



The art of space and architecture; Asta Kosala Kosali and Asta Bumi

Ida Bagus Agung Wicaksana¹

ABSTRACT

In designing space and building, the Balinese follows the guidelines that have been passed on by their predecessors. The concepts experienced countless refinement and enrichment throughout ages with the philosophical influence of Hindu teachings, by the prominent historical figures, from *Bali Aga* to Majapahit period. The Balinese refers to the idea by the name *Asta Kosala kosali* and *Asta Bumi*. Lontar *Asta Kosala kosali* encompasses the layout, guidance and building arrangements for the house and holy shrine in Bali, while the Lontar *Asta Bumi* summarizes the rules about the width of the courtyard of a shrine or temple, including the division of space, and the distance between shrine. If concluded, the ideas are aiming for one noble purpose; to create a harmonious place

to live. The *Undagi* as the executor needs to understand several points to build a perfectly balanced nesting area to live such as *Vastu Purusha Mandala*, *Hulu Teben*, *Tri Mandala dan Tri Angga*, Traditional Metric system, etc. The guidelines of *Asta Kosala Kosali* as well as *Asta Bumi*, offer not only an artistic value but also solidity against extreme natural conditions. Besides as a place to live, the architecture and space management act as a symbol of Hinduism, art, and social role. The history has been proving that the design is stable in facing various local disasters, such as earthquake, flame, torrents, flood and so forth. Furthermore, the concept is rich in philosophical value; Expert suggests the government should maintain the local genius. Thus, it would not be faded in future.

Keyword: Asta Kosala Kosali, Asta Bumi, Space, Architecture

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INTRODUCTION

In designing space and building, the Balinese follows the guidelines that have been passed on by their predecessors. Starting from how to choose a suitable place to live, a good day to build, how to organize space and determine the ideal building structure to occupy. This concept is believed to have been existed long before the *Bali Aga*. In its development, as in the *Bali Aga* era, some of the historical figures of *Bali Aga* and *Majapahit* period such as *Kebo Iwa*, and *Mpu Kuturan* who lived in the 11th century, then continued in the reign of King *Anak Wungsu* in Bali, they enriched the concepts with refinement and philosophical influence of Hindu teachings.¹

Danghyang Nirartha who lived at the time of King *Dalem Waturenggong* after *Gajah Mada* expedition to Bali in the 14th century also contributed to the repertoire of the architecture. In the present, society combines modern architectural technology and the traditional ideas based on this manuscript. The guideline, summarized in *Lontar*. The Balinese refers it by the name *Asta Kosala kosali* and *Asta Bumi*.²

BACKGROUND

The Balinese believes that *Bhagawan Wiswakarma*; the grand architect of the gods created the Rule of *Asta Kosala* and *Asta Bumi*. His expertise in making a floating-palace on the sea, as told in the epic story of *Mahabharata*, made him a central figure in the architectural art. Lontar *Asta Kosala kosali* encompasses the layout, guidance and building arrangements for the house and holy shrine in Bali, by Philosophical, Ethical, and Ritual foundations with due regard to the conception of manifestation, selection of land, good days (*Padewasan*) to build houses, and the implementation of *Yadnya*. While the Lontar *Asta Bumi* summarizes the rules about the width of the courtyard of a shrine or temple, including the division of space, and the distance between shrine.³ If concluded, the ideas are aiming for one noble purpose; to create a harmonious place to live.

Harmonization in life, indeed, is an absolute thing to be achieved. The spirit of living in harmony with all beings reflects on *Tri Hita Karana* teaching. *Tri Hita Karana* is the living philosophy of Balinese society which contains three elements that build

¹Kantor Kepala Desa, Sanur Kauh
agungwicaksana12@gmail.com

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Ida Bagus Ngurah Tri Pramana

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balance and unity on the relationship between human to God, interhuman, and a human being with their environment,⁴ then it all becomes the source of prosperity, peace, and happiness.

THE CONCEPTS IN BRIEF

Balinese culture absorbs the values of Hindu religion which has three elements as the basic framework; they are *tatwa*, *susila*, and ceremony. It aims to help people to achieve the ultimate goal (*Dharma*).⁵ Asta Kosala Kosali and Asta Bumi become implementations of Hindu religion in the architectural field. Based on the scripts, in a nutshell, several points need to be taken into account when someone ought to build a perfectly balanced nesting place to live. First, it is the *Vastu Purusha Mandala* or *Sanga Mandala*.

According to the story, there was a Giant God that had been subdued by Lord Brahma and other Gods since he wreaked havoc in the universe. However, Lord Brahma realized it was his mistake in the first place; after defeated the giant, then he granted the Giant God an authority to bring chaos to those who unable to fulfill his request. Lord Brahma assigned him as the base of all resident.

Hence, the concept of Vastu Purusha mandala applies as the concept of how to manage space in the residential area. However, some believe that the idea was a long journey of wisdom in observing natural phenomenon by the previous sage and ancestors. They realized how the placement of specific building and sunshine timing might affect the fortune and health of the resident.⁶

The following theory is *Hulu Teben*. "Hulu" means the upper course, while "teben" means the downstream or opposite direction to the upstream. The literature mentions that the east is considered as a holy direction, while the north is a symbol of the mountain. Both courses are the upstream direction. In addition, if it refers to the concept of Vastu Purusha Mandala, the meeting of the east and north or North-east is the position where the head and upper body of the giant god. Hence in its application, the place where the head of the giant god lies is the ultimate location to build the temple.

The direction can be precisely determined by using a compass. When deciding the location of the temple, it should be exact. It must not deviate to the northeast or southeast. If someone chooses North as Hulu, or in observing the mountains and hills' location, they should check the compass. For example, if the mountain is in the north, the compass should point the same direction, not to deviate to the northeast or northwest. The precise location of Hulu will make it easier to determine shrines' position, based on its purpose to facilitate the implementation of the ceremony and worship.⁷

Third, is the *Tri Mandala* and *Tri Angga* concepts. Tri mandala concept explains that both the macrocosms and the microcosmos could be divided into three parts, they are *Nista*, *Madya*, and *Utama*.⁸ For instance, on the human body, or known as 'Tri Angga,' lower body is Nista, Middle frame is Madya, and the head is Utama. while for the earth, Mountain is considered Utama, Land is Madya and Sea is Nista. In managing an area for Temple, Balinese Hindu treats Utama as the holiest place. Thus only prayer-related activity may be conducted in this area. Madya is a middle area; this area serves as a supporting place for the prayer activity. However, it is off limit to a specific action that belongs to Nista Area. In Nista Area, or the outer area is where people may behave as what they usually do. As in a temple, Nista mandala is where the food stalls are open, the parking area, or where the people slaughter animals for offering purposes. The concepts also applied in selecting material to build or to craft something; the article is divided into Nista, Madya or Utama.

Next, the metric system used in applying this literary method is different from the generally

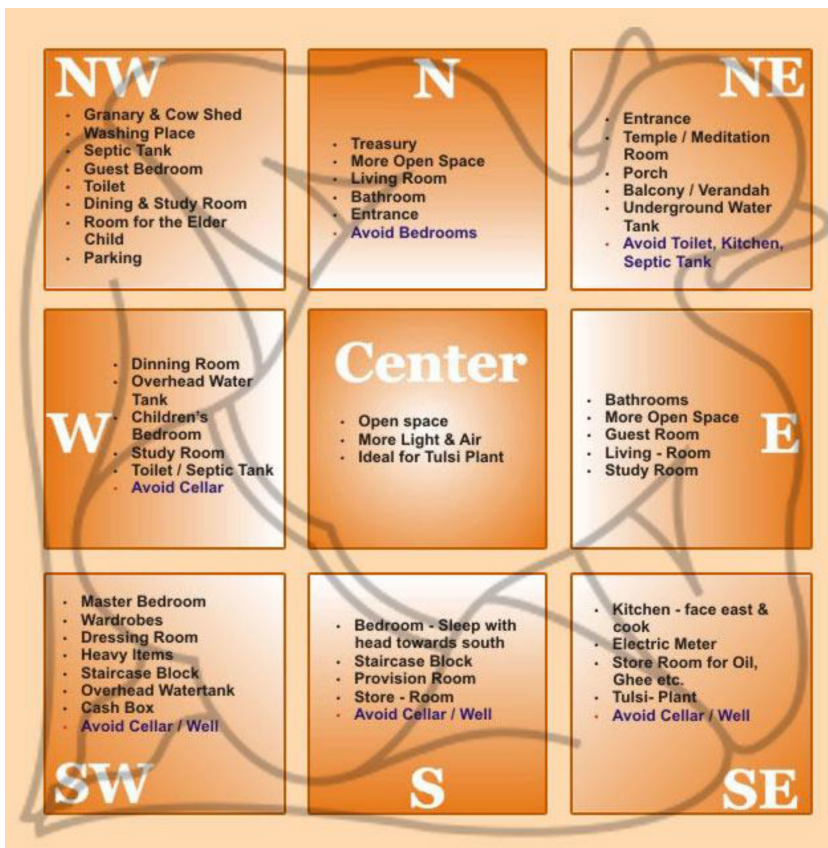


Figure 1 Vastu Purusha mandala applied as the concept of how to manage space in the residential area⁶

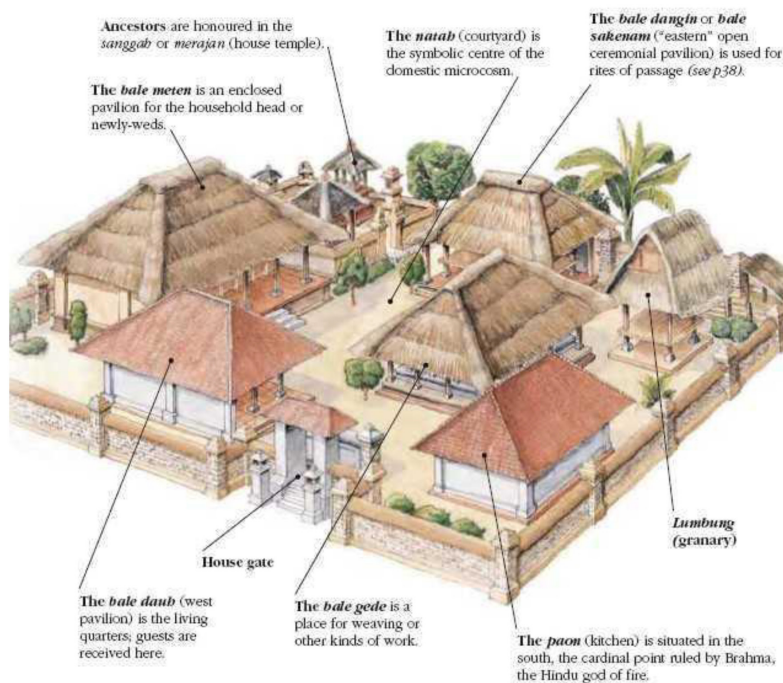


Figure 2 The blueprint of traditional Balinese building¹¹

used by modern architect worldwide. The teaching is Bhuwana Agung must be in harmony with the Bhuana alit. Therefore, the measuring instrument used to measure the size of the residence, or the shrine is the size of the building's owner. Whereas if the building is a village's temple, then the size of the village head or village elders is used as a benchmark.⁹

Many other aspects should be taken into accounts by The *Undagi*; the local term for people who work in designing, crafting and building, related to the rules set by the predecessors. An undagi, should not only equip themselves with the knowledge of the design but also need to learn and understand the art, culture, customs, and religion.¹⁰

EXPERT'S OPINION

The distance between one building to other building, according to the elder, apparently was carefully calculated. For example, the kitchen is situated next to the bathroom. Kitchen acts as a place to cook, and fire-related area. When the kitchen got caught by fire, the resident may obtain water in the next building, the bathroom, to put off the flame. The distance between one structure to other, if correctly following the rules, would keep the fire spreading to other building. Other brilliant examples such as the position of the gate that placed not adjacent with the yard, thus people outside cannot directly see the inside of the house, or the placement of *Gedong* which served as a vault, in the

innermost area of the house.

One of Bali's most famous architects, Popo Danes, claimed the conventional Balinese construction is a culturally rich architecture. It is full of philosophy, such as applying the concept of Asta Kosala Kosali. "Asta Kosala Kosali is the blueprint of traditional Balinese building. Starting from how to arrange the space and room, thus we have Sanga mandala, where an area is divided into nine to determine where they should build *Sanggah*, main house, *natah*, *teba* and so on" Popo said. In making the floor, He observes the Balinese tends to build a higher stepping floor. "I think it has been through a long process based on life experience when torrent occurs in the rainy season, the water level is below the floor's level," Popo said.

The ancestor had taken into account about the availability of constructing material. Since in the past, the article on the island is limited, unlike nowadays, where we may import wood from Kalimantan. "In Bali, the resources are less to be expected; the wood is rare and mostly short, the stones are mostly local stones. Thus these traditional rules also discuss hierarchy related to the availability of materials," he added.

According to Popo, since Balinese addresses spirituality highly, therefore the highest quality material is used to build a place for prayer. For instance, the best quality woods to build a temple are *Cempaka*, Jackfruit, and *Majagau*. These woods are considered the first-class (Utama) in Bali. Popo added "in the past, If wood was five meters in length, it is a long one. At that time, there were no bolt system or glue to extend it. They were applying measurement using body size, like *adepa*, *anyari*, *alangkat* due to it was impossible to make a pillar more than three and a half meters".¹²

The Grand design of Balinese architecture and its management, are proven, to offer not only an artistic value but also solidity against extreme natural conditions. Experts believe the Balinese house has its uniqueness, which is resistant to earthquake shocks. Furthermore, the local architecture of Bali is one of the essential findings, in the history of the earthquake in Indonesia, especially in Bali.

Some prominent figures that well-known as quake observer experts, Anak Agung Ngurah Sentana, Gde Krisna and I Made Kris Adi Sastra gave their comments on earthquake disaster 'Gejer Bali' in 1815 ago. They believe the old house construction is resistant to shocks since locals utilized wood frames that flexibly move during earthquakes. The installation prevented the inhabitants from the building's rubbles that caused by the earthquake. "This *bale* structure does not root into the ground, and if there is an earthquake, it just graciously



Figure 3 Balinese traditional metric system¹³

shifted. The collapsed part is only the wall. As we can see, It is rarely in the old village, people killed by the earthquake” said Krisna. Moreover, local architecture since ancient Balinese civilization has become one of the important findings in the history of the earthquake in Indonesia. The ancient Balinese civilization has experienced a long trial process, to build earthquake resistant houses as a legacy to their offspring.¹⁴

Gede Kresna said the design of traditional houses in the past, however, more resistant to an earthquake than modern building nowadays. “The old Balinese building, despite built with limited materials, it had a formidable design to anticipate natural earthquakes and volcanic eruptions.” for instance, the traditional houses in *Sidatapa* village were earthquake-resistant, when Seririt earthquake occurred,” he said. Moreover, he added, some old villages apply earthquake-resistant concept despite the simplicity of its building, such as in the village of *Julah*, *Pacung*, *Pedawa* and several other ancient villages. “In fact, until nowadays, in the community of Sidetapa Village, they use the old building model,” he said. Krishna further explained, the government should maintain the local genius concept of Balinese building that both have profound value and philosophy.¹⁵

CONCLUSION

The guidelines of Asta Kosala Kosali as well as Asta Bumi, offer not only an artistic value but also solidity against extreme natural conditions. Besides as a place to live, the architecture and space management act as a symbol of Hinduism, art, and social role. The history has proved that the design is useful in facing various local disaster, such as earthquake, flame, torrents, flood and so forth. Since the concept is rich in philosophical value, Expert suggests the government should maintain the local genius. Thus it would not be faded in future.

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