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SYMBOLIC ECOSYSTEM: THEORY AND THE CASE OF THE NAGA SERPENT IN SOUTHERN KHMER CULTURE, VIETNAM

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ABSTRACT

This article proposes Symbolic Ecosystem theory as a new analytical framework in cultural studies, shifting the focus from semantic decoding to analysing the operational mechanisms of symbols in ethnic life. The theory is built upon three structural layers (natural-ecological infrastructure; ritual-social institutions; a core of discourse and values), four operational principles, and three distinctive internal mechanisms not previously proposed in any existing symbol theory. Cultural identity is defined as a systemic outcome arising from the three-layer interaction rather than a static set of attributes. To validate the framework, the article analyses the Naga serpent symbol in Southern Khmer Theravada Buddhism, drawing on fieldwork from 50 temples across four provinces – Soc Trang, Tra Vinh, Kien Giang and An Giang – conducted between 2019 and 2023 with 55 in-depth interviews. Results show that 100% of surveyed temples feature the Naga-Makara combinatorial motif and 100% of main halls display the seven-headed Naga sheltering the Buddha, confirming the absolute structural consistency of the Khmer symbolic ecosystem. The study's novelty lies in a dual contribution: an integrative theory with three previously undescribed operational mechanisms, and empirically grounded field validation.

KEYWORDS: Symbolic Ecosystem; Operational Mechanism; Naga Serpent; Southern Khmer Culture; Ethnic Cultural Identity; Adaptive Restructuring.

1. INTRODUCTION

In cultural studies, the question “What does a symbol say?” has been answered by generations of scholars, from semiotics to interpretive anthropology. However, a deeper and more challenging question remains unresolved: What allows a symbol to endure through centuries of upheaval without becoming an empty form? What mechanisms sustain the vitality of a symbol within the life of an ethnic community? This is the theoretical gap that the present article seeks to address.

The gap is particularly evident in studies of ethnic cultural identity in Vietnam. Most existing works either stop at cataloguing and describing cultural characteristics, or at interpreting the meaning of symbols within specific contexts, but rarely pose the question of the internal mechanisms that enable a symbolic system to sustain and regenerate itself. In the current context of globalization and urbanization, which are exerting unprecedented pressures on minority ethnic communities, the question of how symbols operate is no longer a purely academic issue but has become a theoretical foundation essential for heritage preservation policy.

This article is organized according to a clear distinction between theoretical propositions and empirical verification. The theoretical section (Section 4) introduces the theory of the Symbolic Ecosystem as a new analytical framework, comprising a three-tiered model, four operational principles, and three intrinsic mechanisms. The empirical section (Section 5) examines the symbol of the Naga serpent in the culture of the Southern Khmer as a test case, drawing on fieldwork data collected from 50 Theravada temples across the provinces of Sóc Trăng, Trà Vinh, Kiên Giang, and An Giang during the period 2019–2023, including 55 in-depth interviews with monks, artisans, and members of the Khmer community.

2. LITERATURE REVIEW

2.1. *Theories Of Cultural Symbols and Their Operational Limitations*

From Ferdinand de Saussure (1916) with his binary model of the sign to Charles Sanders Peirce (1931–1958) with his triadic categories of semiotics (icon, index, symbol), the foundations of structural semiotics established the analytical tools for treating symbols as units of linguistic–logical inquiry. This contribution is undeniable; however, both traditions primarily address symbols within the abstract domain of language, without raising the question of

the mechanisms by which symbols operate in concrete social life.

The turning point came with Clifford Geertz (1973), who asserted that symbols can only be properly understood when situated within specific cultural contexts. His concept of “thick description” opened a new era for the study of symbols as cultural texts. Sherry Ortner (1973) further contributed by distinguishing between summative symbols and elaborating symbols, the latter providing schemata through which communities organize collective experience. Marshall Sahlins (1985) introduced a historical dimension to the analysis, demonstrating that symbolic structures both orient action and are transformed by concrete events. Nevertheless, all of these approaches tend to privilege the interpretation of static meanings rather than examining the long-term operational mechanisms of symbols within social structures.

The groundbreaking contribution in shifting the study of symbols from static meaning to operative force came from Victor Turner (1969, 1974). Through the concepts of *communitas* and liminal structure, Turner demonstrated that symbols not only “speak” but also “act” within ritual: they generate social effects, restructure relationships, and activate communal cohesion. Arnold van Gennep (1960) provided a framework for explaining why symbols concentrate at transitional points of space and time. Robert Merton (1968) added the distinction between manifest and latent functions, reminding us that not all symbolic functions are explicitly recognized by the community. These contributions constitute the most direct and significant foundations for the theory proposed in this article.

In cultural semiotics, Yuri Lotman (1990) developed the concept of the semiosphere—a semiotic space in which cultural codes interact, collide, and transform, characterized by boundaries, centers, and peripheries, and endowed with capacities for self-organization and self-preservation. This model expanded the scope of analysis from the level of individual signs to the entirety of the semiotic environment. Nevertheless, the semiosphere is primarily constructed on the plane of codes and discourse, remaining oriented more toward semiotic order than toward the concrete social practices and material infrastructures in which symbols are activated. Pierre Bourdieu (1977) and Michel Foucault (1972) enriched the power–historical dimension of symbolic analysis, yet they did not provide an integrated model of intrinsic operational mechanisms.

2.2. *Studies On the Naga Symbol and Khmer*

Culture

The Naga symbol has attracted wide scholarly attention in Southeast Asia. In his analysis of the axis mundi (1959), Mircea Eliade pointed out that natural entities such as serpents, mountains, and trees function as connectors between cosmic layers in many cultures; the Naga is a paradigmatic embodiment of the cosmic axis, both vertically and horizontally. Ortner (1973) identified the Naga as a typical elaborating symbol: rather than representing a single meaning, it provides a schema for interpreting the entire relationship between water and land, chaos and order within the Khmer cosmology.

In Khmer studies in Vietnam, Mai Ngọc Chừ (1999) demonstrated that within the Southeast Asian worldview, the interpenetration of human beings and the natural landscape transformed the natural world into a symbolized entity, with waterways occupying the central position in the agrarian cosmology. Nguyễn Từ Chi (1991) approached ethnology from a systemic perspective, viewing symbols as links that connect ethnic cultures across time. Phan Anh Tú (2004, 2016) examined Naga decorative motifs in Khmer temple architecture, clarifying their relationship to water cults, religious protection, and foundational myths of nationhood. Thạch Nam Phương (2015, 2019) differentiated the appellations, attributes, and artistic forms of the Naga (Neak) within the spatial context of Southern Khmer temples. Hoàng Sĩ Ngọc (2022, 2026) conducted in-depth research on the Naga symbol in Southern Khmer culture, establishing the Naga as an intermediary coordinating symbol in temple architecture and elucidating the Naga-Makara-Garuda configuration as a coherent symbolic system reflecting Khmer cosmology. These studies have advanced the perspective of symbols as living entities within cultural systems, yet they have not proposed an integrated analytical framework capable of describing the full range of intrinsic operational mechanisms.

2.3. Studies On Ethnic Cultural Identity in Vietnam

In Vietnamese cultural studies, cultural identity has been approached from multiple perspectives. Trần Ngọc Thêm (2014, 2019) conceptualized culture as a dynamic system with an internal balancing mechanism, in which cultural elements interact according to principles of regulation and adaptation. Phan Ngọc (2002) proposed approaching identity through the lens of “modes of contact with foreign cultures” emphasizing the selective filtering and restructuring processes that occur when ethnic cultures encounter external cultural currents. Đinh Hồng Hải (2014) highlighted the capacity of symbols for “structural regeneration” that is, their ability to adjust form and function to fit new social environments without losing their core values.

Hoàng Sĩ Nguyên (2017) demonstrated, through the betel-and-areca symbol, the resilience and operational capacity of an axial symbol across centuries of Vietnamese literature, showing that while an axial symbol may contract in form, it can nonetheless preserve intact its capacity to anchor cultural identity.

These studies have advanced the perspective of symbols as living entities within cultural systems, yet they still lack an integrated analytical framework capable of describing the full range of intrinsic operational mechanisms that enable symbolic systems to sustain and regenerate themselves.

2.4. Theoretical Gap

Viewed as a whole, the above approaches leave two significant gaps.

First, no analytical framework has yet integrated all three dimensions of the symbol: the ecological space in which the symbol takes root, the social ritual institutions through which the symbol circulates, and the community value system in which the symbol crystallizes into identity.

Second, no study has yet described the intrinsic mechanisms that allow symbolic systems to sustain themselves and to distinguish between “healthy transformation” and “systemic rupture.” These two gaps constitute the point of departure for the theory of the Symbolic Ecosystem.

Table 1: Comparison Of Theoretical Approaches to Cultural Symbols.

Approach	Representative	Unit of Analysis	Limitations and Gaps
Structural Semiotics	Saussure (1916); Peirce (1931-1958)	Sign / linguistic structure	Analyzes symbols as linguistic-logical entities, without considering social operational mechanisms
Interpretive Anthropology	Geertz (1973); Ortner (1973); Sahlins (1985)	Cultural text / thick description	Focuses on decoding static meanings; does not describe mechanisms of long-term symbolic maintenance

Ritual Studies	Turner (1969, 1974); Van Gennep (1960)	Ritual/ <i>communitas</i> / liminality	Describes activation moments well but lacks an integrated model of three structural levels
Cultural Semiotics	Lotman (1990)	Semiosphere / cultural codes	Emphasizes code and discourse order; insufficiently considers social practices and material infrastructure
Power and Discourse Theory	Bourdieu (1977); Foucault (1972)	Symbolic capital / archaeology of knowledge	Clarifies the dimension of power but does not explain the self-sustaining mechanisms of symbolic systems
Symbolic Ecosystem Theory (proposed)	Hoang Si Ngoc (2022, 2026)	Multi-level operational unit	Integrates three structural levels + four principles + three intrinsic mechanisms not previously proposed

Source: Compiled By the Author

3. RESEARCH METHODS

3.1. Research Design

The study was conducted through an in-depth qualitative approach with a case study design. This design is appropriate to the dual objectives of the research: both to construct a new theoretical framework through inductive reasoning from field data, and to test the applicability of that framework through a specific, empirically rich case. The research integrates three mutually supportive analytical tools: systems analysis to establish multi-layered relational configurations; symbolic analysis to decode functions and activating capacities; and an interdisciplinary approach drawing from anthropology, semiotics, and cultural studies.

3.2. Research Site and Subjects

Fieldwork was conducted at 50 Khmer Theravada temples located in the four provinces with the highest Khmer population density in Southern Vietnam: Sóc Trăng (15 temples), Trà Vinh (14 temples), Kiên Giang (12 temples), and A Giang (9 temples). The temples were selected according to three criteria: having existed for more than 50 years, serving as centers of Khmer community life, and possessing relatively intact architecture. The fieldwork period spanned from 2019 to 2023.

3.3. Data Collection and Analysis

Data were collected through three mutually complementary methods. Structured participant observation involved recording the position, number, orientation, and combinations of Naga figures in each architectural space according to a pre-designed coding scheme. Semi-structured in-depth interviews were conducted with 55 individuals, including monks (*achar*), carving artisans, village leaders, and members of the Khmer community, focusing on the communal interpretations of Naga, the ritual processes associated with it, and perceptions of the symbol’s transformation in contemporary life. Document analysis encompassed Pali scriptures, temple chronicles, and archival

materials on Khmer architecture. All data were analyzed through two rounds of coding: open coding to identify recurring patterns, and axial coding to establish relationships among patterns across the three levels of the theoretical model.

4. THE THEORY OF THE SYMBOLIC ECOSYSTEM

4.1. Theoretical Point of Departure

The theory of the Symbolic Ecosystem originates from a question that existing theories of symbolism have not adequately addressed: what mechanisms enable a symbol to survive profound historical upheavals without becoming a mere relic covered by the dust of time? Geertz (1973) argued that symbols endure through their cultural context, yet he did not explain what sustains that very context. Lotman (1990) proposed that the semiosphere is self-organizing and self-preserving, but the specific mechanisms of such preservation remain undefined. Turner (1969) demonstrated that rituals activate symbols, but his analysis stopped at the moment of activation, without describing the multi-layered structures that maintain this capacity over time.

The designation “ecosystem” is not a mere analogy but reflects an ontological perspective: a symbol exists in symbiotic relation with its material environment, social institutions, and community value system in the same way that a living organism exists in relation to its ecosystem. When one structural layer is damaged, the entire system adjusts; when interconnections are severed, the symbol loses its operational capacity and gradually becomes an empty form.

4.2. Three-Layer Structural Model

The Symbolic Ecosystem is composed of three continuously interacting layers, each assuming a distinct function yet inseparable from the others.

The first layer is the natural-ecological infrastructure, where the symbol takes root in the land, sacred sites, and geographical environment. This foundational layer provides the material anchor

and primordial sacredness for the symbol. In Southeast Asian consciousness, the relationship between humans and the natural landscape has transformed the natural world into a symbolized entity (Mai Ngọc Chừ, 1999). At this level, although the symbol has not yet spoken, it already establishes the conditions for being awakened. This is also what Eliade (1959) described when referring to the presence of the sacred (hierophany) in natural entities: space is never neutral but always differentiated between the sacred and the profane.

The second layer is the ritual-social institution, the environment of practice in which the symbol circulates, spreads, and is validated through communal action. A symbol truly lives only when it enters the flow of social practices, where the community not only observes but actively engages and regenerates shared belief. Through ritual, the symbol transcends its static image state to become a driving force that orients behavior, generating the

state of *communitas* described by Turner (1969): a space in which social boundaries are temporarily dissolved to make way for a collective sacred experience.

The third layer is the core of discourse and values, where the symbol crystallizes into belief, morality, and fundamental systems of thought. This is the most subtle layer, not visibly manifested like a temple or a procession, yet silently shaping the community's interpretation of its own existence. Within this theoretical framework, ethnic cultural identity is understood as a systemic outcome arising from the resonance of all three layers, rather than as an attribute stored in any single layer. The interconnection among the three layers is the sufficient condition for identity to exist; when such interconnection is disrupted, the symbol risks becoming a mere performative form devoid of structural capacity.

Table 2: Three-Layer Model of the Symbolic Ecosystem.

Structural Level	Key Components	Operational Principle	Function for Identity
Level 1: Natural-Ecological Infrastructure	Geographical environment; water ecology; indigenous memory; sacred material space	Provides anchoring points: symbols take root in land and primordial sacredness	Irreplaceable foundation; once Level 1 is lost, the entire system is difficult to fully recover
Level 2: Ritual-Social Institutions	Architecture; festivals; life-cycle rituals; community organization	Circulation and reactivation: symbols are disseminated through collective periodic practices	Living environment of symbols; when Level 2 weakens, Level 3 can compensate
Level 3: Discursive-Value Core	Mythology; beliefs; community ethics; ethnic value system	Crystallization and orientation: symbols become frameworks of moral cognition and identity	Coordinating core; symbols here are intangible but govern how the community defines itself

Source: Author's Theoretical Proposal

4.3. Four Principles of Operation

The symbolic ecosystem operates according to four intrinsic principles, which distinguish it from previous theories of symbolism.

The principle of dynamism asserts that symbols are always in operation and continuously adapt to changes in the social, economic, and technological environment; the meaning of a symbol never closes completely but constantly opens up new possibilities for interpretation.

The principle of relationality states that each symbol only acquires meaning and functions within a network of connections with other symbols, values, and institutions; no symbol exists independently, since its power derives from its position within the system of relations rather than from its own form (Lotman, 1990).

The principle of polycentrism rejects the notion of a fixed center of meaning; each community, era, or discourse can generate its own code of meaning for the same symbol without undermining its structural

core.

The principle of power and historicity affirms that every shift in meaning is tied to relations of power, discourse, and specific historical conditions (Bourdieu, 1977; Foucault, 1972); the process of the Buddhization of the Naga in Khmer culture is a paradigmatic example, where religious authority reshaped a native water deity symbol into a component of the Buddhist cosmology without erasing its original ecological core.

4.4. Three Intrinsic Operating Mechanisms

The three intrinsic operating mechanisms represent the most innovative contribution of this theory, providing theoretical tools to explain phenomena that Geertz, Lotman, and Turner had not described.

The first mechanism is the Anchoring-Diffusion mechanism. A symbol must first take root in a specific ecological infrastructure (Level 1) to establish a sacred anchor point; from there, it does not move directly upward to Level 3 but instead diffuses

horizontally within the network of ritual institutions (Level 2) before crystallizing into a sustainable core of values. This diffusion is nonlinear and network-shaped, rather than a straight vertical progression. This mechanism explains why the same symbol can simultaneously appear across multiple spaces of practice while still maintaining structural consistency: horizontal diffusion within Level 2 generates synchronization of meaning.

The second mechanism is Conditional Resonance. The three levels do not automatically resonate but only generate a resonance effect once the threshold of frequency and intensity of activation is reached. Below this threshold, a symbol may still be present in form but no longer functions as a structural force. This marks a crucial boundary between a living symbol and a performative symbol—a distinction absent from previous theories of symbolism. Turner (1969) referred to the effect of *communitas* but did not describe the sufficient conditions for its occurrence; the mechanism of Conditional Resonance fills that gap.

The third mechanism is Functional Stratification under Stress. When social environments fluctuate and weaken Level 2, Level 3 can assume additional load to compensate, for example through cultural discourse, media, or heritage tourism. The reverse can also occur: when Level 3 weakens due to erosion of core values, Level 2 may temporarily sustain the system through ritual practices carried out by inertia. However, Level 1 holds a special position in this mechanism. Level 1 is not only the material ecological environment but also exists as memory preserved in mythology, rituals, and names. When the material Level 1 is lost due to urbanization or environmental change, the system can continue to operate during a transitional phase thanks to the intact memory-based Level 1. Systemic rupture only occurs when both the material and memory dimensions of Level 1 are eroded. This mechanism provides a diagnostic tool for conservation policy, signaling the real risks that may cause systemic breakdown.

Table 3: The Three Intrinsic Operating Mechanisms of the Symbolic Ecosystem.

Mechanism	Theoretical Content	Operational Conditions	Signs of Weakening
Anchoring-Diffusion	Symbols first take root in Level 1 (ecological anchoring points), then diffuse horizontally through the network of Level 2 before crystallizing into Level 3. The diffusion is nonlinear—network-like rather than a straight bottom-up path.	Ecological environment remains intact; community maintains periodic ritual practices	Symbols appear but are detached from their original space; rituals become infrequent or merely formal
Conditional Resonance	The three levels resonate only when thresholds of frequency and intensity of activation are met. Below this threshold, symbols exist formally but no longer operate as structural forces. This marks the boundary between living symbols and performative symbols—a distinction absent in Geertz, Lotman, or Turner.	Rituals occur with sufficient frequency; sacred spaces maintain sufficient intensity; community participation is active and large enough	Forms remain but the community no longer experiences sacredness; symbols gradually become decorative
Functional Stratification under Stress	When Level 2 weakens, Level 3 compensates (through discourse, tourism, media). This mechanism distinguishes healthy transformation from systemic rupture.	Level 1 is a necessary condition for anchoring; Levels 2 and 3 can compensate for each other	The real danger signal is the simultaneous loss of Level 1 (material base, memory)

Source: Author’s Theoretical Proposal.

5. CASE ANALYSIS: NAGA IN THE SYMBOLIC ECOSYSTEM OF THE SOUTHERN KHMER

5.1. Level 1: Naga And the Ecological Infrastructure of Southern Vietnam

The serpent deity Naga in Southern Khmer culture is not a symbol directly imported from India but has undergone a profound process of localization, in which the ecological infrastructure of

the Mekong Delta plays a decisive role. The distinctive landscape of Southern Vietnam—with its intricate network of rivers and canals, fertile alluvial soil, and cyclical floods—shapes the entire agricultural livelihood and provides an ideal ecological foundation for Naga, originally a mythical creature in Indian cosmology, to take root and become a central communal symbol. The relationship between Naga and water is not merely symbolic but ecological: the Khmer depend on water for survival,

and Naga embodies the vital force of that water source.

Field data reveal that most of the surveyed temples tend to orient their façades toward natural water sources such as rivers or canals, or feature artificial ponds at the front of the temple grounds. This reflects an ecological memory encoded into architectural design. A Khmer temple with Naga figures at its gates and stairways is not a structure isolated from the natural environment but rather an intermediary point between the world of water and the world of the sky, mirroring the ecological spatial structure in which the Khmer community lives daily. In-depth interviews with *achar* in Sóc Trăng and Trà Vinh highlight the sacred memory linking Naga to the ethnic origins of the Khmer. In the Khmer founding myth, the ancestors were born from the union of Prince Kaundinya and Princess Naga Soma—a cosmogonic narrative that places water at the center of ethnic identity. The ritual of Krong Pe-li performed when building a house, documented in ethnographic studies of the Southern Khmer (Thạch Nam Phương, 2019), reflects the same symbolic logic: land belongs to Naga, and Khmer houses must be oriented according to the body structure of Naga—head, torso, belly, and tail. This provides the strongest evidence that Naga is not an alien symbol but the sacred subject of the very habitat itself.

5.2. Level 2: Naga In Temple Architecture and Community Rituals

5.2.1. The Logic of Spatial Distribution in Architecture

The most significant contribution of the field research is the identification of the specific structural-ritual role of Naga within the spatial organization of Khmer temples. Naga consistently and distinctively occupies intermediary positions: boundary walls, triple gates, stairways, balustrades, window frames, and the main entrance of the sanctuary. This distribution is not accidental but reflects a coherent structural logic aligned with the theory of liminality developed by Van Gennep (1960) and Turner (1969): transitional points within space are special thresholds that must be ‘marked’ by distinctive symbols to guide participants’ consciousness through liminal states.

At the boundary walls and triple gates, Naga appears with a long, relatively straight body, often bearing three to five heads oriented toward the temple entrance. Its function here is to guard the threshold between the secular and the sacred space, warding off elements that do not belong to the sacred

realm. At stairways and balustrades, Naga frequently appears in conjunction with Makara (Mko): Makara swallowing or releasing Naga’s tail creates a symbolic configuration that represents the transformation from primordial chaos into cultural order. Ritual participants walking along Naga’s body from the foot of the stairway to the sanctuary are not merely ascending a physical structure but undergoing a journey of spiritual transformation. At window frames and the main entrance, Naga is often shaped in an arched, rainbow-like form, symbolizing the bridge between the earthly realm and Nirvana in Khmer Buddhist cosmology.

5.2.2. Naga In the Sanctuary: An Immutable Motif

While the distribution outside the sanctuary demonstrates the function of guarding boundaries, the interior space of the sanctuary reveals a deeper layer of meaning within the Naga symbolic ecosystem. In all fifty sanctuaries surveyed, without exception, the motif of the seven-headed Naga sheltering the Buddha is present. This immutable motif is tied to the story of Naga Mucalinda rising from the earth to protect the Buddha from storms during the sixth week of meditation following his enlightenment. The absolute consistency of this motif across the entire surveyed region carries significant theoretical implications. It cannot be explained by administrative uniformity or top-down control. It can only be accounted for by the stable operation of the Conditional Resonance mechanism: once the threshold of three-level resonance is reached, the symbolic system sustains structural consistency without the need for any coercive institution.

The number seven is not accidental. In Theravāda Buddhism, seven is a sacred number associated with the seven weeks of meditation following enlightenment. The seven-headed Naga spreading its hoods like a sacred canopy to shelter the Buddha is a declarative image of the relationship between nature and enlightenment: nature does not stand in opposition to wisdom but rather supports the unfolding of spiritual development. This represents the philosophical depth of Level 3 within the Naga symbolic ecosystem, anchored and reactivated each time the community enters the sanctuary.

Alongside the worship statues, mural paintings inside the sanctuary depict numerous episodes involving Naga in the life of the Buddha: the story of the golden bowl cast into the Nairājanā River where Naga witnessed the vow of enlightenment; the scene of Naga shielding the meditating Buddha from the rain; and the scene of Naga listening to the Dharma.

This mural system transforms the sanctuary into a comprehensive narrative space, where Naga is not only a visible symbol but also a character within the sacred storyline. Each time the community enters the sanctuary, they are reminded of Naga's role in the journey toward enlightenment.

5.2.3. Network Operating Mechanism: Naga In Relation to Makara and Garuda

The symbolic ecosystem of Khmer temple architecture is fully revealed only when Naga is placed in structural relation to Makara and Garuda. Together, these three creatures form a symbolic triangle that reflects the Khmer cosmology: Makara represents the subterranean world and the primordial ocean; Naga represents the realm of water and the earth; Garuda represents the sky and the

celestial order. Naga occupies the intermediary position, functioning as a connector and mediator between the two poles. This is why Naga consistently appears at architectural thresholds, while Garuda dominates the temple spire and Makara marks the point of primordial chaos.

The Naga-Makara ensemble appears with a 100% frequency across all fifty temples surveyed. Makara typically manifests by 'swallowing/releasing' Naga at balustrades and stairways. This configuration symbolizes not merely a visual relationship but a cognitive process: the transformation from a primordial state of chaos into cultural order is enacted through the physical journey of the ritual participant along Naga's body. In this sense, Khmer temple architecture is not only a site of worship but also a device for the transformation of consciousness.

Table 4: Distribution Of Naga Symbols by Spatial Positions in the Architecture of Southern Khmer Temples.

Vị trí kiến trúc	Linh vật chủ đạo	Tần suất	Chức năng biểu tượng - nghi lễ
Tường rào / Cổng tam quan	Naga 3-5 đầu	50/50 (100%)	Ranh giới tự c-thiên địa tiên; xua đuổi tà ma; thân dài ít uốn lượn hướng về cổng chùa
Cầu thang / Lan can	Naga + Makara (Mko)	50/50 (100%)	Dẫn dắt hành trình tâm linh từ đất lên không gian thiêng; Mko nuốt/nhả đuôi Naga biểu trưng chuyển hóa hỗn mang-trật tự
Mí cửa sổ / Cửa chánh điện	Naga hình cầu vồng	Phổ biến	Cầu nối trần gian và Niết Bàn; điều tiết ranh giới ngang; tăng cường trạng thái ngưng
Chánh điện - tượng thờ	Naga 7 đầu che Phật	50/50 (100%)	Không gian thiêng tuyệt đối; Naga Mucalinda che chở Phật - hợp nhất tự nhiên và giác ngộ; motif bất biến
Chánh điện - tranh tường	Naga trong Phật thoại	Phổ biến	Tái hiện chuỗi tự sự cuộc đời Đức Phật: thả bát, che mưa, nghe giảng đạo; Naga như chứng nhân thiêng
Nóc mái / Cột cờ	Naga + Garuda	Phổ biến	Bảo hộ toàn diện kiến trúc; trụ cột nâng đỡ vũ trụ đối xứng với Naga thủ y địa

Source: Hoang Si Ngoc, Field Survey Of 50 Temples (2019-2023).

5.2.4. Naga In Life-Cycle Rituals

Field data indicate that Naga does not exist solely within architectural space but also participates directly in the life-cycle rituals of the Southern Khmer, spanning from birth to death.

The ordination custom provides the most profound evidence. In traditional Khmer practice, when a young man enters the ordination ritual, his designation changes to Neak, meaning Naga. This appellation originates from a Buddhist legend in which Naga transformed into human form to join the monastic order but, once revealed, had to leave; in remembrance of Naga's devotion to the Dharma, the Buddha decreed that those who ordain be called Neak. This is not merely a religious title but a direct linkage between human beings and the sacred symbol at a fundamental transitional moment in life. A young man is only recognized by the community as a 'true adult' after having spent time as a monk in the temple. Naga thus participates directly in the

mechanism of social character evaluation, extending beyond its role as a religious symbol.

In Khmer weddings, the ritual in which the groom holds the bride's hem or shawl as they enter the nuptial chamber directly reenacts the legend of Preah Thong grasping the garment of Princess Naga Soma to be led into the subterranean palace. Throughout the ceremony, the attendants sing: 'Pres Thon, dear! Hold the scarf and follow me into the room.' This is not a mere song but a ritualized reenactment of the myth, thereby linking individual marriage to the ethnic origin narrative. In this context, Naga functions as a sacred guarantor of the legitimacy of marriage.

In the annual Ok Om Bok festival, the ghe Ngo boats – with their elongated bodies, sharply curved prows, and three rings of red and yellow paint at the bow symbolizing Naga's neck – race swiftly across the river. Each boat represents a temple or a village community (phum, sóc), with the person seated at the prow not only coordinating technical maneuvers

but also performing spiritual rituals before the race. Through the boat, Naga is 'materialized' and set in motion within the communal festival space. The Mekong Delta ghe Ngo racing festival in 2017 attracted more than 5,000 athletes from 62 teams across five provinces, demonstrating the vitality and expansive resonance of this symbol in the contemporary context.

5.3. Level 3: Naga In the Cultural Identity of the Southern Khmer

At the discursive-value level, Naga is not merely a religious symbol but the very core of ethnic identity. In-depth interviews with monks, *achar*, and members of the Khmer community reveal that Naga is closely tied to two fundamental value axes clearly recognized by the community.

The first axis is origin and belonging. Naga is regarded as the ancestor, a symbol of the sacred bond between the Khmer people and the land and water through the Kaundinya-Soma myth. The Khmer believe themselves to be descendants of the Naga lineage, paralleling the Vietnamese self-identification as 'children of the Dragon and Fairy.' The Khmer founding legend recounts that Kaundinya imparted to the Khmer the secrets of rice cultivation and hydraulic practices through his marriage to Princess Naga; from that moment, the image of the divine serpent Naga was enshrined in temples as the guardian of sacred space and protector of all water sources. This ancestral memory is reactivated whenever the community performs rituals associated with Naga.

The second axis is protection and the guarding of sacred boundaries. Naga safeguards the community from misfortune, especially at critical transitional moments of the life cycle—from ordination to marriage, from house construction to death. This protective function is not an abstract concept but is concretely anchored in architectural positions (Naga at gates, stairways, thresholds) and in communal rituals (Naga embodied in the ghe Ngo boat, Naga in wedding ceremonies). Each passage through a Naga gate constitutes a renewed affirmation of sacred protection within the collective consciousness.

Notably, both value axes do not exist as abstract notions recorded in scriptures but are continuously anchored and reactivated through architectural space (Level 1) and ritual practice (Level 2), thereby generating an automatic cycle of identity preservation without requiring conscious external intervention. This marks the fundamental distinction between identity as a systemic outcome and identity as a static set of attributes.

5.4. Adaptive Restructuring: Three Operational Mechanisms in Practice

In the context of modernization and urbanization, the Naga symbol of the Southern Khmer does not diminish but rather undergoes restructuring, serving as vivid evidence of the three operational mechanisms proposed in the theoretical framework.

The mechanism of Anchoring-Diffusion is manifested in the expansion of Naga from temple space into contemporary public domains. The miniature *ghe Ngo* created by artisan Thach Huynh Thuon has become a cultural-touristic souvenir, carrying the Naga symbol beyond the Khmer community. The Phuc Ngoc Bridge in Thanh Loc commune, Chau Thanh district, Kien Giang (completed in 2021) features balustrades adorned with Naga motifs, integrating the symbol into civic space for everyday life. In both cases, Level 1 (the aquatic environment of the Southern region) remains intact, ensuring that diffusion is not severed from its ecological core.

The mechanism of Conditional Resonance explains why, in certain cases, the appearance of the Naga symbol in new spaces does not generate genuine resonance. When dragon motifs in the Viet-Chinese style appear on the main hall columns of Khleng Pagoda (Soc Trang), this phenomenon does not displace Naga but coexists as a controlled layer of cultural exchange, since the functional positions of Naga (gate, stairway, main hall) remain intact. This demonstrates that the Khmer community maintains a cautious attitude toward the thresholds of resonance within the symbolic ecosystem.

The mechanism of Functional Stratification under conditions of change is most clearly manifested in the case of Tay An Pagoda (An Giang), where the Naga motif appears within architecture shaped in the 'onion dome' style of Islamic design. This does not signify the collapse of the symbolic ecosystem but rather demonstrates the capacity of Level 3 (the discursive core of Naga as a protective symbol) to sustain identity even when Level 2 undergoes architectural transformation. As long as Level 1 (the sacred physical environment) remains intact, the system can withstand significant alterations at Level 2 without disintegration.

6. DISCUSSION

6.1. Dialogue With Existing Theories of Symbolism

The research findings position the theory of the Symbolic Ecosystem in direct dialogue with three major theoretical traditions. With respect to Geertz

(1973), this theory concurs that symbols cannot be understood apart from their context, yet it adds a crucial argument: context is not a static frame enclosing the symbol but a dynamic system with a three-tiered structure and intrinsic operational mechanisms. The fact that Naga maintains a 100% presence across all functional positions in 50 temples spanning four provinces demonstrates that a deeper structural system is at work—one that the tools of ‘thick description’ alone are insufficient to capture.

With respect to Lotman (1990), the theory of the Symbolic Ecosystem shares the view of the self-organizing and self-preserving nature of semiotic systems, yet it introduces the ecological-material dimension that the semiosphere lacks. Whereas the semiosphere is primarily a space of codes and discourses, the Symbolic Ecosystem asserts that material environments such as waterways and temples cannot be reduced to semiotic codes, for they possess independent anchoring and activating functions. Regarding Turner (1969, 1974), the theory fully inherits his observations on the social effects of ritual symbols, but extends them by situating ritual moments within a continuous three-tiered structure, rather than treating ritual as an isolated event.

6.2. Cultural Identity as a Systemic Outcome: Theoretical Implications

An important theoretical contribution of this study is the repositioning of the concept of cultural identity. Rather than conceiving identity as a set of attributes preserved within a cultural repository, the theory of the Symbolic Ecosystem defines identity as a systemic outcome arising from the resonance of the three structural levels. This implies that identity cannot be safeguarded merely by maintaining the material forms of symbols; identity exists only when the interconnection among ecological infrastructure, ritual institutions, and the value core remains intact.

Empirical evidence showing the 100% presence of the Naga-Makara ensemble and the seven-headed Naga at the main hall is not a mere statistical figure. It constitutes proof of the structural consistency of the Southern Khmer Symbolic Ecosystem: across the entire distribution area of Khmer culture, despite variations in the scale and architectural style of individual temples, the core symbolic configuration is maintained with absolute uniformity. This consistency can only be explained by the stable operation of the three intrinsic mechanisms, particularly the mechanism of Conditional Resonance, which ensures that the structural levels are synchronized through continuous communal practice.

6.3. Practical Implications for Heritage Preservation

The theory of the Symbolic Ecosystem offers three significant practical implications for policies aimed at preserving the cultural heritage of ethnic communities.

First, heritage preservation should not focus solely on maintaining the material form of symbols but must ensure the continuity among all three structural levels. A temple perfectly restored in its physical appearance yet severed from its practicing community is a symbol in decline.

Second, changes in the material form of symbols are not necessarily signs of decline, provided that Level 1 remains intact and the three operational mechanisms continue to function. Adaptive restructuring is a manifestation of vitality, not deterioration.

Third, the highest risk signal is not merely the loss of the physical ecological environment, since Level 1 also persists as memory preserved within the community. The real danger arises when both the material Level 1 and the mnemonic Level 1 weaken within a single generation—that is, when the next generation simultaneously loses the original ecological environment and no longer knows the foundational myth or performs the related rituals. Heritage policy must therefore prioritize both dimensions: safeguarding the sacred physical space and sustaining the practices that transmit ecological memory across generations.

7. CONCLUSION

This article proposes the theory of the Symbolic Ecosystem as a new analytical framework for the study of cultural symbols and ethnic identity, with three distinct contributions. At the level of modeling, the theory establishes a three-tiered structure (natural-ecological infrastructure; ritual-social institutions; discursive-value core) and four operational principles (dynamism, relationality, polycentrism, and power-history). At the level of mechanisms, the theory identifies three intrinsic operational processes (Anchoring-Diffusion; Conditional Resonance; Functional Stratification under change), none of which have been articulated in prior theories of symbolism. At the level of identity, the theory repositions cultural identity from a static set of attributes to a systemic outcome arising from the resonance of the three structural levels.

The case of the Naga serpent in the culture of the Southern Khmer in Vietnam provides highly persuasive empirical validation for this theoretical framework. Data from 50 temples collected over five

years of fieldwork confirm the absolute structural consistency of the Khmer Symbolic Ecosystem: 100% presence of the Naga-Makara ensemble and 100% of the seven-headed Naga at the main hall, regardless of geographical diversity or architectural scale. In particular, qualitative data from in-depth interviews reveal how the Naga symbol directly participates in architecture, life-cycle rituals, community festivals, and the ethnic value system as a living entity rather

than a decorative motif.

Future research directions may extend the theory of the Symbolic Ecosystem to other symbolic cases in Southeast Asia in order to test its universality, identify variations of the model across different ecological-cultural contexts, and develop quantitative indicators for assessing the 'health' of symbolic ecosystems, thereby supporting evaluation and policy planning in heritage preservation.

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