

Comparison of Spatial Planning of Sundanese Traditional Houses

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Abstract. This study aims to describe the differences and similarities in the spatial patterns of Sundanese traditional houses in Cikondang and Kampung Naga which are presented in the form of a comparison table. In making Sundanese traditional house in Cikondang and Kampung Naga, based on Sundanese customs rules, one of which is applied to the spatial pattern. The method used in this study is descriptive analysis by obtaining data through surveys and observations. This research combines the spatial layout in Sundanese traditional house in Cikondang with that in Kampung Naga. Includes spatial patterns and the number of spaces, space functions, users, dimensions, and number of openings. The results of the study found differences in terms of spatial patterns, space dimensions, users and the number of openings. Through this research, it can be concluded that there are differences in the spatial pattern of the cikondang traditional house has 2 pawon, namely the outer and inner pawon and has bale-bale located outside the core house building whose user is a woman. In terms of the number of openings, the Cikondang traditional house has 1 door while the Kampung Naga traditional house has 2 doors, namely the kitchen door and the main door.

Keywords comparasion, spatial pattern, Sundanese traditional house, Cikondang, Kampung Naga.

1. Introduction

The Sundanese tribe is one of the largest tribes in Indonesia which apart from its distinctive language accent, the Sundanese also have a variety of cultural heritage. Sundanese people hold strongly the view that humans are part of nature so they must establish harmony with nature highly respect and protect the natural environment, because it is believed that nature is the protector of their lives so that many rituals and rules have been raised to preserve nature [1]. From this view, various local wisdoms were manifested into the concept of space in residential houses called Sundanese Traditional Houses. The Sundanese traditional house is a work in the form of architecture made by manifesting elements of belief and meaning. Sundanese traditional houses are designed based on human nature as living beings who have a tendency to gather and associate. The house is divided into three parts of the vertical structure, namely the roof, walls and floor. In Sundanese culture, the three parts are symbolizers of the house as a macrocosm [2]. In the division of space, Sundanese people divide space with their respective functions and are divided by gender and family order [2].

In building a Sundanese traditional house is based on Sundanese traditions or customs represented in the exterior design of the house and the concept of home interior space. For Sundanese

people, the house has invisible energy that moves vertically and horizontally both outside and inside the house. According to Sumardjo (2015), Sundanese traditional houses have a cosmological concept that is divided into the upper world, middle world and underworld therefore, Sundanese people believe that the house is the center of their universe [3]. Sundanese traditional houses are required for philosophical meanings represented in the shape of the house, the building materials of the house, as well as the spatial patterns in the house [3].

The interior design layout in this study includes space dimensions, space orientation, space openings, and the number and function of space that is tailored to the needs of space users. Spatial planning is something that needs to be considered in the construction of residential houses because poor spatial planning will affect the activity patterns of home residents to be less effective and efficient and cause the space in the house to become irregular. In arranging the interior space, it is necessary to understand about the needs of residents and related issues can be helpful in designing space for human use. According to Jon Lang (1987), the ability of the layout of the environment to afford privacy through territorial control is important because it allows the fulfillment of some basic human needs [4]. According to Nuryanto (2015), the division of the concept of space in the house is made based on the human body that is placed horizontally, which is divided into a front room / *tepas* that functions to receive guests, a bedroom / *enggon* located next to the living room, a kitchen / *pawon* that uses land, does not use a ceiling, and usually there is a *hawu*. In addition, there is a *goah* that functions as a place to store rice or rice which is located near the kitchen or behind the house. *Goah* is a place considered sacred to the Sundanese people [5]. According to Kemalawati (2021), spatial planning aims to facilitate all activities carried out by the Sundanese community at home. However, spatial patterns can be customized according to user activity patterns so as to allow spatial differences in terms of division and placement of space, the number of spaces, the dimensions of space as well as differences in the direction and number of openings between Sundanese Traditional Houses in one area and another.

In West Java, especially in tatar Sundanese there are seven Sundanese traditional villages which of course consist of houses where the people live [6]. Of the seven Sundanese traditional villages that exist, two of them are Cikondang Village and Naga Village. Sundanese Traditional Houses in Cikondang and in Kampung Naga are two Sundanese traditional houses in different areas that currently still preserve the rules and customs that apply, especially in erecting residential buildings both in terms of the shape of exterior buildings, as well as in terms of interior design concepts, one of which is in the interior layout. The two sundanese traditional houses have different characteristics, beliefs, and activity patterns that affect the spatial concept of their homes because they adapt to their views of life and activity patterns. Therefore, although the concept of a residential house used is the concept of a Sundanese traditional residence, there can be a possibility of differences, especially in the layout in the house.

This research was made because Sundanese Tatars have many indigenous villages scattered in various regions. This allows for differences in the concept of views caused by rules, customs, and patterns of community activity, one of which is in the traditional house where the community lives. In addition, in previous studies no one has discussed the comparison of spatial planning between Sundanese traditional houses in Cikondang and Sundanese traditional houses in Naga Village. The purpose of this study is to describe the differences and similarities in the spatial patterns of Sundanese traditional houses in Cikondang and Kampung Naga traditional houses which will be presented in the form of a comparison table so that this research is useful for adding knowledge to the field of interior design of Sundanese traditional houses.

2. Method

This research aims to describe the comparison between two of Sundanese traditional houses, namely Cikondang traditional houses and Kampung Naga traditional houses which used a descriptive method. According to Gall & Borg (2007), the descriptive method is a research method which used to describe a phenomenon and its characteristics. This research is more concerned with what rather than how or why something has happened. Therefore, observation and survey tools are often used to gather data [7]. In this study, the descriptive method can describe what are the differences and similarities in the interior layout of Sundanese traditional houses in Cikondang and Kampung Naga which include the division and placement of space, the number of spaces, the dimensions of space, the direction of openings and the number of openings.

In this study, data collection was obtained from the results of field observations. In observation, researchers act as active observers by observing the conditions and environment of the Cikondang house and conducting in-depth interviews with the caretaker of the traditional house, namely Mr. Anom Juhana on January 29, 2023. In-depth interview are mostly long duration, face to face interviews conducted to achieve desire goals and also it's known as one on one methode of extracting more detailed information or deep understanding of subject or concept [8].

3. Results and Discussion

A. Cikondang Traditional Houses

Sunda Cikondang Traditional House is located in the village of Lamajang at Pangalengan District, in Bandung Regency, 38 kilometers south of Bandung City, it sits by the edge of Gunung Tilu base, bordering with the wood, which is part of a preserved forest. The ancestral house of Ki Sunda is the only heritage of Uyat Murtaki a.k.a Ma Empuh, the first key holder from the 16-17 century in Cikondang [9]. According to Anom Juhana (2023), The Cikondang traditional house originally functioned as the residence of a caretaker, but with the development of the times until now, the Cikondang traditional house has been used as a cultural heritage, tourist attractions, cultural and religious education, and a place to carry out traditional rituals. The Cikondang traditional house has been established for 360 years or approximately four centuries [10]. According to the caretaker of the Cikondang traditional house, Mr. Anom Juhana (2023), in 1942 there was a fire that resulted in the entire building burning until finally leaving only one residential building which is currently made as a cultural heritage. The remaining house was renovated by not adding or subtracting the concept of the building both in terms of shape, material, and size because the Cikondang people uphold the ancestral principle of "*upama pondok teu meunang disambung, upama panjang teu merunag dipotong*" which when translated into english becomes "if it is short, it should not be spliced, if it is long, it should not be cut". The renovation process also has a rule, namely the wood material used must be soaked first for one year before use. In Cikondang village, the traditional house faces towards the north because the south is a grave from the ancestors of the founder of the Cikondang traditional village so that the direction of the house should not be faced with the tomb area. In addition to traditional houses, there are also areas that have been preserved from the beginning of the construction of the Cikondang traditional village, namely the prohibition forest to the east, and the tombs of ancestors and caretakers of the Cikondang traditional house in the south. In addition, around the house there is a *leuit* (rice barn) in the north and saung lisung which is located in the west close to the rice field area as shown in figure 1.

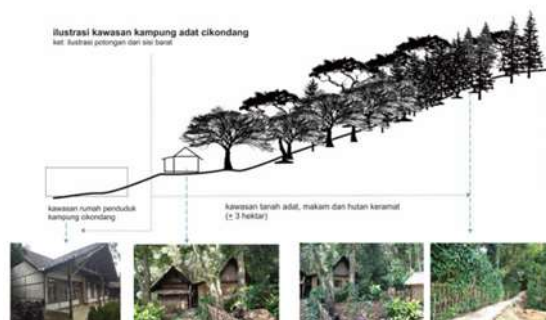


Figure. 1. Cikondang traditional village area
Source : N Sriwardani (2019)

According to the Caretaker of the Cikondang traditional house, Anom Juhana (2023), the Cikondang traditional house has dimensions of 12 meters in building length and 8 meters in building width. However, after taking measurements of the building, the measurement results show that the building has dimensions of 10 meters in length and 6 meters in width. Then at the time of observation of the measurement of the dimensions of the roof found that 12 x 8 meters is a measure of the length and width of the roof or the temperature of the house. The house is a sanctified thing so that women who are not in a holy state (menstruation) are prohibited from entering. In addition, people with religions other than Islam are prohibited from entering the house.



Figure 2. The shape of Cikondang traditional houses
Source : MS Muzaki (2023)

The shape of the Cikondang Traditional House building is a stilt house with the characteristic of having a kolong. The roof of the house is in the form of a jolopong suhunan roof, which is the roof of a house that is elongated on both sides like a gable roof model which is also known as suhunan panjang or gagajahan [5]. The shape of the door of the Cikondang traditional house is known as the shape of the palayu open. According to Idris, et al (2013), palayu open means “facing the long” it's indicated where the front door of the house is facing one side of the plane roof [11] as shown in figure 2.

According to Anom Juhana (2023), The Cikondang traditional house contains many meanings derived from its beliefs, namely Islamic beliefs. In the Cikondang traditional house, there is only 1 door that represents that believe only in Allah SWT. Meanwhile, in a private space, only use a curtain cover. There are five windows taken from 5 pillars of Islam and 5 prayer times. On the window there are also 9 lists / baffles representing the spread of Islam in Indonesia spread by Wali Songo.




Inside the Cikondang traditional house, it is divided into 5 areas inside the core house, namely tepas, inner pawon, middle area imah, bedroom and goah as in the plan in figure 3.







Figure 3. Spatial patterns of Cikondang traditional houses
Source : MS Muzaki (2023)

Each of these spaces has a function and is divided by gender. Cikondang traditional houses have the characteristics of spatial patterns, the number of spaces, the division of space, the laying & function of space, and the number of openings arranged in table 1 below.

Table 1. Spatial patterns of Cikondang traditional houses
Source : MS Muzaki (2023)

Code	Name and Space Function	Location & Space Users	Space Dimensions (P x L)	Documentation
A	<i>Tepas.</i> Serves to receive guests.	Is in front of the entrance. Neutral area, can be used by both men and women.	280 x 285 cm	 Source : MS Muzaki (2023)
B	<i>Pawon</i> dalam. The kitchen area used to cook water and rice uses hawu as a fireplace. Parako is also made from clay material as a barrier between hawu and the floor.	It is near the <i>tepas</i> and the middle / middle room of the imah. Used by women.	453 x 285 cm	 Source : MS Muzaki (2023)
C	<i>Tengah Imah / Living Room.</i> It serves as a family gathering area and at night is also used as a sleeping area.	Is in front of the inner <i>pawon</i> . Neutral area, can be used by both men and women.	733 x 321 cm	 Source : MS Muzaki (2023)

D	<p><i>Goah</i> Serves as a storage room for rice and sajen (offerings). It is a sacred area because it has the meaning of offering and honoring the Goddess <i>Sri Padi</i> who has given prosperity to life.</p>	<p>It is beside the inner <i>pawon</i>. Used for women who have a bloodline with a caretaker like a younger sister. Especially for arranging and giving <i>sajen</i>.</p>	<p>314 x 267 cm (size more or less, taken from the results of the remaining measurements of the building & living room because the room cannot be entered)</p>	 <p>Source : MS Muzaki (2023)</p>
E	<p>Bedroom/caretaker's room. It is a caretaker's room as a place of worship and stores heirloom objects.</p>	<p>Is next to the living room. It should only be used by caretakers. No one should enter the room including the caretaker's wife and children.</p>	<p>314 x 267 cm (size more or less, taken from the results of the remaining measurements of the building & living room because the room cannot be entered)</p>	 <p>Source : MS Muzaki (2023)</p>
F	<p><i>Pawon Luar</i> Serves as a food cooking area for everyday life. It is also used for cooking for women / wives who are menstruating.</p>	<p>Is outside the core house and in front of the <i>bale-bale</i>. Be used by women.</p>	<p>290 x 150 cm</p>	 <p>Source : MS Muzaki (2023)</p>
G	<p><i>Bale-bale</i> Used as a temporary space for women or one of the family members to menstruate (in an unholy state). In addition, it is also used as a space for the wife of the kuncen to carry out the birth procession and as long as it is still in a puerperal state.</p>	<p>It is outside the core house and behind the outer <i>pawon</i>. Be used by women.</p>	<p>431 x 240 cm</p>	 <p>Source : MS Muzaki (2023)</p>

B. Kampung Naga Traditional Houses

Kampung Naga is a village inhabited by the indigenous Sundanese people. Naga Village is located in Neglasari Village, Salawu District, Tasikmalaya Regency and is at an altitude of 690 meters above sea level. Kampung Naga has a traditional area of 4 ha which is divided into 3 areas, namely leuweung keramat (ancestral tombs) in the west, community villages in the middle, and leweung ban in the east [12]. Kampung Naga is one of the traditional villages in Tatar Sunda that still upholds the customs of its ancestors. These rules are the rules that must be obeyed by the community in order to achieve a

balance of life between humans and nature and with god, one of whose forms is the traditional house of Kampung Naga [12].



Figure 4. The shape of the Kampung Naga traditional house
Source : MM Sudarwani (2016)

According to Cahyan (2016), Kampung Naga has 113 buildings in which there are 110 residential houses, sacred buildings / *Bumi Ageung*, mosques, and deliberation areas / *Bale Patemo* [13]. The orientation of the direction of the Kampung Naga traditional house building faces north-south. While special buildings such as *Bumi Ageung*, mosque, and *Bale Patemo* face east-west [14]. The shape of the Kampung Naga traditional house is a stilt house with a long *julang ngapak* or *suhunan* type roof. On the front and back of the house, it uses sorondoy like a flying julang wing and flapping its wings [15] as shown in figure 4.

In building a residential house in Kampung Naga, there are rules to determine the size of the house, which is determined from the birthday of the couple of residents of the house. In addition, anatomical measurements of the body of its inhabitants are also carried out. The results of the occupants' body measurements are used to determine the height of the house, doors, and windows [14]. The average size of residential buildings in Kampung Naga is 6x8 meters. However, there are also houses with the smallest size, namely 6x6 meters and the largest size up to 12x12 meters as shown in figure 5. The difference in house size causes a difference in the number of rooms in the house without eliminating the core rooms such as tepas, pawon, and bedrooms.



Figure 5. Dimentions differences of Kampung Naga traditional houses
Source : MM Sudarwani (2016)

At the beginning, the traditional house of Kampung Naga did not have many windows and only had 1 entrance. However, since 1956, the house has several windows and 2 entrances. The position of the door in the Kampung Naga traditional house must face north or south and one other door must be on the same side. The door is an access door to the kitchen. According to the view of the Naga

community, the shape and parts of the house are arranged according to the category of gender as well as its role in the family [15]. The men occupy the front area of the house while the women in charge of governing the family control the other rooms in the kitchen. Kampung Naga traditional house also has the characteristics of spatial pattern, number of spaces, division of space, placement & function of space, and number of openings arranged in table 2 below.

Tabel 2. Spatial patterns of Kampung Naga traditional houses

Code	Name and Room Function	Location and Space Users.	Space Dimensions (P x L)
A	<i>Tepas.</i> Serves to receive guests. It is believed to function as an absorbent of bad influences that enter the house [15].	Is in front of the entrance. Is a men's area.	Adjusted to the size of the dimensions of the house.
B	<i>Tengah Imah.</i> It serves as a gathering space for family members and as a place for children to learn. In addition, it is used for sleeping areas at night [15].	Located in the middle of the house (between rooms / <i>pangkeng</i>). Used as a neutral area.	Adjusted to the size of the dimensions of the house.
C	<i>Pangkeng</i> / Bedroom. Serves as a bedroom for a husband and wife. At home with a large size has 2 spaces of <i>pangkeng</i> [15].	It is on the left side of a small house. And it is on the right and left sides of the big house. Neutral area, can be used by both men and women.	Adjusted to the size of the dimensions of the house.
D	Kitchen. Serves as a place to cook and prepare dishes [15].	It is located at the front of the house, adjacent to the <i>tepas</i> and has an entrance from the outside of the house. Used by women.	Adjusted to the size of the dimensions of the house.
E	<i>Goah.</i> It is a place to store rice or grain [15].	The laying of the <i>goah</i> is determined from the results of the calculation of the wife's birthday / <i>weton</i> . The calculation results will show that the location of the <i>goah</i> is on the east or west side. Used by women.	Adjusted to the size of the dimensions of the house.

F	<i>Kolong Imah.</i> Serves as a storage place for agricultural tools, firewood, or chicken or duck cages. <i>Kolong imah</i> also serves to reduce humid air entering the house [15].	It is at the bottom of the house / underside of the house.	Adjusted to the size of the dimensions of the house. It has a height of approximately 60 cm.

Source : MS Muzaki (2023)

C. Comparison of the layout of the Cikondang traditional house and the Kampung Naga traditional house.

Based on the description in tables 1 & 2, you can see the differences and similarities in spatial layout between the Cikondang traditional house and the Kampung Naga traditional house as in tables 3 & 4 below.

Table 3. Differences of spatial patterns in Cikondang and Kampung Naga traditional houses
Source : MS Muzaki (2023)

Comparative Table of Differences in Spatial Planning			
No.	Spatial Aspects	Cikondang Traditional House	Kampung Naga Traditional House
1	Space Division	It is divided into 7 rooms. It has 2 kitchen spaces.	It is divided into 6 rooms and has 2 bedrooms.
2	Space Name	The kitchen is called <i>pawon</i> .	Rooms are referred to by the term <i>pangkeng</i> .
3	Space functions	<i>Inner pawon</i> serves to cook rice and water. While the outer <i>pawon</i> is used to cook daily food. Apart from being a place to rest, the bedroom is used as a place of worship and stores heirloom objects.	The kitchen serves as a place to cook and serve food. <i>Kolong imah</i> is used to store agricultural tools and as a cage for livestock such as chickens or ducks.
4	Space Laying	The outer <i>bale-bale</i> and <i>pawon</i> are located outside the core house. <i>Goah</i> separated from the inner <i>pawon</i> .	<i>Goah</i> is located inside the kitchen area.
5	Space Users	The bedroom is used exclusively for caretakers (men).	Bedroom used for married couples (male & female).
6	Space dimensions	The dimensions of space should not be changed because they strongly adhere to the ancestral principle that is " <i>upama pondok teu meunang disambung, panjang teu meunang dipotong</i> ".	The dimensions of the space are not fixed because the size of each resident's house is different. The size of the house is determined from the results of the calculation of the birthday/ <i>weton</i> of a married couple.

Table 4. Similarities of spatial patterns in Cikondang and Kampung Naga traditional houses
Source : MS Muzaki (2023)

Comparative Table of Similarities in Spatial Planning		
No.	Spatial Aspects of Cikondang and Kampung Naga Traditional Houses	Similarities of Spatial Patterns
1	Space Division	It has a core space, namely <i>tepas</i> , kitchen, and bedroom.
2	Space Name	Some rooms have the same name as <i>tepas</i> , <i>tengah imah</i> , and <i>goah</i> .
3	Space functions	<i>Goah</i> is a sacred space because it is a tribute to the goddess of rice.
4	Space Laying	The <i>tepas</i> and kitchen are at the front of the house.
5	Space Users	The women's area consists of a kitchen space and <i>goah</i> .

4. Conclusion

Cikondang traditional houses and Kampung Naga traditional houses are Sundanese cultural artifacts in the form of architectural works that basically still follow the philosophical and cosmological values of Sundanese traditional houses. However, the difference in the location of Sundanese traditional houses allows for differences and similarities in house spatial patterns because they are adjusted to the patterns of activities and customs that apply to an area. In this study, we can see the similarities and differences between the Cikondang traditional house and Kampung Naga. In these two traditional houses, there are differences in the entire spatial layout, namely in the division of space, name, location function, user, dimensions, and number of openings. The similarities between the Cikondang traditional house and the Kampung Naga traditional house lie in several aspects of spatial planning, namely in the division of space, the name of the space. Functions, laying and user of space.

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