

CONTINUITY AND CHANGE IN JAVANESE ORNAMENTAL ART: A CASE STUDY OF MEDALLIONS FROM PENATARAN TEMPLE AND MANTINGAN MOSQUE

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ABSTRACT

This study explores the dynamics of cultural continuity and change in Javanese ornamental art during the significant transition from the Hindu-Buddhist era to the Islamic era. While previous research has often focused on Penataran Temple and Mantingan Mosque separately, this study fills a significant gap by providing a direct, micro-level comparison of their medallion ornaments. The research employs Ahadiat Joedawinata's theory of design change as a systematic analytical framework, allowing for an examination that goes beyond simple visual description. Each artifact is analyzed based on its technique, material, function, and symbolic meaning. The findings demonstrate a complex process of negotiation rather than mere replacement. Key elements of continuity are evident in the persistent use of the medallion format, low-relief carving techniques, and fauna motifs, such as the peacock. In contrast, significant changes are seen in the removal of mythological creatures, the introduction of geometric (arabesque) and floral motifs, and a stylistic shift from naturalistic deformation to abstract stylization, reflecting the adoption of Islamic aesthetic values. Ultimately, this study contributes a new analytical model—the 'Continuity and Change' framework—for interpreting cultural transformation in Nusantara. It illustrates how Javanese society creatively integrated new influences while preserving its core artistic heritage.

Keywords: continuity change, design transformation, medallion-ornament, penataran temple, mantingan mosque

INTRODUCTION

Previous research has discovered that the intricately designed medallion ornaments engraved on the walls of the Mantingan Mosque in Jepara resemble those found on the walls of the Penataran Temple in Blitar. This significant similarity highlights a direct cultural and artistic connection between the two sites, underscoring the historical interactions that influenced their architectural styles. As depicted in Figure 1, the detailed patterns and motifs of these medallions unambiguously reflect shared traditions and aesthetic values from the era.

Penataran Temple was rediscovered by Sir Thomas Stamford Raffles in 1815. It was originally constructed in 1337 Saka, which corresponds to 1415

AD, during the Hindu-Buddhist era, as indicated by the year carved on the pool wall (Purwantari, 2023; Yudianto & Ratyaningrum, 2023). In contrast, the Mantingan Mosque was built in 1748 Saka, or 1559 AD, during the Islamic Kingdom era (Irsyada, 2019; Resiyani, 2020). The time gap between these two sacred sites is approximately 144 years, or 1.5 centuries.

Additionally, these structures were established during different periods of rule and were influenced by various cultures, reflecting the context of different religions. Geographically, Penataran Temple is located in Blitar, East Java, while Mantingan Mosque is situated in Jepara, Central Java, approximately 300 kilometers apart. Despite significant differences in time and location, both buildings exhibit visual similarities,

particularly in the medallion ornaments engraved on their walls. Both artifacts feature a circular medallion shape with motifs of animals carved within the inner circle.

The central question guiding this research is illustrated in Figure 1. This direct comparison, a novel approach for examining these specific artifacts, highlights the central research inquiry: the persistence of form during a significant cultural and religious transition (Irsyada, 2018). Despite being separated by approximately 1.5 centuries and undergoing a major spiritual transformation, the medallion ornaments of Mantingan Mosque and Penataran Temple exhibit a striking visual similarity. This figure highlights the central question of the study: how can such formal continuity be explained in light of the profound contextual changes that have occurred? The visual paradox presented necessitates an analytical approach that goes beyond superficial observation.

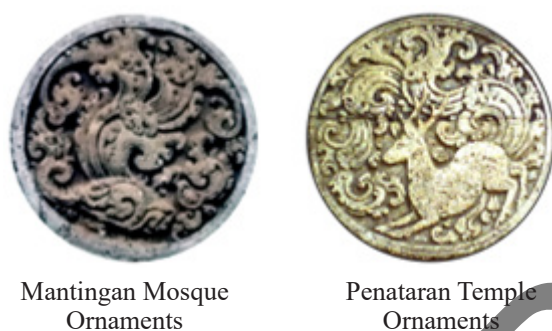


Figure 1 Medallions from Mantingan Mosque (Islamic Era) and Penataran Temple (Hindu-Buddhist Era)

The term "ornament" is derived from the Latin word "ornare," which means "to decorate." Ornamentation refers to decoration and is often associated with decorative or ornamental design. This design can incorporate geometric styles of decoration, as well as forms of handicraft commonly found in architecture and interior design. Traditional ornamentation is considered an art form that adheres to specific techniques and expressions based on established rules, norms, and patterns that are collectively agreed upon and passed down through generations. The evolution of ornamental art reflects the progression of human thought regarding art and culture. This process is influenced by the cultural standards and norms that prevail in society (Nirmala et al., 2019).

During the Hindu-Buddhist era, temple wall decorations often featured realistic elements. These decorations are exemplified by the *Lalitavistara* reliefs found on Borobudur Temple and the Sri Tanjung reliefs at Penataran Temple. However, with the introduction of Islamic culture in Java, a shift occurred towards more Arabic-style ornamental motifs. As a result, the depiction of animals and human figures became either obscured or stylized. These stylized depictions can

be observed in the *Pintu Bledak* of the Demak Grand Mosque and the walls of the Mantingan Mosque, as illustrated in Figure 2 (Irsyada, 2022). This diagram situates Penataran Temple and Mantingan Mosque within the broader historical transition from the Hindu-Buddhist to the Islamic eras, offering a new framework for comparative analysis (Koswara, 1996; Irsyada, 2018).

The process of artistic negotiation observed in Mantingan is not an isolated phenomenon but rather part of a broader historical trend in Javanese art. Figure 2 provides a historical timeline that places the case studies within this larger transformation. It visually represents the shift in belief systems, design products, and artistic motifs from the Hindu-Buddhist period (Majapahit) to the Islamic period (Demak, Kalinyamat). By situating Penataran and Mantingan within this timeline, this study highlights the significance of comparing these two pivotal yet interconnected moments in the context of continuous cultural evolution.

The cultural transformation highlighted in the timeline shows that Penataran and Mantingan not only represent two distinct historical periods but also exhibit visual continuity and adaptation worthy of examination. This study focuses on the medallion ornaments found at Penataran Temple and Mantingan Mosque. Despite their different religious backgrounds, these two sites display striking visual similarities. These similarities prompt a deeper investigation into the aesthetic and symbolic values embedded in their respective artistic expressions.

This study explores the transformation of medallion ornaments found in the Penataran Temple and Mantingan Mosque. It aims to uncover how cultural expressions and their embedded values evolved during the transition from the Hindu-Buddhist to the Islamic period in Java. Both artifacts share a circular medallion shape, featuring animal motifs engraved within the inner circle. This striking continuity, which spans a significant shift in both religion and politics, presents an intriguing puzzle. It challenges the assumption of a complete cultural break. Instead, it suggests a sophisticated process of acculturation, in which pre-existing traditions were reinterpreted under the influence of new Islamic values.

The persistence of this ornamental form underscores its profound significance in the Javanese aesthetic and worldview. Analyzing its transformation is not just an artistic endeavor. It is crucial for understanding how the core of Javanese identity adapted during one of its most critical historical periods. As noted by prior scholarship (Iswahyudi in Irsyada, 2018), the medallion motif served not only decorative purposes but also conveyed symbolic and narrative meanings, often reflecting religious or mythological themes. Its survival and reconfiguration within Islamic contexts provide a compelling perspective for examining broader cultural negotiations.

Comparative studies that connect the Hindu-Buddhist and Islamic periods have generally taken a

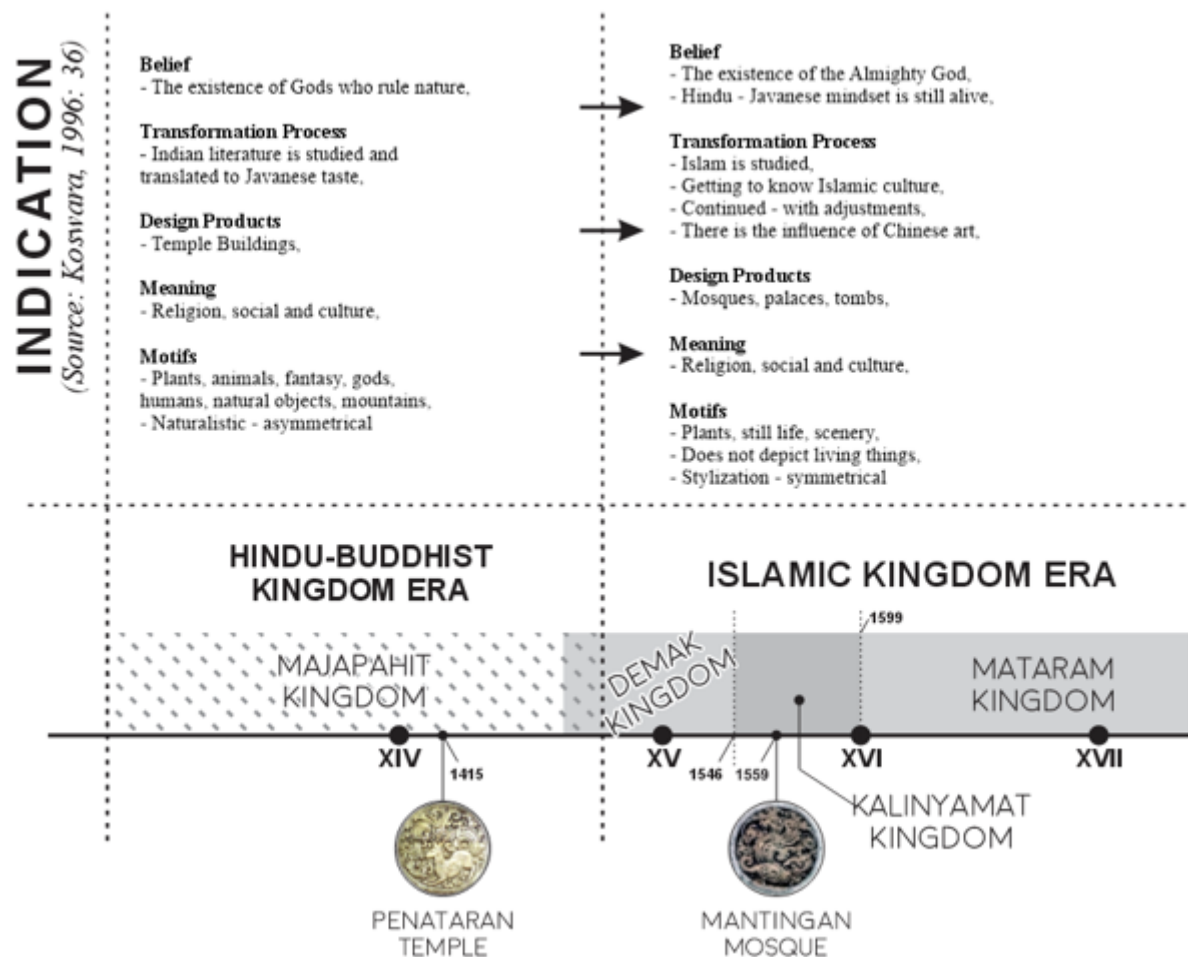


Figure 2 A Timeline of Javanese Artistic Transformation

broad approach, often highlighting general stylistic changes without providing a systematic framework to explain the specific mechanisms of transformation. While earlier studies have documented the iconographic details of Penataran Temple (Purwantari, 2023; Yudianto & Ratyaningrum, 2023) or the stylistic influences in Mantingan Mosque (Irsyada, 2019), they typically analyze these sites in isolation. This gap in the literature underscores the need for a detailed, micro-level analysis of how specific ornamental features—such as medallions—were transformed over time. It is crucial to identify which elements were preserved, which were abandoned, and the underlying factors that drove these choices. Addressing this gap requires a more systematic and integrated approach to understanding how ornamental forms evolved in response to changes in religion and culture.

To address this research gap, this study analyzes the medallions through the lens of continuity and change, breaking down the specific elements that were preserved, altered, or newly introduced. It employs Ahadiat Joedawinata's theory of design change as its core analytical framework, providing a structured approach to evaluate artifacts based on technique, material, function, and symbolic meaning. Existing research on these historical sites offers a crucial foundation. Extensive studies have documented the

rich iconography of Penataran Temple, including its narrative reliefs and diversity of fauna (Yudianto & Ratyaningrum, 2023; Suhadak et al., 2022). Meanwhile, separate research has explored the unique stylistic fusion, and symbolic meanings present in the carvings of Mantingan Mosque (Irsyada, 2019; Pambudi et al., 2019).

However, most of this literature treats each site in isolation. Cross-period comparisons often remain general, lacking a systematic method to dissect the specific mechanisms of transformation at the micro-level of shared ornamental elements. By focusing on the medallion as a visual constant across two religious traditions, this study provides a novel, theory-driven approach to understanding how cultural forms were selectively retained, reinterpreted, or replaced during Java's spiritual and artistic transition.

METHODS

This research employs a qualitative method with a focused historical approach. The historical scope is intentionally defined between the Late Majapahit period and the rise of the Islamic Sultanates along the north coast of Java. Specifically, the analysis focuses on two key temporal anchor points: circa 1415 AD

(Saka 1337), the year associated with the construction of the main temple at Penataran, and 1559 AD (Saka 1481), the established date for the completion of the Mantingan Mosque. These 144 years were deliberately chosen, as they represent a pivotal period of religious, political, and artistic transformation in Javanese history, providing a valuable framework for comparing cultural shifts.

The overall methodological design aims not only to describe visual differences but also to analyze the underlying symbolic and cultural changes that these artifacts represent. Central to this study's analytical framework is Ahadiat Joedawinata's theory of design change. This theory was chosen to shift the analysis from mere visual descriptions to a critical examination of the transformation process. Joedawinata's framework offers a systematic tool for deconstructing each artifact, focusing on key elements such as technique, material, energy, function, and meaning.

The application of this theory was carried out using a structured analytical protocol. For each medallion, the analysis followed three steps: Physical-Technical Elements, Functional-Symbolic Elements, and Comparative Analysis. First, in the Physical-Technical Elements, the carving technique (e.g., low relief), the material used (e.g., andesite versus limestone), and the inferred processing energy were identified. Second, in the Functional-Symbolic Elements, the medallion's function (e.g., narrative filler versus symbolic wall decoration) and its symbolic meaning, which was derived from its core motifs, were analyzed. Finally, in the Comparative Analysis, the results for Penataran were systematically compared with those for Mantingan across all these elements to identify patterns of continuity or change. For example, the 'Meaning' element in Penataran was directly contrasted with the 'Meaning' element in Mantingan to understand the ideological shift that took place.

The primary objective of this framework is to integrate the findings into a model of Continuity and Change. This model facilitates a detailed analysis of what was lost, altered, newly introduced, and retained during the cultural transition. The research process is illustrated in Figure 3. This diagram shows the sequential flow of the research, starting with the initial problem formulation and framework selection, followed by the triangulated data collection and multi-stage data analysis, and culminating in the final synthesis and conclusion.

To ensure the depth and validity of the analysis, data were gathered using three primary methods. Field observations were conducted at Penataran Temple and Mantingan Mosque to collect visual data, allowing for a detailed analysis of each medallion's form, material texture, and carving techniques. These direct observations provide foundational evidence for stylistic and material comparisons. Additionally, purposive interviews were held with two key individuals: Kiai Nardi, a respected cultural figure

in Jepara, and Afif Isyarobi, a historian specializing in the history and ornamentation of Jepara. These interviews were essential for gaining an emic (local/insider) perspective and capturing cultural contexts that are often absent from formal literature.

A comprehensive review of relevant academic journals and books was also conducted to provide historical context, establish the "state of the art" in the field of study, and facilitate the cross-validation of data obtained from observations and interviews from an (academic/outsider) perspective. This methodological triangulation involved not just collecting data from three sources, but actively using them to validate and enrich one another. For instance, a visual finding from direct observation (such as a specific motif) was first validated against historical descriptions found in the literature. Then, its cultural significance was further explored through in-depth interviews with local experts. This iterative process of comparing and contrasting data from various sources allowed for the development of a more robust, reliable, and multi-layered interpretation.

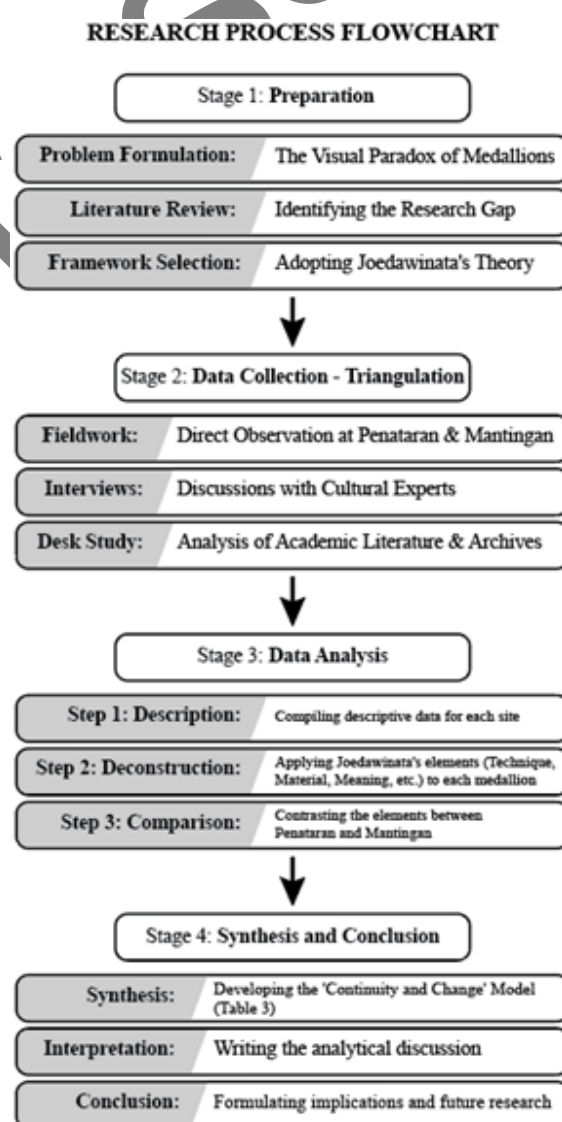


Figure 3 Research Process Flowchart

RESULTS AND DISCUSSIONS

This section presents the results of a comparative analysis that begins with a broad understanding of ornamentation and gradually focuses on a specific examination of the medals from Penataran Temple and Mantingan Mosque. The main contribution of this research, as demonstrated in the following analysis, is not confined to a single aspect. Instead, it comprises a synthesis of three distinct elements: a new objects of comparison, a systematic analytical method, and nuanced theoretical contributions.

In this new comparison, this research presents one of the first direct micro-level comparisons of the medal ornamentation from these individually studied sites, considering it a primary document of cultural transition. In a systematic analytical method, this research employs Joedawinata's theory of design change as a structured framework for analysis, unlike previous comparative studies that often remained purely descriptive. This approach enables a detailed examination of how and why specific design elements were transformed, going beyond mere stylistic observations. Ultimately, through nuanced theoretical contributions that map the findings onto the Continuity and Change model, this research provides nuanced insights into the acculturation of Javanese culture. The study reveals that this transition is not simply a process of replacement but rather a dynamic negotiation between preserving core aesthetic principles (continuity) and embracing new symbolic values (change).

The following discussion will elaborate on key concepts of ornamentation, beginning with its basic definitions and then applying an analytical framework to a specific case study. According to Riisberg and Munch, ornamentation refers to the arrangement of various motifs, organized according to particular principles and rules, which creates interesting decorative structures or shapes. The term "ornament" is often used interchangeably with "decoration" or "embellishment." It encompasses jewelry utilized in architecture, environmental design, objects, and even the human body, including fashion (Sudana, 2019).

According to Criticos, the essence of ornamentation lies in its ability to create, convey, and enhance meaning. Ornamental symbolism serves as a crucial layer of representation for individuals or groups expressing their identity. In the case of Karawo ornaments, these pieces serve to convey meaning through their symbolic designs. Criticos identifies four primary functions of ornamentation: symbolic (representation), qualitative, structuring, and decorative. These functions are often interconnected within a single type of ornament and may vary in their prominence. (Sudana, 2019)

According to Gustami, ornamentation refers to the decorative elements applied to a product. The primary purpose of ornamentation is to enhance the beauty of the item being decorated. The development of Nusantara ornaments showcases the diverse traditional

designs found across the country, each reflecting unique characteristics specific to its region. As a result, Nusantara ornaments embody the local community's tastes and cultural influences. Additionally, ornaments serve various functions beyond mere aesthetics, including symbolic significance and constructive technical roles (Hermita & Sianturi, 2020).

Similar to Gustami's perspective, Glaveanu argues that ornaments are significant motifs that, when added to an object or process, enhance not only its aesthetic appeal but also its individual and social value. Glaveanu's assertion highlights that the use of ornaments is not solely for enriching visual aesthetics; it also contributes to the personal and social significance of the object. Through a study of Easter egg decorations in Northern Romania, Glaveanu identified various functions of ornaments, including marking group identity, conveying meaning, organizing actions, directing attention, expressing personal style, evoking experiences, beautifying the object, and representing reality. These functions encompass aesthetic, utilitarian, individual, and social aspects of ornaments (Sudana, 2019).

A medallion is a round or oval ornament featuring sculptural or pictorial decoration, often found on interiors, monuments, or pieces of furniture. In Great Britain, medallions became a popular decorative element in neoclassical architecture during the 19th century (Yudianto & Ratyaningrum, 2023). According to Halim and Herwindo, a medallion is a circular carving that may be adorned with ornaments or reliefs that convey a story. The development of medallions is believed to have been influenced by Chinese culture, impacting kingdoms during the Young Classic era, including the Hindu-Buddhist kingdoms of Singosari and Majapahit. Medallion ornaments are particularly found on temples from the Young Classic period, such as Penataran Temple and Kidal Temple. Beyond their decorative purpose, medallions also add aesthetic value and beauty to the structures they adorn (Chandra, 2021).

Medallions are decorative elements commonly found in sacred buildings such as temples and mosques. According to Webster's New Dictionary, a medallion resembles a tablet and is often used to depict relief objects, portraits, or ornaments. These can be located on walls, windows, or as edge decorations on carpets. Medallion artifacts are believed to have originated during prehistoric times, approximately between 2500 and 1500 BC in the Indus River Valley, with a focus on the Harappa and Mohenjo-daro regions in India. In 1922, British archaeologist Sir Montimer Wheeler conducted excavations and discovered 250 round pieces of stamps and stone slabs resembling medallions. However, further examination revealed that these were pictographs featuring an ox, as illustrated in Figure 4 (Irsyada, 2018).

In his analysis, Iswahyudi explains that medallions serve purposes beyond mere decoration, carrying multiple layers of meaning and function in sacred architecture across Java. Medallions act

as decorative elements that enhance the aesthetic appeal of temples and mosques. They also carry symbolic significance. In the Hindu-Buddhist context, medallions often depict mythological narratives or religious events, while in the Islamic context, they typically feature calligraphy or geometric motifs that contain spiritual meaning. Additionally, medallions express cultural identity, reflecting the local genius of the Javanese people. The shapes and motifs illustrate the process of acculturation and cultural adaptation from India, which developed into a distinctive and unique work of art in Java. They also hold religious significance, as they are linked to Hindu-Buddhist cosmology. Such representations include Mount Meru (Mahameru), which is believed to be the abode of the gods, particularly depicted in Hindu and Buddhist temples. In the context of mosques, they enhance the sacred and spiritual atmosphere. Lastly, medallions function as tools of visual communication, acting as signs that convey symbolic messages to the community. Their meanings can be interpreted through a process of semiosis (Irsyada, 2018).



Figure 4 Image of a Medallion Containing a Pictograph (Irsyada, 2018)

In general, a design object, like anything else, originates from a concept. Simply put, the idea transforms into the object. A concept is formed by a collection of interrelated ideas, which are then brought to life through specific techniques, skills, tools, materials, and energy, resulting in the creation of a new object. According to Bagas, design is influenced by the ability to assess the situation, meet market needs, respond to consumer demand, and draw on a wealth of ideas and imagination necessary for developing new products (Irsyada, 2018).

To produce a new object, a concept encompasses

at least two value systems: a traditional aesthetic value and a spiritual cosmological value. Traditional aesthetic values are rooted in local traditions. In contrast, spiritual cosmological values refer to the beliefs or religious values that influence the people in a particular area. The formulated concept aligns with specific materials available locally, leading to the idea of "design as concept." When this concept is integrated with other elements—such as materials, techniques, skills, and tools, a new object is produced (Irsyada, 2018).

The new object contains elements that define its identity, including utility, aesthetics, symbolism, and vision or mission. According to Mayall, objects possess characteristic features related to their function (serviceability) and appearance. Professor Childe noted that prehistoric stone axes exemplify both efficiency in function (utility) and beauty (aesthetics). These axes illustrate the dual characteristics of functionality and aesthetics. To create a quality product (object) for people, a well-thought-out design (idea) is essential. Ahadiat emphasizes that good design must incorporate several key elements, including technique, materials, processing energy, functionality, usability, artistic imagery, and consumer demand. As Ahadiat and Gunawan illustrate in Figure 5, effective design results in objects that provide practical and aesthetic benefits, addressing the physical, psychological, social, economic, and spiritual needs of humans as "end users." This approach aims to fulfill various human needs, which encompass biophysical, psychological, socio-economic, and cultural-spiritual aspects (Irsyada, 2018).

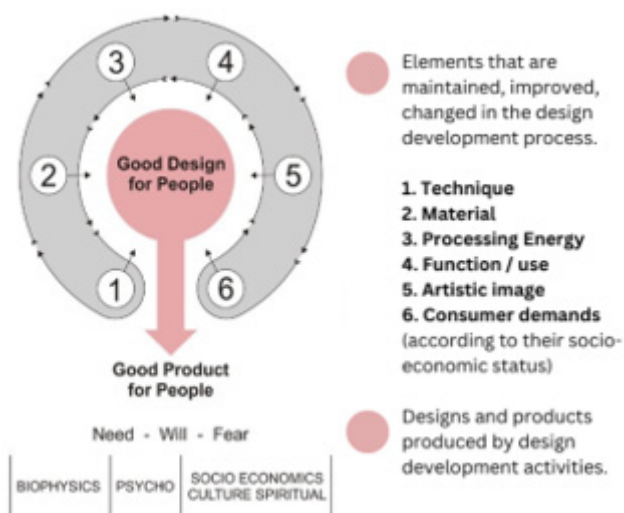


Figure 5 Graph of elements retained, improved, and changed in the design development process (Irsyada, 2018)

Natural resources, ecological systems, culture, and the ideas, behaviors, and physical attributes of people in a region all influence one another causally, with geographical location as a starting factor. The relationship among the natural ecological environment,

culture, and local communities is interactive and adaptive, shaped by the materials, technology, sensitivity, and skills available in the area. The natural environment, culture, and local populations serve as guiding elements for extra-aesthetic artifact forms. Conversely, regional materials, energy, technology, tools, sensitivity, and skills guide the creation of intra-aesthetic artifact forms, as illustrated in Figure 6 (Irsyada, 2018).

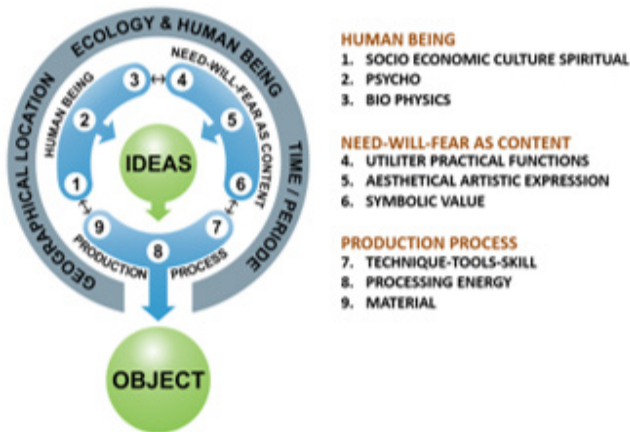


Figure 6 Graph of Guiding Element Theory in Design Phenomena (Irsyada, 2018)

In this research, a comparative analysis was conducted on two historical ornaments from the Nusantara, the Penataran Temple Medallion and the Mantingan Mosque Medallion, as illustrated in Table 1. These ornaments serve not only as decorative elements but also as reflections of a complex process of cultural acculturation. They represent a tangible manifestation of the interactions and transformations among local, Chinese, and Islamic cultures within their social and spiritual contexts. Each ornament exhibits unique characteristics in terms of craftsmanship techniques, materials, symbolic meanings, and the role of human creativity in their development. To clarify the differences and similarities between the two ornaments, the following comparison table addresses several key aspects, including the production process, functions, meanings, and the contributions of those involved in their creation.

To systematically deconstruct these artifacts, this study utilizes Joedawinata's theory of design change as its analytical framework. Table 1 presents the direct results of this analytical process. Instead of merely listing differences, the table organizes the comparison based on specific guiding elements, such as Technique, Material, Function, and Conceptor. This method offers a novel, evidence-based approach for our comparison. Such a systematic breakdown serves as foundational evidence for our analysis, enabling us to identify precisely where transformations occurred and which elements remained stable across the two periods. This analysis marks the first step in transitioning from mere description to critical interpretation.

Table 1 Systematic Analysis of Medallions using Joedawinata's Theory

Medallion of Penataran Temple	Guiding Elements	Medallion of Mantingan Mosque
Production Process		
Engraving – carving – Chinese culture	Technique – Tools – Skill	Engraving – carving – Chinese culture
Humans	Processing Energy	Humans
Black River Stone / Andesite and Red Brick	Material	Yellow limestone and limestone
Need-Will-Fear as Content		
Decorative elements on temple walls, filling gaps between Mahabharata relief panels	Utility Function	Wall decorations for the mosque
Javanese–Chinese	Aesthetic Expression	Javanese – Chinese – Islamic
Correlation between humans and fauna coexisting harmoniously	Symbolic Value	Symbol of the construction of the Mantingan Mosque
Human Being		
Tribhuwana Wijayatunggadewi	Conceptor	Ratu Kalinyamat
Unknown	Artisans / Sculptors	Tjie Wie Gwan & Sunan Kalijogo
Javanese, Chinese	Skill	Javanese, Chinese, Islamic

The medallions found in Penataran Temple and Mantingan Mosque are prime examples of cultural acculturation in the Nusantara region. The influence of Chinese culture is evident in the sculptural techniques and ornamental motifs. This influence showcases that the creative process in traditional architecture is not solely based on local traditions but also receptive to external influences.

At Penataran Temple, the Chinese influences are evident in the sculptural inlay technique, which is skillfully integrated with local iconography and narratives, such as those from the Mahabharata, a significant Hindu epic. In contrast, the Mantingan Mosque exhibits a blend of Javanese and Chinese influences, along with a stronger incorporation of Islamic aesthetics. This reflects the spiritual and social transformations that accompanied the spread of Islam throughout the Nusantara.

The selection of materials in these two

medallions highlights the adaptation to the environment and the available technology of the time. At Penataran Temple, the use of black river stone, andesite, and red bricks exemplifies the local natural resources found in East Java. As noted by Eni (2019), this temple, built outside the realms of the three great kingdoms—Kediri, Singasari, and Majapahit—primarily utilizes black river stone, andesite, and red bricks. These materials are well-suited for temple architecture, as they provide the necessary sturdiness and durability against weather changes.

In contrast, the Mantingan Mosque features limestone, a material that is more malleable and easier to work with. This choice reflects a design philosophy that prioritizes both visual aesthetics and the practicality of efficient craftsmanship. Consequently, the inclusion of artworks in mosques achieves a balance between beauty and the techniques that facilitate quicker construction and detailing.

The symbolic value of the two medallions is highly significant within the social and religious context in which they were created. The ornaments found in Penataran Temple are not only decorative, but also fill empty panels with philosophical meanings related to human relationships with nature and wildlife. This reflects the Javanese people's spiritual awareness of the environment and their connection to life. The depiction of animals corresponds with past cultures that held beliefs in the significance of animals, allowing them to coexist as living beings alongside humans (Suhadak et al., 2022). In contrast, the ornamentation on the Mantingan Mosque focuses more on symbolizing development and honoring Islamic values. By blending elements of Javanese and Chinese culture, these ornaments serve as a bridge between local traditions and new religious teachings.

The involvement of significant figures in the creation of these ornaments shows that art and

architecture in the past were closely tied to the roles of leaders and spiritual figures. At Penataran Temple, the presence of Tribhuwana Wijayatunggadewi as the designer indicates royal involvement in the artistic process. This involvement highlights how political and religious power influenced the development of cultural infrastructure. Similarly, at the Mantingan Mosque, the participation of key figures in the spread of Islam, Tjje Wie Gwan and Sunan Kalijogo, is noted. The involvement of these figures suggests that art served not only as a medium of cultural expression but also as a tool for proselytizing and disseminating Islamic values.

These two ornaments exemplify the crucial role that human skills and expertise play in producing high-quality artworks. The skills involved reflect not only technical proficiency but also an understanding of cross-cultural influences. At Penataran Temple, the blending of local carving techniques with Chinese cultural elements highlights the collaboration between local artisans and foreign influences. Similarly, the Mantingan Mosque showcases a fusion of Javanese, Chinese, and Islamic artistic skills, demonstrating the richness of multicultural cooperation. This collaboration serves as clear evidence that the harmonious interaction of diverse cultures shapes the arts and culture of Nusantara.

Table 2 outlines the transformation processes observed between the Penataran Temple Medallion and the Mantingan Mosque Medallion. It focuses on several key aspects, including their transformation, meaning or functionality, dimensions, motifs or themes, depiction styles, and ornamentation techniques. This analysis highlights both the differences and similarities in the ornaments, particularly in terms of fauna, floral, and geometric motifs, as well as the carving styles and their symbolic functions in these two types of medallions.

Table 2 Indications of the Transformation Process

Medallion of Penataran Temple	Indication	Medallion of Mantingan Mosque
Fauna motifs and mythological creatures with deformative carving styles dominate the ornament	Transformation	The ornament is dominated by fauna, floral, and geometric motifs, with stylized carving applied to the fauna motifs
Symbolic and aesthetic	Meaning / Function	Symbolic and aesthetic
Low relief (Bas Relief)	Dimension	Low relief (Bas Relief)
Fauna (buffalo, elephant, donkey, cassowary, wild boar, fennec fox, deer, cow, tiger, antelope, goat, civet, owl, sparrow, dove, hornbill, crane, quail, peacock, parrot, pigeon, swan, rooster, duck, monitor lizard, pangolin, muskrat, Javan rhino, horse, mouse-deer, Javan porcupine, cat, ram, dog, fox) & mythological creatures (lembuswana & nagaraja)	Motif / Theme	Geometric (arabesque), Floral, Fauna (peacock, phoenix, horse, elephant, crab, monkey)
Deformation	Style (Rendering Approach)	Stylization (abstracted)
Passive Ornament	Ornamentation Technique	Passive Ornament

Building on the detailed evidence presented in Table 1, Table 2 begins the synthesis process by distilling complex data into core categories of transformation. For instance, it illustrates the shift in dominant themes from mythological fauna to stylized flora, as well as the change in rendering styles from deformation to stylization. This table serves as an essential bridge, summarizing the key changes before they are fully conceptualized in the final analytical model.

In both the Penataran Temple and the Mantingan Mosque, the ornaments serve as both symbolic and aesthetic elements, crafted through low-relief carvings known as bas-relief. These ornaments indicate that their primary purpose is to convey spiritual and visual meaning while maintaining the integrity of the building's overall structure. However, there are notable differences in how the themes and motifs are transformed in each setting.

The medallion at Penataran Temple features fauna and mythological creatures depicted in a stylized, often deformed manner. This artistic approach alters parts or the entirety of the original forms to create specific visual effects. Iswahyudi notes that ornamental motifs, particularly those featuring plant or vine designs, are predominantly found on the feet and bodies of various East Javanese temples, including Penataran Temple. This trend can be traced back to classical traditions that associate tendrils with fertility and abundance. Furthermore, this motif reflects a continuation of the ornamental style observed in the Kalasan Temple in Central Java. However, in East Javanese temples, the vine motif typically emerges from the bodies of animals (Purwanti, 2021).

The Mantingan Mosque is notable for its intricately carved medallions that showcase a variety of motifs, including animals, floral patterns, and geometric designs known as arabesques (Irsyada, 2019). The animal motifs, particularly those depicting peacocks, phoenixes, horses, elephants, and monkeys, are especially remarkable. These representations have been refined through a technique called stylization, which simplifies forms into more abstract patterns. This method is characteristic of Islamic art, which generally avoids explicit depictions of living creatures in accordance with the aesthetic principles of the culture.

Both medals showcase a variety of themes that convey their significance. The Penataran Temple medal is adorned with intricate fauna motifs, including a bull, buffalo, elephant, donkey, cassowary, wild boar, fennekin, deer, cow, tiger, goat, civet, owl, sparrow, pigeon, hornbill, crane, quail, peacock, turtledove, swan, rooster, duck, monitor lizard, Javanese rhinoceros, horse, Javanese porcupine, cat, ram, dog, and fox, as well as mythological creatures like lembuswana and nagaraja (Yudianto & Ratyaningrum, 2023). This rich diversity of fauna represents the close relationship between humans and nature, reflecting the animist and mythological beliefs that were prevalent at the time.

On the other hand, the Mantingan Mosque features a more varied design, integrating geometric (arabesque), floral, and faunal motifs, such as the peacock, phoenix, horse, and *ketam* (crab) (Irsyada, 2019). The inclusion of motifs like the peacock and phoenix carries spiritual and symbolic meanings in both Islamic and Chinese cultures, representing beauty, resurrection, and new life.

Penataran Temple primarily employs deformation as its depiction technique, altering the original forms of animals and mythological creatures to highlight their mystical and supernatural aspects. This approach suggests that the temple's sculptures prioritize conveying meaning over achieving realistic representation. In contrast, the Mantingan Mosque utilizes stylization to create more abstract and geometric motifs. This style reflects the aesthetics of Islamic art, which typically avoids realistic portrayals of living beings in favor of repetitive patterns and shapes that serve as spiritual expressions.

Both medallions are classified as passive ornaments, meaning they do not serve a structural function but instead enhance the building's aesthetics as decorative elements. At Penataran Temple, these ornaments also emphasize local myths and stories. In contrast, at the Mantingan Mosque, the ornaments serve not only as wall decorations but also as symbols that enhance the spiritual significance of the mosque.

The analysis presented here highlights the transformation process through the examination of the changes in two medallion ornament designs, as detailed in Table 3 below. This table effectively summarizes the primary theoretical contribution referred to as the 'Continuity and Change' model. It serves as an analytical framework that outlines various aspects of cultural acculturation by indicating what elements were lost, what changed, what was introduced, and what remained intact. By organizing the findings in this structured way, the table provides a compelling, evidence-based argument for a more nuanced understanding of cultural dynamics. It demonstrates that the transition involved not just a straightforward replacement of one culture with another, but rather a complex process of negotiation, highlighting the importance of the conclusions drawn from this study.

As described in Table 3, "What is Missing" from the Mantingan Mosque are the mythological elements and mythical creatures that are prominently featured in the Penataran Temple. Their absence highlights a transition in cultural and spiritual values, reflecting on how evolving teachings and beliefs can influence artistic expressions and forms over time. Then, "What has Changed" can be observed in the techniques and themes of depiction, particularly as they align more closely with Islamic aesthetics. These changes include the incorporation of stylization and geometric motifs. Such adaptations indicate a cultural fusion that blends traditional local practices with new influences, creating a unique artistic identity.

Next, "What is New" in the Mantingan Mosque is distinguished by its intricate floral and arabesque

motifs, which are characteristic elements of Islamic art. The influence of Islamic design has transformed the significance of ornaments, allowing them to function as both spiritual symbols and aesthetic elements. Lastly, "What is Kept" includes the incorporation of fauna motifs and the use of bas-relief carving techniques. The preservation of these elements indicates a continuity in both methodology and aesthetic presentation, even as values and cultural contexts have evolved.

The transition from the Hindu-Buddhist Majapahit era to the Islamic period, marked by the establishment of the Mantingan Mosque in 1559 AD ("Rupa Brahmana Warna Sari," as cited in Harjono, Irsyada, 2019), triggered a fundamental transformation in the visual language of medallion ornaments. This research analysis, summarized in Tables 1 and 3, identifies three primary areas of change: the disappearance of specific motifs, the introduction of new ones, and a radical shift in rendering style.

A notable difference between the two sites is the complete absence of mythological creatures, such as the Lembuswana and Nagaraja, at the Mantingan Mosque. These figures, which comprise a subset of the 80 varied motifs at Penataran Temple (Yudianto & Ratyaningrum, 2023), were central to the Hindu-Buddhist cosmological worldview. Their removal signifies a profound ideological shift, consciously purging the visual language of pre-Islamic divine representations to align with the aniconic principles of Islam. Consequently, the function of medallions as fillers for narrative panels, such as the Ramayana reliefs at Penataran, was abandoned.

In place of the discarded mythology, the artisans of Mantingan introduced new motifs that reflected the

emerging Islamic aesthetic. This new motif is evident in the medallions, which prominently feature geometric patterns reminiscent of arabesque designs. There is also a greater emphasis on stylized floral motifs, known as sulur-suluran, such as the lotus and vines. These motifs were adapted from existing traditions but were given renewed significance (Irsyada, 2019). The incorporation of new arabesque styles was not merely a decorative choice. It served to align visual culture with a new spiritual identity, creating a sacred atmosphere through patterns that evoke the infinite and transcendent nature of God.

The *gaya* (rendering style) underwent a significant transformation, likely due to a more profound shift in the *makna* (core meaning) inherent in the art. The transition from the deformation of Penataran to the stylization of Mantingan represented a sophisticated artistic response to a theological challenge. As Gustami (in Irsyada, 2022) points out, animal motifs were "modified to no longer look like living creatures" by blending them with foliage. While this observation is important, it can be interpreted in broader terms. This modification was not merely a modification, but an act of creative abstraction. By transforming realistic figures into abstract patterns, the artisans successfully shifted the 'meaning' from a representation of a worldly creature to a symbol of divine beauty and complexity, which is a fundamental aspect of Islamic aesthetics. In this way, Javanese artisans were not simply adhering to guidelines. Instead, they were active agents who reimagined their visual language.

This stylistic shift is closely linked to changes in material and processing energy, two key elements in

Table 3 The 'Continuity and Change' Model: A New Framework for Analysis

Aspect	What is Missing	What has Changed	What is New	What is Kept
Motif / Theme	Mythological creatures (Lembuswana, Nagaraja)	Fauna motifs are simplified (from naturalistic to stylized)	Addition of geometric (arabesque) and floral motifs	Fauna motifs remain in use (e.g., peacock, horse, elephant)
Rendering Style	Extreme deformation of mythological creatures	Fauna depicted with stylization or abstract patterns	Stylization becomes the main rendering style	Low relief (bas relief) remains the primary technique
Meaning / Function	Focus on mythology and the Mahabharata stories	Aesthetic and symbolic values adapted to Islamic teachings	Spiritual symbols of the mosque and wall decorations	Symbolic and aesthetic meaning as artistic elements
Cultural Context	No exclusive focus on Islamic teachings	Javanese-Chinese-Islamic blend replaces Javanese-Chinese blend	The Islamic cultural influence becomes more prominent	Chinese cultural influence remains present
Ornamentation Technique	No dominant geometric elements	Deformation replaced by stylization	Addition of geometric and floral elements	Passive ornamentation as a decorative element
Material	Andesite and red bricks are no longer used	Material changed from hard stone to limestone	Yellow limestone and limestone used in the Mantingan Mosque	Focus on available local materials

Joedawinata's theory. A clear sensory contrast emerges between the hard, dark andesite of Penataran, which conveys a sense of imposing permanence, and the softer, lighter limestone at Mantingan, which appears more pliable and conducive to the intricate detailing necessary for stylization. This observation aligns with insights from an interview with Kiai Nardi, who noted that using local limestone was also a practical choice, as it significantly reduces processing energy. The use of local limestone enabled faster craftsmanship, a crucial factor for large-scale royal projects. Consequently, the choice of material was a strategic decision that balanced symbolic needs, aesthetic opportunities, and the practicalities of craftsmanship.

Despite the significant changes that have occurred, the analysis also highlights notable elements of continuity. This continuity indicates the resilience of core Javanese aesthetic principles and the ability of local artisans to navigate cultural influences. As Boediman noted (in Irsyada, 2019), this process involved a blend of Hindu-Buddhist, Chinese, and newer Islamic influences.

One of the most striking aspects of continuity is the use of the circular medallion format. This architectural element, a defining feature of the 80 reliefs at Penataran Temple, was regarded as both valuable and aesthetically pleasing. Its direct adoption at Mantingan Mosque suggests that the format was successfully secularized or reinterpreted. This continuity enables the medallion format to be detached from its original Hindu-Buddhist narrative context and repurposed as a suitable decorative feature within an Islamic sacred space.

Methodologically, there is a clear continuity in craftsmanship across both sites. Each site exclusively employs the low-relief carving technique to create its ornaments, demonstrating a stable and unbroken tradition of stone carving skills that have been passed down through generations. Although the subject matter (what) and underlying ideologies (why) have changed, the fundamental carving technique (how) has remained a cornerstone of Javanese artistic production.

The discovery that specific animal motifs—such as the peacock (*merak*) and horse (*kuda*)—persist in the ornamental program of the Mantingan Mosque, albeit in a highly stylized form, both supports and enhances the conclusions of earlier scholars. While Irsyada (2022) correctly identifies the trend toward stylization as a means of adhering to Islamic aniconism, a direct comparison with the more naturalistic and distorted animal representations at Penataran Temple reveals a process that is more complex than simple prohibition. Instead of avoiding figurative representation altogether, artisans at Mantingan seem to have engaged in a deliberate act of symbolic recontextualization. Animals that hold enduring cultural significance were not eliminated but transformed. They were retained for their importance and adapted to align with changing aesthetic and religious sensibilities. This selective retention and adaptation, highlighted through comparative analysis,

emphasizes a more dynamic and negotiated cultural transition than has been previously described.

The selective retention of animals such as the peacock and horse at Mantingan indicates a deliberate process of cultural filtering. While textual sources may catalog these motifs, insights from a discussion with cultural historian Afif Isyarobi reveal a more profound cultural significance. According to Isyarobi, these animals were not merely decorative elements. However, they are deeply embedded in the Javanese cultural psyche as symbols of *kewibawaan* (authority) and *keindahan* (beauty). Thus, omitting them would be culturally untenable. Their continued presence should be understood as a non-negotiable cultural imperative. The challenge was not addressed through erasure, but through the creative abstraction mentioned earlier. This interpretation, informed by local expert knowledge, suggests that the artworks at Mantingan are not solely expressions of Islamic art. They also embody the Javanese ability to accommodate and harmonize multiple cultural values simultaneously.

CONCLUSIONS

This study concludes that the medallion ornaments of Penataran Temple and Mantingan Mosque serve as significant micro-archives of cultural transformation in Java. Rather than simply comparing styles, this research makes three key contributions to the field: a focused comparative object, a systematic analytical method, and nuanced theoretical insights into the dynamics of continuity and change.

The findings reveal that the transition from the Hindu-Buddhist to the Islamic era was not a straightforward replacement of one artistic tradition with another. Instead, it was a complex process of negotiation. The medallions at Penataran Temple emphasize motifs rooted in local fauna and mythology, reflecting a Hindu-Buddhist worldview. In contrast, the Mantingan Mosque showcases a dynamic fusion of Javanese, Chinese, and Islamic influences through its geometric, floral, and stylized animal motifs. This diversity underscores the vibrant nature of ornamentation in Nusantara, where new influences were integrated while maintaining a distinct local identity. These medallion ornaments are not merely decorative elements. Instead, they are tangible representations of the broader cultural and religious dynamics within the region.

The integration of Chinese, Javanese, and Islamic design elements in these ornaments showcases the flexibility and openness of the local society. This integration reflects the community's ability to adapt to new cultural and religious influences while still honoring its heritage. The ornaments found at both Penataran Temple and Mantingan Mosque stand as a testament to the adaptability and resilience of local artistic traditions. As artifacts of cultural heritage, they carry profound meanings that reflect the spiritual and social identities of their respective communities.

This underscores the importance of preserving such artifacts for future generations.

This study, beyond the specific case of the medallions, presents several broader implications. Theoretically, it demonstrates that the 'Continuity and Change' model is a powerful tool for analyzing cultural transitions, moving past simplistic narratives of replacement. Methodologically, it emphasizes the importance of combining systematic design analysis (based on Joedawinata's theory) with historical and cultural context to uncover deeper layers of meaning in artifacts. Historically, the findings challenge the notion of a monolithic 'Islamic art' in Java, instead revealing a localized and syncretic visual language that balances global influences with deeply rooted local traditions.

This study recognizes several limitations that may impact its generalizability. First, it focuses solely on medallion ornaments, which limits the scope and excludes potentially valuable insights from other types of ornamental designs. Additionally, most of the literature cited is more than five years old, which may reduce the relevance of this research in some academic circles.

These limitations also present opportunities for further research. For instance, the 'Continuity and Change' model could be applied to other ornamental forms, such as kala-makara or antefixes, during the same transitional period. Additionally, a comparative study of medallions from East Javanese temples (e.g., Kidal, Jabung) versus those from Central Javanese Islamic sites could uncover regional variations in the acculturation process. Investigating these opportunities would build upon the foundation established by this research and provide a more comprehensive understanding of Nusantara's artistic heritage.

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sites, and interpreting the patterns of transformation within the broader historical and cultural context of Java's religious transition), A. E. I.; Wrote the paper (The author was responsible for writing the entire manuscript, including structuring the main argument, integrating the qualitative data with the theoretical framework, and developing the final narrative and conclusions), A. E. I.

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