Umi Dayati, Keppi Sukesi, Soegiyanto and Yayuk Yuliati  
**Gender Construction on the Character Developing Bringing Up Method of Under Age Children in Sosio-culture of Mataraman Pamangku**  

Rooman Babapoor  
**Evaluating the Role of Migration in the Rural Poverty and Its Ways of Reduction Case Study: Village Badmajin (Village of Qazvin City)**  

A.Sepahi, Ramezan Ali Naderi Mayvan, Mohammad Amin Hounakzahi, Ezzatolah Mafi  
**Spatial Analysis of the Development Status in Rural Regions of Saravan**  

Hormoz Asadi Koohbad  
**Evaluating the Evolution and Development (of Wisdom) in the Imamia Jurisprudence and Law and Its Application Among Imamia Shia Jurists**......  

Purnama Salura, Hartanto Budiyuwono  
**Fundamental Differences between Chinese Ethnic House Type with Arabs in Tegal City by the Pattern of Relationship Zone Approach**  

Farahman Farrokhi, Rajab Esfandiari, Edward Schaefer  
**A Many-Facet Rasch Measurement of Differential Rater Severity/Leniency in Self-Assessment, Peer-Assessment, and Teacher Assessment**  

Mohammadreza Dehghani, Mohammadreza Abdoli, Mohammad Lashkary  
**Corporate Governance and its Effect on the Corporate Performance Corporate Governance and its Effect on the Corporate Performance**  

Fakhradin Misagh  
**On Entropy and Informative Distance in a Time Interval**  

Kamran Nazari, Farzad Eavani, MostafaEmami  
**Relationship between Job Satisfaction and Employee Satisfaction Survey of Accounting Information Systems (Case Study of Government ........**  

Mohammad Doostar, Esmaeil Malek Akhlagh, Maryam Kazemi iman abadi  
**Analysis of the Impact of Brand Assets on the Buying Decisions of Final Consumers Brand of Iran's Milk Industry Company (Pegah)**  

Agusthina Risambessy, Bambang Swasto, Armanu Thoyib, Endang Siti Astuti  
**The Influence of Transformational Leadership Style, Motivation, Burnout towards Job Satisfaction and Employee Performance**  

Adeleh Alinia; Mohammad Vahedian; Payam Alizadeh; Reza Altarzadeh; Habibollah Esmaeili; Mohammad Hadi Asgari  
**A Study on Effect of Trance theoretical Model-based Educational Intervention on Degree of Exercising by Female Adolescent, Tonekabon ........**  

Firooz Sadighi, Reza Mobashshemia
A Study of Lexical Evidentials in Modern Persian: Does Genre Matter?

Sri Wahjuningsih and Achadiah Rachmawati
The Effect of ß-tocopherol on Plasma Membrane Integrity of Goat Spermatozoa

Mashali A., Mohammadzadeh S., Cheraghi J., Fattahnia F., Sukhtehzari A.
The Impact of Vetaroline and Veteglan on Conception Rate in Cross Breed Milking Cows

Mehdi Delkosh, Mohammad Delkosh, Mohsen Jamali
Greenâ€™s Function and its Applications

Ali Khiabarani, Mohammad jodeiri abbasii
Sustainable House in Iranâ€™s Desert

Davood Mohammad Moghadam
Deceived American Young Ladies in Europe, a Basic Pattern of Henry Jamesâ€™s International Theme

Ida Rosada, Keppi Sukses, Sugianto, Yayuk Yuliati
Socio Economical Profile of åœææDangææ Parish Female at Informal Sector

Hossein Khanifar, Seyed Reza Saeedi, Mojtaba Nik Aeen, Reihaneh Zarei
The Study of Organizational Culture Factors Preventing Official Corruption

Shahram Garianinia, Narges Delakfroz, Simin Dorkht Zendehdel Sabet
The Role of Family in Creating Brand Equity from the Perspective of Bank Customers (Case study of Saderat bank branches in Guilan Province)

Hossein Khazaee
Use of Discourse Markers by Iranian Teachers of English as a Foreign Language

Shahin Shafei; Hamid Vahdati; Alireza Ghaffari Kashani
Transform based Method for Multi-spectral and Monochrome Images Fusion Using High Pass Modulation Coefficients Technique

Fazin Rezaei, Babak Nejad Toolami
Comparison of Ant Colony Algorithm with Methods of Multiple Discriminant Analysis and LOGIT in Financial Distress Prediction

Hadi Givi, Mohammad Ali Noroozi, Behroz Vahidi, Jawad Shokrollahi Moghani and Mohammad Ali Vakilian Zand
A Novel Approach for Optimization of Z-Matrix Building Process Using Ant Colony Algorithm

Abolfazl Yahyaabadi
Global Warming, Reasons, Consequences and Protocols

Abolghasem Gholameze Tehrani, Amir Abbas Gholameze tehranli, Somaye garjami
Prioritization of Marketing Mix with Use of AHP Technique with Marketing Strategic Planning Approach (Case Study: Four Major Companies........
Fundamental Differences between Chinese Ethnic House Type with Arabs in Tegal City by the Pattern of Relationship Zone Approach

Purnama Salura\textsuperscript{1}, Hartanto Budiyuwono\textsuperscript{2*}

\textsuperscript{1} Senior Lecturer in the Department of Architecture of Parahyangan Catholic University, Bandung, Indonesia
\textsuperscript{2} Doctoral Candidate in Architecture of Parahyangan Catholic University, Bandung, Indonesia

ABSTRACT

This research uncovered the different type of Chinese and Arab ethnic house. The methods of this research were: Putting forward approach zone theoretically; Applying the approach in both cases studies; Read the application of approach zone in each case study. The result analysis showed that there is fundamental difference which is found in pattern of relationship zone on both case studies. The benefits obtain from this research were: Firstly, discovering the basic types of each case study; Secondly, uncover archetypal differences in the case studies; Thirdly, putting forward the relationship pattern as a new way to analyze the relationship of activities that can be applied on a case study that has a similar character.

Keywords: architectural housing, pattern of relationship zone, house type

INTRODUCTION

Cities in Indonesia today are mostly developed by the colonial government on the existing housing. In 1818, the Dutch colonial government issued regering sreglement 1818 governing the organization of ethnic Chinese and Eastern Oriental under the control of the ethnic heads [1]. Then proceed with the racialist policies Wijkenstelsel en Passenstelsel that governed the zone or region settlements based on specific ethnic groups in 1835-1915 [2]. The regulation created the formation of ethnic Chinese or Chinatown and Arab or Arab village at a number of major cities in the Netherlands East Indies [3]. The rapid growth of habitation, resulted in the Dutch colonial government to slowly build other supporting facilities that eventually form a city. At the end of 1917, Tegal be afdeling regenschap of karasidenan Pekalongan with a population of consisting of 585,000 natives; 6,900 chinese; 1,700 europeans and 1,000 arabs [4]. At that time, large cities area of the northern coast of Java, faced with a increasing population, high demand for housing and other needs. Hence the government and the Dutch architect began to play an important role in the design of cities in the Netherlands East Indies [5].

A brief overview above shows that housing is an important part of the growth in Tegal city. Surprisingly, in this city, research on the type of architecture houses is rarely studied. This research investigated the basic types of both Chinese and Arab ethnic housing in Tegal. The purpose of this research is to analyze and reveal the type of both Chinese and Arab ethnic housing that is the first housing in Tegal using an approach of relationships pattern zone. This approach is rarely used in architectural research. Whereas for the analysis of the houses, this approach is believed to be very critical as it rely on the activity patterns of residents and house users. While the benefits were: Firstly, knew the basic type of both Chinese and Arab ethnic house; Secondly, formulated both types of houses in the chart pattern of the connection zone; Thirdly, revealed fundamental difference between the two Houses types using the approach pattern relationship zone

MATERIALS AND METHODS

Case Study

Tegal is located at 108° 57’ 6” up to 109° 21’ 30” BT and 6° 50’ 41” to 7° 15’ 30” LS. History recorded in 1530, Ki Gede Sebayu, a family of Pajang kingdom arrived at Tetegual [6]. Along with the inauguration of Ki Gede Sebayu into Juru Demang at the Tetegual village by Prince Benowo king of Pajang. In 1746, the colonial community who originally lived in the harbour was move to permanent houses in the city, while the Chinese live in the southern city [7]. Chinese camp in the colonial times were around the temple Tek Hay Kiong Tegal. Originally in 1756, this temple houses of the ashes of Kwee Lak Kwa. First restoration was conducted in 1837 by kapiten Tan Koen Hway together with his associates and Tegal community at that time [8]. Houses of chinese ethnic that is observed is located in Chinatown, while Arabs ethnic houses that is studied is located at Arab village not far from chinatown area. Based on Van Den Berg’s research in 1886, in Tegal, Arab ethnic is one of the largest colonies in Indonesia [9]. In 1901, in Jakarta, Jam’iatul Al-Khair is the oldest organization of Islamic education in Indonesia [10]. Starting mid-1920, the colonial government allow public limited company

*Corresponding Author: Hartanto Budiyuwono, Doctoral Candidate in Architecture of Parahyangan Catholic University, Bandung, Indonesia Email: budi222002@yahoo.com.
and commercial (Naamloze Venootschappen) to be involved in housing development [11]. In these era, more development was conducted especially the houses of arab ethnic around the school Al Irsyad. The Design of the cities in Dutch Colonial times in 1930s has involved the architects, as well as district-level local authorities.

**The Pattern of Relationship Zone as an Analytical Tool**

Basically the blueprint of a house is a reflection of the composition of layout of rooms inside a building. This layout is an adjustment of owner daily activities. House user activity depends on cultural rules consciously or unconsciously to be obey. Similarly, socio-economic aspects of residents in a specified period influence the activities of residents [12]. In the process of arranging and organizing, initially, users as single family will form groups from of all the existing activities of daily life. When grouping these daily activities can meet effectiveness, efficiency, and not breaking the rules and culture, then grouping will be used generally as the basis for arrangement of rooms in the house. In turn creates the grouping of raw space or a particular pattern of relationships zone. These particular patterns of relationships become the real zone as a room divider. So that in turn creates a physical type of a particular house for a specific group. Thus the approach zone pattern of relationships is not a physical type of home, but the raw grouping type in the home. The pattern of relationship building zone can be divided into three main groups of public, private, service. Private rooms are individual rooms or private areas which cannot be entered without the person feels his honor is threatened, violated, or not disturbing his solitude. Public space is a space that is free for anyone. While service room is room that used to serve the needs of public and private.

<table>
<thead>
<tr>
<th>No</th>
<th>PUBLIC Zone</th>
<th>Description of the activity participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Semi-public</td>
<td>Outsider to meet with homeowners</td>
</tr>
<tr>
<td>2</td>
<td>Public-private transition</td>
<td>An outsider sitting together talking with owner</td>
</tr>
<tr>
<td>4</td>
<td>Semi-private</td>
<td>Members of the house</td>
</tr>
<tr>
<td>5</td>
<td>PRIVATE</td>
<td>Sleeping rooms for families and family members.</td>
</tr>
<tr>
<td>6</td>
<td>Public-service transition</td>
<td>Outsiders working together with house servant</td>
</tr>
<tr>
<td>7</td>
<td>Private-service transition</td>
<td>Activities carried out by residents with servant</td>
</tr>
<tr>
<td>8</td>
<td>Semi service</td>
<td>Housekeeper and during work seen by the owner</td>
</tr>
<tr>
<td>9</td>
<td>SERVICE</td>
<td>Are private by housekeeper</td>
</tr>
<tr>
<td>10</td>
<td>Public-service-private Activities</td>
<td>Activities carried out by outsiders, servant, and transition</td>
</tr>
</tbody>
</table>

**Table 01: A Schematic Diagram of Zone** [13]

Thus the pattern of relationships based on offender activity zone within a clustered residential property on three activities: see table 01 [13]:

- The first group, which is done by outsiders who come to visit to meet with homeowners, the nature of its activities are grouped in the public zone, then developed into a semi-public
- Second group, which carried out by families who own a home, the nature of its activities in private zone and developed into a semi private.
- The third group, which is done by outsiders who work to help the family, the nature of its activities are grouped within the service zone and develop into semi Services

**RESULTS AND DISCUSSION**

Relationship zone of Chinese Ethnic house in architecture. The areas of the chinese are the chinese camp which is set up by the colonial government. These houses have always been there, they goes through the changing of land rights since the enactment of land-rent during Raffles era, and then turned into a land-rent in the Dutch colonial era. Since the Tegal becomes the municipality of central Java province, whereby the city council of every municipality was established in 1930s, so numerous chinese houses which are fulfilled in the pictures, had approved by the colonial government. According to the owner, this house is the oldest and has been occupied by a few descendants. The land area is 326 sqm and building area is 265 sqm.

**Figure 02: Floor plan, Section and Appearance of ethnic chinese home** [14]
The description of the pattern relationships in the house of Chinese zone is drawn directly on a floor plan based on the relationship of space occurs, which is based on circulation.

In Figure 03 it can be seen that the ethnic Chinese house were build up against the walls of the left and right boundaries. The activity patterns and relationship of space, suggest that existence of three buildings which contain three groups of activities, namely:

- The building front, accommodate public activities of the outsiders. There is a living room as a public-private zone (3). The building is connected by connecting building as a semi-private zone (4) heading towards the middle of the building, through the park.
- The building embodies the middle zone activity as a private family bedroom (5), as well as a family activity to watch television and eat as a semi-private zone (4). Because the eating and watching area is an open area that heads towards the garden, thus it will be quite cold in the evening. So that made bulkhead to the rear seating area which is a semi-private zone pattern.
- The back building will accommodate the servant’s bedroom as service zone (9). The activities that are carried out by owner and helper, a private-service zone (7) such as kitchen, toilet. Semi-service zone (8) which is always carried out by servants namely; ironing, washing and drying clothes.

Tracing the relationship of these activities, then applying the pattern using the framework of the relationship zone. The results are shown in Table 04, the following diagram:
There are seven overlapping activities based on the pattern of relationships. This activity consists of:

- **1:** activity carried out by passerby (outsider) who pass-by in front of the house.
- **3:** activity carried out by outsiders when they meet with owner. This is living room with two seating positions, which are used by school friends of the owner’s child to study together and the other one is used for the activities of other guests.
- **4:** activity that is carried out by family members, or guests who are regarded as close relatives. The activities are sitting and chatting while admiring courtyard.
- **5:** sleeping activity by family, also family members
- **7:** activity that is carried out together by house owner with the servants.
- **8:** activity performed by the servants to aid homeowners like washing, drying, ironing.
- **9:** sleeping activity by servant

In the application of the pattern of relationships, there is not an interaction between public activities (1 and 2) and service activities (8 and 9). This is to avoid unwanted interaction between guests and servant. Interaction is also absent in the activities of public-private-service (10) caused by the ethnic Chinese residents who do not have motor vehicle which is a rare commodity in Colonial times. Because the ethnic Chinese house is only used for residence purpose.

**Relationship of the Architecture of Ethnic Arab Houses**

The area of Arab houses is a residential area around Al Irsyad school which was established on 29th August 1917 [15], the oldest area of Islamic education in Tegal. Since the city council established in every municipality in 1930s, there is an increasing number of ethnic Arab houses in the region. According to the owner, this house is one of the oldest houses and has been occupied by several generations. With land area of 402 sqm and building area of 231 sqm.

![Figure 05: Floor Plan, Section and appearance of the ethnic Arab houses][14]

The Arab ethnic house consist of two buildings, where the main building is not attached on both sides of the walls to the neighboring buildings. There are three accesses by outsiders who have to go through the door of the semi-public (number 2) into the house, namely: towards the living room; leading to the guest room; heading into the room that has been cleaned up by servant.

The activity patterns and the relationship of Arab ethnic house, indicates the existence of two buildings which contain two groups of activities. Namely:

- The front building accommodates all activities from public-private, private to semi private activities. Even semi private activities have developed into a semi-private especially for guest’s lodging, as well as sitting and dining area with the guests.
- The back building accommodates the servant’s bedroom as a service zone (number 9). The activity that is carried out by both owner and servant as a private zone (number 7) such as kitchen, restrooms, and backyard (number 7). There is also semi-service zone (number 8), which always carried out by servants for ironing, washing and drying clothes.
After the relationships of these activities are being traced, applying the pattern using the framework of relationship zone. The results are shown in Table 07 and the following diagram:

<table>
<thead>
<tr>
<th>No</th>
<th>Zone</th>
<th>A room that is used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PUBLIC</td>
<td>Porch</td>
</tr>
<tr>
<td>2</td>
<td>Semi-public</td>
<td>Front yard, guest room, terrace, guest bedroom, terrace</td>
</tr>
<tr>
<td>3</td>
<td>Public-private transition</td>
<td>Celebrating room.</td>
</tr>
<tr>
<td>4</td>
<td>Semi-private</td>
<td>Family room is sometimes used for the study of religion</td>
</tr>
<tr>
<td>4a</td>
<td>Special semi-private 1</td>
<td>Sleeping room for guests.</td>
</tr>
<tr>
<td>4b</td>
<td>Special semi-private 2</td>
<td>Terrace as a place to sit and eat</td>
</tr>
<tr>
<td>5</td>
<td>PRIVATE</td>
<td>Sleeping room for families and family members</td>
</tr>
<tr>
<td>6</td>
<td>Public-service transition</td>
<td>Terrace space to sit, shower room, toilet room, kitchen.</td>
</tr>
<tr>
<td>7</td>
<td>Semi-service</td>
<td>Laundry room and ironing room</td>
</tr>
<tr>
<td>8</td>
<td>SERVICE</td>
<td>Servant bedroom</td>
</tr>
<tr>
<td>9</td>
<td>10 Public-private-service transition</td>
<td>Open space inside the House which served as a place of dry, also used as a carpenter.</td>
</tr>
</tbody>
</table>

Base on the zone pattern of relationship, it is found nine overlapping activities. These activities consist of:
- 1: activity carried out by outsiders passing by the pavements before the house.
- 2: activity carried out by outsiders after entering the house through the door of the yard.
- 3: activity carried out by outsiders when they met with the owner, the living room.
- 4a: activity carried out by guests who are considered close relatives to stay in temporary.
- 4b: activity that is performed by the guests with the owner, sitting around talking and dinning.
- 5: activity to rest, by members of the family.
- 7: activities to be carry out by the homeowners along with servant at the kitchen, toilet, and sitting area at the back porch.
- 8: resting activity for servant.
- 9: activity carried out by outsiders, servants, and owner. Currently, the space is used for car park. Initially it is used as a place for livestock such as horses or buffalo.
On the application of the pattern of relationship is an interaction zone between the public (the number 1, and 2) the service (number 8, and 9), and public-private transition (number 3). As well as an interaction between the public (the number 1, and 2) with a special semi-private (number 4a) variant growth of spaces on the activity of special semi-private zone (number 4a, and 4b) which are not related to private (number 5).

CONCLUSION

Results of a study which was concluded base on an analysis of the pattern of relationship zone revealed a fundamental difference between these zones on the house and the house of ethnic Chinese and ethnic Arabs in Tegal as follows:

- Firstly, in the Chinese house there are seven basic activities overlap. The pattern of public-private relationships zone become part of the semi-private, meaning that guests are allowed to enter into people’s home who are considered relatives only. The rear building could not deal directly with public. This means that servant did not have the freedom to leave the house without being noticed by the building owner. While privacy is emphasized only in the owner bedroom area
- Secondly, in the Arab house, there are nine basic activities overlap. The pattern of public-private relationships zone, even a special semi-private zone pattern becomes part of a pattern of semi-public zone. Meaning that guests are allowed to enter into the house to stay even they are not considered as close relatives. This indicated the absence of access to the living room. Rear building can be associated with public activities, often fused with the pattern of public-service zone-private. This means that servant has the freedom to leave the house without being noticed by owner. Although it provided extra bedroom for guests, there is no special room for guests to do public activity to the servant. Homeowners put privacy in the bedroom in addition to individual families as well as to the living room and dining area are semi-private zone pattern.

REFERENCES

