

PROPORTION IDENTIFICATION OF CANDI TEBING GUNUNG KAWI IN TAMPAKSIRING GIANYAR-BALI

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ABSTRACT

Temples in Indonesia, are generally related to legacy of Hinduism-Buddhism and monarchy historical era. The temple is an architectural structure which has its own rules, started from site selection to calculation proportion. CandiTebing can be classified into architectural object, and can't be seen as an archeological relic. The identification of proportion on CandiTebingGunungKawi can be used as an architectural research object. The purpose of the research is to analyze its proportion forming elements of CandiTebingGunungKawi design. The research design using mixed methods between qualitative and quantitative approaches, and also used field research method. Proportion forming elements of CandiTebingGunungKawi generally can be divided into three main parts; pedestal, body, and head. Each proportion forming elements detail on pedestal, body and crown, consist of a lower framed, body and upper framed.

Keywords : *canditebing; forming elements; proportion*

A. INTRODUCTION

The term temple in Indonesia is generally associated with sacred buildings of Hindu-Buddhist relics and royal times. The temple was built as a symbol of the universe as the place or *stana* of the Gods. The temple is also an artificial form of the mountain, the *stana* of the real Gods of Mount Mahameru (Soekmono, 1988: 84). In the Indonesian dictionary great dictionary is defined as ancient buildings made of stone, a place of worship, storage of ashes of kings or Hindu-Buddhist priests. On the other hand, when starting from the origin of the word, the temple is derived from *Kawi* language, namely *cinandi*, which means buried (Mardiwarsito, 1985: 134). The purpose of being buried (*cinandi*) in this context is not a corpse or ashes but a variety of objects, such as pieces of various metals and agate, accompanied by serving and considered as symbols of physical substances of the united king with his reincarnation of the God (Soekmono, 1988: 81).

The temple is said to be a replica of Mount Mahameru which also has guidelines on its establishment ranging from location selection to proportion calculation. In the building of the temple consideration of proper location selection is the most important thing. A site or land with no streams, swampy soil, gravel-filled soil and the remains of a cremation site should be avoided (Kaulacara, 1966: 10). The sandiest soil is the soil that is said to be good for erecting a temple. The

selection of temple locations is also classified by the smell of the soil in the site. Sweet soil is said to be the land of the Brahmana, the reddish-colored soil as fresh and acidic is called Ksatriya soil, the salty soil is Vaisya's land and the dark, muddy-smelling soil is the land of Sudra (Kaulacara 1966: 10).

Indonesia has a dissemination of heritage sites in the form of temples that are found in Java and Bali. The discovery of temples in Java is in the form of Buddhist temples and Hindu temples, the temples are like Borobudur Temple, Prambanan, Mendut, Pawon, Dieng, Sewu, and there are still many other temples scattered in various areas in Java. Similarly found in Bali, the temples are also widely spread in some areas in Bali, the temples are Pegulingan Temple, Prasada Ship, Canggi Temple, Mengening Temple and *Candi Tebing* Gunung Kawi which is also a tourist attraction best known by the world international and protected by Law No. 11 of 2010 on Cultural Heritage.

Candi Tebing Gunung Kawi became one of the famous objects because of its uniqueness that is built on the cliff wall. Temple with this type is not found in other areas, even this temple is only found in Bali. Temple cliff in the chisel on the cliff wall and only has one face. *Candi Tebing* Gunung Kawi consists of ten temples that are divided into three different locations. The division of the cliff temple (*candi tebing*) group is based on the number of cliff temples in each location. The division of groups of the cliffs temple is a complex of five-group

temples, a complex of four-group temples and one group temple complex. In addition to the temple there are also hermitages scattered in the temple complex of the cliff. Due to the large area and the number of objects of these relics sites, no wonder if this area becomes a tourist destination. Foreign and domestic tourists are arriving to see the monumental work.

Candi tebing is also one of the creation of architecture, and not only seen from the study of archeology only. Principle of architectural design such as the calculation of the proportion of *Candi Tebing Gunung Kawi* is one of the topics that can be used as a research in architecture studies. Proportion of course formed from the comparison of one element with another element in a building. The comparison can be a comparison between the width, thickness and height of each element. The cliffs in Gunung Kawi appear to have the same proportions, but to know how the calculations and the basic measures used in composing such proportions can not be seen with the naked eye. If carefully observed these temples have different arrangements of size and details.

Differences from the size of the temple appear in the five group temples that have one temple with a higher size than the other temple. This is also confirmed in the archive of images from the *Balai Pelestarian Cagar Budaya (BPCB)* or Cultural Heritage Preservation Public Hall which also shows these differences. This difference certainly raises the question of whether all temples have the same proportion calculations. The calculation of the proportion of *Candi Tebing Gunung Kawi* becomes interesting to be examined from the application of the proportion system, because this *candi tebing* has a different founding location than the temples generally established on flat land rather than clinging to the cliff wall.

The purpose of this research is to analyze the elements of proportion forming of *Candi Tebing Gunung Kawi* in Tampaksiring, Gianyar. This study is expected to add guidance related to the benchmark of the size of the proportions used in temple buildings, especially in *Candi Tebing Gunung Kawi* and the findings of this study are expected to be a reference as well as a comparison in size calculations to make the proportions of other buildings associated with measure or *sikut*, *gegulak* as well as *asta kosala kosali* especially on traditional Balinese architecture.

B. LITERATURE STUDY

Literature study used is research by Atmadi (1979) with the title of research "Beberapa Patokan Perancangan Bangunan Candi, Suatu Penelitian Melalui Ungkapan Bangunan Pada Relief Candi Borobudur". This study examines the benchmark design of the building through the reliefs on the temple, especially on the reliefs of Borobudur Temple. The method used is to classify the parts of the temples under study such as the temple building with the construction of stone structures and wooden construction buildings. Provision of codes on each part of the temple is also done to facilitate the grouping. Hypothesis used in this research, one hypothesis is benchmark comparison of building components applied to the relief of Borobudur Temple is a benchmark that developed in Indonesia, especially in Java. In the conclusion also presented about the basic size of a tunnel used to build temples in Central Java. *Tala* is a measure of the human body from the tip of the forehead to the tip of the chin or the distance between the tip of the thumb and the tip of the middle finger when supine.

C. METHODOLOGY

This research uses mixed methods research or combined research method, that is combination between qualitative and quantitative approach. The research strategy uses simultaneous and sequential data collection to understand the problems as well as possible. Data collection can be obtained from numerical information (via instrument) as well as textual information (through interview) so that the final data obtained can show information that is both qualitative and quantitative (Emzir, 2012: 28). This research also uses field research method or field research. The field research approach is chosen because this approach is more likely to be an in-depth field observation of an object considering that the research is related to the proportion, so that there is a direct measurement of the object's dimensions in the field. Primary data will be more easily collected by measuring on the objects of the cliff temples at Gunung Kawi. Problems and questions about an object will be easy to find with direct observation in the field.

Determination of the source of research data is a reference to determine the appropriate instrument and data collection techniques. This research uses quantitative and qualitative data collected by measuring the object of the cliff temple and the interview with the relevant source. For quantitative

data collection techniques of course is done by direct measurement on the cliffs by dividing the cliffs into three parts of the head, body and legs. Measuring tool used in the measurement is a manual meter, considering the field is quite difficult and the condition of the temple is not in good condition.

D. RESULTS AND DISCUSSION

General Representation of *Candi Tebing Gunung Kawi*

Candi Tebing Gunung Kawi is located in Penaka, Tampaksiring village, Tampaksiring district, Gianyar regency. *Candi Tebing* Gunung Kawi consists of 10 pieces of temples located in three locations such as the explanation in figure 1.1. Group 5 temple is said to be the main group and looks at the 5A temple which has the highest visible size. This is also reinforced by the existence of script or Sanskrit writing that reads *haji home ing jalu* and interpreted as a king who died in Valley of Pakerisan River. The layout of the temple uses the concept of *kaja* (North in English) as the main orientation shown by the position of temple 5A located in the most royal position. *Kaja* in Indonesian means north, but it should be emphasized that *kaja* does not necessarily mean the north in the Indonesian language, because *kaja* especially in terms of Balinese architecture is the orientation towards the mountain which is considered as the main orientation. The cliff temples at Gunung Kawi also have place of *pedagingan* located just below the false door. The place of *pedagingan* is a place to bury or store five kinds of metal symbolized as five basic glory when ritual *mapendeman panca datu* (Disbud, 1987: 6). *Nawasanga* casket is a place to put various types of metal and other objects accompanied by serving. These objects are also called *pripih* (Soekmono, 1988: 81).

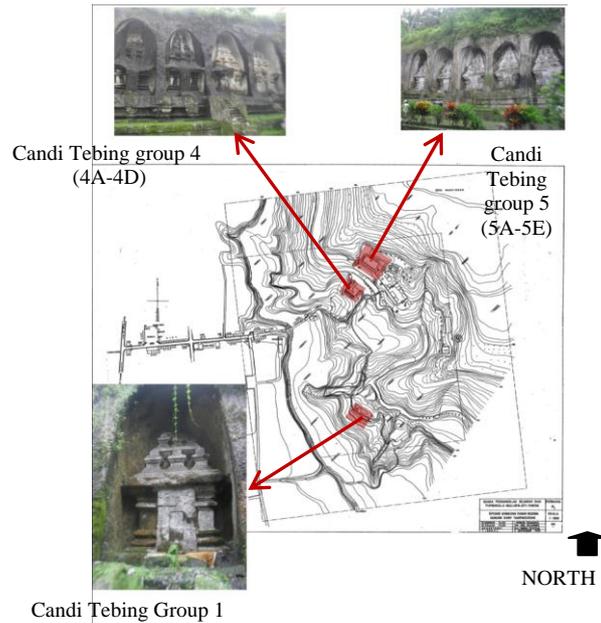


Figure 1. Situation Map of Candi Tebing Gunung Kawi
 (Source: author).

Candi Tebing Gunung Kawi are on the right and left side of the Pakerisan River, as are the hermitage caves scattered along the river. The 5 group temples and groups of 4 positions are facing each other and both groups are on the right side of the river's left bank. Unlike the case with the temples 5 and Temple 4 are clustered, temple 1 only consists of one temple and located far south of temple 5 and temple 4. In general the physical conditions of the ten temples have started to experience damage. This is evident in the temples of group 4, especially 4D temples whose condition is already very alarming. The head of the 4D temple is almost out of shape on the front, as well as on the head of the temple 1. Damages on the face of the temple also complicate the measurement process to get the calculation of the proportion of the temple. The original forms of the temple are also difficult to ascertain since the temples have been coated with cement to keep the shape of the temple. Damage generally occurs on the front side of the temple, while on the side parts can still be read and can be measured.

Proportion forming elements of CandiTebingGunungKawi

The Proportion forming elements of *CandiTebingGunung Kawi* is formed by three main elements of the base, body and top. Each major element is also composed by more detailed constituent elements so as to form the proportion of the cliff temple. To simplify the explanation, the detail elements are named as the forming element of proportion with proportion forming elements code. Each temple in each group has a similar proportion forming elements repetition, but there are different sections. The Proportion forming elements will be discussed in every major element of the temple that is on the base/pedestal, body and top/head.

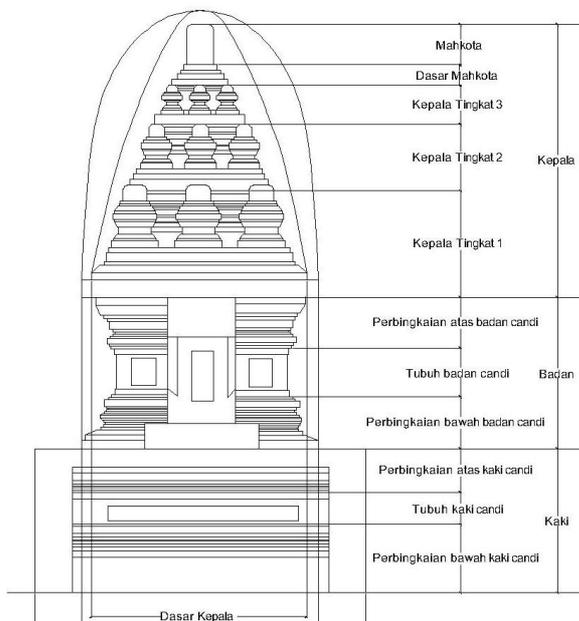


Figure 2.Detail of Base, Body, and Top of CandiTebingGunungKawi (Source: author).

The proportion of Candi Tebing Gunung Kawi is also formed by a very detailed The Proportion forming elements of the smallest parts. The naming of each proportion forming elements is adjusted to the naming in Gianyar area considering Candi Tebing Gunung Kawi is still in Gianyar area and conducting interviews on resource persons who know about naming the temple section. The interviewees were from BPCB, undagi (builders), and Balinese stilers who were around Tampaksiring-Gianyar area. It aims to provide

comparability and look for conformity to the names of The Proportion forming elements to be used.

Pedestal (base) of the Candi (temple)

The Proportion forming elements discussion starts from the pedestal of the 5th group temple. The 5-membered group's temple is connected into one part and begins to separate from the body part of the temple. The temple pedestal in group 5 shows that there is a difference in 5A temple pedestal which has clear boundary and an elevation level of about ± 36 cm from the temple level of 5B-5E, while at 5B-5E temple pedestal is seen to be one like in Figure 3 and not seen there clear boundaries for every pedestal of the temple. Differences 5A temple pedestal also shows that this temple has advantages of other temples. The application of the principle of axis in the architecture of the temple is shown by the stairs up at the pedestal of 5C temple which position is located in the middle of the group5 temple.

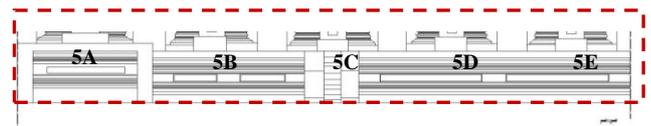


Figure 3.Front Elevation pedestal of Candi Group 5 CandiTebingGunungKawi (Source: author).

The Proportion forming elements 5A temple pedestal is divided into lower frame, body and upper frame. The bottom framing is composed by the proportion forming elements in the form of pedestal base, ganggong, capon, sebitan, baong capung, bebed, body parts composed by pengawak, and the top frames are composed by kalung, baong capung, sebitan, capon, ganggong and penukub. The top framing is the repetition of the bottom frame just only its position is inverted or in a mirror state. The structure of the proportion forming elements at the pedestal of the 5B-5E group temple is also the same as the proportion forming elements of temple 5A which is also divided into the lower frame, body, and bottom frame with the same detail the proportion forming elements that consists of pedestal base, ganggong, capon, sebitan, baong capung, bebed, pengawak, kalung and penukub. The difference with 5A legs is seen from the details of the sebitan and the numbered kalung at different levels.

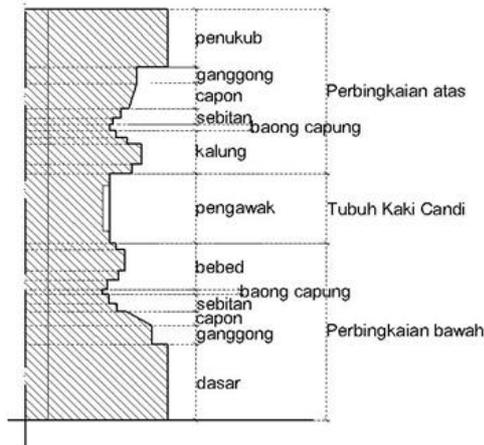


Figure 4. The Proportion forming elements pedestal of Candi 5A CandiTebingGunungKawi (Source: author).

The 4th group temple pedestal also has similarities with the temple pedestal 5B-5E which becomes only at the pedestal of the temple 4 the borders of the temple's legs are more clearly visible. The application of the principle of the axis to the design is also shown in the placement of the staircase in the middle. Unlike the 5 group temples that indeed amounted to five temples so that the ladder placed in the middle position right on the temple 5C, while at temple 4 because the number of even-numbered ladders placed between the temple 4B and 4C temple. The structure of the proportion forming elements at the pedestal of the temple 4 is not much different from the 5 temple which is also divided into the lower frame, body, and upper frames with the arrangement of the pedestal base.

Unlike the case with temple 5 and temple 4, temple 1 which consists of one temple also has legs that look clearly. Temple 1 has a smaller size than other temples, and has a ladder in the middle of the temple as in temple 5 and temple 4. A differences leg of temple 1 with other temples visible on the side of the temple pedestal that has three sides looks like the body and head of the temple.

The Body of Candi (temple)

The proportion forming elements on the body of the temple also has similarities with the proportion forming elements on the pedestal of the temple, it's just that there are several repetitions of the proportion forming elements on the body of the temple like the repetition of the bebed. Differences form bebed visible on temple 5A one of the different bebed and not owned by other

temples. This further reinforces the statement that temple 5A is the main temple in *candi tebing Gunung Kawi* complex. The temple bodies are also much damaged and there are some parts that are not read anymore, therefore the measurement is done by estimating the proportion forming elements that can still be read or compare with the proportion forming elements that can still be read.

The proportion forming elements on the body of the temple is also divided into the lower frame, body, and upper framing. Frame under the body of the temple is arranged by the base of the body, ganggong, capon, sebitan, two baong dragonflies and two bebed under the guard, then the body parts of the temple composed by the man, while the top frame is composed by *kalong*, *baong capung*, *sebitan*, *capon*, *ganggong*, and *penukub*. The body of the temple also has a genuine pedagingan in the middle of the body precisely under a pseudo door. The pseudo door becomes a barrier between the right and left wingers. Differences the proportion forming elements also occurs in the temple body as well as the pedestal of the temple, the difference the proportion forming elements occurs on the number of levels or palih bebed, necklaces and sebitan. The explanation in the following figures is to show each equation as well as the difference from the temple body parts between one temple to another temple or between groups of temples.

The condition of the temple bodies is almost all hard to read on the front, except in temples 5A, 5B, and temple 1. Candi 5A has the best condition but not the original form of the temple, but the cement-covered temple. In addition, temples 5A and 5B are in places that are not too wet, unlike the case of temples 5C-5E, 4A-4D and temple 1 is relatively in a wet and humid. Body 5C and 5D temple is not read on the front and some parts on the side, as well as the temple 4A-4D front of the body of the temple has been difficult to read even a pseudony door that has been flat.

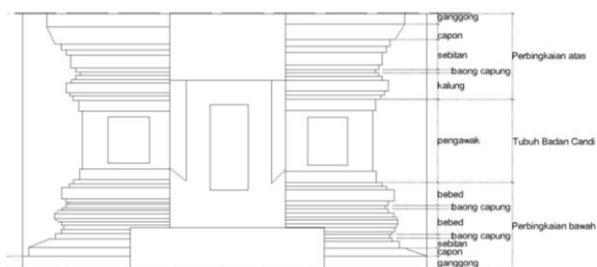


Figure 5. the proportion forming elements body of Candi 5A CandiTebingGunungKawi (Source: author)

Head of Candi (temple)

The head of the temple is the most complex part, because of the large number of the proportion forming elements in this section. In contrast to the legs and bodies of the temple, the head has several distinct the proportion forming elements although there is indeed a similar repetition at every level. Differences the proportion forming elements varies greatly in the head from the base to the top of the head. The discussion of the proportion forming elements on the head of the temple can not be seen only from the front view only, it is because there are parts that are not visible and only seen on the cut image.

The head of the temple is divided into four namely the head level 1, head level 2, head level 3 and the crown of the temple. Each section has different the proportion forming elements at each level. The division on each head of the temple also consists of the lower frame, body, and upper frame, and in each part is also composed by a more detailed the proportion forming elements. In the main part compiled by the base of the crown and the main crown or in Balinese terms called with *murda*. Each level of head is decorated with three pieces of *angklok / mendur* that resemble a stupa. The detail of each framing is also composed by the base, *capon*, *ganggong*, *sebitan*, *baong capung*, and *penukub* only each level has a different amount. The proportion forming elements part of the head that is not owned by body parts and feet is the crown.

The temple's proportion forming elements composition of temple 5 on temple 5, temple 4 and temple 1 is very different, especially at temple 1. Temple 1 does have overall difference from pedestal to head, while temple 5 and temple 4 are almost the same although if observed there are differences in some the part as in the head is precisely the difference in the framing below level 3. Each level has a bottom frame, but at the head of the 3rd level temple in group 5 there is no apparent use of the bottom frame. The possibility of the absence of the bottom frame in temple 5 is predicted because of the exhausted level 3 spaces or no longer possible to add frames.

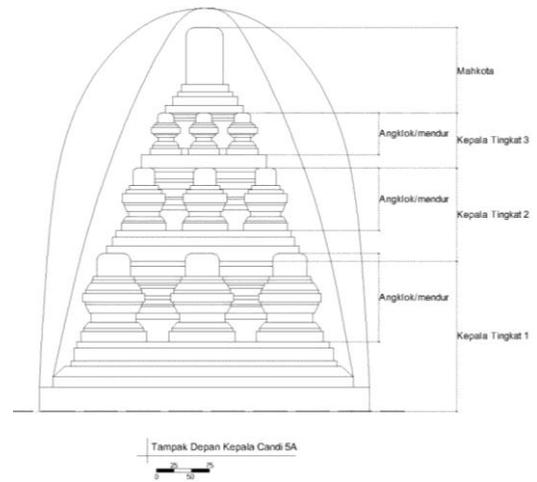


Figure 6. the proportion forming elements Head of Candi 5A CandiTebingGunungKawi (Source: author).

The heads of the 5, 4 and 1 groups of temples are almost entirely different from both the proportion forming elements and the dimensions. *Angklok / mendur* is one of the prominent parts in the head. Based on the results of interviews with the speakers, *angklok / mendur* actually only decoration at each level of the temple whose position covered the main level of each head of the upper frame, so it does not look intact from the front or side. *Angklok / mendur* in detail also prepared by the proportion forming elements such as base, *capon*, *ganggong*, *pengawak*, *penukub*, and *murda*. Each group of temples also has different the proportion forming elements *angklok / mendur* arrangement. At temple 5 and temple 4 difference of the proportion forming elements on *angklok / mendur* seen at head level 3. Temple 5A and temple 5B have *angklok / mendur* which is different with temple 5C-5E, while temple 4A and temple 4B have *angklok / mendur* which is different also with temple 4C and 4D, while temple 1 does have a simple *angklok / mendur* without *capon*.

E. CONCLUSION

The proportion forming elements in Candi Tebing Gunung Kawi is broadly divided into three main parts of the pedestal, body and head. The proportion forming elements details of each leg, body and head section consist of a lower frame, body and upper frame. The proportion forming elements that exist in every part of the temple are the same; it's just that there are different naming according to its placement. The legs are divided into lower frames, bodies, and upper frames with

detail consisting of the base (*dasar*), *pengawak* and *penukub*, then the body part is also divided into the lower frame, the body and the upper frame and composed of the base (*dasar*), *pengawak* and *penukub*, only the head has its own level of complexity because its level is also divided into the lower frame, the body, and the upper frame.

The real proportion forming elements has the same shape but with different names like *bebed* and *kalung*. *Bebed* is the name for the the proportion forming elements that is under the wing while the *kalung* is the name for the proportion forming elements that is above the wannabe. *Ganggong*, *capon*, *sebitan* and *baongcapung* are the proportion forming elements that are always present in every part of the pedestal, body and head. *Ganggong*, *capon*, *sebitan* and *baong capung* on the legs started after the base and so on the body. Unlike the case with the legs and bodies *ganggong*, *capon*, *sebitan* and *baong capung* is contained in detail framing up. The proportion forming elements heads in the form of *angklok / mendur* is not the main part of the head-shaped, *angklok / mendur* is only decorative that fills each level of the head.

ACKNOWLEDGMENT

This research was made in order to follow the haze of research of novice lecturer of Kementrianc Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia in the year of implementation of 2017, which of course has been fully funded by the Kementrian Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia. In the writing and completion of this study, it certainly will not work smoothly if there is no support from the Faculty of Engineering, University of Warmadewa, especially in the Department of Architecture which fully supports the full process of this research. Are also acknowledgments to the research institute of Warmadewa University which has provided research research clinics and the like to add insight and writing skills.

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