

## Beyond Iconography: Interpreting the Mapag Toya as an Embodied Visual Communication System in Balinese Cultural Ecology

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### ABSTRACT

Ritual practices in Balinese Hindu culture constitute complex systems of meaning that integrate visual, spatial, and symbolic communication. This study examines the Mapag Toya ceremony at Pura Luhur Batukaru as a form of visual communication embedded within a socio-cultural and ecological framework. While previous studies have predominantly approached ritual through descriptive cultural analysis, this research advances a multilayered interpretive framework combining iconographic analysis, semiotic interpretation, and ritual anthropology. Using qualitative methods, data were collected through field observation, interviews with ritual actors, and documentation of ceremonial processes. The analysis applies three levels of interpretation—visual description, symbolic identification, and intrinsic meaning—while extending beyond classical iconography to examine how meaning is constructed, communicated, and embodied through ritual performance. The findings demonstrate that Mapag Toya operates not merely as a religious ceremony but as an integrated visual communication system that articulates relationships between humans, nature, and the divine, as conceptualised in the Tri Hita Karana philosophy. The ritual encodes ecological knowledge, social organisation, and spiritual values through symbolic forms, spatial arrangements, and performative actions. This study contributes to design and cultural research by reframing ritual as an active communicative medium rather than a static symbolic representation, offering a methodological integration that bridges visual studies, anthropology, and cultural ecology.

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## INTRODUCTION

Subak can be understood as a form of socio-ecological system shaped through processes of niche construction and ritual practice (Lansing & Fox, 2011), in which symbolic and material interactions are inseparable. Ritual practices in Balinese Hindu culture constitute complex systems of meaning-making that extend beyond religious expression into the intertwined domains of visual communication, spatial organization, and ecological knowledge. Ritual has increasingly been conceptualized as a system of symbolic communication and social action through which cultural meanings are constructed and transmitted (Clifford Geertz, 1973; Victor Turner, 1969). Within the Balinese context, ritual is inseparable from environmental systems, particularly in relation to water management and agricultural cycles embedded in the Subak system (Arsana et al., 2025; Huang, 2020; Lansing, 2006; Wahyuni, 2023). Among these practices, the Mapag Toya ceremony—performed at the beginning of the rice cultivation cycle—represents a critical cultural process through which water is ritually received, managed, and symbolically articulated. While previous studies have examined Subak and its associated rituals as systems of ecological management and local wisdom (Lestari & Ginting, 2021; Jurnal Kajian Bali, 2025), their function as structured systems of visual communication remains under-theorized.

Within the philosophical framework of *Tri Hita Karana*, ritual practices mediate the relationships between humans, nature, and the divine. These relationships are not only expressed symbolically but also enacted through multimodal forms of communication that involve visual elements, spatial arrangements, and embodied practices. Visual meaning, therefore, must be understood as socially constructed through multimodal sign systems (Kress & van Leeuwen, 2021; Jewitt, 2013), rather than as static representations. Classical approaches to visual interpretation, particularly those derived from Erwin Panofsky (1972), provide a foundational framework for analyzing symbolic meaning. However, such approaches were developed for static artifacts and are limited in their ability to address the performative, embodied, and ecological dimensions of ritual practices. As demonstrated in recent studies of Balinese ritual and visual representation (Julianto et al., 2020; Suastini, 2021), meaning is not merely encoded in objects but emerges through interaction, movement, and context (Kamala & Salim, 2025; Lestari et al., 2021; Wahyuni et al., 2023).

To address this gap, this study proposes a multilayered analytical framework integrating iconography, semiotics, and ritual anthropology within a cultural ecology perspective. Through this approach, Mapag Toya is examined as an embodied visual communication system in which meaning is dynamically produced through the interaction of participants, materials, and environment.

## LITERATURE REVIEW

### 2.1 Ritual, Visual Communication, and Meaning Construction

Ritual has long been recognized as a fundamental cultural mechanism through which societies construct, transmit, and negotiate meaning. Ritual can be understood as a performative process through which symbolic structures are enacted and experienced collectively (Turner, 1969). Within contemporary scholarship, ritual is no longer understood merely as repetitive religious behavior but as a dynamic system of symbolic communication that operates across visual, performative, and spatial dimensions (Smith, 2006; Harrison, 2013). From this perspective, ritual practices function as structured communicative acts that encode cultural values, social relations, and cosmological beliefs. In Balinese contexts, ritual practices are deeply embedded in agricultural and ecological systems, where symbolic actions are inseparable from environmental processes (Huang, 2020).

In the context of visual communication, meaning is not confined to static images but emerges through processes of signification involving symbols, gestures, material artifacts, and embodied actions. The field of semiotics provides a critical framework for understanding how such meanings are constructed. Semiotic analysis enables the interpretation of ritual elements as sign systems operating across multiple levels of meaning, including denotation, connotation, and myth (Barthes, 1977). Drawing on semiotic theory, particularly the distinction among denotation, connotation, and myth, ritual elements can be interpreted as signs operating within culturally specific systems of meaning. In Balinese ritual contexts, such sign systems are often expressed through multimodal forms that integrate visual, spatial, and performative elements (Suparwa et al., 2023). This approach enables the analysis of how visual forms – such as offerings, spatial arrangements, and performative gestures – function as communicative units that convey layered symbolic messages (Turner, 1969; Bell, 2009, 2010; Schechner, 2013).

However, semiotic approaches alone may risk reducing ritual to a system of signs detached from lived experience. To address this limitation, insights from the anthropology of ritual emphasize the performative, embodied, and experiential dimensions of ritual practices. Scholars in this field highlight that meaning in ritual is not only represented but enacted through bodily participation, temporal sequencing, and collective engagement. Thus, ritual must be understood as an embodied process in which communication occurs through action, interaction, and sensory experience rather than solely through visual representation.

### 2.2 Iconography and Its Limitations in Ritual Analysis

The analysis of visual meaning has been significantly shaped by the work of Erwin Panofsky, whose iconographic and iconological framework offers a structured approach to interpreting visual artifacts. Panofsky's three levels of interpretation – pre-iconography (formal description), iconography (symbolic identification), and iconology (intrinsic meaning) – provide a systematic method for uncovering layers of meaning embedded within visual

forms (Panofsky, 1955). This framework has been widely applied in art history and visual studies to decode symbolic content and cultural significance.

In studies of ritual and traditional practices, iconography has been utilized to interpret symbolic objects, visual motifs, and ceremonial elements. Such applications are particularly relevant in contexts where ritual artifacts—such as offerings (*bebantenan*), costumes, and sacred objects—contain rich symbolic meanings rooted in religious and cultural traditions. Through iconographic analysis, these elements can be examined in relation to broader cosmological concepts, such as the Balinese philosophy of *Tri Hita Karana*, which articulates the interconnectedness among humans, nature, and the divine.

Nevertheless, the application of Panofsky’s framework to ritual contexts presents critical limitations. Originally developed for the analysis of static visual artifacts within Western art traditions, iconography tends to prioritize representation over performance and structure over process. As a result, it may inadequately capture the temporal, embodied, and relational dimensions of ritual practices. In the case of Mapag Toya, where meaning is produced through movement, sound, spatial transitions, and collective participation, a purely iconographic approach risks reducing a dynamic cultural process to a fixed symbolic interpretation.

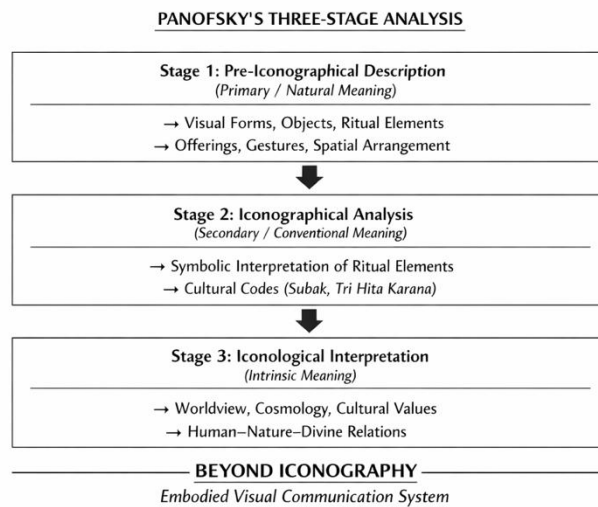


Figure 1. Panofsky’s Three-Stage Analysis for Analyzing the Mapag Toya within Balinese Cultural Ecology

### 2.3 Towards an Embodied and Ecological Approach

To overcome these limitations, recent interdisciplinary approaches in design, cultural studies, and anthropology advocate for a shift towards understanding cultural practices as integrated systems of meaning that encompass visual, performative, and environmental dimensions. This perspective aligns with cultural ecology, which examines how cultural practices both shape and are shaped by ecological systems.

Within the Balinese context, cultural ecology is deeply embedded in the Subak system, where agricultural practices, water management, and religious rituals are interconnected within a holistic socio-ecological framework (Lansing, 2006; Lansing & Fox, 2011; Orlove & Caton, 2010). The Subak system has been widely recognized as an integrated socio-ecological system that combines irrigation management with religious and cultural practices (Lansing, 2006; Wahyuni, 2023). Recent studies further highlight its role as a form of traditional ecological knowledge that sustains environmental balance through ritual practices aligned with *Tri Hita Karana* (Suastini, 2021; Wahyuni et al., 2023). Rituals such as Mapag Toya play a crucial role in maintaining this balance by mediating relationships between humans, natural resources, and spiritual forces. Water, as a central element in the ritual, functions not only as a physical resource but also as a symbolic and communicative medium that conveys meanings related to fertility, sustainability, and divine blessing.

Furthermore, an embodied approach to visual communication emphasizes that meaning emerges through the interaction between participants, materials, and environments (Ingold, 2011, 2013; Pink, 2015). In this view, ritual is understood as a form of “embodied visuality,” where communication is enacted through gestures, movements, and spatial practices rather than solely through visual representation. This perspective enables a more comprehensive understanding of Mapag Toya as a communicative system that integrates symbolic forms, performative actions, and ecological relationships.

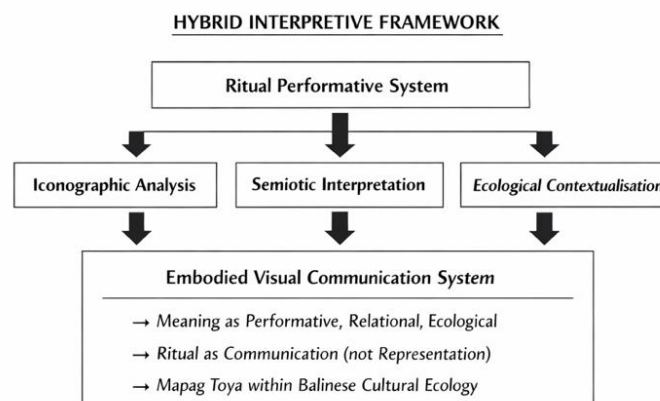


Figure 2. Hybrid Interpretive Framework for Analyzing the Mapag Toya within Balinese Cultural Ecology

#### 2.4 Research Gap and Theoretical Positioning

Despite the growing recognition of ritual as a complex communicative system, existing studies on Balinese ceremonies – including Mapag Toya – have largely remained within descriptive ethnographic or religious frameworks. While these studies provide valuable insights into cultural practices and symbolic meanings, they often lack a systematic integration of visual communication theory, semiotics, and ecological perspectives. Moreover, the

use of iconographic analysis in such studies has rarely been extended beyond descriptive interpretation to engage with broader theoretical debates concerning embodiment, performance, and environmental context. This creates a critical gap in understanding how ritual operates as an active system of communication that not only represents meaning but also produces and transmits it within specific socio-cultural and ecological settings (Smith, 2006; Harrison, 2013; Waterton & Watson, 2010; Winter, 2014).

In response to this gap, the present study adopts a multilayered theoretical framework that combines iconography, semiotics, and ritual anthropology within a cultural ecology perspective. This integrated approach enables the examination of Mapag Toya as an embodied visual communication system in which meaning is dynamically constructed through the interaction of symbolic forms, performative practices, and environmental contexts. By doing so, the study contributes to advancing methodological approaches in design and cultural research, particularly in the analysis of living traditions and intangible cultural heritage.

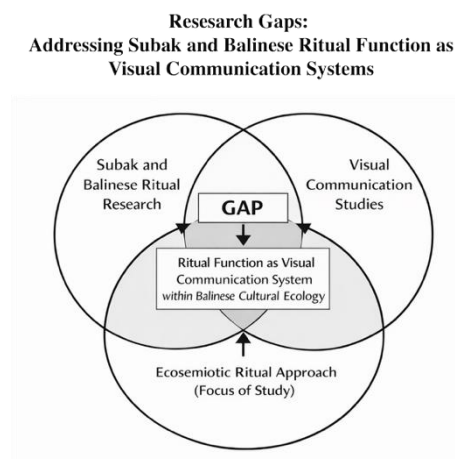


Figure 3. Identifying research gaps in the study of Subak and Balinese ritual as visual communication systems

## METHODOLOGY

### 3.1 Research Design

This study adopts a qualitative interpretive approach to examine the Mapag Toya ceremony as an embodied system of visual communication situated within a socio-cultural and ecological context. The research is grounded in an interpretivist paradigm, which assumes that meaning is socially constructed and must be understood through participants' perspectives, practices, and experiences within their cultural setting. This approach aligns with contemporary qualitative methodologies that emphasize embodied, sensory, and experiential knowledge in cultural research (Pink, 2015). Unlike conventional descriptive qualitative studies, this research employs a multilayered analytical framework that integrates visual analysis, semiotic interpretation, and ritual performance analysis. This approach enables a shift

from merely documenting cultural phenomena to critically examining how meaning is produced, communicated, and sustained through ritual practices (Bateman et al., 2018; Jewitt, 2013).

### 3.2 Research Site and Context

The study is conducted at Pura Luhur Batukaru, located in Wangaya Gede Village, Tabanan, Bali—an area that forms part of the Subak cultural landscape. This site is selected due to its significance as a ritual center associated with agricultural cycles, water management, and spiritual practices within the Balinese Hindu tradition. The Mapag Toya ceremony, performed at the beginning of the rice cultivation cycle, serves as the primary unit of analysis. The ritual involves multiple stages, locations, and participants, including temple priests, Subak members, and community representatives, making it a suitable case for examining the interaction between visual symbolism, performative action, and ecological context.



Picture 1. Mapag Toya ritual, Wangaya Gede Village  
(<https://baliexpress.jawapos.com/balinese/16/12/2021/mapag-toya-di-wangaya-gede-wajib-dipimpin-jero-kubayan/>, 7<sup>th</sup> January 2026)

### 3.3 Data Collection Methods

Data were collected through multiple qualitative techniques to ensure depth, contextual richness, and triangulation:

#### 1. Participant Observation

Direct observation of the Mapag Toya ceremony was conducted to document ritual sequences, spatial arrangements, visual elements, and performative actions. This method enabled the researcher to capture embodied practices, movement patterns, and interactions that cannot be fully represented through textual description alone.

#### 2. In-depth Interviews

Semi-structured interviews were conducted with key informants, including ritual leaders (e.g., *Jro Kubayan*), temple custodians, and Subak members. These interviews provided insights into the meanings, beliefs, and interpretations associated with ritual practices, as well as local knowledge related to water management and cultural traditions.

3. Visual and Audio Documentation

Photographic and audiovisual recordings were used to document ritual objects (*bebantenan*), spatial configurations, processions, and performative elements. These materials served as primary data for visual and semiotic analysis.

4. Document and Literature Review

Relevant texts, including lontar manuscripts, religious scriptures, and prior academic studies, were analyzed to contextualize the ritual within broader cultural, historical, and philosophical frameworks.

**3.4 Analytical Framework**

This study employs a multilayered analytical framework integrating three complementary approaches:

**Iconographic Analysis (Structural Visual Interpretation)**

The study adopts the three-level interpretive model developed by Erwin Panofsky as an initial analytical framework: Pre-iconography: Identification and description of visual elements (objects, gestures, spatial arrangements); Iconography: Interpretation of symbolic meanings based on cultural and historical knowledge; Iconology: Interpretation of intrinsic meanings related to broader socio-cultural values and worldviews. In this study, iconography functions as a structural entry point for organizing visual data rather than as a standalone method.

**Semiotic Analysis (Meaning Construction)**

To extend beyond descriptive interpretation, the study incorporates semiotics to analyze how meaning is constructed and communicated through ritual elements. This includes: (1) identifying sign systems within ritual objects, gestures, and spatial arrangements; (2) analyzing layers of meaning (denotative, connotative, and cultural/mythic), and (3) examining how symbols operate within culturally specific codes. This approach enables the interpretation of ritual elements as active communicative signs, rather than static symbolic representations.

**Ritual Performance Analysis (Embodied Meaning)**

To capture the ritual's dynamic and performative nature, the study integrates perspectives from the anthropology of ritual. This analysis focuses on embodied actions and participant interactions, temporal sequences and ritual flow, and collective participation and experiential dimensions. Through this lens, meaning is understood as something enacted and experienced rather than merely represented.

**Cultural-Ecological Interpretation (Contextual Integration)**

Finally, the analysis is situated within the framework of cultural ecology to examine the relationship between ritual practices and environmental systems. This includes the role of water as both a material and a symbolic element, the integration of ritual within the Subak irrigation system, and the expression of ecological values through cultural practices. This layer connects symbolic meaning with environmental sustainability and socio-ecological systems.

**Data Analysis Procedure**

The data analysis followed an iterative and interpretive process:

1. Data Organisation  
Visual, textual, and interview data were categorized based on ritual stages, locations, and elements.
2. Visual Structuring (Iconographic Layer)  
Key visual elements were identified and analyzed using the three levels of iconographic interpretation.
3. Meaning Expansion (Semiotic Layer)  
Symbols and ritual elements were interpreted as sign systems to uncover layered meanings.
4. Embodied Interpretation (Performance Layer)  
Observational and experiential data were analyzed to understand how meaning is enacted through ritual practices.
5. Contextual Synthesis (Ecological Layer)  
Findings were synthesized within the broader framework of cultural ecology, linking symbolic practices with environmental and social systems.

### **Validity and Trustworthiness**

To ensure the credibility and reliability of the study, several strategies were employed, which consist of (a) Data Triangulation: Combining observation, interviews, and documentation; (b) Contextual Validation: Cross-checking interpretations with local informants; (c) Thick Description: Providing detailed contextual accounts to support interpretation; and (d) Reflexivity: Acknowledging the researcher's interpretive role in meaning construction

## **RESULT AND DISCUSSION**

### **4.1 Mapag Toya as a Structured Visual Communication System**

The Mapag Toya ceremony demonstrates that ritual operates as a structured system of visual communication in which meaning is produced through the integration of objects, actions, and spatial configurations. This aligns with multimodal theories of communication, in which meaning is produced through the interaction among visual, spatial, and performative modes rather than through isolated symbolic representation (Kress & van Leeuwen, 2021). At the pre-iconographic level, the ritual presents a sequence of observable elements, including offerings (*bebantenan*), processions, ritual objects (e.g., symbolic representations of the sun and moon), and collective movements across multiple sacred sites. However, beyond their formal appearance, these elements function as communicative units organized within a coherent system. Through the lens of semiotics, ritual objects and actions can be understood as signs that convey specific meanings within a culturally defined code. For instance, offerings composed of natural materials (plants, water, animals, and fire elements) signify the totality of the cosmos, reflecting the relationship between *Bhuana Agung* (macrocosm) and *Bhuana Alit* (microcosm). These symbolic configurations are not arbitrary but structured by shared cultural knowledge, enabling participants to collectively interpret and enact meaning. In this sense, Mapag Toya extends beyond symbolic representation to function as

an integrated communication system in which meaning is not only encoded in visual forms but also activated through ritual participation.

#### **4.2 From Representation to Embodiment: Ritual as Performative Communication**

While iconographic analysis reveals the symbolic structure of ritual elements, it does not fully account for how meaning is experienced and transmitted. Meaning emerges relationally through embodied interaction among participants, material forms, and environmental contexts, reflecting the processual nature of cultural practices (Ingold, 2011; Pink, 2015). The findings indicate that meaning in Mapag Toya is fundamentally embodied and performative, emerging through collective action, movement, and temporal sequencing. Drawing on the anthropology of ritual, the ceremony can be interpreted as a performative process in which communication occurs through participation rather than observation alone. The *ngider bale agung* procession, accompanied by Baris Gede dance and Baleganjur music, exemplifies how movement, rhythm, and spatial transition contribute to the production of meaning. These performative elements create a shared sensory experience that reinforces communal identity and spiritual connection. Furthermore, the act of “welcoming water” (*mapag toya*) is not merely symbolic but enacted through specific gestures, such as striking the water surface with ritual plants and opening temporary water structures. These actions materialize abstract concepts—such as gratitude, purification, and renewal—into tangible experiences. Meaning, therefore, is not fixed within objects but emerges through embodied interaction between participants, materials, and environment.

#### **4.3 Spatial and Ecological Dimensions of Meaning**

A key finding of this study is that the communicative structure of Mapag Toya is inseparable from its spatial and ecological context. The ritual unfolds across multiple sites—from temple spaces to water sources—forming a spatial narrative that reflects the flow of water from upstream to downstream within the Subak system. The integration of ritual practice within the Subak system demonstrates how ecological knowledge is communicated and sustained through cultural processes (Huang, 2020; Wahyuni, 2023). Within the framework of cultural ecology, this spatial movement can be interpreted as a form of ecological communication. Water functions simultaneously as a physical resource and a symbolic medium through which relationships between humans, nature, and the divine are articulated. The ritual encodes ecological knowledge by emphasizing the importance of water conservation, environmental balance, and collective responsibility in managing irrigation systems. This integration of symbolic and ecological dimensions aligns with the philosophy of *Tri Hita Karana*, in which harmony among humans (*Pawongan*), nature (*Palemahan*), and the divine (*Parhyangan*) is maintained through continuous interaction. Mapag Toya thus operates as a cultural mechanism that reinforces ecological awareness and sustainable practices through symbolic and performative communication.

#### **4.4 Extending Iconography: Towards a Multilayered Interpretation**

The application of Erwin Panofsky's iconographic framework provides a useful starting point for analysing the visual elements of the ritual. At the pre-iconographic and iconographic levels, the method effectively identifies forms, motifs, and symbolic meanings embedded in ritual objects and practices. At the iconological level, it facilitates the interpretation of broader cultural values, including religious beliefs and social structures. However, the findings reveal that iconography alone is insufficient to fully capture the complexity of Mapag Toya as a living, performative system. The integration of semiotic and anthropological perspectives enables a shift from static interpretation to dynamic analysis, where meaning is understood as relational, processual, and embodied. This multilayered approach demonstrates that ritual communication operates across multiple dimensions, such as visual (objects, symbols, colors), performative (movement, sound, participation), spatial (site transitions, environmental context), and ecological (water systems, sustainability practices). By combining these dimensions, the study advances a more comprehensive framework for analyzing cultural practices that cannot be adequately explained through a single methodological lens.

#### **4.5 Mapag Toya as an Embodied Visual Communication System**

Synthesizing these findings, Mapag Toya can be understood as an embodied visual communication system in which meaning is continuously produced through the interaction of symbolic forms, performative actions, and ecological contexts. Unlike conventional models of communication that separate sender, message, and receiver, the ritual operates as a participatory system in which all participants are simultaneously producers and interpreters of meaning. This system is characterized by collective authorship (community-based participation), embodied transmission (knowledge conveyed through action and experience), and contextual meaning (dependent on cultural and ecological context). Through this framework, ritual is repositioned from a passive cultural artifact to an active communicative process that sustains social cohesion, cultural identity, and ecological awareness. Mapag Toya, therefore, exemplifies how traditional practices function as sophisticated systems of communication that integrate visual, performative, and environmental dimensions.

### **CONCLUSION AND RECOMMENDATIONS**

This study set out to reinterpret the Mapag Toya ceremony beyond conventional descriptive and iconographic approaches by positioning it as an embodied visual communication system within the framework of Balinese cultural ecology. Through a multilayered analytical approach that integrates iconography, semiotics, and the anthropology of ritual, the research demonstrates that ritual operates not merely as a symbolic representation but as a dynamic process through which meaning is constructed, enacted, and transmitted.

The findings reveal that Mapag Toya functions as a complex communicative system in which visual elements, performative actions, and spatial configurations are interdependent. Symbolic objects such as offerings, ritual materials, and spatial arrangements encode cultural and cosmological meanings, while embodied practices—movement, procession, and collective participation—activate these meanings within lived experience. Furthermore, the ritual's integration within the Subak system highlights the inseparability of cultural practices and ecological processes, positioning water not only as a physical resource but also as a central communicative medium linking human, nature, and the divine.

Theoretically, this study contributes in three significant ways. First, it extends the application of Erwin Panofsky's iconographic framework by integrating it with semiotic and anthropological perspectives, thereby addressing its limitations in analyzing dynamic and performative cultural practices. Second, it advances the conceptualization of ritual as an embodied form of visual communication, challenging conventional distinctions between visual representation and lived experience. Third, it introduces a culturally grounded analytical model that connects visual communication with ecological systems, contributing to interdisciplinary discussions in design studies, cultural studies, and heritage research.

Practically, the study offers implications for the documentation, preservation, and interpretation of intangible cultural heritage. Recognizing ritual as a communicative system rather than a static tradition supports more holistic approaches to cultural preservation that account for performance, participation, and environmental context. Recent studies on the mediation of ritual through digital platforms further suggest that ritual communication systems are adaptable and continuously evolving across contexts. This perspective is particularly relevant in the context of growing global attention to sustainability, where traditional knowledge systems, such as those embedded in the Subak and *Tri Hita Karana* frameworks, provide valuable insights into sustainable human–environment relationships.

Nevertheless, this study is limited by its focus on a single case within a specific cultural and geographical context. Future research may expand this framework by conducting comparative studies across different ritual systems or by incorporating digital and immersive technologies to explore new modes of representing and analyzing embodied cultural practices. Additionally, further investigation into the intersection between ritual, design practice, and interactive media may open new avenues for translating traditional knowledge into contemporary visual communication contexts (Putra, 2026). This perspective contributes to broader discussions on cultural heritage and

sustainability, in which traditional practices are increasingly recognized as dynamic systems of knowledge production and communication.

In conclusion, by moving beyond iconography towards a multilayered and embodied understanding of ritual, this study demonstrates that Mapag Toya is not only a cultural or religious practice but also a sophisticated system of communication that integrates symbolic, performative, and ecological dimensions. This study ultimately demonstrates that ritual, when examined beyond static representation, constitutes a sophisticated and contextually grounded system of visual communication that challenges dominant Western-centric frameworks and expands the scope of visual communication studies.

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