

NATAH: FUNCTIONAL AND SPIRITUAL SPACE IN BALINESE VERNACULAR ARCHITECTURE

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ABSTRACT

Indonesia has various manifestations of vernacular architecture which are the answers to human needs and responses to nature, society, and culture. Natah in Balinese vernacular architecture has a strong character and is rich in functional and spiritual meaning, so it is significant to study. This study aims to analyze the proportions and forming factors of natah, examine how the spatial proportions and architectural elements in natah reflect local wisdom values, and explore how this concept is applied in the daily practices of the Balinese people. The research paradigm used is naturalistic, with a qualitative research strategy in the form of an interpretive approach. The discussion indicator is Vernacular Study to discuss the proportions and forming factors to then understand the relationship between space and architecture that is formed. Based on the analysis result, it is known that natah is an open area formed as a result of the configuration of traditional Balinese residential space patterns. Natah has a function as ventilation, lighting, and evacuation. Natah also has a spiritual function as a place for ceremonies and rituals and as a socialization space for the Balinese people, so the existence of natah is important for the Balinese people for the sustainability of traditional architecture.

Keywords: vernacular architecture, Balinese architecture, Natah, Tri Hita Karana, spatial analysis

1. PREFACE

Bali, one of the islands in Indonesia, is known as the largest and most significant center of Hinduism in the country, with around 86.8% of its population adhering to Hinduism (Denpasar, 2021). The life of the Balinese people is inseparable from the custom of Hindu teachings, one of which is the prominent philosophy of *Tri Hita Karana*, the balance and harmony between God, humans, and nature. This philosophy was born from the awareness of Hindus of the importance of carrying out *dharma*, playing a role in national development, and realizing a prosperous, just, and prosperous society in accordance with *Pancasila*. However, long before the Hindu influence from Majapahit spread, the Balinese people had lived in harmony with nature, following local norms that respect balance and harmonious relationships with the surrounding environment. Although influenced by Hinduism, this philosophy is deeply rooted in local wisdom, namely Animism and Dynamism. Based on the Charter on The Built Vernacular Heritage from ICOMOS (1999), vernacular buildings are the result of traditional and natural approaches used by communities to build their own homes. Therefore, vernacular buildings represent local characters that are responsive to the environment. Based on this, it can be concluded that the manifestation of vernacular architecture in Bali emerged and was formed based on the needs and responses to nature, society and culture.

Houses and their surroundings are the places that reflect the lifestyle, culture and society of the people who use vernacular settlements and they are shaped by their spatial behavior (Kaya, 2020). The development of the era and the influence of external factors and philosophy have created two types of traditional Balinese settlements that can still be found today, Bali Aga and Bali Daratan. In short, Bali Aga is an early type of settlement that was not influenced by Javanese Hindu beliefs, so its people do not recognize the caste system (Kusuma & Tanuwidjaja, 2014) (Figure 1). In contrast, Bali Daratan is a type of settlement that emerged after the influence of Javanese Hindu beliefs, especially from the Majapahit kingdom, which began to influence in the 13th to 15th centuries (Susetyo, 2016).

Summarized from Putra et al. (2020), Bali Aga settlements are located in the mountainous and interior areas of central Bali, inhabited by people who fled from the lowlands. These settlements have a linear pattern, with houses lined up without dividing walls, so that the yards appear to be unified. Public areas are located along village roads and are used for markets and significant events, such as rituals and celebrations. Meanwhile, the Bali Daratan type is a settlement pattern that is more commonly found in the lowlands of the island of Bali, characterized by intersections that run from north to south and cut the east-to-west axis (redrawn from Parimin, 1986) (Figure 2).

Figure 1

Bali Aga Spatial Pattern

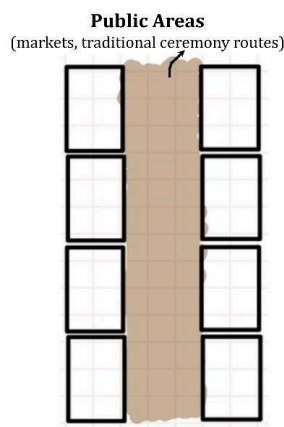
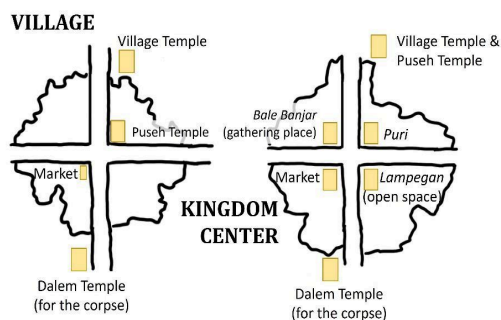


Figure 2

Spatial Pattern of Bali Daratan



Although Bali Aga and Bali Daratan have differences in settlement patterns, both still show a high level of spirituality when determining the orientation and placement of buildings, especially those considered sacred. This deep belief in spiritual values is reflected in the use of the *Asta*

Kosala Kosali Text guidelines, which not only serve as a guide in daily life, but also in architectural aspects. These rules ensure that buildings are designed considering the balance between spiritual, natural, and human elements so that every element in the built environment has a meaning and function that is in harmony with traditional teachings.

Similarities that can also be seen in Bali Aga and Mainland Bali are that both settlements consist of complexes that include various types of buildings with various functions, such as places of worship, residences, kitchens, and gathering places in open spaces. These open spaces are called *natah*, the outer space formed by the buildings that surround it in a certain environment (Putra, 2003). *Natah* plays an important role in social and ritual activities that aim to neutralize negative forces in the environment and create a balance between concrete and abstract spaces (Yudiantini, 2012).

In the context of the sustainability of vernacular architecture, understanding the process and its values becomes important. Strategies for adaptive reuse of vernacular architecture are essential in the context of fulfilling needs according to its development (Ordóñez-Castañón & Ferreira, 2024). Cosmologically, *natah* is a meeting point between *akasa* (sky) and *pertiwi* (earth), and functions as a gathering point in disaster situations, such as earthquakes. In the context of *Tri Hita Karana*, *natah* is a space that supports a harmonious relationship between humans and God, and the surrounding environment sustainability of vernacular architecture. Therefore, the existence and maintenance of *natah* space is very important in creating balance and harmony in Hindu-Balinese culture.

This study aims to analyze the proportions and forming factors of *natah*, which play an essential role in understanding the relationship between space and Balinese vernacular architecture. This study will also examine how the spatial proportions and architectural elements in *natah* reflect local wisdom values and how this concept is applied in the daily practices of the Balinese people.

2. RESEARCH METHOD

Research approach

This study uses a naturalistic paradigm with a qualitative research strategy based on an interpretive approach. Interpretive research investigates socio-physical phenomena in a complex context, to explain the phenomenon in a holistic narrative form (Groat & Wang, 2002). With an interpretive approach, the study focuses on the subjective interpretation of the local community, especially on the proportions and factors that form *natah* as an important space in the life of a traditional Balinese house.

Indicator

The main indicators of discussion include the analysis of proportions and *natah-forming* factors, which play an important role in understanding the relationship between space and Balinese vernacular architecture. This approach explores how factors such as environment, culture, and social function shape the spatial proportions and layout of *natah*. The philosophy of *Tri Hita Karana* and the text of *Asta Kosala Kosali* are important foundations in understanding the harmonious relationship between humans, nature, and God that is manifested in Balinese vernacular architecture, where the balance between these three elements is reflected in the spatial arrangement, building orientation, and materials used. This study will also examine how the spatial proportions and architectural elements in *natah* reflect local wisdom values, and how this concept is applied in the daily practices of the Balinese people.

Data collection and analysis

The data discussion in this study was conducted narratively based on literature studies from existing research and books, which aligns with the naturalistic and qualitative approach. Data were collected by reviewing various sources that discuss the proportions and factors that form *natah*, as well as the philosophy that forms Balinese vernacular architecture.

Data analysis was carried out by interpreting the information obtained by considering the cultural and social context, as well as how the relationship between space and architecture is formed and maintained. The findings were then poured into a narrative that connects the concept of Balinese philosophy in the design of *natah* space to provide a deeper understanding of the function and philosophy of *natah* in the daily lives of Balinese people.

3. RESULT AND DISCUSSION

The meaning and philosophical value of the spatial planning of traditional Balinese buildings in the *Asta Kosala Kosali* Text refers to the rules and guidelines that must be followed in the construction of Balinese vernacular architecture (Sari & Kusuma, 2020), including: (a) *Tri Hita Karana*: emphasizes balance and harmony between three main elements, namely God, humans, and nature; (b) *Sanga Mandala*: regulates the division of land into nine different areas, each with a specific function (redrawn from Sitinjak et al. (2020)) (Figure 3); (c) *Tri Loka*: divides the living environment into three parts, namely *Bhur* (earth), *Bwah* (air), and *Swah* (sky) (redrawn based on interpretation on Iswara (2013)) (Figure 4); (d) *Tri Angga*: divides space or buildings into three parts, namely head (main), body (*madya*), and feet (*nista*) (redrawn based on interpretation of Budiharjo (1991)) (Figure 5); (e) *Tunjuk Luh* (*Tunjuk Langit* – pointing to the sky): arrange the orientation of the building so that it faces or is oriented towards a point that brings goodness or luck according to the calculation of auspicious days; (f) *Taksu* (*Ukuran & Skala* – measurement & scale): ensuring that the building is not only functional but also harmonious with the natural environment and spiritual energy; (g) *Nawa Sanga* (*Arah Mata Angin* – cardinal direction): regulates the placement of buildings based on the wind directions which have spiritual value (Figure 6); (h) *Kaja-Kelod* (*Gunung-Laut* – Mount-Sea): focuses on the direction and influence of the physical environment and the spiritual energy flowing from that direction which functions to determine the direction of sacred space, room dividers, and the hierarchy of space in a complex (Figure 7).

Figure 3

Sanga Mandala Visualization



Figure 4
Tri Loka in the Physical Form of a Residential House

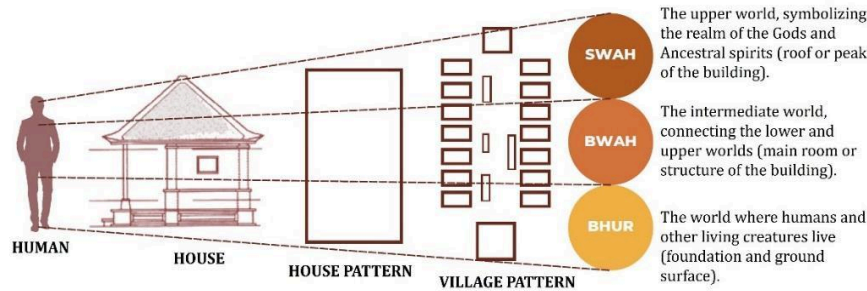


Figure 5
Tri Angga Horizontally and Vertically in the Physical Form of a Residential House

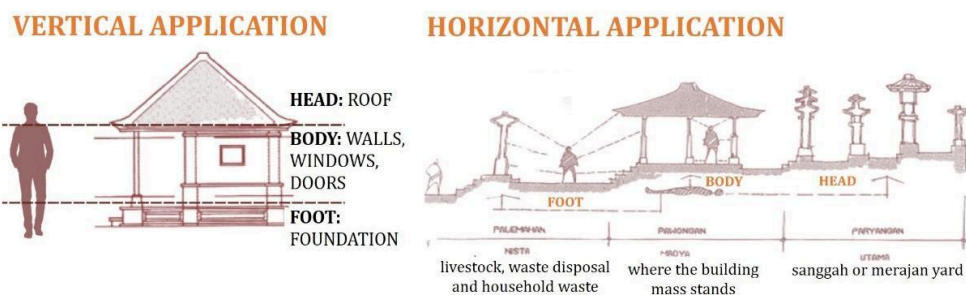
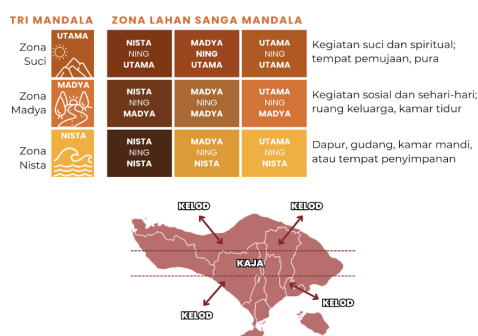


Figure 6
Nawa Sanga Visualisation



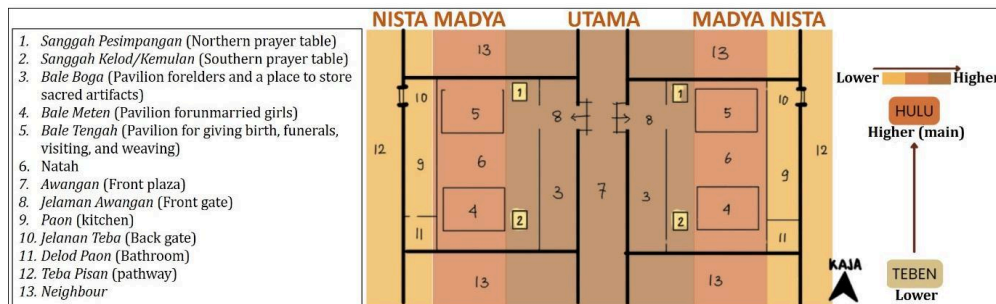
Figure 7
Kaja Kelod Visualisation



Bali Aga is an early type of settlement in Bali and is not influenced by Javanese Hinduism so it does not recognize the caste system. This settlement was firstly formed by residents who fled from the lowlands of Bali to the mountains and then established settlements that were not influenced by Hindu beliefs (Putra et al., 2020). In each housing complex there is a *pesimpangan sanggah*, *kelod/kemulan sanggah*, *bale boga*, *bale meten*, *bale tengah*, *natah*, *awangan*, *jelaman awangan*, *paon*, *jelanan teba*, *delod paon*. The division of settlement patterns follows the philosophy of *Tri Angga* and *Tri Loka*, where the main or head part is the middle part of the settlement, *madya* is the part of the residential house and *nista* is the backyard of each housing complex of the residents (redrawn from Kusuma & Tanuwidjaja (2014)) (Figure 8).

Figure 8

Interior Space Patterns in Bali Aga



Bali Daratan's settlement is influenced by the Hindu-Javanese religion, where each settlement has a function according to its caste. *Brahmana* usually lives in *Griya* which is the main zoning of an environmental pattern. On the other hand, *Ksatria* who holds the government lives in *Puri*, and *Ksatria* who does not hold government directly lives in *Jero*. Furthermore, *Weisa* or traders usually live in *Umah*, which occupies the north, south, east, or west side of the village road. Unlike *Sudra*, they usually live in *Kubu* which is outside the center of the settlement, in the fields, on plantations, or other places, and is spread without a pattern as a residential environment. However, in general, traditional Balinese mainland houses have *natah*, *sanggah/merajan*, *bale meten*, *bale dangin/bale sakenam*, *bale dauh*, *bale gede*, *paon/kitchen*, barn and cage (Budiharjo, 1991) (Figure 9). Bali Daratan has a house layout that is divided into 9 sections according to the *Sanga Mandala* philosophy and has a specific function. It usually has an open space called *natah* in the central area or *madyaning nista* (Budiharjo, 1991; Suyoga, 2019) (Figure 10).

Figure 9

Interior Space Patterns in Bali Daratan

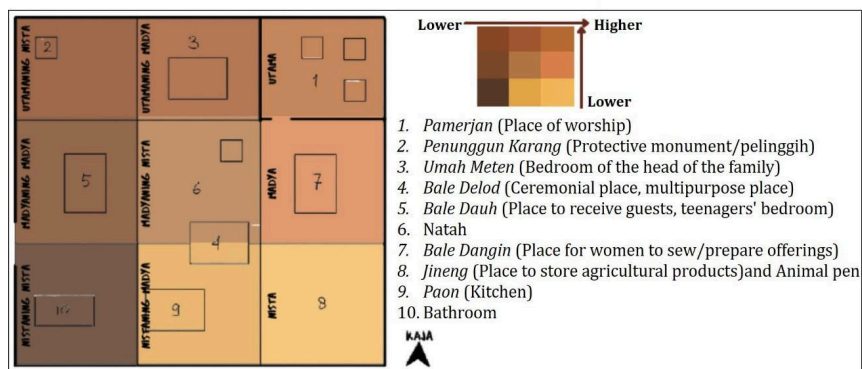
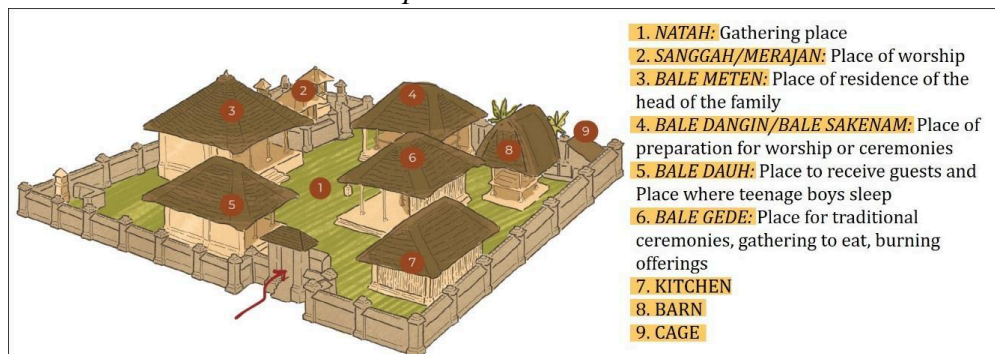


Figure 10
Mainland Balinese House Complex

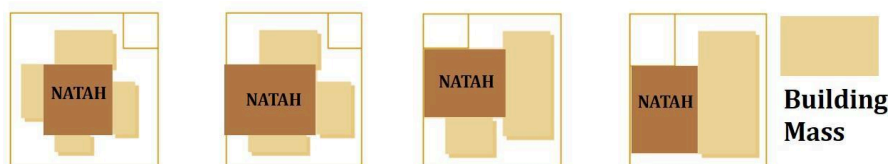


According to the above-mentioned analysis, it shows that both Bali Aga and Bali Daratan settlements have the same characteristics, namely the presence of *natah* as the center of the housing complex, surrounded by other buildings. This confirms that although the Bali Daratan settlement has been influenced by Hindu-Javanese culture, its spatial structure still adopts traditional elements found in Bali Aga. Both settlements prioritize the placement of *natah* in the middle or central part of the complex, reflecting a deep philosophy rooted in animism and dynamism. The influence of animism and dynamism appears to be the main foundation in vernacular architecture in Bali, which has survived across time and cultural changes. The emphasis on this philosophy of space shows a strong continuity between the beliefs of the past and the present.

If seen from its characteristics, *natah* is not an outdoor space that has a fixed form. From a further perspective, *natah* is not just a yard in a housing complex. With its various forms, but with the same function and philosophical view, *natah* appears in houses, villages, and cities with their respective characteristics (Putra, 2003). The forms of *natah* will be explained below.

Natah on House Scale (redrawn based on Putra (2003)) (Figure 11) has several functions, including various ceremonial activities, such as *butha yadnya* (related to natural forces), *manusa yadnya* (related to human life), and *pitra yadnya* (related to ancestral spirits). Socially, *natah* is used to receive guests at ceremonies or celebrations. In terms of health, *natah* functions as an open space that supports air circulation, natural lighting, and good exposure to sunlight. Philosophically, *natah* is a meeting medium between the elements of *akasa* (sky) which is *purusa* (male) and the elements of *pertiwi* (earth) which is *pradana* (female).

Figure 11
Variations of House Natah

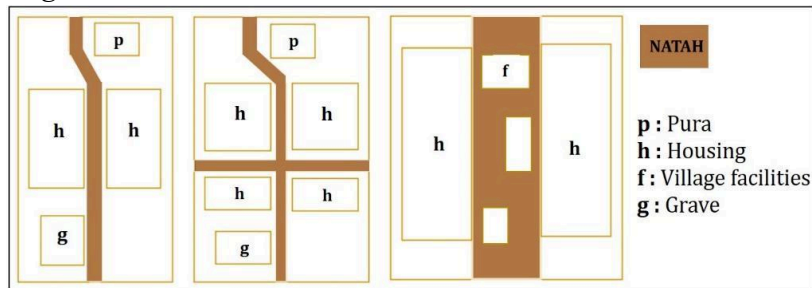


Natah on Village Scale (redrawn based on Putra (2003)) (Figure 12) has a social activity function on a larger scale, such as communicating, recreation, and selling. Its religious function is in various forms of traditional and religious activities. From a spatial planning aspect, village *natah*

is an open space for the public that acts as the lungs of the village. Philosophically, village *natah* is a meeting medium between the elements of the cosmos and the elements of the universe, as well as an orientation for access to residents' houses and public facilities.

Figure 12

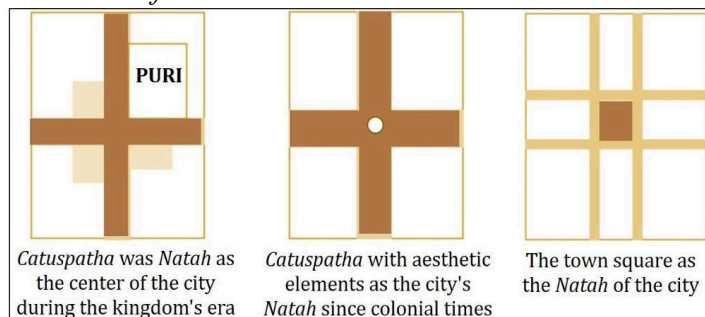
Village Natah Variations



Natah on City Scale (redrawn based on Putra (2003)) (Figure 13) has existed during the kingdom era, and it was used to hold the *tawur ceremony*, a ritual offering or purification carried out every year to maintain harmony between humans and nature and the spirits around them. *Natah Kota*, a four-way intersection (*catuspatha*), is a symbol of the universe, warding off evil in order to create a safer environment. The four-way intersection is also the intersection of two axes, north-south and east-west, which the 'zero' point symbolizes emptiness and the universe (Donder, 2001).

Figure 13

Variations of Natah Kota



4. CONCLUSIONS AND RECOMMENDATIONS

The use of *Tri Hita Karana* in Balinese spatial arrangement illustrates the deep philosophy of Balinese life. By emphasizing the harmonious relationship between God, Human, and Nature, *Tri Hita Karana* becomes the basis for architectural development and spatial planning. *Asta Kosala Kosali* provides clear guidelines for regulating land division, building orientation, and using natural materials in harmony with the environment.

Natah, which is an open space surrounded by buildings, has an important functional and spiritual role in Balinese vernacular architecture. *Natah* is not only a location for ritual ceremonies that neutralize negative spirit, but also functions as a center for social interaction and protection from disasters. By facilitating air circulation and sunlight, *natah* can support the health of the residential environment.

Overall, Balinese spatial arrangement integrates functional and spiritual aspects, creating the balance necessary for a harmonious and prosperous life. *Natah* is an important symbol of the cultural and spiritual values inherent in Balinese society.

REFERENCES

- Budiharjo, E. (1991). *Architectural conservation in Bali*. Yogyakarta Gadjah Mada University.
- Denpasar, D. K. (2021). *Pemeluk Agama Hindu Bali Terbanyak di Indonesia pada Juni 2021*. <https://link.denpasarkota.go.id/2021/11/03/pemeluk-agama-hindu-bali-terbanyak-di-indonesia-pada-juni-2021-2/>
- Donder, I. K. (2001). *Panca Dathu: Atom, atma dan animisme*. Paramita.
- Groat, L. N., & Wang, D. (2002). *Architectural research methods*. John Wiley & Sons.
- Sitinjak, R. H. I., Wardani, L. K., & Nilasari, P. F. (2020). Traditional Balinese architecture: From cosmic to modern. *SHS Web of Conferences, ICSH 2019*, 76, Article 01047. <https://doi.org/10.1051/shsconf/20207601047>
- ICOMOS (1999). *Charter on the built vernacular heritage*. https://www.icomos.org.tr/Dosyalar/ICOMOSTR_en0464200001536913566.pdf
- Iswara, G. A. (2013). *Arsitektur Bali: Konsepsi Tri Angga dan Tri Loka*. Jurusan Teknik Arsitektur Fakultas Teknik Universitas Udayana.
- Kaya, A. T. (2020). Interpreting vernacular settlements using the spatial behavior concept. *Gazi University Journal of Science*, 33(2), 297-316. <https://doi.org/10.35378/gujs.559548>
- Kusuma, H. A., & Tanuwidjaja, G. (2014). Desain rumah Bali kontemporer yang berbasis konsep Tri Mandala. *Seminar Rumah Tradisional 2014 – Transformasi Nilai-Nilai Tradisional Dalam Arsitektur Masa Kini*, 1-11.
- Ordóñez-Castañón, D., & Ferreira, T. C. (2024). Toward the adaptive reuse of vernacular architecture: Practices from the School of Porto. *Heritage*, 7, 1826-1849. <https://doi.org/https://doi.org/10.3390/heritage7030087>
- Parimin, A. P. (1986). *Fundamental study on spatial formation of island village: Environmental hierarchy of sacred-profane concept in Bali* [University of Osaka]. <https://doi.org/10.11501/13038874>
- Putra, I. D. G. A. D., Wirawibawa, I. B. G., & Satria, M. W. (2020). Spatial orientation and the patterns of the traditional settlement in the Eastern Bali: Investigating new tourism attractions. *GeoJournal of Tourism and Geosites*, 29(2), 614-627. <https://doi.org/10.30892/gtg.29218-493>
- Putra, I. G. M. (2003). Perubahan ekspresi konsep natah dalam tata ruang di Bali. *Jurnal Permukiman Natah*, 1(2), 52-58.
- Sari, N. L. K. I., & Kusuma, I. M. W. (2020). Nilai filosofis tata ruang bangunan tradisional Bali dalam teks Asta Kosala Kosali. *Sphatika: Jurnal Teologi*, 11(1), 88-97.
- Susetyo, S. (2016). Pengaruh Majapahit pada bangunan Puri Gede Kaba-Kaba, Tabanan. *Amerta*, 34(2), 139-152. <https://doi.org/10.24832/amt.v34i2.181>
- Suyoga, I. P. G. (2019). Penggunaan istilah griya, puri, dan jero, sebagai nama kompleks perumahan masa kini: Perspektif pergulatan identitas. *Jurnal Patra*, 1(2), 74-78.
- Yudiantini, N. M. (2012). Natah and Telajakan: The role and identity in indigenous villages. *Proceedings of the International Seminar on Place Making and Identity 2012*, 179-187.