The meaning of spaces in the development of Karo Architecture (case study: shop houses)

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Abstract. This article examines the development of Karo architecture in North Sumatra, Indonesia. Karo Architecture is one of the architectures which still survive with a complete footprint and its existence can be traced. The postmodern era now, of course, influences by the development of this architecture. The benefits of local wisdom are explored by examining the existence of abstract and concrete spaces in Karo traditional architecture. For this reason, the article aims to look at the development of the existence of Karo architecture in its abstract and concrete spaces. The objects of research are Karo traditional buildings and shop houses located in Karo Regency and its surroundings. The method used is the descriptive qualitative approach to describe the facts in the field and examine them with the theory used. The result is that existing spaces are the results of culture from generation to generation that produces meaning according to their needs or Karo’s contemporary culture can adapt shop house.

1. Introduction

Karo is one of developing cultures in North Sumatra Province. This culture develops in the area now known as the Karo Regency. This area is a plateau and hilly with fertile land and advanced agriculture. The Karo culture gave birth to one of the archipelago architecture where archipelago architecture is very valuable inheritance which is inherited by Indonesian ancestor; archipelago architecture is formed from experiences and processes for hundreds of years and has its uniqueness. While the culture is the result of human activities in line with the history behind it [1]. Every human activity produces a culture that continuously influences people's life in a region. This culture has elements such as arts, kinship systems, and agricultural systems which complement each other to form a culture.

Culture is very closely related to the community itself where the culture that is present is a custom or rule that is recognized and believed by the community. In culture, besides being related to the regulation of life, it also relates to beliefs that color all activities and behavior of the ancestors [2]. Culture is a complex whole that contains knowledge, beliefs, arts, morals, laws, customs, and other abilities that are obtained by a person as a member of society [3].

The existence of artifacts is a forerunner of the establishment of architecture towards a culture until buildings are created as shelter and refuge which eventually become architecture. However, these buildings not only function as shelters, but also function as buildings that support a settlement or village, such as Jambur, Lesung, Geriten, and Guard Post. These buildings which have Karo identity and they are said as Karo Traditional Architecture.

Karo culture is inherent in this society until now even though the existence of the culture is no longer as strong as it once was. However, the existence of this culture that is still inherent in memory
makes the culture accommodated in the building of their homes or dwellings even though most of them already transformed in new forms, namely shop houses (Ruko).

2. Literature review

2.1. Karo traditional architecture

In Karo traditional architecture, there are many traditional buildings, namely: **siwaluh jabu, jambur, sapo page, geriten and lesung**. In this discussion, the focus is on the traditional building **siwaluh jabu**. The word Jabu means family, besides that Jabu is also interpreted as one part of the rooms in the Karo house. Whereas **Siwaluh Jabu** is Karo traditional house which is intended for eight families (**jabu**), where the eight families have family ties with each other. The spatial structure inhabited by each family is arranged according to the position and function of each family. Life together in traditional houses is governed by beliefs and customs.

The inside part or floor plan of **Siwaluh Jabu** does not have a physical barrier that separates the space between one family with another family whether it is **Siwaluh Jabu** which is used by ordinary people (Derip) or by nobles (Sibayak). However, there is a kitchen that separates the opposite spaces. The kitchen is used by every two adjacent families. Therefore, at a glance, this building consists of only one large space occupied by eight families where each of the families occupies a space measuring approximately 4x4 m. This makes them able to see each other. Although each room is occupied by one family, basically, all spaces can be used for various functions communally depending on the activities being carried out, such as: for eating places, beds, receiving guests and others. The existence of cultures and various kinds of taboos that are applied between families by their customs becomes a very strict psychological barrier between these spaces.

This family rope in the **jurwal** is the owner of the house (host) which is referred to as **Bena Kayu**, then the wife's family is referred to as **kalimbubu**, the family of the recipient's wife is called **anak beru**, and the last is female culture, so there are four eight families [2].

**Figure 1.** Position of **Bena Kayu** room in **Siwaluh Jabu**, Karo traditional house  
Source: Nawawiy Loebis, dkk 2004 Raibnya Para Dewa, Kajian Arsitektur Karo

Upstream and downstream are directive points in the pattern of Karo settlements which in general are buildings in clustered or lined up. This grouping follows the flow of the river so that the position of the house is based on the flow of the river, where the front or main door faces upstream while the back door faces downstream.

Karo traditional houses are divided into three parts, namely bottom, middle, top. This is a manifestation of the cosmological space according to their beliefs, which consists of: (a) The upper world or heaven, this area is controlled by **Batara Guru** namely the gods of the upper world or the vast world of space. (b) The middle world, this area is controlled by your majesty **ni aji**, the gods of the middle world, the earth. (c) The underworld, this area is dominated by **Banua Koling**, the god of the underworld.
They believe that the uppermost part is the holiest and the most sacred; the middle world as humans dwelling while the underworld is a world of darkness which is identified with hell. This is why the Karo people give offerings above the nageng which are on the roofs of traditional houses and put bones or traces of burning dead bodies on their roofs. This trilogy is also used in the human body of Karo people, namely the head, body, legs. The head is considered as a more sacred part than feet [12].

![Figure 2](image)

**Figure 2.** Division of world in the world view in Karo community.

Source: John Tuah Adya Saragih, 2018 Jejak Warisan Urung Lingga di Desa Lingga, Kajian Fenomenologi Arsitektur Karo

In traditional architecture, the role of culture is important. The formation of traditional architecture, in general, is a representation of the meaning contained in it. Because, in broad outline, culture has a physical form that contains non-physical ideas that are not visible but affect the physical form that exists. Culture has ideas that guide and lead activities in daily life [4]. This culture, in this case, is Karo traditional culture which becomes the basis of the formation of Karo Traditional Architecture.

Culture has norms made by ancestors as the form of rule that must be followed together. This form architecturally has regularity which is called order [5]. This produces expressive meaning as a form of culture. The rule develops along with the journey and development of the culture. This rule will provide quality of life to change the meaning of someone's life up to people life. Culture can change from time to time according to the activities that occur. This change is also happening now; there is a difference with the past because the meaning that arises now shifts according to the period changing and the interests of the people.

With this change, it influences the shape and morphology of the traditional architecture includes the space in it. Socially, cohesion is needed to reinforce the development of culture [6]. This cohesion is a social touch that occurs in the formation of space in Karo architecture. Besides that, the formation of abstract and concrete spaces also requires social cohesion as part which supports the development of the culture. The forming elements of space that are most often used physically are points, lines, fields, and spaces [7]. These forming elements concretely produce space that can be felt physically. However, not only physically, but space can also be felt abstractly based on beliefs and rules as the customs of the culture. The space created is a place for humans to take refuge both physically and abstractly (in mind) where space becomes a form of architecture because architecture comes from space [8]. The concept of space can change throughout the existence of human civilization and its identity of every civilization itself. Karo Architecture has a traditional building called Siwaluh Jabu House. *Siwaluh Jabu* has 8 (eight) rooms for eight nuclear families [9]. This nuclear family has kinship element that supports each other from one family to another family. Each family has tasks and functions that are interrelated and supportive in one house. These tasks and functions are automatically held.

**2.2. Abstract space and concrete space**
Abstract art or often referred to as art embodiment is one type of contemporary art that does not describe objects in the original or tangible but uses colors and forms in a non-representational way [15]. By the meaning above, it can be said that abstract space is a space created not by physical but by the meanings contained and understood by the user where these meaning and understanding are only in the mind of. The meaning can be derived from which is still attached to or can only be felt that it is formed from the psychology of the user.

The shape of an object has mass, by moving the mass, what remains is an abstract spatial structure. With this statement, two types of spaces are identified, namely geometric space and aesthetic space. After removing the mass of the object, what remains is the geometric space. Whereas the lost mass is a strong, vital and aesthetic space. The concept of abstract space in architecture is more conceived of Euclidean / Cartesian epistemology as abstract space [16]. Abstract space is a formal, homogeneous and repetitive space, will eliminate all differences related to human identity such as ethnicity and gender with quantitative objectives [17].

The existence of abstract space will eliminate history and memory and experience, finally that space cannot be recognized anymore. Concrete space is the opposite of abstract space. Concrete space is a space that has an identity in accordance with the user of the space. Concrete space is more to the subject space than the calculation space (Euclidean / Cartesian) and has originality and linkages [18].

3. Method
This research used descriptive qualitative method which was carried out to see the extent to which abstract space in Karo traditional houses is created. Qualitative research is research that recognizes the symptoms or phenomena that occur [10]. Therefore, a comprehensive study of traditional architecture is needed by visiting the house directly and looking for facts about the space and then presented descriptively to explain the existence of abstraction space in the Karo architecture. This method is considered to be effective because it presents the facts contained in the field which are then analyzed by an inductive approach [11]. Then, inductive analysis is done to gather facts and stories in the field such as literature and field data from several Karo traditional buildings in Karo Region. The existence of the abstract space is traced from the existence of dwelling space in Karo traditional houses, and then the space is examined in physical and non-physical forms. The research process is divided into 3 (three) stages, namely: (a) primary data collection, (b) data compilation, (c) data analysis and conclusion.

4. Results and discussions
The research explains: (a) Karo traditional culture to be able to see how this culture plays a role in producing Karo traditional architecture, (b) Architecture of shop houses, (c) Abstract and concrete space theory so that it can see how cultural links to the formation of space in new building which is shop house.

4.1. Shop house at veteran road, Berastagi
Shop house or commonly called “Ruko” is a term for buildings of urban cities in Asia, especially Indonesia, which generally have multilevel characteristics or two to three floors with a width of four to six meters where on the ground floor or the first floor of this shop function as a place of business while at the next floor serves as a place to live. Shop house that developed in the 18th-20th century became an alternative choice of homes in the present. Ruko usually has a simple facade and is built in line with other shop houses so that it appears like a complex. Each shop is connected with the pedestrian protected with the facade of the building [13]. This is formed because on the top floor of the shop is made more protruding forward than the ground floor so that the ground floor of the front (terrace) becomes typical arcades or pedestrian pathway [14].

The existence of shop houses is recognized on Veteran Street, Berastagi City where there are many shop houses along right and left sides of the road. Activities that occur are in accordance with the function of the shop that has been described above, basically, shop houses intended for people who
have businesses in their own dwellings. Therefore, the activities that occur in this area or region are trading.

![Figure 3. Shop houses on Veteran Street, Berastagi.](image)

It is not different from this side of the road, both sides of the road consisted of rowing shop houses and there is trade activity on Veteran Street, Berastagi City and it is a place for them to live in the same place. People passing in front of the shop cannot recognize which shop houses the ethnic Karo owner or other ethnics owner such as ethnic Chinese. The shop house owner also can be identified if there is a billboard with the name and tribe of the owner. But overall the shop house front view image can be said to be an abstract and quantitative objects if it is analogous to the space defined by Lefebvre in Merrifield [17].

![Figure 4. Shop houses on Veteran Street, Berastagi.](image)

4.2. Abstract and concrete space in Karo’s owners shop house
In general, the spaces in the shop are abstract spaces, where after completion, all people will not be able to distinguish spaces related to human identity or ethnicity. After the owner, ethnicity and activities are clear, then some abstract spaces become concrete spaces, especially related to the family system.

From the data obtained through interviews with local residents, stated that some of them still place parent rooms on the top floor of the house, namely the third floor (if the house has three stories) or the second floor (if the house has two stories). This is irregularity why parents' rooms are on the top floor while in terms of physical ability, parents' rooms are more feasible if they are placed on the lower floor so that they are easy to access.

In the family system, Kalimbubu (female giver and family head) is very sacred and respected, therefore the head of the family occupies an important space in right front of the house (bena kayu). Karo Traditional culture respect for the head of the family up to now has survived in the social contemporary Karo culture and is reflected in the front room on the 3rd floor of the shop. In Karo traditional house plans, spaces spread left and right horizontally. But at the shop, the concrete space was lifted to the 3rd floor. This fact was confirmed by an interview conducted by researchers to Alex Sembiring as a member “Himpunan Masyarakat Karo Indonesia”.

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Figure 5. Blue arrow, bena kayu room (householder) on the horizontal plan of a traditional Karo house, move up to the 3rd floor of the shop house in contemporary culture of Karo (source: survey 2019)

Other evidence, the ground floor shop house space generally functions as a commercial space of the type of abstract space. Commercial space can be said to be abstract space because commercial activities are modern social cultural activities and have no ethnic cultural identity. But during the survey, the research team discovered a Karo temporal social cultural activity that had traditional origins carried out in that space. The temporal activity is in the form of marriage and death before going to Jambur. Where in the event the family of the kalimbubu (house owner, female giver), senina and anak beru children (female recipients) gather and occupy separate spaces. Senina divides herself and joins kalimbubu or anak beru so that the ground floor space is divided into two which are separated by the middle passage. Usually the boundary is clearly visible from two stretches of mats with circulation in the middle of the room or sitting in groups. Although these socio-cultural activities are temporal, they succeed in transforming abstract space into concrete spaces.

Figure 6. Floorplan of ruko, segmentation during traditional ceremony (source: data processing)

5. Conclusions
With the meaning of abstract and concrete space as explained in section 4.2, the abstract space that occurs in the Karo traditional house Siwaluh Jabu is that there is no physical barrier to any space in the Karo traditional house Siwaluh Jabu, but in terms of the activities that occur it can be seen that there is a separation of spaces or differences between one space and another. This becomes an abstract space created from customs, norms against the position of the family tree from family members who live in Siwaluh Jabu. More precisely, the abstract space is created by the norms of Karo culture. In addition, abstract space is also can be seen from the hierarchy of space at the shop house on Veteran Street, Berastagi. If is viewed from the space hierarchy in Siwaluh Jabu, the area occupied by Bena Kayu is in the farthest area from the main entrance, where Bena Kayu is the owner of the house, if it likened to the most respected and respected person in the house.

The same thing happens to the shop house on Veteran Street, Berastagi City, the parents' room is placed farthest from the entrance, which is the third floor (if the shop has three floors) and on the second floor (if the shop has two floors). In the hierarchical position, parents are the most respected family members and are respected by other family members. In terms of the hierarchy of space in the Karo traditional house, the top of the house is the most sacred space. Therefore, the parent's room is placed on the top floor of the house.

Finally, the abstract space in the shop floor can be a concrete space even though the social activities of contemporary Karo culture take place temporally. This shows that shop houses can accommodate social cultural activities of ethnic or Karo people can adapt to rigid and geometric shop houses.

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