

Borobudur cultural landscape : a madilog discourse

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Abstract: Borobudur, an ancient monument renowned as a prominent tourist attraction for years, has traditionally been scrutinized through the lens of mystical logic, with prevailing discussions revolving around spiritual influences and supernatural elements. This perspective posits that every aspect of Borobudur, from its construction to its purpose, is intrinsically linked to spiritual motivations. However, a departure from this mystical logic emerges in contemporary research studies that delve into Borobudur's facets through various disciplines such as geography, geology, architecture, and astronomy. This shift aims to explore the cultural landscape of Borobudur during its construction in the eighth century from a different standpoint. In a departure from the mystical approach, this study adopts Tan Malaka's Madilog method to present a fresh perspective on Borobudur's cultural landscape. Through this alternative approach, the study unveils a compelling revelation: Borobudur's cultural landscape development aligns significantly with sustainable and economic sustainability principles. Contrary to the prevailing mystical narratives, Tan Malaka's Madilog sheds light on the pragmatic aspects of Borobudur's construction era, emphasizing a connection to broader concepts of sustainability and economic viability. This nuanced exploration broadens our understanding of Borobudur and highlights the importance of considering diverse methodological approaches to unlock the multifaceted dimension of this historical monument.

Keywords: Madilog, Cultural Landscape, Borobudur, Tan Malaka, Tourism

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Introduction

UNWTO no longer defines tourism merely as travel activities but has shifted towards a more complex perspective. It is considered a "social, cultural, and economic phenomenon inseparable from the need for people to move to countries or places outside their usual environment for personal or business/professional purposes.-These people are called visitors (who may be tourists or excursionists; residents or non-residents) for which their activities involve financing" (UNWTO, 2008). This Tourism definition should be translated into Indonesian as "kepariwisataan," not "pariwisata" or "wisata" because, in Indonesia tourism law number 10, 2010 (UU10, 2009) it states that "kepariwisataan is the whole activity related to Tourism which is multidimensional, and multi-discipline that emerges as a manifestation of the needs of each person and country as well as interactions between tourists and the local community, fellow tourists, government, local government, and entrepreneurs.

Likewise with ecotourism, which is translated as *ekowisata*, for example, is more often associated only with "tour activities" (wisata), not as "insight - concept, collection of activities" (pariwisata). In the regulation No. 33 of 2009 of the Minister of Home Affairs, "ekowisata is the natural resources potential, the environment, as well as cultural uniqueness, which can become one of the leading sectors within the region that have not been optimally developed" (Permendagri33, 2009). This definition is ambiguous and needs to be refined and updated

because it contains an explicit meaning limited to "potential." However, it is sufficient to clarify the position of *ekowisata*, where nature is not merely an object for visits but a concept that involves the community (host and industry) and efforts to conserve the surrounding nature. Regarding understanding the terms tourism (*wisata*, *pariwisata*, and *kepariwisataan*), ecotourism should be translated as environment-based tourism, not just a tour to visit nature or environmentally friendly recreational activities but also all aspect on civilization. This article is the initial writing to spark a discussion about ecotourism in the sense of tourism as *Kepariwisataan* (not just a tour) and its relation to the Borobudur landscape, in which Borobudur should also be seen as a cultural landscape (Saujana)

The word "Saujana" still feels foreign in some circles. However, the word Saujana is an original Indonesian word, which according to the main Indonesian Dictionary, means "*sejauh mata memandang*" (kbbi.co.id, 2023) or visual horizon and acuity. In 2003 in the Charter for the Preservation of Indonesian Heritage, the word *saujana* was agreed to be the equivalent of Cultural Landscape, which is a dynamic reflection of human relations with the natural surroundings and their culture in a broad unit of space and time. Saujana is a complex phenomenon related to tangible and intangible heritage. (D. Rahmi, 2015)

So far, the study of the Borobudur cultural heritage has been mainly discussed using a mystical logic approach a mindset that assumes that everything emerges from the influence of spirits or supernatural beings and the purpose of Borobudur construction was entirely related to Budism (Long, 2007; Murwanto et al., 2004; Septemuryantoro, 2021; Soekmono, 1976) – Mystical Logic is borrowing the term of Tan Malaka, one of the Indonesian thinkers during the independence era in his book entitled the title *Madilog* (Malaka, 1951). Although there are numerous research on geography, geology, architecture, and astronomy within the same era, most of them refer to mystical logic as their epicenter. In this study, *Madilog* Borobudur Cultural Landscape will be presented in a study that (attempts to) distance itself from the mystical logic in question and is expected to spark ecotourism discourse on the Borobudur basin. Tracing from various articles about Borobudur, the study of the Borobudur cultural landscape using the *Madilog* of Tan Malaka approach has never been published, and the author intends to fill in the gaps with this initial study in order to provide a different perspective from previous writings; in which adopting Tan Malaka's material-ism, dialectics, and logic studies of the Borobudur cultural-landscape (Saujana) to be able to see the reasons behind the construction and the cultural-landscape formation of Borobudur.

The exotic dream of ecotourism originated from nightmares of hedonic activity after the second world war, with the rise of Safari tours, which are hunting activities for wild animals in mainland Africa, especially Kenya and its surroundings. This safari activity had become a trend among jet-setters in Europe and America until the 1970s when the Kenyan government opened itself to these hunters and "sold" a wild lion as prey for US \$ 27,000 (Wikipedia, 2023). Another fact that is even more interesting is that safari activities originally referred to trading activities on the Africa-Arabia-Europe trade route from the Middle Ages (fourteenth century) to the eighteenth century. This trade route was not only a trading center for various commodities but also a dark era of human trafficking (enslavement). This dark era of human enslavement ended in the early twentieth century, marked by the second world war until the mid-twentieth century. After the world war, safari became an adventure term, hunting for wild animals, rare animals, plants, and other exotic flora and fauna for trade purposes and even recreational (McCoy, 2022). The transition period of the 70s to 80s decades became the starting point for several world bodies, environmentalists, and researchers to start discussing hunting tourism activities as activities that disrupt existing ecosystems. From several sources and the media, *The Costa Rica Times*, in 1965, stated that an academic adventurer named Claus-Dieter (Nick) Hetsler, who was then active in the Berkley International Forum, had initiated the first ecotour, exploring the Yucatan – the northern peninsula of Mexico, which famous for its dense tropical rain forests and the mysterious Mayan tribe (Legacy, 2009), and at the same time has been named the first ecotourist (Weaver, 2001).

In its development, along with the emergence of global environmental problems, in his book entitled *Ecotourism: Competing and Conflicting Schools of Thought* (Higham, 2007) explained that, in 1987, of the many definitions that existed at that time, Hector Ceballos-

Lascurain, formulates ecotourism as a tourist trip to an area that is still natural, undisturbed or unpolluted, to study particular objects, admire and enjoy the scenery and its flora and fauna that are still sustainable, including every cultural manifestation of the surrounding community (both past and present) found in the area referred to (Ceballos-Lascuráin, 1987). Since then, discussions and research related to ecotourism have become increasingly lively, and among the tourism industry, activists, and environmentalists, this formulation is considered to need still to be refined. Then the International Ecotourism Society (TIES) defines ecotourism as responsible travel to areas that conserve nature and the environment and improve local people's prosperity and well-being (TIES, 2015). In a free translation, this definition, ecotourism - "environment-based tourism" can be interpreted as responsible tourism by maintaining the authenticity of nature, maintaining environmental sustainability and community culture, and improving the welfare of local communities. Within this definition, the main difference between ecotourism and nature tourism (ecotourism) is that ecotourism (environment-based tourism) prioritizes the responsibility to conserve nature, preserve culture and empower the local economy. In other words, the number of tourist visits cannot be used to measure the success or failure of the concept of ecotourism being applied.

UNWTO, the United Nations World Tourism Organization, has been involved in and supported the development of ecotourism since the early 90s. Shortly after that, the United Nations declared 2002 as the year of ecotourism or known as the International Year of Ecotourism (IYE); in line with the declaration, UNWTO organized various activities, including the world ecotourism summit and published a set of guidelines (guidelines) that focus on the contribution of tourism to protect areas (protected areas). In addition, UNWTO prepared marketing reports to increase knowledge of seven important world countries considered and expected to be ecotourism-producing markets. In line with this, the definition of ecotourism according to UNWTO, (UNWTO, 2002) is tourism that has the following characteristics:

- 1) All forms of eco-based tourism, where the primary motivation of tourists is observing and appreciating nature and traditional culture in a sustainable area.
- 2) Prioritizing the value of Education by interpreting the unique characteristics of the object visited.
- 3) Ensure the minimum negative impact on the natural and socio-cultural environment.
- 4) Support the maintenance of natural areas used as ecotourism attractions by
 - a. Generate economic benefits for communities, groups, and local authorities in managing area conservation.
 - b. Provide alternative jobs and income opportunities for local people.
 - c. Increase awareness of preserving natural and cultural resources among residents and tourists.

Madilog is an acronym for Logical Dialectical Materialism which is the result of a synthesis of Tan Malaka's nationalist thoughts, which he outlined in a book of Madilog, Tan Malaka, a prominent and most influential work belonging to one of the figures in the struggle for Indonesian independence. This work is also referred to as one of the books that became the pinnacle of Tan Malaka's best thoughts (Afandi & Rahman, 2015). From reading various articles and excerpts from books related to Materialism, Dialectical, and Logic, then juxtaposing them with Tan Malaka's writings in his Madilog book, discussing it in English, and then trying to catch what is implied in Madilog's "donkey bridge" which he initiated and wrote, the author captures Madilog's perspective as Dialectical Materialism logic as a synthesis of Karl Marx and Friedrich's thoughts on dialectical materialism (1847 – 1848) which emphasizes the "real" situation and conditions at that time (now) and logical positivism, also known as empirical positivism, a school of thought that science focuses on empirical observation, which later develops into neo positivism which separates logical positivism as empiricism in epistemology, determinism in morals and agnosticism in metaphysics and religion as a systematic logic, as expressed by Louis Leahy, a modern philosopher, in his book Human Being: A Philosophical Research. (Camilleri, 2018)(Leahy 2008, Amen 2015).

Methodology

This study adopts a qualitative literature exploratory method with the Madilog Tan Malaka approach to position the concept of ecotourism in its portion in uncover a new perspective on the Borobudur cultural landscape during its construction era in the eighth century. Using Tan Malaka's Madi-log approach and initiate the Borobudur cultural landscape discourse; this is very important to gain a more precise reason behind the construction of Borobudur and the formation of its cultural landscape.

The data was obtained by taking references from various articles, books, and websites that are relevant and have a good validity value. The author utilizes a cross-reference check approach and recent publications to assess data validity. As with the function of literature studies, the author hopes to gain a fresh and new perspective through this study (Elliott & Timulak, 2021). In such a broad dimension of discussion related to the Borobudur temple, in this study, the author takes a niche angle that so far may have gone unnoticed and been dazzled by the grandeur Buddhism mystical logic of the Borobudur Temple. That cranny angle is the dialectical logic of materialism related to the magnitude of the Kedu plains economy during the construction and completion of the Borobudur temple mega project.

Results and Discussions

Results

Materialism Aspects of Borobudur Cultural Landscape

Borobudur cultural landscape, also known as the Kedu plains, was formed from the processes of the Plio-Pleistocene Tectonic Orogenesis process at the end of the Tertiary era around two to three million years ago and formed the towering Manoreh mountains and extending from east to west for more than twenty kilometers. , with an altitude of 500 to 1000 meters above sea level. The polio-plethoric process at the same time forms an open basin that allows Java seawater to the north to enter through a basin known as the Bantul Terban or Bantul geological fracture (Bantul Graben) (BPPIIndonesianheritagetrust.org, 2023; Sutikno et al., 2006). Toward the end of the polio-Pleistocene orogenesis, several parts of the basin formed a series of hills, namely Carving Hill, Gendol Hill, Sari Hill, Pring Hill, Borobudur Hill, Dagi Hill, and Mijil Hill, followed by the emergence of young volcanoes during the Quarter era around the basin, including Mount Tidar, Mount Telomoyo, Mount Andong, Mount Sumbing, Mount Sindoro, Mount Merbabu, and Mount Merapi.

In terms of the dynamics of the process and its geological development, seawater intrusion through the Bantul Terban since the tertiary era has formed an ancient lake, volcanic eruptions since the quarter era has formed antediluvian rivers, the natural contours are varied, covered with millions of years of volcanic ash, rich in various minerals from the weathering process of soil composition that was causing the land of the Kedu plains to be so fertile. As the rivers formed from geological processes, the water flow availability is eternal, with minor fluctuations during the changing seasons making the two plains an incomparable natural heritage.

Discussions

The Nature Dialectics and Human Logic in the Kedu Plain

The incomparable Natural Heritage of the Kedu plains is the logical reason for the birth of civilization on it. The abundant wealth of natural resources sparked the creative initiative of the people at that time to manage the natural heritage inherited from the motherland, which was embodied in cultural heritage. It is from this point that the dialectic of the Borobudur landscape begins. Saujana Borobudur, or what UNESCO agrees with is the term Borobudur Cultural landscape which can be interpreted as a reflection of the creativity of the community in managing its natural landscape, which is reflected in spatial (land) use patterns, the building uses, and other life-supporting uses (economy), so that nature as a place to live is beneficial on an ongoing basis (D. H. Rahmi et al., 2012). The anthropocentric-ecological point of view of environmental science (Soeroso, 2007, 2010) seems to have been dominated by the Borobudur community at that time;

we can still see the traces of this through the election of the Kedu plain as the center of civilization at that time as well as traces of agriculture and other spatial and land management.

Various studies of the Borobudur temple and the cluster of temples around it up to a ten-kilometer radius show traces of how land management in the Kedu plains considers basins, river flows, river crossings, and the area's density. The amazing fact is that in the same era, around the eighth century AD or 760 to 830 AD, two masterpieces were built on this plain which had such high constructing technological, aesthetic, and philosophical values, even exceeding the thinking ability of the ordinary people of that era modern nowadays. This dialectics has led many researchers to explore the side of Buddhism mystical logic (Afandi & Rahman, 2015; Malaka, 1951). Only later, in the era of the 2000s, along with the ability of carbon analysis technology, studies on the morphology of the Kedu plains were increasingly revealed, where with chronostratigraphic evidence, the implications of the morphology of the Kedu plains could be raised and introduced as Saujana – cultural landscape (Gomez et al., 2010; Murwanto et al., 2004). Citing the "Policotomy of Ecotourism Development Options in the Borobudur Area" (Soeroso, 2010), the diversity of natural dialectics and logical dialectics since the founding of Borobudur (8th century) was not limited to the existence of temples. Nevertheless, it also includes spatial planning concepts such as agricultural, public (village), and construction technology zones and implies higher education philosophy and governance. In other words, the intelligence of civilization at that time was so brilliant that it deserves to be called the *Enlightenment period* and is still strongly detectable today, even though it has begun to fade in the daily behavior of people in the current Borobudur Saujana area.

Dialectical Materialism logic of Kedu Plains

By limiting the study's focus only to the design and construction process of Borobudur and Prambanan temples which were built in the same era, If only armed with the existence of rich natural building materials, fertile land, and rivers with abundant water as support for vital necessities of life, the science which (at minimum) includes agricultural technology which is closely related to astrology, engineering technology, architecture, aesthetics, and philosophy, coupled with management skills on a macro and micro scale, then a masterpiece can be materialized.

The construction of the two clusters of temples which lasted for more than two generations or within 75-80 years, indeed required thousands of workers for at least three generations, which of course, also had to be supported by the transfer of technology from the generation that planning and started its development to the next generation, this technology is not only design technology, architecture and building aesthetics but also a management system that is extraordinarily complex and detailed. At the same time, adoption, learning, dissemination, and philosophical foundation are carried out. The only logical consequence of the activity's magnitude is the existence of an advanced and excellent education system.

With the complexity of these activities, it is logical for the authors to propose a hypothesis that the logistical needs are substantial, and to meet logistical needs, especially food, agricultural technology intervention is a vital requirement. The Borobudur and Prambanan mega projects would not have materialized without qualified agricultural and food processing technologies. The clarity in disclosing dialectics and materialism logic reveals why the Borobudur and Prambanan megaprojects and their related clusters of temples need to be made/can and can be made. Even though it is the initial research, the veil of this mega project has begun to unfold, providing an opportunity to see how well-established science and technology were at that time; then, it also revealed a little about the relationship between the existence of temples and astronomy where the arrangement of the temple charts is algorithmic, and can be seen with the naked eye in the construction of the maha mandala. Research has proven that the zenith paths of the sun and planetary constellations and their satellites are indeed mapped in the algorithmic arrangement of buildings, statues, and stupas, even in relief; This algorithmic arrangement is a reference for planting times, periods of various activities and dialectics of civilization which are mapped in the holy-day of astronomical calendar (*ala ayuning dewasa* or *wewukon and wewaran in Bali until now*) (Eiseman, 2011; Juni, 2020). The remnants of this astrological ability in Java are still known as *Pranoto Mongso*. (Business today, 2017; Magli, 2017; PPLH Seloliman, 2018; Situngkir, 2012).

The dialectics of materialism logic can be a place of real-life skills education then and now. (Magli, 2017; PPLH Seloliman, 2018; Situngkir, 2012; Sparavigna, 2017).

Conclusions

Madilog Tan Malaka, or the Logic of Materialism Dialectic of Tan Malaka, found loopholes to reveal the reason, readiness, and human ability at that time to form the Borobudur cultural landscape, which exceeded today's modern human capabilities. The flashes out of the loopholes are: (1) Land management science and technology has been associated with qualified astrology with a legacy that can still be used today in the form of Pranoto Mongso (in Java traditions), not even just agriculture, in Bali *wewukon*, *wewaran*, *wariga* with all their calculations known as the holy-day of the astronomical calendar (*ala ayuning dewasa*) is also used as a benchmark for carrying out various activities, including various ceremonies and time arrangements in running a business and all businesses, ultimately agriculture. (2) Strategic management has developed so that the organization of natural resources, people, and capital can produce timeless masterpieces over such a long period. (3) The establishment of design technology, architecture, aesthetics, and philosophy requires an extraordinary dialectic of logic, and this requires a holistic education system, which succeeds in embracing the empirical peaks as technology, the peaks of epistemology as philosophy, morals and grounding them in the attitude of everyday life as morals, and agnosticism in metaphysics and theology. (4) The intelligence of the people at the time of the Borobudur temple construction was in line with the principles of ecotourism, where the use of natural heritage follows the principles of natural, environmental, and cultural sustainability, including economic sustainability so that we can inherit the landscape of Borobudur to this day.

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