

ARCHITECTURE KNOWLEDGE IN MANUSCRIPT OF LONTAR ASTA KOSALA KOSALI (In the Perspective of Architecture is a Construction Process)

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ABSTRACT

Implementation of research or study of manuscripts in the realm of knowledge of architecture, the first stage that must be executed is to ensure that the script to be studied contains knowledge of architecture. It is important to be able to really position the manuscript as an architectural script worthy of its architectural knowledge. Therefore, the study of the architectural content of Asta Kosala Kosali (AKK) is important to do. An examination of the manuscript with the aim of knowing whether the manuscript contains the architectural knowledge and the type of knowledge it contains is carried out with a critical approach. In this case the method used is descriptive criticism with contextual criticism technique. Application of this method is done by asking 2 questions to the script, namely; 1) does the AKK script contain the knowledge of architecture in a construction process context ?, and 2) what kind of architectural knowledge is contained in the AKK text ?. From the results of this study can be concluded that the manuscript of AKK is an architectural script which contains knowledge of *tattwa* (philosophy), *ethika* (ethics) and *upacara* (technical) regarding the construction process.

Keyword: *knowledge, architecture, manuscript and asta kosala kosali*

A. INTRODUCTION

The research or study of Aston Kosala Kosali lontar script (AKK), basically consists of two activities namely interpretation and translation. Interpretation is done to reveal the meaning contained in the manuscript by using the architectural perspective, while the translation is done to change the meaning of the manuscript into the context of the construction process. For that reason the manuscript should be positioned as text not as a paper. As the written work of the manuscript already contains the intent of the author whose meaning and purpose is certain, as the text of the text consists of a series of letters that form a stand-alone sentence thus open the opportunity for interpretation of the sentences in the script with different perspectives and contexts. This is exemplified by Prijotomo through a study conducted by Jennifer Bloomer (1993) and Abidin Kusno (1997), and asserts by quoting Paisley Livingston (1993). By positioning the text as a text and performing the exploration in the frame of architecture, the text of palm leaves Asta Kosala Kosali can be explored to reveal the knowledge of architecture, especially knowledge of Balinese architecture.

The first step in disclosure of Balinese architecture knowledge especially concerning the construction process that put the AKK script as its main object is the transfer of script and the transfer of language to the script and validate the result of both. As stated by Prijotomo (2006), that although these texts clearly discuss about the environment, both from the design guidance and the construction of the building, it can not be said that these texts are the text of knowledge of architecture, then the next stage is to put the script AKK as an architectural script, because the study will be conducted is a study that is in the realm of scientific architecture. In this case will be an assessment of the AKK script by using theories of architecture in general in the perspective of architecture and the context of the construction process.

The assessment of the architecture of the AKK text is aimed at several things; 1) to ensure that this manuscript has the potential to be explored in the realm of architecture, 2) to know the aspects of architectural knowledge contained therein, 3) to affirm that the AKK text is worth exploring in the realm of architectural science. Hence the investigation or review of the content of AKK manuscripts relating to matters of important architectural nature first to do.

B. ARCHITECTURE ARE CONSTRUCTED

Architecture is formed because of the need for example the needs of conducive environment conditions, security, and so forth. This need requires treatment or a particular way of dealing with objects such as available construction materials and construction technology, (Snyder and Catanese, 1985). What this demonstrates is that in realizing architectural attention to building materials and the use of appropriate construction technology is first and foremost. As Mies van der Rohe observes, Klassen (1990) argues, architecture is a beautiful building that begins when we compose the elements attentively. Arranging means connecting, uniting, assembling and bringing together, and this is the understanding of construction. Furthermore Klassen explains that the construction in Latin comes from the word "struere" which means sowing, scattering, sowing, also has to do with the English word "to strew" which means to spread. Struere then gets the prefix "con" which means bringing together or connecting, so it becomes "con-struere" which means to compose and connect. In Webster's dictionary, con + struere is synonymous with the word construct which means to build form, or devise, by fitting parts or elements together systematically, which means to build or find a form by matching parts or elements forming together systematically. Thus it can be said that construction is an attempt to build a formation by composing, matching, combining the elements of the systematically.

By placing construere notions identical to construction, the meaning according to Webster's dictionary is the act or process of construction and the manner or method of constructing (manner or method of building). This indicates that the notion of construction concerns three main subjects: 1) the action or undertaking, 2) the process or stages being carried out or held, and 3) the means or method used. These three basic points are an integral entity in the formation and incorporation of elements of form. On the other hand Klassen (1990) in his description of architecture as a construction by referring to Mies van de Rohe, also states that there is involvement of two elements in the construction of elements of poiesis and techne elements. Poiesis are all things that cause an object to exist from nothing, while techne is the ability to do things based on the principles involved. Poiesis element is

more to the goal of achieving beauty, taking into account the things that are not real (intangible), thus what is needed is an aesthetic ability. While the techne element is more to the goal of achieving robustness, which refers to the skill in assembling tangible elements, thus requiring constructive structural ability. Thus it is clear that between construction and architecture there is a close relationship, where the architecture exists because it is constructed.

C. DESCRIPTIVE CRITICISM AS METHOD

This study is a study that places the manuscript as its main object. By placing the text of the ejected Asta Kosala Kosali text as the main object of the study, this research essentially is dominated by translating and interpreting activities. In the activity of translating and interpreting the main force needed is critical thinking and logic, where Wayne Attoe (1978) states that in terms of criticizing architectural objects one approach that can be used is a critical approach. As the approach described above, the method to be used in this research is the method of criticism, especially Descriptive Criticism by applying Contextual Criticism technique.

Descriptive critique method with contextual critic technique, organized by understanding the text as it is or in other words describing and explaining the textual content as said by the text itself using an architectural point of view in the context of constructing. Technically the operation of this method is done by asking some questions to the text according to the perspective used and the desired context. Questions in question, such as; 1) does the AKK script contain the knowledge of architecture in a constructive context ?, and 2) what kind of architectural knowledge is contained in the AKK text ?. With these two questions, it will be able to know the knowledge content of the AKK script in the realm of architectural knowledge.

D. FEASIBILITY AND POSITION OF SELECTED TEXT

There are so many Nusantara archives that are stored in various places of collections that have the opportunity to be studied, both in terms of physical and text content. The archival texts of the archipelago are basically written documents that record a complex of ideas or ideas of society in its time which contains various aspects of life, Ikram

(1997). One of the ancient manuscripts contained in Bali is in the form of papyrus, which is called Aston Kosala Kosali lontar. Lontar Asta Kosala Kosali is a manuscript which contains the procedures for building a building that has become a guide for generations, which in it contains both material and spiritual knowledge related to constructive procedures, Gelebet (1986). From several sources, such as Gedong Kertya Museum in Singaraja, Lontar Library of Udayana University, Private Collection and Documentation Center of Bali Culture, there are 19 promontory palm leaves associated with the building process in Bali. Of the 19 days, 10 of them are directly entitled Asta Kosala Kosali, the rest are given different titles but the cargo is also contained in Asta Kosala Kosali. And there are 18 books transliteration and translations of lontar which related to the way of building with various variations of the title. The alphabet and alphabet translation of these lontar is done by individuals and institutions that pay attention to the existence of the palm lontar.

Due to the large number of manuscripts on how to construct as inventoried by the Cultural Service of Bali Province, there will be election of the texts. Selection of the manuscripts is done by considering:

1. The authenticity of the manuscript; manuscripts directly obtained from the source
2. The physical state of the manuscript; completeness, wholeness, and letter clarity
3. Manuscript content; manuscripts contain building procedures (constructing buildings)
4. Availability of comparative texts; manuscripts originating from the same administrative area

On the basis of these considerations, the main manuscript selected for exploration of its knowledge content is a manuscript originating from Puri Madurha in Karangasem Regency of Bali Province, with catalog number: 001176 - Dha - K / IV / 12 / DISBUD, entitled Dharmaning Asta Kosala.

This manuscript is the original manuscript preserved in Puri Madurha Karangasem and has never been done over script and language transfer. Physical condition is still good, complete with 155 sheets of papyrus, each piece is still intact nothing is broken and the letters in it can still be read clearly. This text contains provisions on the

procedures of building, in the form of rites of development, development development ethics, material selection, provisions on the size, processing of parts of buildings and their requirements and stages of development. Based on the inventory of the Provincial Cultural Office of Bali, there are 7 documents of alphabet and alphabet translation of Asta Kosala Kosali originating from the Karangasem region, indicating that a comparative text will accompany the main manuscript explored. Thus Lontar Dharmaning Asta Kosala derived from Puri Madurha is worthy to be studied.

In the course of exploring or studying the ancient manuscripts, the problem to be faced is the first difficulty to be encountered in terms of the reading, since it is commonly written in ancient Balinese Kawi letters (a combination of ancient Javanese, ancient Balinese and Sanskrit) and is rare who pursue or have the ability to read ancient manuscripts. The second problem is the physical condition of the manuscript that sometimes in some parts is not legible because it is broken. And the next completeness and the composition of the manuscript, which due to poor maintenance of lontar strands can be removed and lost and also when rearranged sequence is not in accordance with the original. Finally the most important issue is the authenticity of the substance, because of the way of preserving and preserving this papyrus by making periodic copies, and which do so not the author, the manuscript substance may be different or be written with different wordings, thus the meaning in question by first author becomes changed. Therefore, the first step in exploring the palm of Asta Kosala Kosali is to translate script and language transfer by involving people who have expertise in this field. After that, the philological validation of the result of the alphabet translation and the transfer of language to give confidence that the alphabet and the transfer of the language that has been done can be trusted truth. And therefore the exploration or study of the palm text of Asta Kosala Kosali requires the involvement of other scientific realms.

E. CONTENTS OF LONTAR ASTA KOSALA KOSALI

Asta Kosala Kosali actually consists of two different meanings. According Bidja (2012: 3) Asta Kosala Kosali consists of Asta Kosala and Asta Kosali. Asta Kosala is a guideline and procedure

for making towers or tall buildings, in the form of meru for sacred and bade for corpse. Asta Kosali is a guideline and procedure for making residential buildings. Therefore, in a manuscript containing both guidance and the procedure of making good building of holy place, stretch of corpse and dwelling house then manuscript manuscripts and procedures of building in Bali are given the name palm leaves Asta Kosala Kosali (AKK).

Based on the history of AKK lontar currently available and spread throughout Bali, especially in

the plains, especially in southern and eastern Bali, originated from the same source, Widana, (2011: ii). Evidence showing the common source of existing AKK letters manuscripts, among others, is; 1) the similarity of letters and languages used, 2) the existence of the same order or systematics of writing, and 3) the existence of the same substance, (Catra, 2017). On the basis of this consideration, in general, all existing AKK lontar manuscripts (inventoried) contain about:

Table1. Content of Lontar Asta Kosala Kosali

Aspek Filsafat TATWA	Aspek Etika ETHIKA	Aspek Teknis UPACARA
<ol style="list-style-type: none"> 1. Sesari Daksina (kanista, madya, utama) 2. Tata upacara Undagi (matirtha, maprasyascitta) 3. Tata cara mlaspas (meresmikan) bangunan 4. Mantra-mantra 5. Surat Lelungguh 6. Sesaji Mlaspas Wadah 7. Mantra Mlaspas Bukur 8. Mantra pada sanak kalau mendapat suguhan 9. Mantra memasang sanan 10. Mantra pengurip kayu dan sarananya 11. Arti Kayu (sebagai material utama bangunan) 12. Upakara menyalin lontar 	<ol style="list-style-type: none"> 1. Pesan bagi para pekerja dibidang keterampilan pertukangan (Undagi) 2. Undagi harus hati-hati menentukan sikut (ukuran) 3. Peristilahan / pengertian (Bhuwana Agung, Bhuwana Alit, Undagi) 4. Kewajiban Undagi kepada Ida Sanghyang Widhi 5. Nama-nama palih 6. Nama-nama Wadah 	<ol style="list-style-type: none"> 1. Tata cara memasang sunduk 2. Menetapkan ukuran 3. Sikut Tiang 4. Tata letak dapur (paon) 5. Sikut Daun Pintu 6. Lait (baji) 7. Sikut Kaki Tiang 8. Sikut Tiang 9. Sikut Karang Paumahan 10. Sikut Tanah Pekarangan 11. Paduraksa 12. Tata cara mengukur pekarangan rumah 13. Sikut Pengalah 14. Sikut kapit udang, sunan, iga-iga, lilit pada jineng 15. Sikut Tiang Meru, Tiang Sanggah 16. Sikut Tiang Lumbung, Tiang Jineng, Tiang Gelebeg 17. Sikut Sukun Parahyangan 18. Sikut Wangun Dawa 19. Jenis Kayu 20. Tata cara Membuat Lubang pada kayu 21. Perhitungan membuat bebataran 22. Perhitungan membuat likah 23. Perhitungan membuat iga-iga 24. Sikut Wadah

Source: Arthana, 2017

Viewed from the above table, the content of AKK lontar script is mostly related to technical aspects, especially regarding the determination of the size of the land and the layout of the building, the procedure of execution of the work, the determination of the size and calculation of parts of

the building. These 4 AKK lontar technical loads are part of Balinese architecture's overall construction process. The systematic content of knowledge in AKK lontar script can be seen in the following diagram:

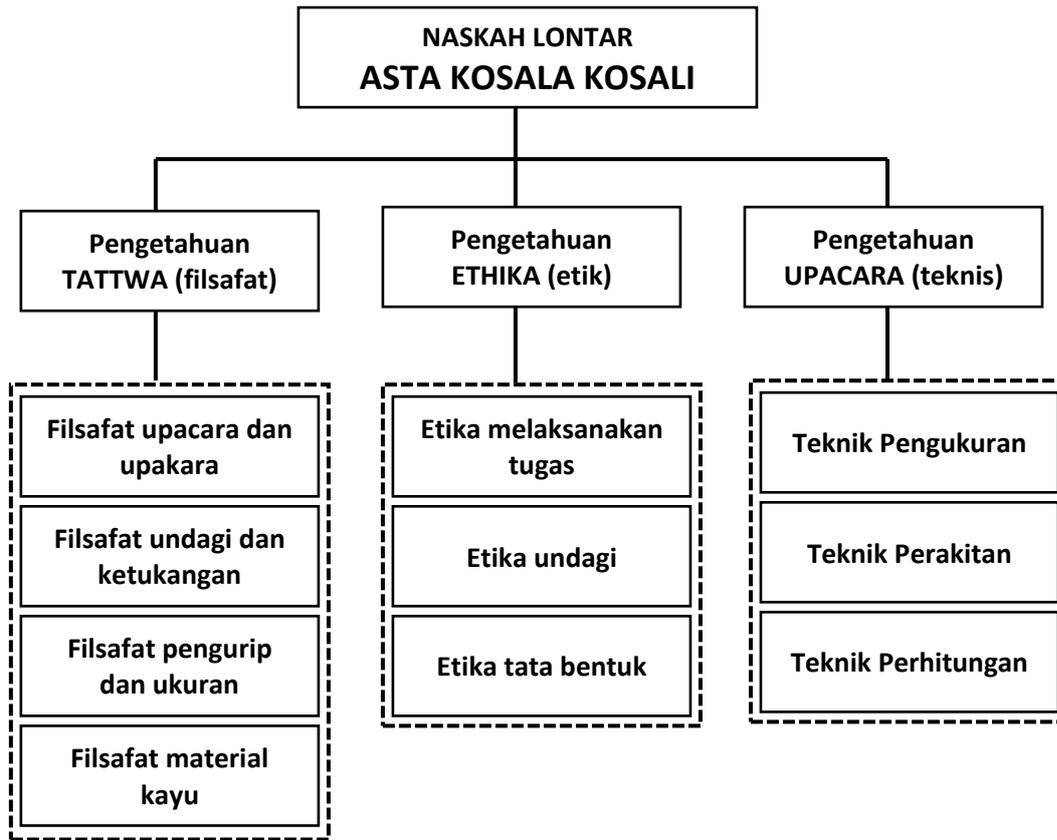


Figure 1. Systematic Content of Lontar AKK
 Source: Arthana, 2017

Lontar AKK is a script used as a guide or guidance in the process of constructing traditional Balinese buildings. This text contains three main aspects relating to the process of building construction, namely aspects of philosophy (tattwa), ethical aspects (ethics) and technical aspects (ceremony). Referring to the view of Klassen, that in the sense of architecture as a construction in which involved two main elements of the elements of poesis and techne elements, the aspects of tattwa and ethics can be classified into elements of poesis is an intangible element as the cause of a building from nothing to become. While the ceremonial aspect is classified into the techne aspect, which is a tangible element of the construction process as a representation of the ability to do things based on the principles involved. This means that the aspects of tattwa and ethics are non-architectural factors that affect the construction process, while the ceremony is the architectural element that became the main shaper of an architectural construction.

Architecture as a building is a basic human need in order to meet various aspects of life, both the needs of the container activities that can ensure a sense of security and comfort, protection or shade, the representation of social aspects and beliefs and so forth. Snyder and Catanese are of the view that in order to realize this need in an architectural perspective as a physical form, construction materials and construction technology are the main thing to be noticed. The content in the AKK lontar script shows a concern for the two main elements, as is the view of Snyder and Catanese. Since the main material used is wood, the attention to building materials in the AKK is contained in several lots relating to the classification of wood species, the procedure of selecting and cutting timber. While the attention to construction technology starts from the procedure of making, determining the size and measurement, determining the construction system using the tongue and groove system (holes and pegs), and the procedure of assembling or combining parts one with the other.

The views of Snyder and Catanese are in line with the view of Mies van der Rohe referred to by Klassen, where it is stated that architecture is a beautiful building that begins when we compose the elements attentively. Arranging means connecting, uniting, assembling and bringing together. This means that the AKK lontar script is an architectural script, in which the content in it concerns the presence of beautiful buildings with due regard to the material characteristics and the construction process.

CONCLUSION

From the foregoing description described above, as the purpose of this investigation or study may be deduced:

1. That the AKK lontar script contains architectural knowledge pertaining to the construction process, and hence this manuscript is an architectural script .
2. Content of knowledge contained in AKK lontar script, among others is the knowledge of tattwa (philosophy) aspect consisting of ceremonial and upakara philosophy, undagi philosophy and carpentry, philosophy of theater and size, and the philosophy of wood materials. Knowledge aspects of ethics (ethics) which consists of ethics perform the task, ethics undagi and ethics of form. And

knowledge of ceremonial aspects (technical) consisting of measurement techniques, assembly techniques and calculation techniques.

Thus, the AKK lontar script is worthy of further study and examination to reveal the in-depth architectural knowledge

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