

Correlation between Gunung Padang and Sundanese Traditional Roof

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ABSTRACT

Gunung Padang is the oldest prehistoric megaliths in Indonesia which has a function as a place of worship for the people who settled there about 2000BC according to its orientation and philosophy. Meanwhile after dark ages, people knowledge on building shelter arises therefore many traditional houses are build and had their philosophy implemented such as the vertical and horizontal beliefs in relation of human, nature, and divinity.

This study concerns architecture identity correlation of place in the two eras because of cultural transition which can be observed until now. Gunung Padang has a similar vertical concept identity compare to Sundanese traditional roof according to both philosophy if the highest place is the most sacred place and describes the relationship between human, nature and divinity.

The purpose of this study is to examine the correlation between Gunung Padang and the Sundanese traditional roof concept in religion and cultural aspect. Qualitative methods that leverages vernacular theory is used of the analysis methods.

Key Words: *Gunung Padang, identity, Sundanese traditional roof.*

1. INTRODUCTION

The development of civilization in one nation is strongly affected by their culture in the previous periods. One of them is the relics of prehistoric megaliths in the Sundanese heritage such as Gunung Padang. Gunung Padang is an archaeological site which formed by various size of massive rectangular volcanic stones. The stones are spread almost at the top Gunung Padang area compiled became in terraces and facing up northwest of Mount Gede (picture 1). This Prehistoric site was verified and became one of Megalithic cultural heritage in West Java. Administratively, Gunung Padang is located on the border of Gunung Padang hamlet, Karyamukti village, sub-district of Campaka, Cianjur regency, West Java province of Indonesia which Geographically, this site located between 6°. 57' LS and 107°. 01' BT. Gunung Padang located between two villages, there are Gunung Padang village in East side and Cipanggulan village on the West side.



Picture 1. The picture of Gunung Padang

Gunung Padang appeared in the constellation of prehistoric field around 1979, after three local villagers solved the mystery behind heap of shrubs. They reported their discovery and went to the authority to conduct a mapping, dilenation, and also descriptions. Gunung Padang have *punden berundak* or terraced from prism formed which located on top of a hill that extends northwest to the southeast at an altitude of 885 m above sea level. This site is surrounded by deep valleys and hills.

2. METHODOLOGY

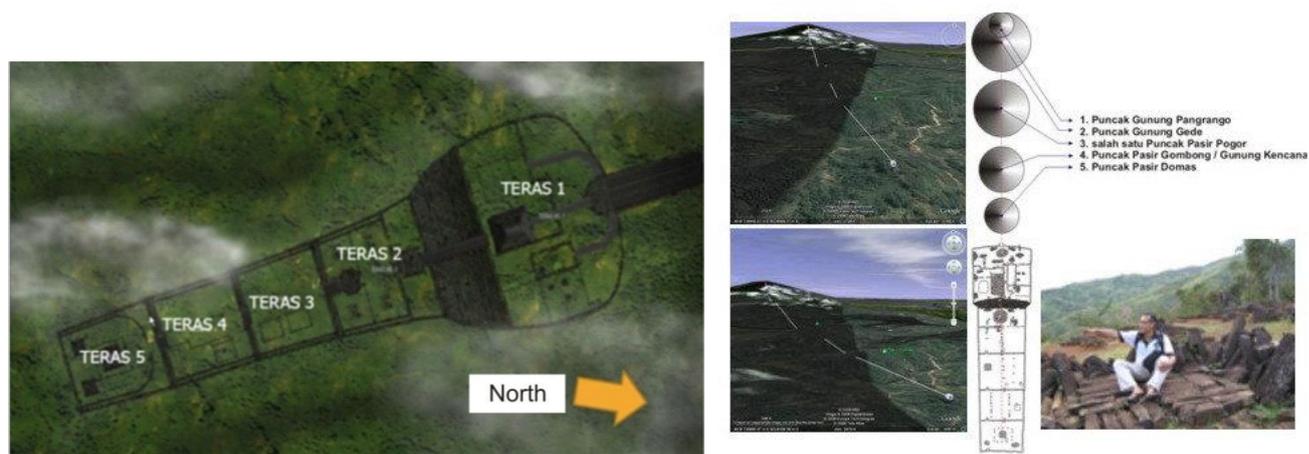
Qualitative methods of analysis was used in order to gather an in-depth understanding of human behaviour and investigates the 'why' and 'how' of decision making, rather than just what, when and where. Related theory of Amos Rapoport rationale will be compared to obtained data and information in order to limit and solve the problem. Methods of Qualitative analysis that leverages vernacular architecture theory, in particular, according to Amos Rapoport theory as the rationale. This study is expected to become a learning substance in exploration of the history of architecture in development applied in urban scale.

Correlational research is a research study that involves collecting data in order to determine wether and to what degree a relationship exists between two or more quantifiable variables (Gay, 1982:430) in Sukardi (2008:166).

3. CONTENTS AND RESULT

As presented by Nurma Ali Ridwan (2010) in his article "Basic of Local Wisdom Scientific" mentioned that local wisdom can be understood as a human effort by their intellects to act and behave towards things, objects, or events that occur in the certain space. Definition above arranged by etymology, which wisdom could be understood as human ability to use common mind in the act or behave as a result of an assessment of things, objects, or events. Specifically, that local wisdom refers to the interaction space is limited to the value system. As the interaction space that has been designed in such a way that involves the patterns of relationships between human and human or man and the physical environment. Furthermore, the theory of *human ecology* reciprocal relationship exists between the environment and behavior. The environment can affect behavior or conversely, behavior can also affect the environment (Ridwan, 2010:4-7). In this case, the ecological model based by aspects of cultural adaptation. In this view, cultural or particular technology is a major factor for people to adapt to environment (Sharer and Ashmor, 1980:61).

The efforts to adapt the disaster prone environment, Gunung Padang Megalithic advocates contribute to give their knowledge to solves those blocks arranged of stone become a terraces or *Punden Berundak* formed. Furthermore, the orientation of Gunung Padang perpendicular to the five mountains in parallel. There are Mt. Pasir Pogor, Mt. Cikencana, Mt. Pangrango, Mt. Batu and Mt. Gede (picture 2). And the tilt angle of the north is 5 degrees, exactly facing the Gede Mount. Based on theories which mentioned above, this mystery should became a local wisdom in the past, whoever built it and whatever the actual intention.



Picture 2. The orientation of Gunung Padang

Beside philosophy fact finding, the construction of Gunung Padang also excited to be explored. Gunung Padang construction consists of five terraces which has a different volcanic stone size. The first terrace is the lowest terrace which has the largest size of stone and then it formed a reduced stone size in every row until the fifth terrace. The first terrace has a rectangular shape and different size, which its two sides are leads to the northwest and southeast sides. This terrace is formed with *urug* or digged system and then reinforced with blocks of stone.

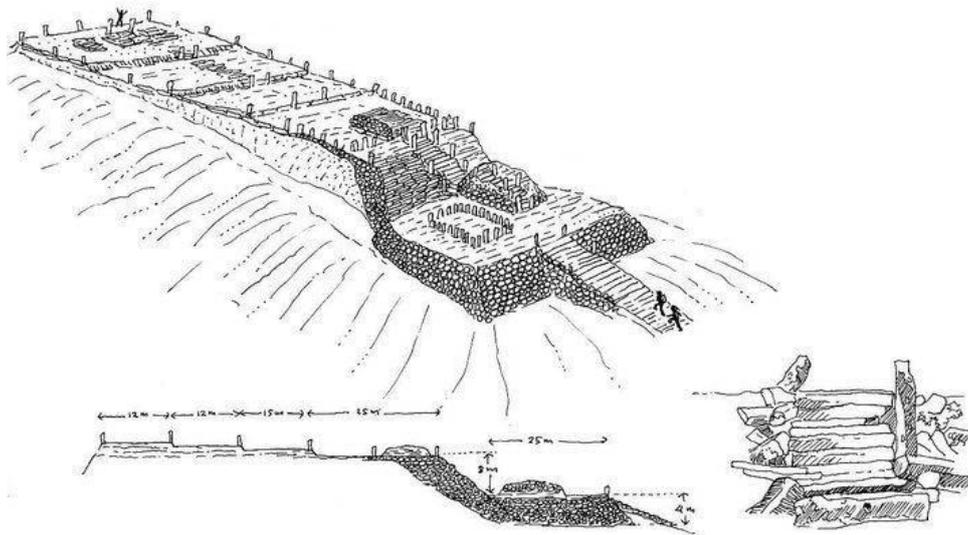


Picture 3. View from fifth terrace

The second terrace has a smaller form compare to the first terrace. On this flat surface terrace, there are six blocks of andesite stones with different size, but half of this row were lost and could not be found by investigator. At the second terrace, almost all stones were in standing position and seem to be functioned as road divider.

The third terrace has a smaller form compare with the second terrace which in this row, five stones was found in standing position even half part of its was wrecked by catastrophe. Some stones arranged in rectangular and circular forms. Overall, based by investigation, Krom gave his opinion of this terrace was expected to be a function of a cemetery in the past. Recent data obtained as a result of excavation DD Bintarti in 1982 prove that in some of the stones in this terrace, burial sign did not founded except plain pottery of shards.

The fourth terrace is higher than the third. There are three block of stones which located in the northeastern part of the fourth terrace. No block of stones are found at the southwest part of the terrace, except for an empty plot of soil that may be used for the implementation of certain ceremony, which takes widely place. Then, the fifth terrace located at the southeastern which the highest terrace. Presumably, this level considered the most sacred terrace (picture 3), where the most sacred ceremonies were held. On this terrace is found monolithic stack and estimated the burial area by the Dutch historian 1949, N. J. Krom (Sukendar, 1995).



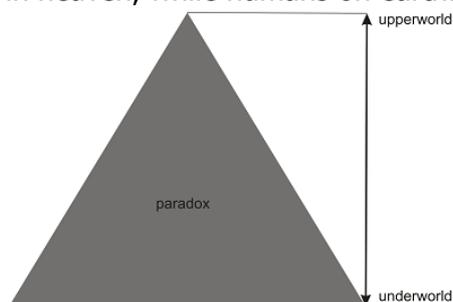
Picture 4. Illustration of the latest condition of Gunung Padang

The last observation result in the east, and south of the site on September 2011, were found smaller terraces of the main terrace of Gunung Padang. The composition of this level is an evident in the eastern side of the patio that features as many as 13 terraces according to the orientation of the main terrace extending from the north to the south. It is probable that such terraces throughout all of the *punden berundak*, the composition of such a terrace on the south side are damages, so then the north and west side should be observed very carefully. Beside that, the layers of soil was successfully investigated. Based on the observation, were found 4 meters-thick layers of sand on the soil surface as earthquake resistant (picture 4). The construction method should be simple used, just arrange or stack the block of stones. Whoever that arrange the construction of Gunung Padang has been thought about the design and construction techniques of the terraces even it was a very simple techniques. But, it was not just build, but also designed, or arranged by an architect (Purajatnika, 2008). Pon Purajatnika also explain that those terraces has a God scale. The stairways to the top deliberately inhumane, because not every people can reach the top, peoples had to have more faith to reach the top of Gunung Padang.

There were several traditional houses which has a particular tradition values as culture rules existence from formed settlements. The occupants became an affecting factor to the meaning of houses and spatial concept. Sundanese traditional house is the architecture masterpiece that contains elements of belief and meaning. All of it also based on society, where people become one of the element that hold on to norms and strong beliefs. This phenomenon will inspire to cultural norms and society in space and time as embodiment humans in the environment. With the realization of this phenomenon, changing process in human based on society will linearly involves.

Architectural form that humans created is the collective form that agreed by them based on their belief. Collective work produced can be a significance architecture style with certain belief in each region. Variety of collective form produce different culture and belief so that its presence to be felt in this world. The formation of upstream and downstream and also the upperworld and the underworld creates a paradox with the element of dualistic and

antagonistic in human space, which is personification of the transcendent powers such as the belief that the Creator living in heaven, while humans on earth.

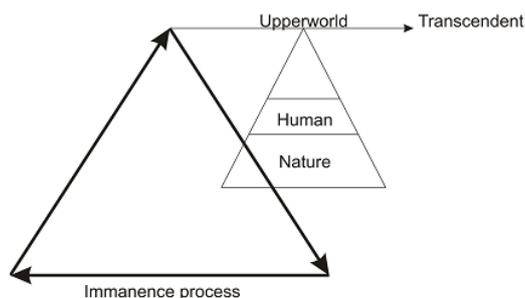


Picture 5. Illustration of colleration between upper and underworld.

This sketch is the symbol of unite of two elements (paradox) which contradict, one but two or could be called as *Dwitunggal* (duumvirate), such as male and female, upstream and downstream, body and soul, left and right (picture 5).

The settlements of Sundanese people are known as gatherers and farmers. Both of them have the same vision, that is achieving harmony toward transcendent through the creation of an object, that cannot be separated from philosophy of society supporters, with the immanence. This society believes that harmony occurs by the merging of nature and human, the human (the microcosm) is a part of nature (the macrocosm) so there have to be synergy between two of it.

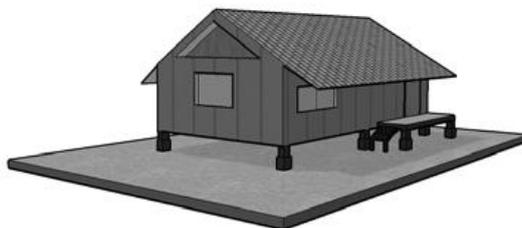
In West Java, there are still many villages found that are still preserved by the indigenous of the society supporters. Because of that, the signification and harmony is still felt in it. Indigenous of the villages still leaving traditional houses although in some aspects of architectural and structural form. The traditional house has been changed because of modernization influence. However, the signification of itself has become one aspect of the tradition that still considered by society supporters, even some Sundanese traditional houses in West Java generally built according to the specific characteristics of regional identity and customs of each region. It is proved that the existence of Sundanese tradition in every village can be interpreted in various ways, in particular it can be seen from the difference in the form of Sundanese traditional house. However it customs deeply rooted in Sundanese people live not simply timeless.



Picture 6. Immanence process of upperworld

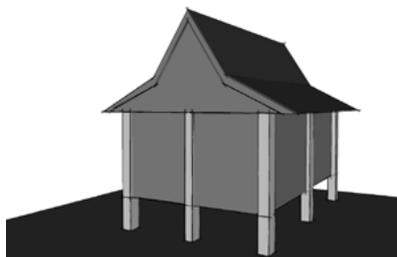
According to the speculation and correlation, there are some examples of typology of Sundanese traditional house. First example is *Suhunan* Jolopong (Jolopong Ridge). *Suhunan*

Jolopong known as *suhunan panjang* (long ridge). The form of the Jolopong have only two side of planes. Both of fields separated by ridge lines in the middle of the house building (picture 7). Even the ridge lines itself is the same side (duplicate) from both of the contiguous planes.



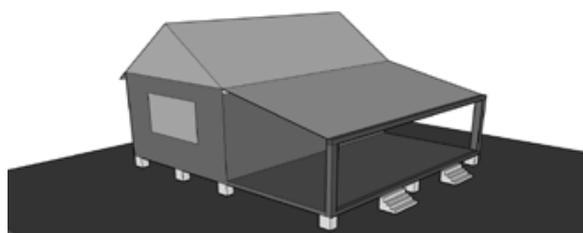
Picture 7. Jolopong roof

The second example is *Suhunan Julang Ngapak* (*Julang Ngapak Ridge*). The form of *Julang Ngapak* roof is flared on both sides of its plane roof. When viewed from the front house, roof forms such resemble the wings of a bird looming (name of a type of bird) is spreading its wings (picture 8).



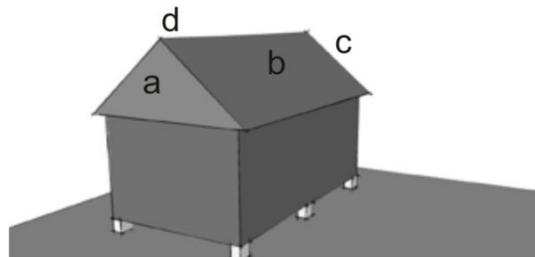
Picture 8. Julang Ngapak roof

The third example is *Suhunan Buka Palayu* (*Open Palayu*). *Open Palayu* means "facing the long". Name of *open palayu* indicates where the front door of the house is facing one side of the plane roof. Thereby, when viewed from the front of the house, clearly visible throughout the cross ridge lines from left to right (picture 9).



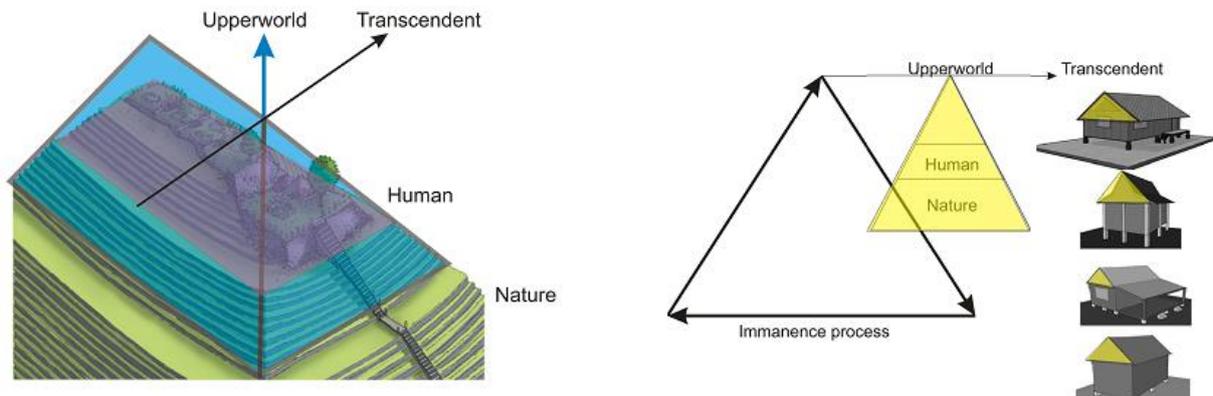
Picture 9. Buka Palayu roof

The last example is *Suhunan Perahu Kumereb* (*Kumereb boat ridge*). The roof has four pieces of the roof planes (a,b,c,d on picture 10). A pair of of the roof area are coextensive, shaped isosceles trapezoid. With the two endpoints of the ridge is the peak points of the triangle. Its legs are the two sides the trapezoid roof plane (picture 10).



Picture 10. Perahu Kumereb roof

All forms of traditional Sundanese roof has triangular basic form, appropriate with the vertical principal that citizen believes if something which located in the highest place will always receive special attention. As example, the roof became a crown of body building. The roof as a crown become something venerable as an appreciation and expectation on where they live. It is confirmed that Sundanese people still holds principle of Gunung Padang megalithic tradition with a much older age before the Sundanese traditional roof forms became evolve (picture 11).



Picture 11. Correlation between Gunung Padang formation and principal of Sundanese traditional roof which has a similar meanings

The impact of Gunung Padang architectural principles, such transformed hereditary generate vertical concept mindset of divinity. *Punden berundak* or terraced which constructs put more upward narrowing become one effect on the form of roof above increasingly getting smaller too. In addition to aspects of the local West Java microclimate is a tropical climate with high rainfall, the greatest influence on the mindset is still the generation to generation society itself that keep sustained.

4. RESUME

Based on the phenomenon which mentioned above, it can be concluded the shape and structure of megalithic sites Gunung Padang has correlation with the dynamics of Sundanese architecture. Local wisdom can be seen as the result of the dialectic between individuals or societies with their environment. Local wisdom can also be defined as a simple knowledge possessed by a society which is a response to environmental conditions, as well as the anticipatory resources of society to the changes brought by environmental influences. Especially the application of local wisdom in religious principles (vertical concept) with the

form of Sundanese architecture roof. Local wisdom principal since the megalithic time may be constantly ongoing become Sundanese architectural identity that can be applied to modern buildings of city scale throughout Indonesia or Asian countries. Over all, this principal that become an identity also applied in each Asia countries. Which the character of architecture itself has variable symbols, meanings, traditions, social functions, cultural/ritual. All of this summarized into a one big line, that Asia architecture identity are architecture philosophy.

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