Space in *Batak Karo* House: a Phenomenology Architecture Study

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**Abstract.** Batak Karo’s Architecture is one of the Indonesian archipelago's architecture which is the result from the local wisdom of the *Batak Karo* tribe, one of the karonese architectures is the traditional Karo house. Masri Singarimbun explained that karok traditional houses are not only related to their functions but related to the process of establishment and how to dwell in it, there are so many customary rules when establishing and occupying the house. Now the *Karo Batak* tribe has turned to contemporary architecture and has lost its meaning in its architecture. This study will examine space in karok architecture with space theory that proposed by Christian Noberg Schultz, namely architectural space and existential space. The methodology used in this research is descriptive qualitative. It was found that karok architecture is a manifestation of the world view Batak Karo tribe which considers the world divided into three parts, namely the upper world, the middle world and the underworld and also the concretization of their kinship relationship, *beru, senina* and *kalimbubu*, which is called *sangkep ngeluh*.

1. Introduction
The development of world architecture today is characterized by the emergence of design alternatives in response to the failure of modern architecture that began to move away from humans. Modern architecture was born from the development of science that separates religion from science. One alternative in response to dissatisfaction to Modern architecture is written in the essay made by Charles Jenks (1975) "The Rise of Post Modern Architecture" which talks about new ways to think and build paradigms based on broader theories. Another movement that began to develop was the phenomenology architecture which was coined by Christian Noberg Schultz (1980) in his book "Genius Loci, toward a phenomenology of architecture" which raised a lot of human experience, human relations to the environment, and discussed how the architecture is a manifestation of natural conditions unconscious human being (intangible). In line with the theory put forward by Schulz, the archipelago's own architecture is a manifestation of Indonesian national culture manifested in different traditional architectures in each region according to ethnicity and natural conditions. This is an interesting phenomenon to reveal how the Karo Batak community created space in architecture which is a manifestation of their worldview.

Space is not something in front of humans. Nor is it an external object or an experience in humans. Not because there are humans above their space (Heidegger, 1997), Martin Heidegger explains that there is a relationship between humans and space, both of which cannot be separated. When we enter into a space, space also enters us so that the subject and object become integrated. Crowe (1997) discusses space in an abstract or intangible context. According to him, space as place maker consists of two formers, namely space that is abstract and space that is tangible or real.
Schultz examines space in two categories, namely existential space and architectural space (Norberg-Schulz, 1971). Existential space is a psychological concept that indicates the development of human schemata, interactions with the environment, in order to get satisfaction. Habib, F., & Sahhaf, S. (2012) The existential space is a qualitative space manifested in architecture. Existential space is space that is intangible and only exists in humans and is formed from the process of interaction between humans and their environment.

Architectural space can be defined as a concretization of existential space (Norberg-Schulz, 1980). Existential space is determined by the concrete structure of the environment, but needs and desires create a reciprocity. The relationship between humans and their environment is a two-way process, real interaction. Architectural space is concrete, the physical aspect of the process. The space study above is a form of interrelated space, where the existential space as an influence that forms space in human and human life gives a reaction so that architectural space is formed.

The problem in this research is how the meaning contained in the space of karo architecture, this meaning is often no longer seen in contemporary architecture. This study aims to discover how space in karo architecture is a manifestation of the worldview of karo society and how they concretize what is in their minds into an architecture.

2. Methodology
The type of research used in studying genius loci in karo architecture is qualitative research. Moleong (2007) states that qualitative research is research that uses a naturalistic approach to find and find understanding or understanding of phenomena in a special context. The nature of this research is descriptive and phenomenology approach to explore the meaning in Karo architectural space.

2.1. Method of Collecting Data
The data collection method is intended to obtain the data needed as input for each subsequent analysis phase. In collecting data in this study there are two ways, namely; Moleong, (2007) Written sources can be divided into sources of books, scientific magazines, archival sources, personal documents and official documents. Researchers try to collect written data from previous studies or notes about karo culture and architecture as primary data, Moleong, (2007) states that photos produce descriptive data that is quite valuable and often used to examine subjective aspects and results are often analyzed inductively (special-general). Here the researcher will document the homes of contemporary people who are research samples and redraw the house plans.

2.2. Data analysis method
The karo architecture will be analyzed with the genius loci indicator by comparing it, then using a descriptive approach to explore the meanings that exist in the overall karo architecture. The results of this analysis are in the form of narratives using a structuralism approach to see karo architecture as a structure that is interrelated with one another, namely the relation of existential space with architectural space.

3. Results and Discussion
Norberg-Schulz (1971) describes space into two categories, namely existential space and architectural space. Existential space can be concluded as a space formed in human psychology that is formed from experience and interaction with the environment. Architectural space is a manifestation or concretization of existential space.

3.1. Space Organization
3.1.1. Existential Space
The existential space of traditional home space organizations is intangible in karo culture. The division of this space is closely related to the relationship between sangkep geluh or rakut sitelu (Senina, anak beru and kalimbubu). Senina is a group whose elements are drawn from the father's lineage, anak beru is the status of a family to another family if one of the first family men takes the daughter of the second family as a wife, and kalimbubu is the family of a woman married by a man. Kalimbubu, senina and anak beru seen from the point of view of structuralism is the embodiment of three dibata which is
believed by the karo community so that in this space organization they try to present the god they worship figure [2], [3].

Traditional houses are the four core jabu that illustrate this kinship relationship, namely Jabu Benana Kayu, Jabu Ujung Kayu, Jabu Lepar, Benana Kayu, Jabu Lepar Ujung Kayu. Jabu Benana Kayu who is the founding family of the village (raja) whose position is as Sukut in Sangkep where he is surrounded by anak beru, senina and kalimbubu. Jabu Ujung Kayu is a family whose position is as a anak beru where his job is as a spokesman for the king in adat and doing all traditional work. Jabu Lepar Benana Kayu is a family whose position as a senator is to provide outside information to the king. Jabu Lepar Ujung Kayu is a family whose position is as Kalimbubu, there is no duty for Kalimbubu because Kalimbubu is believed to be the incarnation of Gods that can be seen (in this idah). The next connection is an additional connection from the sangkep geluh, where the jabu lepar the tip of the wood which is kalimbubu raja has kalimbubu namely jabu sidapurken the tip of the wood. Jabu edge wood which is a child of king beru has two additional relationships, namely jabu sidapuren bena kayu which is a child of beru and jabu sidapuren lepar bena kayu, a child from jabu ujung kayu.

Whereas the priest (bicara guru) has no relationship with sangkep complaining above, the pastor is someone who comes from outside and does not have blood relations at all. Pastor is someone who connects humans in the house with supernatural nature as believed by karo society Figure [3].

3.1.2. Architectural Space
Architectural space in a traditional karo house (traditional house), in the case of a gray house (eight families) the first position is occupied by (1) Jabu Benana Kayu, bena means the beginning, the beginning. This room is located in the direction of the base of the wood inhabited by the family of the village founder who has the highest position (king). The second position is occupied by (2) Jabu Ujung Kayu which is a room next to it, this room is inhabited by a family who gets a wife (Beru child) from
the king while the king's status is the wife's giver (Kalimbubu) to them. The third position is occupied by (3) Jabu Lepar Benana Kayu, which is a room located opposite Jabu Benana Kayu, originating from the same clan (merga) as the king, both as a child, and as a derivative (senina). The fourth position is occupied by (4) Jabu Lepar Ujung Kayu which is a room located opposite Jabu Ujung Kayu, this space is occupied by the party who gave his wife (Kalimbubu) to the King. The Kalimbubu party is considered to be the physical embodiment of the gods so that it is called the god who appears (Bounded by the idah). The fifth position is occupied by (5) Jabu Sidapurken Benana Kayu, which is a family-occupied room that uses the same kitchen as the royal family, namely a family that takes a wife (children) from a child of a royal family. The sixth position is occupied by (6) Jabu Sidapurken Ujung Kayu, which is a room that is as small as a wooden end room, inhabited by a wife-giving family (kalimbubu) from the wife's family for the royal family (kalimbubu raja) called Puang Kalimbubu. The seventh position is occupied by (7) Jabu Sidapurken Lepar Ujung Kayu which is a room occupied by a shaman who also acts as a pastor (Talking Teacher). Eighth position is occupied by (8) Jabu Sidapurken Lepar Benana Kayu which is as small as Jabu Lepar Benana Kayu. Inhabited by the children of the king's children.

Architectural space in traditional houses is marked by jabu separation from each family of residents, the house does not have clear and firm boundaries such as partitions or elevation differences, space between jabu is only marked by a kitchen (dapor) shared by two families. Whereas in the center of the house this boundary is based on the median boundary. Every jabu has ingan medem (bed), ingan medem has a clear boundary between one jabu and another jabu, the median interface is separated by several mats that hang on bamboo sticks, while the barrier with jabu in front is separated by curtain cloth (Masri Singarimbun, 1975)

The schematic line of the sangkepg geluh relationship in the traditional house is seen in (Figure 5.1), the vertical line shows the relationship to kalimbubu, the horizontal line shows the relationship to the female while the diagonal line shows the relationship to the young child. In karo architecture the position of sukut or the founder of the village is located at the base of the wooden traditional house so that sangkepg geluh forms four corners that lock the entire traditional house space.

An additional schematic relationship from sangkep is overflowing, where the jabu lepar wood tip which is the kalimbubu of the king has the kalimbubu party namely jabu sidapurken the tip of the wood (yellow line). Jabu edge wood which is a child of king beru has two additional relationships, namely jabu sidapuren bena kayu which is their beru child (blue line) and jabu sidapuren lepar bena kayu, which is a child from the king's child who occupies jabu ujung kayu (purple line) Figure [6].
3.2. Cosmology

3.2.1. Existential Space
Waterson (2012) states that houses in Austronesia reflect the universe or universe into three layers, namely the sacred upper world, in the middle as the world of human habitation, and the underworld where animals and the underworld god are underworld. Traditional karo houses are divided into three parts, namely bottom, middle, top, this is a manifestation of the cosmological space according to their beliefs. (1) The world above or heaven. This area is controlled by the teacher Batara, the goddess of the ruler of the upper world or the vast world of space. (2) The world is in the middle. This area is controlled by your majesty ni aji, the ruler of the middle world, namely earth. (3) Underworld. This area is controlled by banua koling, the goddess of the underworld.

They believe that the uppermost part is the most sacred and sacred, the middle world as human habitation while the underworld is the world of darkness which is identified with hell. This is why the Karo community made offerings over the nageng (beams above jabu) which were on the roofs of traditional houses and put bones of bones or traces of corpses on their roofs. This trilogy is also used in the human body of karo, namely the head, body, legs. The head is considered as a more sacred part of the foot (Masri Singarimbun, 1975) Figure [7].

3.2.2. Architectural Space
In terms of the physical anatomy of a traditional house, it is divided into three parts, namely; (1) The space under the house is a room that has no function, is left empty and not maintained where there are binangun and pandak standing on the palas to support the building above, (2) The middle room is a
human habitation space where humans live and act, (3) The roof space is a large enough space above
the middle room. This space is considered a sacred space that has a function as a place to give offerings
to begu, where bones of ancestors who have died and are placed in roof tops.

3.3. Dapor
3.3.1. Existential Space
Existential space is drawn from the incantation that was said during the process of establishing the
reporter. It is implied that Dapor is a place for a source of warmth / life, a family gathering place.
Kalimbubu blessed Reporters as a source of prosperity for homeowners. Dapor is a central space for all
activities that are a source of energy in the home.

In the report there are five diiken (stone), five of which are illustrated by groups of silima clans in
karö communities namely Peranginangin, Karo-Karo, Ginting, Tarigan and Sembiring (Nawawiy,
2004). One dapor is used by two jabu (family) with each jabu using three diliken with a diliken to be
used together (Figure 5.10). the third diliken illustrates the existential space of the presence of diliken
sitelu or sangkep nggeluh (senina, anak beru dan kalimbubu). In the philosophy of karö, the presence of
the three will give life to the owner of the house symbolized by the presence of fire in the middle of the
diliken. Fire is an element that can warm the family in the house and with fire all food ingredients are
cooked and eaten to provide life for the family.

When associated with the Hindu belief these five stones are thought to symbolize the five elements
of nature (Panch-bhutas), namely earth, water, fire, wind, and space. These five elements are the formers
of living things that exist on earth and the forming elements of the universe, Figure [8].

![Figure 8](https://example.com/figure8.png)

**Figure 8.** Five stones in hearth of Karo House
Source: Singarimbun, M. (1975)

3.3.2. Architectural Space
Each juruh jabu traditional house has four dapor pieces, namely two in the downstream and two in the
upstream which are in each room (jabu). Each report is used by two adjacent families (Sedapuren). The
Dapor is square, with a size of approximately four square meters equipped with cubes (quality), and
three stoves (diliken) exactly in the middle of the report. Figure [9]

![Figure 9](https://example.com/figure9.png)

**Figure 9.** Dapor position in Karo House
Source: Author
3.4. Ture

3.4.1. Existential Space

Ture in karo architecture has another definition, slope, periphery. In the worldview of the Karo community that this world has levels, namely the lower, middle and upper world. Ture is the existential space for the transition of the underworld to the middle world. Domenig (2014) explained in his research that in Lingga Village, one of the ture functions was a place for mothers to give birth. It is clear that the unborn baby is a person from another world so that when he is born he must go through the ture room. Prinst (2014) said that in the karo community there were sirang ture (died of childbirth). This statement reinforces that ture is a place of transition from another world to the world where humanity lives.

Wiflihani, (2014) explains that copying a house is led by the teacher of the student or teacher who brings up. The teacher of the freshman is the teacher who leads the ceremony when entering the house. He is in ture and invites all residents to enter traditional houses. From the definitions and rituals that are carried out when entering the house, it is clear that ture has an intangible space in the world view of karo society where this is a transitional space to go towards something more sacred, raising them higher than the underworld.

Prinst (2014) the ceremony of death in karo society is called nurunken kalak mate which has the definition of lowering the dead. From the traditional house of the dead, they are lowered through the ture to the ground. Is a symbol of the process of moving the world from life to death.

In karo traditional house there are two tures, namely ginger ture and upstream ture, ginger ture has a lower elevation than the first ture. Prinst (2014) said that ture is a veranda that functions as a place for women, weaving (mbayu) baskets, mats and other things at night, a place to chat and to combine love between girls and youth at night (nure-nure). Unmarried couples are strictly forbidden to enter the house because they have not entered the customary structure that is considered sacred. So that the transition space for them is in ture which will later enter the house. Another function is a place to bathe children, a place to bathe the corpse, if there is a member of the house of the deceased house and a place to urinate for children, and others. There are stairs that connect the land with a terrace (Ture) whose numbers are always odd (average of five). Figure [8].

3.4.2. Architectural Space

In karo traditional house there are two units of ture, namely ginger ture and first ture, ginger ture has a lower elevation than the first ture. Ture itself is a platform made of bamboo. Nawawiy (2004) states that ture is a veranda that functions as a place for women, weaving (mbayu) baskets, mats and other things at night, a place to chat and to combine love between girls and youth at night (nure-nure). Unmarried couples are strictly forbidden to enter the house because they have not entered the customary structure that is considered sacred. So that the transition space for them is in ture which will later enter the house. Another function is a place to bathe children, a place to bathe the corpse, if there is a member of the house of the deceased house and a place to urinate for children, and others. There are stairs that connect the land with a terrace (Ture) whose numbers are always odd (average of five). Figure [8].
3.5. Lau / Labah child

3.5.1. Existential Space
Domenig, (2014) explains that lau children are likened to a river in a house with a higher part besides a lau child called suah (hillside) and a higher part or near a wall (jabu area) called gugung (mountain). In accordance with the orientation of the upstream-downstream house, this lau child is likened to a river flowing in the house from upstream to downstream.

3.5.2. Architectural Space
The lau child is a way of circulation in a traditional house. The lau child consists of a beam that extends from ginger to the top of a traditional house, the lau child has a width of 50cm and a depth of 30cm from the floor surface of a traditional house. The width of the beam of the child is not bigger than the opening so that there is a gap that allows water and household waste to be directly wasted down under the traditional house (Domenig, 2014). Figure [9].

![Figure 11. Anak Lau and its position in Karo House (red line)](source)

4. Conclusion
The space in karol architecture that we can see and prove with the five human senses (tangible) is created because of the existential space in mind, culture or worldview of karol society. The way they see the world in which they live and their activities is seen in the architecture that divides the architecture into three parts. All space in the karol architecture is not created without any reason, but everything is full of meanings and meanings that describe the lives of those who do not look like trust, culture (intangible). Now space is created only for people who are active in it, but karol people used to create architectural space not only for living humans but also for something invisible that exists in the world and live side by side with them.

This worldview also makes them create an architecture that doesn't seem to be complete or not permanent like ture. Because they see the ture is not part of the glorified and worshiped architecture but rather as a transitional ladder whose function is temporary. So this ture does not need to be ornamented or made permanent like a traditional house that is beside it. Worldview that is owned by karol society and manifests it into an architecture makes a unique and full of meaning architecture, they have hidden boundaries between one family and another and make spaces that function at the level of human psychology.
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