Genius loci in Aceh Utara contemporary architecture

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Abstract. Aceh traditional house has become a legacy of its predecessors, but that traditional house will lose its function and existence throughout the journey and technological development, and the depletion of understanding and pride in the potential of Indonesian architecture caused by a lack of information about architectural potential. This study aims to assess the meaning contained in traditional and contemporary houses of Aceh through the theory of genius locus approach so that it can be used as a reference in the design of homes for Acehnese people who are full of culture and remain in their own. This research obtains by using descriptive qualitative methods that relate the life of the people of Aceh Utara by taking several samples of contemporary homes used as a place that is a culture comes to appear. The results of this study are the discovery of abstract and concrete spaces that become places and destinations of life based on the beliefs and life views of the Acehnese wherever they are.

1. Introduction
Since the collapse of modern architecture which was marked by the demolition of the Pruitt Igoe building in St. Louis in 1972 which was a symbol of modern architecture because it was considered not to answer the needs of its occupants in full, then new architectural movements emerged which would become alternative architectures as a substitute for modern architecture [1]. Alternative architecture that appears is expected to be able to restore the design process that prioritizes humans and the environment, which becomes the identity of a place called the genius loci. But the development of modern architecture cannot be completely because modern architecture is also strongly influenced by technological developments and the socio-economic life of its people.

Recently, increased attention has devoted to studying modern developments in architectural heritage. In most parts of the world, traditional social patterns erode and give way to new initiatives. At the same time, national and global trends in leveling cultural differences have resisted by the selective emphasis on the uniqueness of local ethnicity [2]. Traditional houses have become a legacy of the predecessors of a particular ethnicity, but their functions and existence will lose along with travel and technological development. Today, traditional homes have replaced with contemporary houses with all the utilities that are better and adequate for its users. However, many changes in contemporary architecture adopts from traditional architectural forms of ethnicity as self-appreciation and pride.

The diminishing understanding and pride in architecture potential in Indonesia are more due to the lack of information about the diversity of architecture itself, in addition to the rapid information development of world architecture through the ease of accessing reputable new architectural websites.
The architecture will soon be imitated and consumed. Whereas as we know, Indonesia consists of 34 provinces that have a variety of traditional architectures that differ between one district and another, even between one tribe and another. Each of these architectures is the identity of each community group and carries messages, concepts, and characteristics that give a picture of the community groups where the architecture was born. Therefore, the architecture and layout of buildings and interiors and facades of buildings is a tangible manifestation of the manifestations of civilization and culture of each ethnic group [4].

Aceh is one of the ethnic groups in Indonesia which locates on the westernmost tip of the island of Sumatra. The Acehnese who join the majority of the population are Muslims who influence the social culture, traditions, and architecture of their communities such as houses and other buildings. The existence of traditional Aceh houses, which is now very worrying, because the house of existence is almost extinct. There are about no people who can build traditional houses anymore; they prefer to build modern houses or what is now called contemporary homes. However, these changes do not necessarily change completely. Changes in the form and function of space still have the characteristics and space built-in accordance with the needs that have become the custom of the Acehnese themselves [5].

1.1. Genius Loci
Genius loci is a Roman concept, which according to ancient Roman beliefs, every "individual" has his genius, the spirit of his guardian. This spirit gives life to every person and place, accompanies them from birth to death, and determines their character or essence [6].

Peter divides the elements that can build the quality of architecture into nine groups; (1). The body of architecture; (2). Material compatibility; (3). The sound of a space; (4). The temperature; (5). Surrounding objects; (6). Between composure and seduction; (7). The tension between interior and exterior; (8). Level of intimacy; (9). The Light on things [7].

The spirit of a place is also called genius loci, which is one thing whose existence is still attached to humans. Everyone must feel an experience that connects him to a place he has visited. Experiences such as nature, climate, environmental conditions, and even culture that occur in a particular place. Moreover the place where everyone lives from birth to death. Genius Loci is very influential in the formation of spaces - spaces that will give comfort for every human being so that they can orient and find themselves to the environment and become unity with that environment. The meaning and experience of a place are very influential in the life of the creature in it. The elements of the genius loci according to Schulz, are as follows; (1). Space; (2). Character; (3). Spirit; (4). Orientation and identification [6].

1.2. Aceh Traditional House Architecture
In an Acehnese settlement, several houses are usually scattered randomly in a village (gampong). Building aligns regularly along the north-south and southwest lines. The buildings are often in a fenced yard planted with fruit trees. Some pages contain more than one house; more houses belong to married girls. The women on each page descends from the same female ancestor. The yard also contains wells, sewers, and piles of fertilizer covered with cloth. There are also barns, cows, and buffaloes stored under the house [8].
Figure 1 shows the house consists of the main central part, the front room, and the back room, all of which stand on poles more than 2 m high. The center is raised about half a meter than the front and back room. Large open spaces under the house uses for storing items such as agricultural equipment, rice pounders, oil press machines, rice barrels, separate rooms for newly harvested rice, and shelves for firewood. Space also uses as a home for various kinds of animals, such as dogs, goats, sheep, and chickens. Trash is thrown there too, and it is often burning so that the smoke kills insects, preventing them from reproducing under thatched roofs. Apart from that, a place to rest where children sometimes have big swings. Women who do household chores there, and guests who come to visit and condolence also offers there.

The front room separate from the inner room. The front room is space for men. This space also uses as a place to receive guests. The floor is covered with woven mats when there is an event or only accepts guests. There is also a bamboo bench that functions as a bed when it's too hot in the room at night. Men who are not related to the family ever enter the main hallway that leads to the back room inside this hallway, which restrict to household members.

Rooms on the west side of the building use for married couples, for the first meeting of the bride and groom, and for bathing the deceased. White cloth serves as a ceiling, the walls decorate with decorations, and the floor covers with mats. Furniture includes low benches with mattresses and mosquito nets, soft mattresses with a large enough size, and crates for storing personal clothing and equipment. The room on the east side of the hall is for girls or the first girls to get married. The back of the house (back room) functions as a sitting room and kitchen.

In the anthropological analysis of traditional Acehnese homes, the three layers of the cosmos and the differences between men and women are important. The three layers express vertically, and gender
differences are horizontally in the order of residence. Apart from spatial division, ornaments also play a role in demarcation and specification of residential spaces [8].

The vertical principle in Aceh's home is related to the differentiation between the level of the land, the elevated floor level, and the attic, where land is associated with animals, houses with human life, and roofs with ancestors. Under the roof, behind the triangular saddle screen (wind refuse), sacred heirlooms and valuables are traditionally stored. Among these three levels, the level of land and residence put together is considered a profane space, different from the level of the roof, which is a sacred space. At the occupancy level, space limits by the middle of house. The front and back of the lower part contrast with, the center, which is considered more intimate. Horizontal space organization at home connects the front with men and the back with women. The orientation of the house to the west considers congruent with Islam (figure 2).

2. Method
Determination of the type of research using descriptive qualitative research methods, namely that collects data in the form of words, images, and not numbers [9]. This research aims to explain and answer the problems related to conditions, systems of thought and events in traditional home architecture and contemporary home architecture of the North Aceh community with theories from data in the form of interviews, field notes, recordings, photographs, and other documentation by making conclusions. So later, the data obtained in description sentence.

Variables that will become a benchmark in conducting this research are elements of genius loci found in traditional home architecture and contemporary home architecture of North Aceh society today. There are four variables from forming genius loci used (table 1), this variable has strong and interconnected bonds in genius loci at a place that also influences the shape of the architecture.

| Table 1. Genius loci element as a research variable. |
|---------------------------------|----------------|
| **Element Forming Genius Loci** | **Indicator** |
| Room                           | Dimension     |
|                                | Boundaries    |
| Character                      | Material      |
|                                | Light         |
|                                | Temperature   |
| Spirit                         | Spiritual Experience |
| Identification and Orientation | Natural Potential |
|                                | Environment   |

This research conducts in Meunasah Drang Village, Muara Batu District, North Aceh Regency. Villages at the location of this study generally have a lined pattern that extends along the edge of the coast of the Malacca Strait in the north. This pattern also follows the lines of the Sumatera road that connects North Sumatra province with the capital city of Aceh Province, Banda Aceh. Likewise with wide rice fields in the south of the village. Whereas for the eastern and western regions are other villages (figure 3).
In sampling, this study uses a sample choice sequentially, which then continuous adjustment of the sample and the ends if there has been a recurrence. The first sample taken is Mr. Ahmad Hasyem's Ket.

**Figure 3.** Map of research location.

**Figure 4.** Sample research.

In sampling, this study uses a sample choice sequentially, which then continuous adjustment of the sample and the ends if there has been a recurrence. The first sample taken is Mr. Ahmad Hasyem's Ket.
house. His home obtains after an introduction and first interview with geuchiek, namely the wife of the head of the gampong at the research place, in the village of Meunasah Drang (figure 4).

3. Results and Discussions

3.1. Space Analysis in Contemporary Aceh Architecture

Space forms from dimensions and space constraints. Dimensions and constraints are not only seen concretely but also based on user experience and perception. In contemporary Aceh architecture, the dimensions of space are formed based on the activities that occur in it. The space structure in a contemporary Acehnese house is still the same as a traditional Acehnese house, namely by separating the space and access is used by women and men.

Overall contemporary Aceh houses still have the same spatial structure as the structures found in traditional Aceh houses, namely space and access that differ between men and women. At each home layout, both a stage house and a contemporary home have the same based on the activities carried out in it, namely; (1). Panteu; (2). Terrace; (3). Living room; (4). Family room; (5). Bedroom; (6). Kama manyang; (7). Kitchen; (8). Mon; (9). We (figure 5).
Table 2. Space Analysis.

| No. | Space   | Space Forming Elements                                                                 | Boundary                  | Dimension |
|-----|---------|----------------------------------------------------------------------------------------|---------------------------|-----------|
| 1.  | *Panteu* | Pedestal, high floor level around 70-80 cm                                              |                           | 3-5 m²    |
| 2.  | Terrace | Floor height is around 2-3 steps from the ground level                                  |                           | 6-8 m²    |
| 3.  | Living room | The 1st floor level of stairs from the terrace                                     |                           | 12-16 m²  |
| 4.  | Family room | The floor level is one step lower than the previous floor.                             |                           | 12-24 m²  |
| 5.  | Bedroom | The floor level is one stair higher than the previous room                              |                           | 9-16 m²   |
| 6.  | *Kama Manyang* | A higher floor level of around 50 cm or 3 steps from the previous room                 |                           | 9-16 m²   |
| 7.  | *Dapu*   | Floor level that is lower than 1 step from the previous room                            |                           | 9-20 m²   |
| 8.  | *Mon*    | Floor level that is lower than 1 step from the previous room                            |                           | 16-25 m²  |
| 9.  | WC       | Floor level that is lower than 1 step from the previous room                            |                           | 1.5-2.5 m²|

From table 2 above, it can conclude that each room in a residential building distinguishes by its height level. The highest floor is in *kama manyang*, which is around 60-70 cm or about 2-3 steps. While the bedroom has a higher floor level of about one rung. While the lowest floor level is *mon*. It considers that *mon* is a place for washing and purifying, *mon* is a humid and wet place and considers dirty so that it makes it the lowest floor level space in residential buildings.

3.2. Character Analysis of Contemporary Aceh Architecture

Table 3. Character Analysis.

| No. | Space  | Material                                                                 | Lighting and temperature                                                                 |
|-----|--------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1.  | *Panteu* | Floors made of boards or bamboo stems, and roofs with sago palm leaves. | The lighting is very abundant because there is no massive wall covering the four sides of the space. |
| 2.  | Terrace | Concrete or ceramic cast floor                                           | Large light and airing due to the absence of a massive barrier on the side of the space.    |
| 3.  | Living room | Cast cement or ceramic floor which gives a cool and cool effect. | Lighting from wide window openings with a glass surface that provides enough light penetration, and incorporates air conditioning and cool wind into the room. |
| 4.  | Family room | Cast cement or ceramic floor which gives a cool and cool effect. | Lighting from wide window openings with a glass surface that provides enough light penetration, and incorporates air conditioning and cool wind into the room. |
| 5.  | Bedroom | Cast cement or ceramic floor which gives a cool and cool effect.          | The light and air that enter are very enough with window openings smaller than the other spaces. |
6. **Kama Manyang**  
The floor of the board  
The light that enters through a small window that is enough for space and air needs is cooler due to the floor with board material that can drain cool air from the cracks of the board joints.

7. **Dapu**  
Cast cement or ceramic floor which gives a cool and cool effect. Glass window openings and ventilation.  
The lighting that comes from the window and door openings is enough to illuminate the room. Appearance at the corner of the washroom is slightly warmer due to cooking activities.

6. **Mon**  
Concrete floors and walls, *mon* has no roof  
Lighting is very much due to openings at the top of the room. Humidity is also by natural conditions when it is hot, rainy, and winds. The room is easily damp and wet.

### 3.3. Spirit Analysis of Contemporary Aceh Architecture

**Table 4. Spirit Analysis.**

| No. | Space                              | Spirit                                                                 |
|-----|------------------------------------|------------------------------------------------------------------------|
| 1.  | *Panteu* and Terrace               | This space uses as a haven for foreign guests and male guests who have no *mahram* relationship with the owner of the house to be the honor of the female occupants. |
| 2.  | Horizontal structure of the house  | Differences in space and access for men and women for non-religious leaders. Like the living room and family room that intends for men and women. As Islamic teachings about the prohibition of gathering men and women who are not their *muhrim*. |
| 3.  | Floor level                        | The highest floor level is the *kama manyang* as a last tribute to the body that must be bathed and purified before being delivered to the funeral facing God. Likewise, with other spaces that are distinguished by the type of space with different levels of the floor. |
| 4.  | Orientation                        | The orientation of the toilet placement which is not facing the *Qibla* direction, which is westward, is a habit carried out by the Acehnese as a form of belief that the activity is dirty and not to confront with a sacred place. |
| 5.  | Door Openings                      | Door openings on the front, side, and back that function to separate male and female entry access when holding custom events |
| 6.  | Window openings                    | Small window openings with wood made to put light and air into the house, without having to expose the activities and residents who are in the house visible from the outside to keep up the honor of the occupants. |
| 7.  | Mon                                | Being outside the house or the back because it is considered a humid and not clean place. |
3.4. Analysis of Identification and Orientation in Contemporary Aceh Architecture

Table 5. Analysis of Identification and Orientation.

| No. | Space          | Natural Potential                                                                 | Environmental conditions                                                                 |
|-----|----------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1.  | Large yard     | Aceh’s natural potential is rice fields that make the livelihood of its people farming. | The house builds on a large yard which is used as an area to dry the harvested rice every year. |
| 2.  | Panteu         | The coastal area in this area has a lot of pandanus leaves which can be used as pandanus mats woven by women in the village. This weaving process is usually carried out on the panteu. | Environmental and climatic conditions are hot due to the influence of sea angina and paddy fields that make the panteu a great place to gather and relax with family and neighbors. |
| 3.  | Building material | There is good clay to be used by brick makers around the village, triggering the growth of houses with brick walls. | The lack of wood material is not comparable with the growth in the number of housing construction so that the price of wood becomes more expensive. Therefore houses with brick material dominate more. |

River stones that can use as foundation materials for homes.

4. Conclusions

From this study, it can conclude that the most influential element that formed the genius loci on Aceh architecture was spirit. The spirit of the Acehnese community is in the form of their beliefs and beliefs in the teachings of Islam so that they can influence people's thinking in creating space.

In the life of the people of Aceh, a house is a place that intends for women. The house is the right of a mother and daughter in the family. That is very closely related to Islamic teachings about the privileges of women and guarding their nakedness against spies who are betrayed by men and do not become a slander for them. Women are also told to keep their honor in the presence of men who are not their husbands by not mixing with them.

As for space-related genius loci present in contemporary Aceh architecture are as follows; (1). These regulations present certain limitations in society and creating spaces that will be used separately between men and women. Likewise with the waiting room on the front of the house such as the terrace or panteu which is used to receive foreign guests and male guests who are not mahram so that they do not go directly into the house. As well as the shape and size of window openings in parts of the room that are different from the size of the window openings in other spaces, this is to keep up limited views because the bedroom is a private room for women with all their activities; (2). The presence of the kama manyang in a contemporary Aceh house is a new genius loci created to keep the culture that has long been present in the Acehnese community, a high-rise, sacred space that is used as a form of respect and service for elderly parents and a place to bathe the body; (3). The separation of mon, namely the washing and bathing area with the toilet as a form of Acehnese belief that mon is a clean area used for ablution and purification so it must separate from the toilet unclean; (4). The place of the toilet behind and separates from the mon aims to keep up cleanliness from unclean. Likewise, the WC place cannot be facing the Qiblah direction the orientation and purpose of worship based on the beliefs in Islamic teachings; (5). The existence of a guest room for men and a family room for women that is wide enough to uses when holding customary events or holidays; (6). Houses with large yards, both private yards and in groups that will be used as a place to dry the morning the result of harvesting, and drying materials for cooking needs. This yard is also uses as a dining room made by installing tense when holding traditional events such as weddings, aqiqah events, seven days of someone's death, and so on.
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