Actor Relations in the Change of Shape and Space in the Rumah Gadang of Balai Kaliki Traditional Village

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ABSTRACT

Rumah Gadang is a traditional building that represents the cultural identity of Minangkabau Tribe in West Sumatera. This traditional building is a cultural heritage that must be preserved. However, preservation led to many changes in the form and space of traditional buildings. Rumah Gadang which is located in Kampung Adat Balai Kaliki, Payakumbuh City West Sumatera has a level of change in minor and major. That matter could happen because of differences in the network of actor relations in each building. The factor of actor relations has an impact to change the preservation of traditional buildings, thus providing a new perspective on the preservation of traditional buildings. Therefore, this research aims to observe the changes that occur in the Rumah Gadang located in Kampung Adat Balai Kaliki through actor network’s perspective. Completion of this research using a qualitative methodology with Actor Network Theory (ANT) method by examining changes that occur in Rumah Gadang holistically, which is through a study the relations between the actors involved in that building to discover the factors that cause the changes. This research find that the relation of actors involved in each Rumah Gadang determines the quantity of building changes. The result is charted using sosiotehnogram to know the strong actors.

How to cite:
1. Introduction

Traditional buildings are a cultural heritage that must be preserved as a representation of various traditions in Indonesia, although in practice, the physical form and meaning have been changing. In each traditional building, there is a living relief that describes the ideology of the community through history and traditions passed down from generation (Prasetya et al., 2018). Behind the urge to preserve it entirely, there is a practice of using it with various changes. Regarding this, a more contextual perspective on the preservation of traditional buildings and the practice of transformation by the community will be needed.

Rumah Gadang is a traditional building of the Minangkabau tribe in West Sumatra. "Gadang" refers to a large building with a significant function, a place for residence, meetings, and various kinds of traditional events (Putra & Ekomadyo, 2022). According to the informant's explanation, supported by an explanation from Navis (1984), Rumah Gadang is a lavishly inheritance property for the Minangkabau tribe because the ownership is joint property that cannot be traded. This house building also represents the customs and culture of the Minangkabau tribe. The distinctive feature of this house is the roof's shape, which resembles a buffalo horn called a bagonjong roof (Ratnawilis, 2005). The shape of the building, from the construction and pattern to the function of the Gadang House space, results from the culture and values originating from adat in each luhak (area) in West Sumatra (Luhak Tanah Datar, Luhak Agam, and Luhak Limapuluh Kota) by following the principle of consensus leadership in Minangkabau tribe (Kelarasan Koto Piliang and Kelarasan Bodi Caniago) (Prasetyo et al, 2018). The social order applied to this tribe, the matrilineal kinship system, also influences the function and meaning of the Rumah Gadang building, where those who inherit from this lavishly inheritance are based on maternal lineage and ownership of the rooms in the house are only intended for women (Sukmawati, 2019).

One area that still has a Gadang House is the Balai Kaliki Traditional Village, Payakumbuh City. The village is included in the Luhak Limapuluh Kota, where most houses adhere to the Kelarasan Koto Piliang. The distinctive feature of the Rumah Gadang typology is that the entrance is not in the middle as usual but on the right side of the building. The condition of the Rumah Gadang in the area has experienced various changes, both in minor and major numbers. This change occurred due to the influence of globalization, which affected their identity as a Minangkabau people (Effendi, 2013). The identity of this tribe is to ramble and trade with the initial intent and purpose of improving their economy, then returning home to advance their village (Amir, 2005; Ramadhan et al., 2016). The reality is that many migrants do not return and live on overseas land. As a result, there is a change in the structure of indigenous peoples.

According to the informant, several Rumah Gadang were damaged because they were abandoned due to several factors, including the owners going abroad, damaged by age, and tukang tuo, essential actors in constructing these buildings, were rarely found (Fitriza, 2018). This research is intended to observe the changes that occur in the Rumah Gadang in the Balai Kaliki Traditional Village. Observations are made through the perspective of actor networks to see the social relations that influence these changes. With the study of these actors' relations, the village's social structure can be adequately described, how it influences efforts to preserve the Rumah Gadang, and what kind of relationships lead to changes.

2. Method

2.1 The Approach of The Study

This study uses the actor-network theory approach (Actor-Network Theory/ANT) referred to by Yuliar (2009), Technology Governance: Actor-Network Theory Perspective and Latour (2007), Reassembling the Social: An Introduction to Actor-Network-Theory. It aims to understand the actor relations in the pattern of changes in the form and space of traditional houses in the Balai Kaliki Traditional Village. Several studies on architecture in Indonesia also use the ANT approach, such as that carried out by Hatta (2020) when researching the tradition of assembling Bugis society, Ekomadyo & Riyadi (2020) to research Dago Pojok Bandung Creative Village,
and Prasetyo (2021) to research Jelekkong Art Village Bandung. ANT sees architectural spaces built from various relationships between actors and artifacts.

ANT is a theory of social phenomena full of technological objects that focus on actions and networks that arise in socio-technical phenomena (Yuliar, 2009). This theory has two components: actors and actor networks, where action gets various sources from a network, and a network is formed from actions. The main principle of ANT is that human and non-human entities are treated equally: technical objects play an active role in the actor-network construction process. Adjusting various actions between actors to reach a stable relationship where technical objects can work well is called translation (Rizal, 2021). The use of this theory can help the process of filtering social networks related to a phenomenon.

In the context of this research, ANT is used to trace decision-making in an architectural artifact. According to Yuliar (2009), any governance, including architectural artifacts, will relate to a series of decisions by actors: governance is composed of relationships with actions, social interaction, social values, and social change (Figure 1). In one phenomenon, actors will have differences in addressing an issue due to differences in values or references. Human life is closely related to technology, including architectural artifacts, in which values, knowledge, and references are exchanged between the actors involved. With the ANT approach, it will be possible to trace how a decision to change an architectural artifact, in this context, the Rumah Gadang Kampung Adat Balai Kaliki, can be traced through the relations between the actors involved.

![Figure 1. Framework connection between technology and humans](Source: Yuliar, 2009)

### 2.2 Data Collection Method

Data for the research was obtained in three methods: literature study, in-depth interviews, and direct observation. The literature related to this research topic consists of the Rumah Gadang typology in Luhak Limapuluh Kota, the matrilineal kinship system, and the Actor-Network Theory. The observation was done in the Balai Kaliki Traditional Village, Payakumbuh City, West Sumatra. Observations were made in detail to understand and find the location of the problem from the phenomenon that occurred. Then, we will proceed with in-depth interviews with several informants related to this research, consisting of two informants representing traditional leaders in the village, one informant representing the tukang tuo, four informants representing the villagers, and one informant representing the earlier researcher. All of this aims to find out and get information related to the context under study. The subjects of this study were the datuk and bundo kanduang from each Rumah Gadang studied.

The results of observations and in-depth interviews were then mapped using a sociotechnogram from ANT. The goal is to depict the relationship between actors and artifacts to identify actors vital in making decisions about Rumah Gadang. Then, what factors influence the change of the Rumah Gadang as a traditional building that needs to be preserved is delineated.

### 3. Findings and Discussion

#### 3.1 Findings

The technical object in this research is the Rumah Gadang, located in the Balai Kaliki Traditional Village (Figure 2). Based on the explanation from informant 1, Rumah Gadang belongs to the Luhak Limapuluh Kota, and the majority adheres to the Kelarasan Koto Piliang. The part that distinguishes Rumah Gadang Koto Piliang, which is located in Luhak Limapuluh Kota, from Rumah Gadang with amicability and other luhaks is that the position of the main entrance is on the right side of the building and confronting the direction of the river because it was the epicenter of Minangkabau people’s life in ancient times.
Quote 1: “Rumah Rajo Babandiang (Rumah Gadang Kelarasan Koto Piliang) di tiok nagari bedanyo. Disiko (Luhak Limapuluh Kota) inyo pintu di sabalah kanan […] tapi di apo, di (luhak) Tanah Datar nyo di tangah […] caliak lah tata ruang disiko (Kampung Adat Balai Kaliki), lumbuang baderet-deret, Rumah Gadang dari ujuang indak ado nan malintang jo batang aia” (“Rumah Rajo Babandiang (Rumah Gadang Kelarasan Koto Piliang) different on each nagari. Here (Luhak Lima Puluh) has the entrance in the right side of the building […] but if it in (luhak) Tanah Datar the door is located in the middle of the building. Take a look at the layout here (Balai Kaliki Traditional Village), every rice barn lined up, there is no Rumah Gadang from the end of the village that crosses the river”).

Figure 2. Rumah Gadang’s distribution map in Balai Kaliki Traditional Village 
Source: Datuk Bijo Nan Hitam, 2022

Balai Kaliki Traditional Village, Payakumbuh City, has 16 Rumah Gadang, all of which have changed since the Dutch colonial era. It is marked by the presence of berando in various forms. According to the explanation from informant 3, the main requirement for a house to be called a Rumah Gadang is that it must have pillars made of juha wood, a bagonjong roof shape, and an odd number of stairs. The Minangkabau people believe this requirement is a preventive to disaster for the people who live in the house.

Quote 2: “Rumah Godang tu nyo bagonjong jo pakai tonggak. Kalo ndak ado tonggak ntu alun Rumah Godang, cuma melambangkan seperti ini (menunjukkan gambar Rumah Gadang) ya kan, dibuatnya ini (atau bagonjong) di atasnya, dibawainya itu batu semua tu kin ikan lah banyak, itu harusnya ndah buliah dirobah. […] jadi rumah batu tu Rumah Gonjong namonyo, indak Rumah Godang do. Rumah Godang nyo bakayu tonggak, […] kayu ndak bisa pulo selain kayu jua, sabab jua tu rajo kayu. Selain pado itu ndak ado kayu nan kadijadikan lai. […] kayu Rumah Godang tu ndak bisa bacampua-campua do, marusak urang nan ka manghuni. […] anak tango ndak buliah genap, apabila genap tu kita suka jatuh, […] karano urang tuo dulu bilang seperti itu.” (“The Rumah Gadang has a bagonjong roof and tonggak (pillars). Without tonggak, it cannot be called a Gadang House; it only symbolizes it as a Rumah Gadang. The building was built using a bagojong roof, but the lower part uses brick material, which is common nowadays. This must remain the same. […] so that it can only be called Rumah Gonjong, not Rumah Gadang. Rumah Gadang uses wood material, which must be Juha wood; it cannot be mixed with other types of wood. It will have a bad impact on the occupants. […] The number of steps must be odd, not even. If it is disobeyed, a disaster will come, said the elder in ancient times”).

This study uses four Rumah Gadang as case studies. The selection is based on the representation of changes in the shape and function of the Rumah Gadang’s space. The level of change is a transformation in: building elements, space, form, and function.

3.1.1 Rumah Gadang of Datuk Pangka Sinaro
Datuk Pangka Sinaro’s Rumah Gadang is a Rajo Babandiang-type Rumah Gadang built in 1918 (Figure 3). The owner of this house comes from the Mandahiliang Koto Kociak tribe. The status of this house is talipek since there is no successor in the role of appropriate datuk at this time. A woman from the Rumah Gadang clan now occupies this house. In this house, some people think the woman has two roles: a bundo kanduang, who manages the inheritance, and a mande soko, the oldest woman in the house. The daily activities of this woman are taking care of the rice fields and plantations of the artifacts belonging to her people; apart from that, she is also a traditional leader in Balai Kaliki Traditional Village. This Rumah Gadang is often used as a place to stay for guests who want to learn Minangkabau culture in the Balai Kaliki Traditional Village.
The transformation of this house appeared in the building elements, the location of the stairs, which is no longer relevant to the Kelarasan Koto Piliang in Luhak Limapuluh Kota. The reason was that the stairs had previously been inadequate and were repaired according to the needs of the woman’s mother, who was sick. Cost constraints also prevent home repairs from being thoroughly established. Apart from that, the transformation was also found on the right side of the building, with a new building used as the residence of the woman’s older brother's family.

If mapped according to actor relations, the changes in Rumah Gadang Datuk Pangka Sinaro are displayed in the sociotechnogram (Figure 3). The center of the actor’s relationship is a woman who lives in the house, where the relationship of all actors with Rumah Gadang must go through her. The impact is that the changes in this house are very minor because there are few people involved in the house, so the development of the needs of the house users is slight. There are no changes with the addition of new rooms, which affect changes in shape and space. The existence of women living in the house is also crucial to implementing the matrilineal tradition in Rumah Gadang that only women live in the house. Apart from that, the preservation of Rumah Gadang is also driven by her knowledge of the culture and traditions of the Minangkabau tribe, which drives the cognitive processes, thus enhancing the desire to preserve their culture, such as managing heirlooms and providing knowledge of the tribe's culture and traditions to the general public. She was concerned with preserving culture in collaboration with the Orang Mudo of Balai Kaliki Traditional Village, the Community Empowerment Association, and the organizations she participated in, including the Bundo Kanduang Organization.

3.1.2 Rumah Gadang of Datuk Sinaro Nan Hitam
Datuk Sinaro Nan Hitam’s Rumah Gadang belongs to the Rajo Babandiang house type (Figure 4). The grandfather of this house comes from the Kampai Bawah Damo tribe with tapakai or still ongoing status. The Rumah Gadang was built in 1916 and has undergone several renovations in 2005, 2009, 2013, and 2022. In Ranji, the owners of this house consist of three women and two men. The oldest woman, as mande soko, has migrated with her baki family and settled outside the Balai Kaliki Traditional Village. Currently, the house is occupied by the baki family of two other women who perform as bundo kanduang. The two baki families each consist of one mother and one daughter; their husbands have died. The role of bundo kanduang as a woman who manages the inheritance is assisted by the two brothers from the Ranji. The girls in the house are members of the Kaum Mudo in the village. Technological advances, especially in communication, influence the culture and mindset of young people, which impacts the current condition of Rumah Gadang.

Since 2013, the house has had two new rooms built with bricks. The two rooms are located at the rear left and right of the building. The cubicles, which were initially four rooms, were transformed into six rooms due to the additional needs of the occupants. The actor relationships in changing space can be seen in Figure 4. The addition of space emerges because the residents' needs change, and they need more space when all family members gather in the house. As a result, decisions were made to change the Rumah Gadang due to the demands of the residents' families rather than preserving the original form.
3.1.3 Rumah Gadang of Datuk Pangulu Rajo Nan Hitam

Rumah Gadang of Datuk Pangulu Rajo Nan Hitam cannot be addressed as a Rumah Gadang because it has been completely renovated and does not fulfill the requirements of a Rumah Gadang. Initially, this Rumah Gadang belonged to Gajah Maharam-type, built in 1816 by Datuk Pangulu Rajo Nan Hitam. However, this house has been unloaded and built anew using bricks, not wooden posts. The identity of the Minangkabau traditional building is shown in the shape of the bagonjong roof (Figure 6). Even though it has transformed its shape, this house's status is still maintained even though it is vague. Because of that, this house is addressed as the Rumah Tuo, which means the house of the elders of this group. Physically, it has transformed completely; social rules have become more adjustable, and there are rooms for men in this house.

The reason for renovating a house with permanent materials is that the costs are cheaper than wood materials. One juha log to be used as a pillar requires four to eight meters, where the price of one meter of wood is currently around Rp. 500,000. The Gajah Maharam-type of Rumah Gadang can use 30 juha wooden pillars, so brick materials are considered cheaper and more long-lasting than houses made of wood.

Regarding actor relations, there are still dominant actors in decision-making. The presence of main actors who still live in the house means that several traditions can still be maintained. However, external relations have an important role, such as economic factors that determine access to resources for home renovation and maintenance (Figure 6).
3.1.4 Rumah Gadang of Datuk Udun

Rumah Gadang of Datuk Udun belongs to Gadang Rajo Babandiang-type, built in 1916 and renovated in 2019. The Datuk of this house is Datuk Udun, who comes from the Dalimo Balai Kaliki Tribe. The status of the datuk is tagunakan, but this house has changed its function to become a homestay. Currently, the house is managed by the youngest brother of the datuk, who also has his own Rumah Gadang just to the right of Rumah Gadang of Datuk Udun. The homestay manager is also assisted by the Kaum Mudo, who manages the promotion and process of receiving guests. The Kaum Mudo’s secretariat office is located in front of the house.

This house has changed its function because the people who should live in the house have migrated and settled outside the Balai Kaliki Traditional Village area. The inheritance of these people is managed with the help of other people. Therefore, the people from Rumah Gadang of Datuk Udun must relish the results. However, as Rumah Gadang, this house has lost its symbolic meaning as a residence. From the mapping of actor relations, it can be seen that the Kaum Mudo has more roles than other actors in the object of the house (Figure 7). The people who own the house are no longer in the traditional village, so the Rumah Gadang of Datuk Udun is not symbolically important; another actor emerges who is more dominant, the Kaum Mudo. The people of this house consider the economic benefits of Rumah Gadang as more essential than maintaining its original symbol.

3.2 Discussion

According to the research results above, two things related to actor relations in the change of Rumah Gadang can be discussed: the level of change and influential social relations and the factors that perform in these relations.

3.2.1. The Level of Change Form and Function

Rumah Gadang in Balai Kaliki Traditional Village can be differentiated based on the emerging level of change. The first level is the change that occurs only in the building elements. Relations at this level have few relationships compared to other houses. It is because there is only one actor in a Rumah Gadang, a woman.
from Rumah Gadang Datuk Pangka Sinaro. The role of the progenitor of the house no longer exists and does not yet have a replacement candidate. So, decision making in each problem primarily results from her own decision. The woman's knowledge of the high cultural customs of the Minangkabau tribe made her a traditional figure in the village. Therefore, based on her knowledge and particular role in the house, the house actor's will is the leading force in deciding to keep the Rumah Gadang she owns.

The second level is the change that occurs in the money polarity in Rumah Gadang. This house has more relationships than the previous house, thus affecting the level of needs in the house. Many residents make them build additional space. So, decisions are made based on the deliberations between the datuk, bundo kanduang, mande soko, and other house residents.

The third level is that changes occur in the shape of the building. This house can no longer be called a Rumah Gadang because it does not meet the requirements of a Rumah Gadang. This house was built not using wood but bricks. It happens due to economic factors, where the cost of rebuilding a damaged Rumah Gadang is very expensive. So, it was decided to build a modern house with a cheaper price and more extended durability. However, the function of the house is still running like the Rumah Gadang, which is used as a place to live and manage customs, but it needs to be more effective.

The fourth level is the changes that occur in the function of the house. The building of this house still complies with the requirements of a Rumah Gadang. However, this house was no longer occupied because all the residents had migrated. So, the house is transformed into a homestay, whereby the owner gets additional income to fulfill her needs.

3.2.2. The Relation Determinant in Rumah Gadang’s Changes

Of these four changes, there are two determining relationships in the changes in Rumah Gadang. The first determining relationship is social relations. It was found that the fewer relationships there are in a Rumah Gadang, the easier it is to maintain the house's existence. However, the more people are involved in a Rumah Gadang, the more potential there will be changes in form and function to adjust the actors' needs. However, the small number of actors involved does not guarantee that conservation can be maintained because there will be a risk if there are no successors to these actors to maintain their houses.

Thus, economic relations are the second determining relationship influencing the changes in Rumah Gadang. It means that the ability to preserve the Rumah Gadang is also determined by providing very expensive maintenance costs. In this case, the actor with the authority to maintain the Rumah Gadang must have sufficient economic resources to maintain the house.

As with the two aspects that are the most significant factors in the Rumah Gadang preservation strategy, this is based on research on preserving traditional buildings and ANT. The intersection of these two substances is the position of the findings of this research study. Regarding the preservation of Rumah Gadang, a similar type done by Fitriza (2018) has similarities related to the explanation of one of the essential actors in preserving Rumah Gadang. The difference is that this research focuses on one actor, whereas this research describes the related actors as a whole. Related to ANT, there is a study conducted by Rizal (2021) that has similarities to the study of actor relationships with objects that are experiencing a decline in existence, while the difference is that the object used is not a traditional building but a heritage building, the Alwi Assegaf Ice Factory in Palembang.

4. Conclusion

Based on the data analysis and discussion results, it can be concluded that the changes that occurred at the Rumah Gadang in the Balai Kaliki Traditional Village consisted of several levels. The most minor changes occur in building elements, and the most significant changes occur in building functions. Two relations influence this level: social relations and economic relations. In social relations, it is found that the fewer actors involved, the less change will occur. For economic relations, it was found that the ability to preserve Rumah Gadang was also determined by the leading decision maker's access to economic resources to maintain the house. Change occurs because of the emergence of new needs. More and more needs drive changes in the shape and space of the Rumah Gadang. This new need also requires the support of economic resources. With the actor relations approach, the dynamics of preserving traditional buildings in Indonesia can be described.
comprehensively. Therefore, traditional building preservation strategies can be more targeted because they can portray the actors who play essential roles and their access to economic resources for maintaining these traditional buildings.

It is essential to maintain the originality of Rumah Gadang when people's needs and lifestyles change because Rumah Gadang is a traditional Minangkabau building with lavishly inheritance property status. The ownership of the building is shared property which cannot be traded. Rumah Gadang represents the entire tradition of the Minangkabau tribe because, behind the physical object of the building, there is an intangible culture that must be preserved. This culture can work effectively if the physical building is still original. It is a process of cultural inheritance from the Minangkabau tribe. Therefore, the preservation of Rumah Gadang will be appropriate if the preservation of intangible culture also supports it. The first effort must be made to identify actor relations related to the object of conservation because it is related to the lifestyle of human actors, which continues to change over time.

The limitation of this research is that it can only be managed in one village, the Balai Kaliki Traditional Village, which belongs to the Luhak Limapuluh Kota with Kelarasan Koto Piliang. Various Rumah Gadang types are still built based on their luhak and alignment. Deepening the actor's depth is only attainable once a detailed search is carried out. Therefore, recommendations for further research include studying every important actor related to the preservation of Rumah Gadang, both human and non-human actors. It is due to the right conservation strategy involving actors where there are many variations of Rumah Gadang so that by using ANT, these variations can be mapped well.

References


