulted in the inward/outward orientation, multi-unit/single-unit, linear/cluster organization, and closeness/openness regardless of the shape of the building. Interviewing, photographing and sketching were conducted in order to get the house plan and number of rooms, and the behavior tracing method to complete the information about activity and function of the room.

Keywords: Shop house; Chinese; Javanese; spatial arrangement

1. Introduction

Current condition about housing in Indonesia is generally limited to the structural or physical condition with neglect of the information of the users that made it difficult to evaluate and conclude. Even though there are quite many efforts, yet there seems to be lack of appropriate and further analysis that produce

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meaningful result. Self-provided housing has continued to increase and cover roughly 90% of the housing supply in Indonesia. The limitation of Indonesian government to resolve the ever increasing housing demand has caused citizens to provide resources on their own and build houses through private sectors. The number of private economic sectors has also risen in order to support the household economic. This has led to the increased number of family shop house significantly after the political and economic crisis in 1998.

During national crisis in 1998, Yogyakarta was regarded as the safest place and shelter for refugees in the country. With such a variety of people mingling in the city until the current days, Yogyakarta has become the melting pot for Indonesians and adjusted to the current need to develop its region and give way to the demands of immigrants who moved and lived in the town to make a living. This has changed the physical conditions and structure of the urban space as well as private space in the level of space use.

As shop house is an immediate respond to the current situation, this paper aims at revealing the knowledge of how people appropriate spaces in shop houses in order to provide deeper knowledge. By comparing the spatial arrangement in shop houses built by Chinese and Javanese, the distinct characteristics would be revealed through the differences and similarities in the way they appropriate spaces. Focusing on the behavioral aspect in composing and using interior spaces, this study believes that there is quite distinct characteristic between Chinese and Javanese for the purpose of living and working in one building.

2. Development of Shop House and Cultural Influence

While Chinese shop house has become popular in Java by the Chinese immigrants who flooded in during the colonialism period in 16th century, the Javanese traditional architecture does not have a type of shop house (Pratiwo, 2010: 243). In other words, when Chinese introduced shop house building at the first place that were brought from their original land and has become worldwide type, apparently Javanese has developed its own type of shop house roughly in the last three decades as a respond to the local condition. Chinese influence alone was not at its first place. It can be traced back from many earlier centuries in different periods at different places that all together had shaped the physical structure and development of architecture and housing in Java which was central to agriculture.

Most of the Chinese immigrants in Yogyakarta come from Southern part of Mainland China who made their living originally in farming. It is said that the earliest model of shop house was a transformation of a farming house where the open space in the middle area was transformed into an air well, which maintained the orientation of the surrounding rooms inwardly to the air well/service area. The other common characteristic of shop house was the whole front area on the first floor was utilized as a shop and the dwelling space at the back and second/other floor area. These houses were built side by side with a shared construction as row houses in a narrow but a long piece of land for each unit.

On the other hand, the native Javanese also developed the type of shop house. The common characteristics were a single detached house with a separated structure from the main house for the shop or included in the house plan but slightly ahead of the rest of the rooms. Even though some of the houses were built close to each other, but they maintained a separate structure to allow some space between the houses to let the light and fresh air flowing into the rooms, in other words, the Javanese houses characterized in their outward orientation. Looking at these characteristics of the houses built by Javanese, one may see it as most likely as a transformation from a traditional farming house, too.

Rapoport (2005: 26-27) mentioned that “…as cultural rules change, so do the activities appropriate to various settings and also the cues. This is important both for understanding cultural differences and for situations of cultural change (especially rapid culture change) common today, and therefore, for design—for example, in housing.” In regards to the current situation, where many Javanese has built their houses...
with either altered function or designated function as shop, there must have been a lot of changes in the spatial arrangement. In order to clarify and emphasize the result through the cultural different, this paper is comparing the way Chinese and Javanese appropriate their spaces through their activities. Despite of the variety of location and physical appearances, the controlling variable is the function within the behavioral aspects resulting in the actual activities.

3. Characteristics of Chinese and Javanese Shop House in Yogyakarta

Fig. 1. Observation areas in Yogyakarta, Indonesia

Observation area was Ketandan in the center of Yogyakarta city near Beringharjo Market, the oldest and traditional market, where the Chinese built shop houses. Second observation area was Seturan in the new urban center northern part of the city where Javanese built shop houses. Formerly this ethnical segregation was the implication of political regulation during the colonialism period. Later, during the reign of new order era in 1965 until 1998 the segregation was more to cultural repression, rather than physical, by prohibiting Chinese language and other cultural activities engaged in public. This caused the assimilation of Chinese to mainstream Javanese and resulted in the void of Chinese culture in many ways, spoken language, physical expression, and activities. However, inwardly there seems to be different.

3.1. Characteristics of Chinese Shop House

Chinese shop house in Java, particularly in Yogyakarta had some uniqueness through its historical background. There are at least two types, row houses with arcades and without arcades. In Ketandan are those without arcades but sharing roof structure and were constructed as couple or triple houses without
any space between houses. In the course of time, according to the author’s observation there had been rapid changes in the interior, yet slower change in the exterior. Particularly at the northern part of Beringharjo Market where once was known to be material and construction supplier is now revived again with more various goods in smaller scale.

Family living in the houses were generally the first generation who moved into the region who built and lived on their own resources and originally coming from different Southern parts of China. They have established their business in this city and married their children who left the house to another place for a better environment and business prospectus.

Fig. 2. Facade of Chinese Shop House

### 3.2. Characteristics of Javanese Shop House

Shop houses that were built by Javanese in the new urban areas were of great variety from very simple to more complex structure. Some houses were in eclectic style by freely copying any design fit to their demand or image without deeper knowledge on the outside. Generally, they were built as detached houses, not in a row, couple was some spaces between houses especially that the new areas were less crowded resulted from the various built year.

Family living in the houses were mostly new family moving into the region as newly-wed or immigrant from other areas who was interested in establishing business in this city. Some of the houses were built and rented to another family.

Fig. 3. Javanese Shop Houses

### 4. Methodology

Six houses were chosen in each location considering the accessible data, limited time and to emphasize on the qualitative instead of quantitative analysis. Purposive sampling method was used at certain criteria as follow; (1) built either by Chinese or Javanese, (2) built on their own wisdom without any professional
involvement, and (3) regardless the age of building or building shape which is accessible for survey. Interviewing, photographing, sketching to obtain the house plan (fixed feature) and behavior tracing method to obtain activity/room function (semi-fixed feature). All the house plans were redrawn using AutoCAD emphasizing the door position for each floor in any scale of measurement. Each house plan was transferred into diagram of circles representing each functional room and lines representing connectivity that are drawn from the outside point (threshold) to each room. There are two kinds of line; continuous line indicates direct accessibility and dash line indicates close/indirect connectivity. This diagram also showed the circulation flow through the functional room and its level of depth.

![Diagram of circles and lines representing connectivity](image)

1. Assigning number on the house plan
2. Defining the space boundary based on its function
3. Transferred into diagram of circles & lines representing direct connectivity
4. Assigning the indirect connectivity
5. Listing the functional room based on the defined space

**Fig. 4. Method of Analysis**

The first step, assigning number on the house plan, is important to count the number of room. Defining the space boundary in the next step is to identify every area in the house plane and include its function. The third step is the most difficult part which will determine all the connection among the defined spaces which enables it to redefine the space boundary (back to step 2) before establishing a fixed diagram. The fourth step is assigning the indirect connectivity indicated as dash line on the diagram to determine the degree of connectivity among the spaces. The last step is to list the functional rooms based on the defined space in step 2 according to the activity observed as the actual use.

### 5. Results and Discussions

Result of analysis (see Table 1) showed that the number of room with single connectivity is higher in Chinese (32%) than in Javanese (26%), and the number of room with direct connectivity is far higher in Chinese (77%) than in Javanese (58%). Additionally, the number of room with indirect connectivity is much higher in Javanese (42%) than in Chinese (23%). This alone means that the connection of each room has the tendency to be linear for Chinese rather than Javanese that has the tendency to cluster. Single and direct connectivity means that one room has one sole access to an adjacent room, whereas indirect connectivity is that one can access a room from any surrounding room within behavioral distance without much barrier/boundary problem.

Although the number of room with two, three, and four connectivity is higher in Chinese (22%, 15%, 8% respectively) than in Javanese (13%, 8%, 3% respectively), rooms with five connectivity is found higher in Javanese (5%) than in Chinese (1%). More connectivity means more increase in accessibility.
This means that Chinese shop house is more likely to be inwardly oriented, but this is not something apart from function.

Table 1. Type and number of room with its connectivity

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</table>

Sub-total | 19 | 10 | 6 | 2 | 4 | 1 | 1 | 43 | 18 | 7 | 1 | 1 | 1 | 1 | 1 | 2 | 31 | 74 |

Sub-total | 26% | 13% | 8% | 3% | 5% | 1.5% | 1.5% | 58% | 24% | 9% | 1.5% | 1.5% | 1.5% | 3% | 0% | 42% | 100% |

In all Chinese shop houses, there were room with three connections that served various functions as such extended shop, corridor, storage, living room, kitchen, and well/washing area, and 4 out of 6 Javanese shop houses had three connections that served various activities such as corridor, kitchen/dining room, garage/shop, guest room, and stairs. However, we found that 5 out of 6 Chinese shop houses had a room with four connections that served as corridor, but only 2 out of 6 Javanese shop house had room with four connections that served as corridor.

In Chinese shop house we found one room with five connections that served as corridor whereas in Javanese a room with five connections served as living room and dining room. In Javanese we found one room with six connections that served as living room which connected to all other rooms and to the outside. We also found one room with nine connections that served as corridor. Thus, to be more open had characterized the rooms in Javanese (higher level of openness) compared to Chinese.

![Fig. 5. Direct and Indirect Connectivity](image-url)
Furthermore, room with higher connectivity in Javanese shop house served as living/dining room which had social meaning, whereas corridor had no particular function other than circulation/transition space. This meant that even though Chinese shop house seemed to have more rooms with high connectivity and thus inward orientation, it was more likely to be transitional rather than functional room. Therefore, Javanese shop house had outward orientation but also higher functional room inside the houses.

To sum up, having single and direct connectivity considered Chinese shop house as a composition of multiple unit rather than a compound or one single unit. This is emphasized by the corridor as transitional room with high connectivity. On the other hand, Javanese shop house was more likely to be compound or single unit which was less repetitive room unit.

![Characteristics of Chinese Shop House](image1)

![Characteristics of Javanese Shop House](image2)

Fig. 6. (a) Characteristics of Chinese Shop House; (b) Characteristics of Javanese Shop House
6. Conclusion

Despite of the building shape and the house plan or floor area, there were some similarities between two cases in some extent that was its functional room. However, there was quite distinct characteristic which was in overall Javanese shop house was more open, having higher degree of connectivity, and tending to be clustered whereas Chinese shop house tended to be linear and closed in its spatial arrangement. Javanese shop house had outward orientation indicated by the higher number of rooms with access to the outside whereas Chinese shop house tended to be inwardly orientated.

Chinese shop house buildings in the area observed that were built during the colonialism period by the Dutch and resembling those in their origin, later they underwent some transformation because of the influences or forces received from locals (Javanese) and others such as colonial government (Aryanti Dewi, et al., 2005: 18). This paper concluded that even though there had been some fundamental changes on the space arrangement in order to adjust with the block division system developed by the colonial authorities (Ellisa, 1999: 320), inwardly there has been continuity (Pratiwo, 2010: 236) to some extent. This what made it different from local architecture (Javanese).

References


