

Reconstruction of Arogayasala in Khon Kaen Province to the Creation of a Documentary

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Abstract The article aimed to study the reconstruction of the Arogayasala in Khon Kaen Province to the creation of a documentary through a qualitative research method. The research tools consisted of surveys and interviews. This research compiled the data from documents and field studies. The data were analyzed and compared with the architecture built in a similar period to complete the missing parts. The data analysis was conducted according to the concept of creating reconstructions and presented using descriptive analysis. The study result showed that the architecture of the Arogayasala in Khon Kaen consisted of Ku Kaew and Ku Prapachai which have an architectural form with a clear and standardized layout, which can be assumed to be influenced by the central region. The architectural components consisted of the central sanctuary, library, gopura, wall, and pond. Archeological evidence showed that Ku Kaew and Ku Prapachai are kinds of the Arogayasala recorded on the stone inscription at Ta Prohm Temple in Cambodia. The inscription mentioned that King Jayavarman VII constructed 102 Arogayasala within his kingdom. The creation of a documentary from the reconstruction of Ku Prapachai and Ku Kaew, Khon Kaen Province, used three-dimensional technology, or virtual technology, to help present and disseminate this cultural heritage to allow the audience to easily understand the content and appreciate the beauty hidden with the architecture, along with the historical data, which help record past events. This documentary can be used as a model for future documentary creation from reconstructions.

Keywords Reconstruction, Ku Prapachai, Documentary

1. Introduction

Khmer Prasats are considered religious sites in Brahmanism built the Khmer empire [1] as the house of the gods and for holding religious ceremonies. The construction of the Khmer Prasats represented Mount Meru on earth, built as the dwelling place of the gods, with statues of the gods placed inside the buildings. Each part of the Prasat has different characteristics representing Mount Meru. The important components of the Prasat consisted of the central sanctuary, or buildings, library, inner level gopura, or the inner enclosure, ponds, outer gopura, or outer enclosure [2]. The stone inscription from Ta Prohm Temple in Cambodia also indicated that King Jayavarman VII had built 102 Arogayasala within his kingdom [3]. Two Arogayasalas were found in the Khon Kaen areas, Ku Kaew and Ku Prapachai. Arogayasalas are religious sites at hospitals, or pavilions at hospitals, built for ceremonies, which were the characteristics of Khmer Arogayasalas [4].

Arogayasalas generally have a clear and standardized layout, which was assumed to have been influenced by the central region. These layouts can be observed from the location of the five similar architectural parts, consisting of the main sanctuary, library, gopura, enclosure, and ponds. Documentary studies showed that the architecture and the reconstruction of Ku Kaew were already conducted, leaving only the three-dimensional presentation. As for Ku Prapachai, there are currently no studies or reconstructions. From the ruins of the building that have not been fully

restored, the creation of reconstruction and presentation through a documentary will help the audience gain an understanding of these two ancient sites. Therefore, the reconstruction of these two Arogayasalas will help the audience in their imagination when visiting the ancient sites and help revive these deserted sites to be alive again.

From the reasons and importance mentioned above, the researcher wanted to create a reconstruction from the architecture of Ku Kaew and Ku Prapachai in Khon Kaen Province. The reconstruction would be used to create a documentary through a qualitative research process. The research tools consisted of surveys and interviews. The data for this research were collected from documents and field studies, analyzed, and compared with the architecture built in a similar era to fill in the missing components. The data analysis was done based on the reconstruction concept and presented through descriptive analysis. This reconstruction would help with the imagination of the audience and the preservation of the cultural heritage of Khon Kaen Province.

2. Research Objectives

1. To create a reconstruction from the architecture of Ku Prapachai and Ku Kaew, Khon Kaen Province.
2. To create a documentary from the reconstruction of Ku Prapachai and Ku Kaew, Khon Kaen Province.

3. Research Methodology

3.1. Target Group

The researcher emphasized the target group who are related to Ku Prapachai and Ku Kaew, Khon Kaen Province, by selecting from the archeological and architectural experts, which can be categorized as follows:

- (1) Key Informants, consisted of those who provided the history, layout, and architectural components of Ku Prapachai and Ku Kaew, Khon Kaen Province, which included archeologists and historians.
- (2) Casual Information, consisted of those who provided information related to the form of Ku Prapachai and Ku Kaew, which included historians and the department of maintenance for the buildings.
- (3) General Informant, consisted of those who provided the information regarding the visit to Ku Prapachai and Ku Kaew, which included tourists and general people.

3.2. Research Tools

The research tools for this qualitative research consisted of surveys and interviews.

3.3. Data Collection

For the data collection, the researcher collected the information based on the objectives, to answer the research questions, which consisted of two methods:

- (1) Data collected from documents consisting of the recorded data related to the reconstruction from the architectural form of Ku Prapachai and Ku Kaew, Khon Kaen Province, were from the documents and photographs before the restoration process started that shows that site layout. Other documents consisted of those acquired from government agencies, educational institutes, books, textbooks, theses, the internet, and general people.
- (2) Data from field studies consisted of the data compiled from interviews and surveys, the measurements of the area of the site, as well as the studies of the Arogayasalas with a similar architecture that were built in a similar period around the research area, which was used for the creation of the reconstruction and documentary.

3.4. Data Analysis

For the data analysis, the researchers used both the document and field studies data in the analysis process based on the concepts related to the creation of reconstructions and presented using descriptive analysis. The analysis process was conducted based on the research objectives, with the following steps:

- (1) The researcher concluded and categorized the data acquired from documents and field studies to address the research objectives.
- (2) Revise the collected data for the accuracy and integrity
- (3) The collected data was compared for verification, in terms of the persons, time, and location, to confirm the accuracy and reliability to prepare for the analysis.
- (4) For the data analysis, the researcher analyzed two types of data, data from the documents and data from field studies.
 1. Document data analysis is the analysis of the data through the Method of Agreement, which is the verification of data accuracy in terms of the concepts and theories, from different sources of documents to verify the accuracy of the data.
 2. Field study data analysis is the analysis of the data from the research collection tools through inductive data analysis, and the interpretation of the conclusion through concrete characteristics and visible phenomena.
- (5) The presentation of the data was done following the research objectives through a creative method to present the content and knowledge, the steps, and creative knowledge through a documentary.

4. Research Result

4.1. The Creation of the Reconstruction from the Architectural form of Ku Prapachai and Ku Kaew, Khon Kaen Province

From the study of the evidence and the comparison of the architecture in the similar period as Ku Prapachai and Ku Kaew in the northeastern region, it was found that Ku Prapachai Arogayasala was built in the time of King Jayavarman VII in the 18th Buddhist century as the religious site within the community hospital. The construction of the hospital was an important tactic of King Jayavarman VII to unite his kingdom through his great charity. The construction could be compared to the provision of health insurance, which is one of the human necessities [5]. The main architecture of the Arogayasala consisted of a clear and standardized layout of the site, which was assumed to be influenced by the central region, similar to Ku Prapachai and Ku Kaew in Khon Kaen Province. The five architectural components were placed in the same locations, with differences in sizes and other minor details. The components of Ku Prapachai and Ku Kaew consisted of “the main sanctuary”, constructed in a rectangular shape in the middle of the site, where the statues of the gods are placed for religious ceremonies. The main sanctuary was built with laterite stones. The body of Ku Prapachai’s main sanctuary was built in a square shape with indented corners, 8 x 8 meters, while the size of Ku Kaew was 7.20 x 7.20 meters. The sanctuary consisted of only one entrance to the east. The library is situated in the southeast direction of the main sanctuary. At Ku Prapachai, false entrances were built on the other three sides using sandstone frames, with porches built out to be on the same level as the base of the main sanctuary with an area of 4 x 10 meters. The southern wall of the porch consisted of 1 window with a sandstone frame. The roofs of the porch are all collapsed. The front of the porch consisted of a five-step stair. The roof of the main sanctuary was built on four levels. The top level consists of a lotus flower-shaped sandstone. The Ku Kaew library was built on a square base with a sandstone frame in the front, decorated with decorated octagonal columns (currently damaged). The front of the library consisted of three-step stairs. The body of the library was built in a square shape with indented corners, with false doors. The southern part of the porch consisted of one window with a sandstone frame. Currently, only the base and the wall of the body remain. Most of the roof already collapsed. The enclosure, or wall, is built around the main sanctuary and the library to mark the boundary of the religious site. The whole site was built based on the belief in cosmology. The enclosures were built with laterite stones on a square base with canopy-shaped decoration on top. From the field studies, it was found that Ku Kaew and Ku Prapachai Arogayasalas are currently in an almost perfect condition. The entrance at the east is called gopura,

situated in the middle on the eastern side of the enclosure. The roofs of the gopuras are all collapsed. The area beyond the northeastern side of the enclosure is situated a rectangular laterite stone pond, built in steps towards to deepest part. The pond was built to store water for the religious ceremonies. The ponds are still in good condition. Other buildings mentioned in the record, such as the sleeping quarter, housing for the hospital staff, and medicine brewing and storage house can no longer be found since these buildings were built from wood [6] and might already deteriorated. However, although the sleeping quarters and the housing for the hospital staff already deteriorated, the structures that still remain are the Arogayasala [7].

This architecture can be compared to the architecture of other Arogayasala in the Isaan area, such as Prang Ku, Chaiyaphum Province, and Prasat Ta Muean Tot, Surin Province. Although the roofs are all collapsed, the reconstruction was done through the comparison with the architecture built in the similar period, such as Prasat Hin Phimai, Nakhon Ratchasima Province, Prasat Hin Phanom Rung and Prasat Mueang Tam, Buriram Province

4.2. The Creation of a Documentary from the Reconstruction of Ku Prapachai and Ku Kaew, Khon Kaen Province

From the study of the architectural reconstruction of Ku Prapachai and Ku Kaew, Khon Kaen Province, to the creation of the documentary, the creation process is as follows:

1) The Analysis of the Creative Model

In this study, the researcher was interested in presenting a documentary based on the reconstruction of Ku Prapachai and Ku Kaew by presenting the concept from the study in the field. The researcher studied the reconstruction of Ku Prapachai and Ku Kaew by presenting the layout of both sites, the locations for the items within the main sanctuary, the belief in cosmology, consisting of the main sanctuary, the library, the gopura, enclosure, and the pond. The first documentary ever created was Moana, (Shown in Figure 1, Figure 2) by Robert Flaherty, in 1926. John Grierson, an English academic defined documentaries as the Creative Treatment of Actuality. Documentary creators need to portray the story based on reality in a creative way, not plainly presenting the truth [1]. Moreover, documentaries are movies created based on various aspects of society to record the events, behaviors, thoughts, emotions, feelings, and atmospheres from the perspectives of the creator and presented through various forms of movie entertainment [8]. Therefore, the researcher created this documentary to record the actual event and used the knowledge gained from the study as a tool in creating these historical pictures.



Figure 1. Three-dimensional virtual representation of Ku Prapachai Arogayasala, Khon Kaen Province.

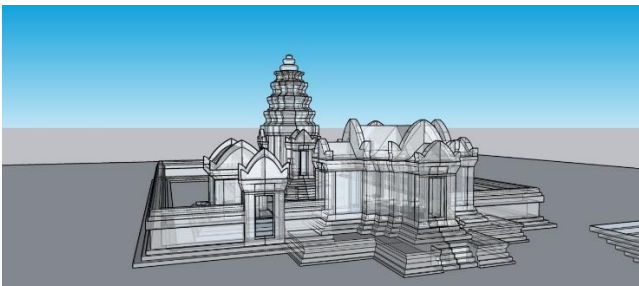


Figure 2. Three-dimensional virtual representation of Ku Kaew Arogayasala, Khon Kaen Province.

2) Creative Steps and Methods

Step 1. Study the data from the photographs before the excavation by focusing on the original architecture before the restoration of Ku Prapachai and Ku Kaew layouts.

Step 2. Study the data from the photographs after the excavation and the data from the demarcation and surveys, followed by creating the current layout of Ku Prapachai and Ku Kaew.

Step 3. Using the data from steps 1 and 2 to analyze and create the reconstruction.

Step 4. Non-participatory observations of the tourists visiting Ku Prapachai and Ku Kaew.

Step 5. Create the script based on the document studies and field studies for the documentary creation.

Step 6. Create a documentary using the interviews, photographs of the researcher's work process, underwater footage, editing, adding narration and sound, and online distribution.

Step 7. The presentation of the documentary

3) Script for Ku Kaew and Ku Prapachai (Arogayasala)

(Enter Mode 1) Introduction + old photographs of the ruins.

Narration*** The architectural influence and form of ancient Khmer disseminated to Thailand around the 12th Buddhist century to the 18th Buddhist century. Clear evidence was found around the 16 to 17 Buddhist century, which was around the time of the Baphuon art era to the Bayon art era, especially during the reign of King

Jayavarman VII, which was at the peak of the Kingdom.

After the reign of King Jayavarman VII, no record of the Khmer Kingdom's power was ever found in Thailand. It can be assumed that the "Arogayasalas" were his last religious under King Jayavarman VII.

(Enter Mode 2) Starting the reconstruction while switching off with the real photographs (various angles of the 3Dmodel)

Narration*** Arogayasalas are the religious sites within the hospitals. It was assumed that these sites were built for Buddhist ceremonies and to hold the hearts of the people in the community. The stone inscription from Prasat Phra Khan and Ta Prohm Temple stated that the King built 102 Arogayasala all across his kingdom. Currently, 31 Arogayasalas have been found in Thailand, 29 of which were found in Isaan. The most important Arogayasalas in Khon Kaen are the Arogayasala of Ku Kaew and the Arogayasala of Ku Prapachai (Shown in Figure 3, Figure 4).

(Enter Mode 3) Camera cuts to the five components of the architecture

Narration*** The main architectural form of Arogayasalas consists of clear and standardized layouts, which were assumed to be influenced by the central part and can be seen from the locations of the five similar architectures, consisting of rectangular "the man sanctuary" in the middle of the site that only has one entrance to the east, built to install the statues. In the southeastern direction of the main sanctuary, a small rectangular building called "the library," was built to keep the religious texts and equipment for the religious ceremonies. These two buildings are surrounded by a wall, or enclosure, with the entrance at the middle of the eastern wall called gopura. The last component is the pond, situated in the northeastern direction to hold the water for religious ceremonies.

(Enter Mode 4) Last camera angle to end the documentary

Narration*** The models of the Ku Kaew and Ku Prapachai Arogayasala, Khon Kaen Province were done through documentary studies and field data. The data were analyzed and compared with the architectures built in a similar time to present the most accurate model of the buildings in the past. Although there are no accurate images, at the minimum, these models can help the audience to be curious and have the desire to find the answers to the past together.



Figure 3. The reconstruction of Ku Kaew to the creation of a documentary



Figure 4. The reconstruction of Ku Prapachai to the creation of a documentary

4) The Creative Work

From the study on the creation of a documentary from the reconstruction of Ku Prapachai and Ku Kaew, Khon Kaen province, the researcher created the work in the form of a documentary (shown in Figure 5). The results from the creation are as follows:



Figure 5. A documentary on Ku Prapachai and Ku Kaew

In terms of the conclusion from the study in creating a documentary from the reconstruction of Ku Prapachai and Ku Kaew, Khon Kaen province.

5. Research Conclusion and Discussions

The research collected the related document and field study data to be used in the study of the reconstruction of the Arogayasalas in Khon Kaen Province. The data was analyzed and compared to the architectures built at similar times to create the reconstructions that show the most accurate depiction of the complete religious site architecture of the past in virtual three-dimensional, presented through a form of documentary. This is in line with Suksawaddi & Lopkerd [9] who stated that the model consists of the principle of assumption and comparison of the art from similar architecture from a similar era. As for the presentation of the data, the researcher presented the concept from the document and

field studies to show the layout and different components of Kyu Prapachai and Ku Kaew. This aligns with George (1994) who stated that for the current Prasats, or Kus, only traces of single buildings are left, facing towards the East, mostly built with Laterite stones or sandstones. The rectangular room consists of only one window on the south. The roof of the room is built in levels, which is in line with the record from Prasat Phrakhan, stating that King Jayavarman VII (1181 – 1220) ordered the construction of 121 “Vahanikaruha”, known as houses with light, rest stop, or travel lodge, along with infirmaries, or Arogayasala, along the route from the main cities in different directions. The locations of the buildings within the site would follow the belief of cosmology, consisting of the main sanctuary, the library, the gopura, the enclosure, and the pond. The last part was the presentation of the creative documentary. As for the concept of the documentary, it will help provide the audiences with simple content and provide them with enjoyment in visiting the ancient sites. This concept aligns with Veerasam [8] who stated that documentaries are created based on various social aspects to record the behaviors, thoughts, emotions, feelings, and the atmospheres through the angle of the creators, and presented in various forms based on the functions of films. This is also in line with an English academic who defined documentaries as the Creative Treatment of Actuality. The movie creators need to present the stories based on the truth in a relative way, not presenting the plain truth [3]. Documentaries are movies created based on the realities of societies from different angles to record the behaviors, thoughts, emotions, feelings, and atmosphere through the angle of the creators and presented using different forms to provide entertainment [8]. Therefore, the researchers created this documentary to record the actual event and use the knowledge from the study as a tool to record the history in pictures.

In conclusion, the study of the Arogayasala reconstruction in Khon Kaen province to the creation of a documentary used a three-dimensional technology, or virtual technology, in the presentation and the dissemination of the cultural heritage of architecture to allow the audience to easily understand the content and appreciate the beauty hidden with the architecture. Furthermore, this creative work can record past events through the knowledge from the study that was used as a tool in recording historical images, simulated events, and current pictures, and created a new knowledge in documentary creation, along with the historical data. Additionally, this documentary can be used as a model for future documentary creation from reconstructions.

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