

# THE RECONSTRUCTION OF “BOROBUDUR CHAIR” AN INDONESIAN CULTURAL HERITAGE

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## ABSTRACT

This Borobudur chair is a very interesting object because it shows that 1,200 years ago Javanese people (those who lived in Java Island, Indonesia) had a tradition of sitting on a chair. This fact shows dissimilarity from the common opinion stating that Javanese people first encountered with a chair during the colonial era. Javanese people already had “sitting on a chair” tradition that is similar to ancient Egyptians, Greeks, Romans, and Chinese people who had adopted this custom before the Javanese. “Borobudur Chair” is a reconstruction of a chair visual from the reliefs of Borobudur temple. It is made by interpreting the shape of the chair in the reliefs which is then translated into a replica. There are two main data for this research. First is the reliefs in Borobudur temple, and the main concern is the visual of chair that is similar with the contemporary chair. These visuals can be found in the section Karmawibhanga, engraved in 160 panels. They are not a continuous story, but pieces of the visuals of karma. Karma can be defined as actions derived from a cause (both physical causes and ideas) and consequences. This research starts from the reconstruction process until the replica production of Borobudur chair. I do hope that this study can be one of the ways to preserve Indonesian cultural heritage and can be used today and in the future. The reconstruction process can be a way to preserve Indonesian heritage, such as I have done with this research.

## Key Words





Borobudur chair, cultural preservation, reconstruction



## INTRODUCTION

Indonesia (in this case, it refers to Java Island) is rich in cultural heritage, from pre-historical era, historical era (Hindu-Buddha period), Islam, colonial, to post Independence era. The archeologists have found many temples and sculptures made of stone dating back from Hindu-Buddha period. One of them is Borobudur temple. This monument was built in eighth century. When it was found for the first time, Borobudur had been ruined; it was then reconstructed. This temple stands in Mangelang, Central Java, where the Javanese people live. Borobudur is a historic monument that is still surrounded by mysteries. There was a saying that Borobudur was originally located in the middle of a lake. It was like a lotus flower floating on water. This opinion was stated by Nieuwenkamp, an architect, sculptor, painter, as well as ethnologist and writer. Two geologists from Utrecht, the Netherlands, Dr. R.M.R. Rutten and Dr. R.W. van Bemmelen, supported this view by saying that there had been a lake in Kedu (the town where Borobudur was located) but now it already dried up (Joesoef, 2004: 68-69). Many researches about Borobudur had been conducted, but it doesn't stop the researchers to dig into new findings from this temple. Borobudur has three steps. First is *kamadhatu* or the world of desire, *rupadhatu* or the world related to the appearance, and *arupadhatu* or the world that is not related to the appearance (Sedyawati, 2006: 416). *Kamadhatu*

consists of 160 *karmavibangga* reliefs that tell about karma. It was covered with stones but there are some visible parts located in the south-east part of the temple. *Rupadhatu*, which consists of 120 *lalitavistara* reliefs, are parts of the steps in which we can see several stories. First is the story of Sidharta Buddha Gautama, the birth of *Jatakamala*, and the heroic story of *Avadana*, displayed in 720 panels. Then there is a story of *Gandavyuha*, that tells about a journey of Bodhisattva in searching for wisdom in 420 reliefs. The last is *Arupadhatu* in 72 stupas and a grand stupa (Mudhiuddin, 2009: 62-66). According to Soekmono, as cited by Daed Joesoef, Borobudur has 1,460 reliefs (Joeseof, 2004: 100). The reliefs in Borobudur are not only about the life of some human figures but, based on the visual in the relief, they also show animals, plants, vehicles, costumes, palaces, and houses. It is interesting to look at the behaviour pattern in the relief like the way of sitting in that era. It is related to the sitting of Javanese people today called *lèsèhan*, that has been inherited for many generations. *Lèsèhan* is sitting on the floor with or without any pad like floor mat. This way of sitting has many variations, like *sila*, *sila panggung*, *sila tumpang*, *jègang*, and *jèngkeng*. These patterns are engraved in the Borobudur reliefs. Beside *lèsèhan*, today there is also a style of sitting on a chair. According to Denys Lombard, sitting on a chair in Java was first introduced in early 20th century, during colonial period. Before that, Javanese people traditionally sat cross-legged (*bersila*) on the floor mat. When they finally sat on a chair, they had to adjust themselves with the shape of the chair. However, they often did the old habit. So when they put their shoes under the chair, they crossed their legs on the chair (1996: 1/159). This statement by Lombard shows that the Javanese people *did* know the chair in the colonial period.

**Table 1.** The style of sitting of Javanese people. It has existed since 8th century

Style of sitting	Explanation	Images from the reliefs in Borobudur temple
<i>Sila</i>	<i>lèsèhan</i> , the legs are bent inside	
<i>Sila panggung</i>	<i>lèsèhan</i> with the knees up	
<i>Sila tumpang</i>	<i>Lèsèhan</i> with one leg put on the thigh of another leg.	
<i>Jègang</i>	<i>lèsèhan</i> with one leg is bent, put on the floor and another leg is bent with its knee is up	

<p><i>Jèngkèng</i></p>	<p><i>Lèsèhan</i>, both of the legs are bent sideways</p>	
<p><i>Jégang</i> with the legs tied with a cloth to the waist.</p>	<p>A tradition of <i>jégang</i>, but the legs are tied with a cloth, shown in the image aside. This kind of sitting is no longer done by contemporary Javanese people.</p>	

When we look at the reliefs in Borobudur we find some visuals of chairs. It is pretty interesting because 1,200 years ago Javanese people had used chairs and had had a tradition of sitting on the chair; this is not compatible with Lombard's statement. However, Lombard was not particularly wrong because, based on that relief, the Javanese people sat in the way of *lèsèhan*. The chair was a great invention at that time in terms of sitting custom. Borobudur chair is a proof of Indonesian cultural heritage that must be preserved because it shows that Javanese civilization (Indonesian civilization) is equal to other civilizations whose history had been connected to chairs, like ancient Egyptians, Greeks, Romans and Chinese people. To preserve Borobudur chair, it is not enough to just collecting pictures, but also recreating the chair in order to know better, to reuse, and to make it the pride of Indonesian's young generation. The question now is: how to reconstruct Borobudur chair and how this reconstruction can be acknowledged as a form of preserving Indonesian cultural heritage.

### LITERATURE REVIEWS

This research is related to reconstruction. In this regard, the definition of reconstruction is connected to a concept of a place (a thing) that is very similar to the original condition, and the reconstruction is done by using a new stuff or old stuff (Sidharta and Budiharjo, 1989: 11). This idea is very compelling because we can use new materials. It means when this chair is reconstructed, interpreted from a relief in the temple, its material (wood) that is utilized can be replaced by the wood we find today. The shape is made as similar as possible to that of the relief. Regarding the source of this research, I need to define the chair itself. According to the dictionary, chair is a place to sit, with legs and back support (KBBI, 1996: 546). In connotative sense, it has many meanings. Culturally, it is an artifact, constructed by idea, sense and intention. In social context, a chair can show the social status of the owner. Politically, a chair is a symbol of power (Marizar, 2013: 57-58). For this study, the definition of the chair is related to the seat of the noblemen in that period. Borobudur chair needs to be preserved. It is necessary to elucidate the definition of preserving and using the cultural heritage. According to Timbul Haryono, there are some aspects that have to considered.

Actually, we can not separate preserving from using. Cultural heritage must be preserved in order to be used today and in the future. Why should we preserve it if we cannot use it? On the other hand, to make use something without preserving it will harm the heritage itself and, in the end, it can not be used (Haryono, 2015: 8)

It seems that we already finished preserving and utilizing Borobudur as a building. This monument had been reconstructed and conserved. The temple is now open for tourist attraction. However, actually it still has many benefits, taken from the relief and the building itself, like the chair. The problem is how to use the creation from this reconstruction.

Cultural heritage concerns with ideology, education, and economics. In the sphere of ideology, it is a national asset to be proud of. It can be used as a tool to unite a nation. In education, it is a media for knowledge and moral teaching. In economic sector, it is used as a tool to increase income (Haryono, 2015: 9). The replica of Borobudur chair can be a symbol of nation's pride because it shows the identity of its tradition (sitting on a chair). It also contains knowledge and norm in the context of sitting. In the sphere of education, it teaches the young people about the ancestors who already sat on a chair, unlike the common opinion stating that sitting on a chair is a part of colonial custom. The chair replica has an economic value because it can be developed. The reasearch team (the author of this paper) will do a reasearch in 2016 concerning the development of Borobudur chair's design. In fact, the replica of Borobudur chair can be used as an item to be shown in Borobudur temple. Visitors can see Borobudur chair in 3D, not in relief engraving (as seen in the pictures because the actual relief is covered by the base of the temple building). So, Borobudur chair replica can be used as an Indonesian cultural heritage because it has ideological, educational, and economic value.

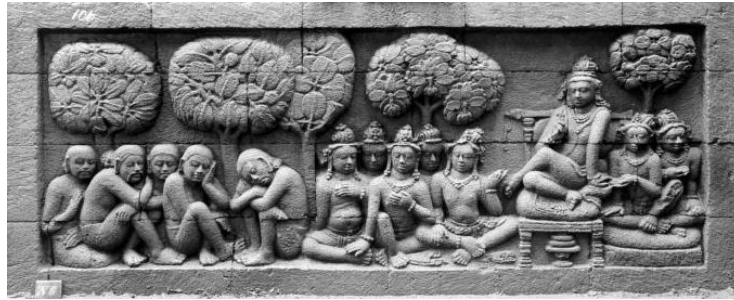
### **PROBLEM STATEMENTS**

This research is based on a study titled "Reconstruction of Borobudur Chair (To Support Creative Industry)" to get the data about the sorts of chair or sitting tools in the reliefs of Borobudur temple. First, the team made a design for the reconstruction of Borobudur chair. Then they made a replica of the chair and developed it to be used in the creative industry for economic purpose. It is hoped that this research can yield one of some methods to reconstruct the chairs from the reliefs in Borobudur and to make the replica of Borobudur chair. The result from this work can be used as a directive to conduct similar researches to be approved for intelectual copyrights (HKI). It can also be employed to improve science, technology, and the art that are related to chair. For the artisans of furniture and interior designers, this study is intended as a new way to extend the innovation of chair for commercial purpose.

### **METHODOLOGY**

There are two main data for this research. First is the reliefs in Borobudur temple, and the main concern is the visual of chair that is similiar with the contemporary chair. These visuals can be found in the section Karmawibhangga, engraved in 160 panels. They are not a continuous story, but pieces of the visuals of karma. Karma can be defined as actions derived from a cause (both physical causes or ideas) and consequences. Karmawibhangga is one of Buddhist scriptures that examines the law of cause and consequences. Regarding the ability of Javanese people at that time, a guidance to make a relief had been interpreted to create a different perspective from the original parts in the scriptures. Although Karmawibhangga came from India, it had been altered and localized that the content of this book showed the life of Javanese people. That is why the visuals of humans, both physical and cultural, indicate the characteristics of Javanese people (Tim Penyusun, 2012: 18-20). According to this point of view, we can assume that the relief of the chair (Borobudur chair) can be interpreted as the chairs of the people at that period. The data of the relief are shown below:

- 1) The chair of noblemen for one person. It is displayed on the relief of Karmawibhangga O-75. It is interpreted as "Sitting on a chair, a nobleman is talking to people who are listening carefully." (Tim Penyusun, 2012: 67)



**Picture 1.** The visual of a chair of noblemen, for one person. The style of sitting is *sila tumpang* (Picture from Tropenmuseum's pictures collection)

- 2) The seat of noblemen (long) for three to five persons with back support. It is displayed on Karmawibhanga relief O-125. The interpretation is: royal family as the ruling party in that time. (Tim Penyusun, 2012: 93).



**Picture 2.** The visual of the seat of noblemen for three to five persons. The style of sitting is varied, like *jègang* and *jèngkèng*. (Picture from Tropenmuseum's pictures collection)

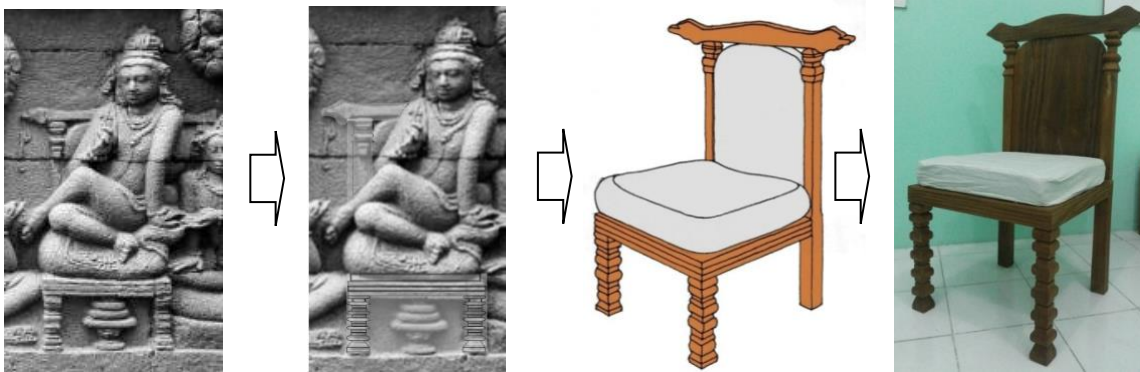
The method used to reconstruct the Borobudur chair is interpretation approach. Since Borobudur is an historical object, it needs artifacts to be researched. They are all interpreted and sorted during the study of this project (Kaplan and Manners, 2000: 92). Interpretation here can be defined as revealing what is referred to in the text (Ahimsa-Putra, 2000: 403). Text in this research is the sculptures of the chairs on the reliefs, and what are referred to are related to these points:

- 1) Anthropometrical interpretation: a study of human's measurement to create ergonomical design for furniture. (Widayat, 2010: 3)
- 2) Ergonomical interpretation: a translation of the relation between human and the tools. For example, a chair is related to comfort, efficiency, and the ease to use, as well as safety (Widayat, 2010: 50).
- 3) Material, technical, and aesthetical interpretations: interpretations related to the design.
- 4) Historical/reconstructional interpretation and cultural interpretation that are related to the tradition of sitting.
- 5) Historical interpretation as a way to study a tradition transmitted among generations. (Sutrisno and Putranto, ed., 2005: 9)

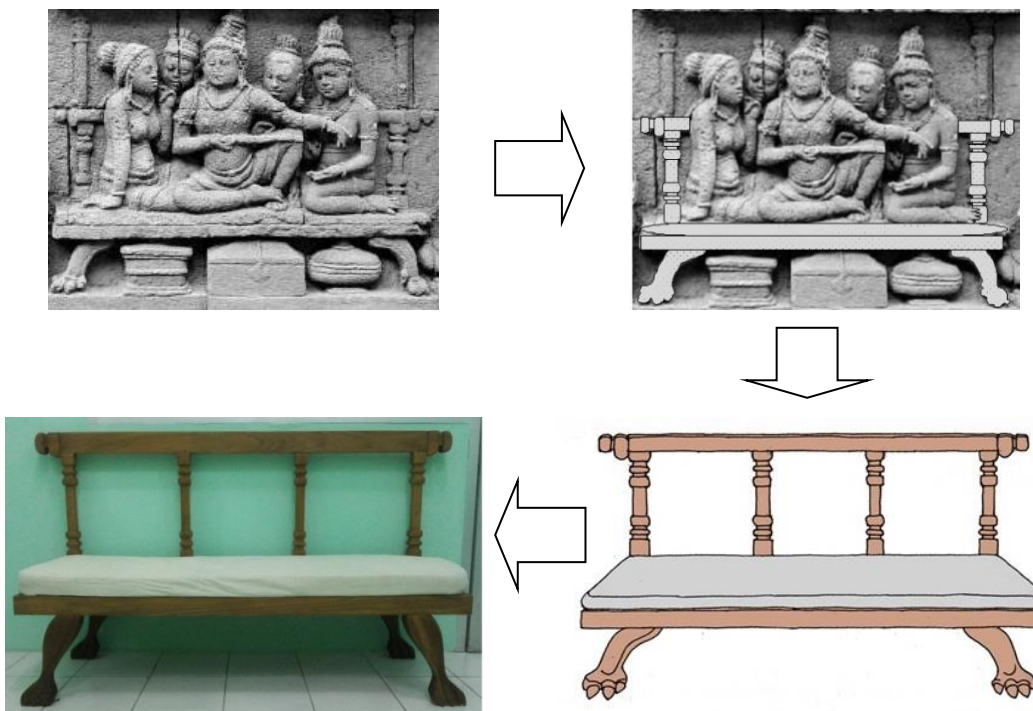
## RESULTS & DISCUSSION

The process of reconstruction of Borobudur chair after the interpretation of chair's relief (text) and the reference are anthropometry, ergonomics, design and historical interpretation that are translated into a perspective sketch (3D sketch). Based on those results, I made an outline. It includes the image from the front side, image from above, image from both sides, the pieces of the image with scale 1:5,

and detail image with scale 1:2. The outline is equipped with material, measurement interpretation and the finishing. It also has engraving details. From then on, this outline is sent to an artisan to make the mock-up.



**Picture 3.** This is the reconstruction process of Borobudur chair from the relief “a chair for one person.” The chair is translated into perspective sketch, then it is actualized as a replica of Borobudur chair. (Source: Tropenmuseum’s pictures collection. Sketch and the visual chair are made by the researcher, 2015)



**Picture 4.** This is the reconstruction process of Borobudur chair of the seat for three to five persons. The chair is translated into perspective sketch. Then it is actualized as a replica of Borobudur chair for three persons. (Source: Tropenmuseum’s pictures collection. Sketch and the visual chair are made by the researcher, 2015)

In transforming this Borobudur chair from relief (2D) to 3D, I found some obstacles. These difficulties and their solutions are explained below.

- 1) The size of the chair. I don’t find any directive for the size of the chair. So, I created a particular standard based on the measurement of human’s body at that time. It is estimated

that most of the people were 163 cm tall. This is a percept for the size of the chair that were engraved on the relief.

- 2) The ergonomical purpose of the chair. First is to compare the Borobudur chair with the size of contemporary chair. Then the Borobudur chair was seated with sitting style of the period in the relief to create a comfortable chair. According to this data, *lèsèhan* is an important sitting style.
- 3) The wood for the chair is unidentified. Teak is used for the reconstruction of the chair. The upholstery of the cushion is made from silk because, based on the interpretation process, this chair was for the noblemen. The material for the filling is cotton. This was a natural material for the filling of mattress before we knew foam. To make a similar construction for the chair, I used bamboo instead of iron nails. Then the parts of the chair are connected to make 90 degrees angle and peg as well as *purus*. The surface of the chair is soft without any finishing.
- 4) To determine the length and wide of the seat, it is important to identify the sitting style of the noblemen, like *sila*, *jinggang* and *jèngkèng*.
- 5) The big question is: why Javanese people are considered to know chair in early 20th century, while the chair on the relief of Borobudur was made in 8th century? In 12th century, during the heyday of Kediri Empire in the region that we know today as East Java, there had been houses with wooden long chair using soft surface (Sedyawati, 2006: 358). This shows that there is a missing link in transmitting the tradition of sitting on a chair. Concerning this, Borobudur chair serves as the connection of this missing link.

## CONCLUSION

The Borobudur chair is reconstructed with interpretation approach based on the relief of Borobudur temple. We employ anthropometrical, ergonomical, design, and historical interpretation to create the concept of Borobudur chair. After that, we draw perspective sketch, and then the mock-up or the replica of the chair. For its ideological, educational and economic value, the making of this chair can be one of some ways to preserve Indonesian cultural heritage. Beside this chair there are many reliefs in Borobudur that need to be reconstructed and made as replicas, such as vehicles, houses, household tools, costumes, etc. The reconstruction process can be a way to preserve Indonesian heritage, such as I have done with this research.

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