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Submission date: 17-May-2023 03:40AM (UTC+0700)

Submission ID: 2094907248

File name: IOP_MSE_128_1_012016.pdf (910.74K)

Word count: 3743
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2016 IOP Conf. Ser.: Mater. Sci. Eng. 128 012016

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IOP Conf. Series: Materials Science and Engineering 128 (2016) 012016 doi:10.1088/1757-899X/128/1/012016

The values of culture and architecture typology of Mandailing traditional house

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Abstract. Mandailing is one of bataknesse ethnic in North Sumatera which belong to strong to hold the customs and traditions Mandailing culture which reflected in the parts of the traditional houses. However rapidly the construction modern house make possibility the traditional house which emiched with culture value will be extinct. This studyto identify the value of culture and architecture typology of traditional house in Mandailing Natal North Sumatera. A case study using phenomenologyc method that is recording and serving the phenomenon which found in field as evidence that include existing condition from building. The finding show that 1) religion system or reliance in the front of location election, ornamentation orientation, construction system and room arrangement, 2) kinship system in the front of room organization, room amount and the completeness, 3) live philosophy found in shape and room arrangement which can accomodate all activity, 4) leadership system in the fornt of ornamentation shape and the meaning, pillar shape, house size vertically, and 5) social system in the front of roof shape, the used of decoration style and room arrangement. Architecture typology of Mandailing house dug from the shape and the construction, room arrangement, and roof shape.

1. Introduction

Mandailing is the one of bataknesse ethnic in Mandailing Natal district of North Sumatera province, Mandailing Natal district is on west beach territory North Sumatera which border on West Sumatera. Some years recently in that area the housing construction grow rapidly implemented in a row with population growth. House live which build inclined adopting modern house shape likes in big cities generally. The condition likes that would causing the extinction Mandailing traditional live house which has value of culture that was handed down from one generation to the next.

Traditional building as the one of archeological architecture traditional which have the important meaning to reflecting idea and attitude a supporter of society. Traditional building which created based on culture values need understanding in developed the culture values in physical form. Nowadays, buildings with traditional architecture not too much found in Mandailing, mostly had been extinct by the time and the rest had been long standing. Facing with that condition, we know that awareness to protect or preserve the traditional culture values not grow yet in that Mandailing society. Instead today generation mostly does not care and respect with their own culture. This thing happened may be caused by social-culture changing which had been made symbols on that traditional building and not relevant morewith nowadays condition. More understanding about the various symbolic meaning which found in traditional buildings, so that worried the local wisdom values time to time will be lost caused by culture development. This thing marked by emerge the phenomenon to rebuild traditional building by some society who have ability in financial side as the effort to hold high the identity and true self their culture (Nasution, 2006). But, the new shape so different with the traditional form. Any

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IOP Conf. Series: Materials Science and Engineering 128 (2016) 012016 doi:10.1088/1757-899X/128/1/012016 desire from the ethnic society to build house live based on ethnic in form and way which more modern is the factor who become main priority in directness traditional culture preservation. To make a live tradition or preserve the tradition in modern live is not an easy thing because on and another be in contradiction. But awareness that tradition is the one which appear in a long process, agreed on group, have history value, spiritual, morality, art, myth and local wisdom, and others.

In order to not happened the wild construction and worrying future prospect traditional architecture, so needed the identification of shape and structure that traditional building. The identification is done to get the information about architecture typology Mandailing traditional house. Typology is the study about types to make classification which based on the similarity of object character (Galih, 2010), in research traditional architecture, typology used as the tools to analyzing the object. Any two aspects which analyzed in study about traditional house that are shape and room typology (Aufa, N, 2010). Classification the shape of traditional house distinguished based on building element that consist of roof, wall and pillar (Ryeung, S, 2012). Meanwhile, room typology consists of pattern and room function. Survey conducted in two location which relative still many be found traditional house likely in Mandailing Godang and Mandailing Julu.

Ryeung, S (2012) states that to analyze the typology of traditional houseneeded investigation to three element of house building, there are; roof, wall, and pillar. Hosein, A. (2012), in research about traditional house states that privacy concept and room optimum, simplicity, multi-functionality, family propinquity, room arrangement which opened are social-culture value which potential significantly implemented in contemporary house design. Based on both of the opinion above can be concluded that in designing a Mandailing traditional house must be considering the kinship with the room arrangement which is fair and flexible and also the house form that focused on the roofs, walls and pillar.

The main problem in this research is to see the originality of Mandailing house typology which become reference for society to rebuild traditional house live based on Mandailing ethnic. Another section of your paper

2. Research and Methodology

This research using phenomenology method which is recording and serving the phenomenon that found in field as fact which including existing condition in traditional building. Phenomenology according to Husserl (Smith,2007;Crowell, 2001) is an attempt to understand the consciousness as experienced from the first -person perspective. The essence of Husserl's phenomenology according to Smith (2007) is the awareness that is directed or intentionality (consciousness directivity).

Interview technique which opened and detailed conducted on respondent, this research also seeing the relevancy information that given with surrounding environment condition, the existence of traditional house, and the house history (Satori and Komariah, 2009). Information that given by informant validated with another informant that met in research location, likes society figure, the house owner, or house tenant. Collecting data of traditional house physically conducted by do measuring and recording, meanwhile secounder data conducted by journal and similar research that also discuss about typology some traditional house. The election of house which will observed with sampling purposive method, with criteria election likes the originality of shape/house architecture and house which still occupied.

Data analysis conducted through descriptive-qualitative approachment. Finding condition in field analyzed based on the interpretation result researcher on the condition of existing house which found in field.

3. Discussion

3.1. The culture values of Mandailing traditional house

Luthan, PLA., 2013. Generally traditional society live and attitude based on social-culture values which hold high. That values contained in a system which consist of live philosophy, social system, leadership system, and family system or religion. Obviously, that systems formed in attitude and materiil culture (that is artefak; traditional building)

IOP Conf. Series: M aterials Science and Engineering **128**(2016) 012016 doi:10.1088/1757-899X /128/1/012016 *Live philosophy*

Mandailing society have live philosophy holong and domu, that is love and affection between fellow society member (Lubis, R, 2006). Love and affection not only in context people to people, but people with another creature, also people with God.

Mandailing society is the society group who has behave to erect the justice and peacefullness, togetherness value which strong, also hold high unity values. Togetherness values very strong effecting room arrangement shape in Mandailing traditional house (especially King-Raja Bogas house), be found some rooms that can accommodating all togetherness activity on that society.

Social value

Implementation and custom law in daily live or in custom ceremony Mandailing society done based on structure and social system which called markoummarsisolkot (family custom in group), or often called as daliannatolu. Dalian natolumeans pillar which three, containing the meaning that Mandailing society trusting on social system which joined together in one structure arrangement that consist of kahanggi ,mora and boru (Lubis, R, 2006).

In discussion activity daliannatolu component there any roled as highest decision taker. This highest decision taker based on tradition ceremony types which implemented, people who become family head, also who become mora, kahanggior anakboru when the ceremony went on. This thing make possibility any distribution of special rooms for the third component. Dalian natoluin king house or bagasgodang custom ceremony. Also make possibility any distribution of sit position for daliannatolu component based on each role ofmora, kahanggi, or anakboru. Moreover, live which based on discussion result make possibility for Mandailing society to have a building that specially intended for that discussion activity.

In social system Mandailing society not known any social stratification. Social level just used to distinguished between role and postion of king with king family member, king assistant, and common people. This level distinguish size and completeness of the traditional house. Common people house do not allowed using roof shape that same with king, also do not allowed using decoration style. This social system also emerge when organizing room inside the king building house.

Leadership value

When implementing society government on Mandailing customs law, government institution and the customs sit some traditional leader figure which called as namoranatorasand lead by someone who has status as raja panusunanor raja panusuk. Raja panusunanis head of government in hutainduk(mother vllage), meanwhile raja panusukis head of government in hutaanakor developed from hutainduk. But, each hutarunning the government autonomously. King is primus interparis(leader) who lead democraticly appropriate with discussion result between the head of village or also called as namoranatoras.

Politic lives in Mandailing society describing any law values and customs which hold high in every lives principle. King is someone who considered important and respected the existence, guarding his citizen fairly and full of affection. So that, king is the center of social-culture activity Mandailingsociety., it menas the place where people tell all of their live problems and asking the moril helped even material.

Family value

In Mandailing society any three family group (kingrous), there are mora, kahanggi (people who have sama sure name or have family relationship brother-sister) and anakboru. The third group used by Mandailing society as pillar component for their social system which called daliannatolu (the three pillar). In architecture context, family structure or kinship structure explains about pattern and manner to have relation which can forming something interaction that can known as occupied patterns. Family structure in connection with the relation between parents-children that can reflecting in room arrangement pattern that can forming privacy hierarcy. Meanwhile, family structure explains about the relation of individual role in big family.

IOP Conf. Series: M aterials Science and Engineering **128**(2016) 012016 doi:10.1088/1757-899X /128/1/012016 Religion value and reliance

Religion values that trusted by Mandailing society can seen clearly on determining of building orentation and building appearance vertically. Building orientation determined by following the sunrises direction and do not allowed back to back it. This thing believed by society that sun and the come direction of light is considered as the live source. So the society trust that house obtaining the live source from the sun (the main source from God).

Moreover, building appearance which is house on stilts and consists of three parts among others, tarumanibagas (space underneath of house), bagas (house to live), parapi(roof) believed as cosmos creation or world. Space underneath of house believed as under world symbol which is death world and evil souls as the creation of people relation with another creature. The middle part of house believed as middle world symbol which is life, the place for people to do their daily activity, where happened relationship between people to people. And the top part of house is holy and sacred world as the creation of relationship between people with God. The culture values that contained in live of Mandailing traditional society hold high as guidance to live in form of group can seen in table 1.

Table 1. The culture values of Mandailing traditional building Source: analysis, 2014

Culture value identification	Traditional house		
Religion system or reliance	Election of location, Orientation, Ornamentation, Construction system, Room arrangement, Mass shape		
Family system	Room organization, The amount of room and the completeness (custom building, rice barn, yard)		
Live philosophy	Arrangement room shape, The house completeness as symbol of individu and social activity		
Leadership system	The ornamentation shape and the meaning, Pillar shape, House size vertically		
Social system	Roof shape, Used of various decoration, Room organization		

3.2. The shape of traditional house in Mandailing

The house shape in Mandailing different among king's house and common people's. The difference seen clearly from building mass, room size, room arrangement pattern, decoration style application, roof shape, and dimention. Generally, the king's house were in an area which is completed with yard (allamanbolak), rice barn (sopoeme), and custom building (sopogodang). Meanwhile, common people do not have that certainty. The difference of building shape can seen clearly in Figure 1-4



Figure 1 : The difference between king's house and common people's in Mandailing

Source: Field Survey, 2013

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Figure 2 : Traditional house area in Hutagodang village – Mandailing.

Source: Field Survey, 2013



Figure 3: BagasGodang inMandailingGodang



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KayuLaut village village village

Figure4: Bagas Godang in Mandailing Julu

Source: Field Survey, 2013

3.3. The structure and construction of traditional house in Mandailing

From structure and construction side, houses in Mandailing using house on stilts construction with wooden structure and natural stone as the ground. Vertically, the bouse divided into three parts that are parapi(upper world)as banuapartoru. Mandailing people had a belief that this universe is divided into three parts or called Banua, they are :BanuaParginjang (upper world), this is a place where God, the human master that called Datu Natumompa Tano Nagumorga Langit as the creator and the owner of this sky and earth; Banua Tonga (middle world), this is a place where human does daily life activities. This place is symbolized by red color; BanuaPartoru (bottom world), this is a place for dead people or called as spirit world. This place is symbolized by black color (Nuraini, 2011). The third parts centered in pantartonga (center room) is the room that considered holy, in this part made center pillar or tonga pillar. The construction shape of traditional house can seen in Figure 5



Figure 5: Mandailing people cosmology house

Source: Field survey, 2013

In Figure 6 can seen each form of building component that found on king house in Mandailing.

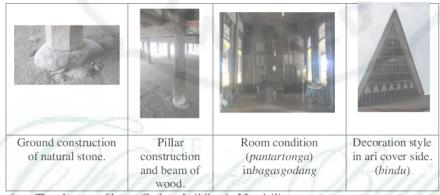


Figure 6 : The element of bagas Godang building in Mandailing

Source: Field survey, 2013

3.4. Construction model of ground connection and coloumn.

Whole form and ground system of traditional house in Mandailing, even king house and common people, the pillar arrangement have the form of octagonal which put over pebble flat without loop or connection like house on stilts that many made by this time. Place or surface to put the stone usually

IOP Conf. Series: M aterials Science and Engineering **128**(2016) 012016 doi:10.1088/1757-899X /128/1/012016 above the land. But, in some traditional house found the surface that had been permanent with make massive surface and had been made harden or cemented.



Keterangan: a) Panyabungan Tonga, b) Hutagodang, c) PidoliDolok, d) Singengu, d) common people's house foundation

Figure 7 : Foundation shape of bagasGodang and Mandailing society house

Source: Field survey, 2013

3.5. The room arrangement of Mandailing traditional house

The room management in Mandailing traditional house not regardless from the occupant activity everyday. Bagasgodangarrangement (king's house) and common people's house certainty different. If in king's house always held the activities that involve about customs and society, so in common people's house only have occupying activity likes sleep, cook and together with family member, and socialization with neighbour. Activities which held inside house give effect to arrangement pattern and room size that needed to accomodate the activity. In example, in king's house found room which the size big enough in middle room, that called as pantartonga, and this room used as gathering room for king's family (kahanggi, mora, anakboru) and common people to do custom ceremony activity. Moreover, in front side of king's house any room that used to socializicing with neighbour and family member which called parangin-anginan, or another term called as terrace. Besides custom activity, in king's house also live family member with daily activity likes sleep, eat, cook, take a bath, and so on.

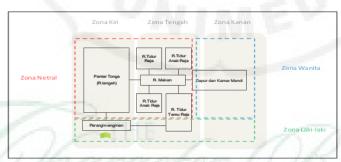


Figure 8 : The room arrangement pattern of BagasGodang Source : Redrawing fromNasution (2006)

3.6. The roof shape of Mandailing traditional house

Roof shape has ridge line which warping or called as silingkungdolokpancucuran roof. The shape of silingkungdolokpancucuran roof means as modesty that do not distinguish someone level nor position, innocent attitude to accept the changing and emendation., also helpful behavior to help another people who need. Special for king's house has thin cover (triangle shape in roof) in each sides, any 4 thin

IOP Conf. Series: Materials Science and Engineering **128**(2016) 012016 doi:10.1088/1757-899X/128/1/012016 cover which completed with ornament and added one piece in stairs roof side. These thin cover made from wavy zinc and in front side of roof found eaves trough the rain water from roof to the disposal channel. Roof in this king's house consist of main roof, kitchen roof (addition), and stairs room, that can marked from the ridge line.







Roof shape silingkungdolokpancucuranapplicated in King's house

Roof shape*sarotole*applicated in King's house and his family.

Roof shape sarocinoapplicated in common people's house

Figure 9 : Roof shape of Mandailing traditional house

Source: Field Survey, 2013

4. Conclusion

Based on the typology identification found concept implementing banuaseen clearly in shape of Mandailing traditional house which divided into 3 (three) groups that are Banuaparginjang (upper world), Banuatonga (middle world), Banuapartoru (bottom world).

The values that contained inside 1) religion system or reliance marked by election of location, ornamentation location, construction system, and room arrangement, 2) family system marked by room organization, the amount of room and completeness, 3) live philosophy found in shape and arrangement of room that can accomodate all activity, 4) leadership system marked by ornament style and the meaning, pillar shape and house size vertically, and 5) social system marked by roof shape, the using of decoration style and room organization.

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