



## Otih ka Kaleh Wabla: The intentionality of consciousness within multi-functional spatial configurations in Makaling

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ARTICLE INFO	ABSTRACT
<p><i>Article history:</i> Received June 03, 2025 Received in revised form Oct. 17, 2025 Accepted December 22, 2025 Available online March 01, 2026</p> <p><i>Keywords:</i> Papuan society Transcendental phenomenology Vernacular settlements</p> <p><b>*Corresponding author:</b> Yashinta Irma Pratami Hematang Department of Architecture and Planning, Faculty of Engineering, Universitas Gadjah Mada, Indonesia Email: <a href="mailto:yashinta@unmus.ac.id">yashinta@unmus.ac.id</a> ORCID: <a href="https://orcid.org/0000-0001-8612-1660">https://orcid.org/0000-0001-8612-1660</a></p>	<p><i>Makaling Village, located in South Papua Province, exhibits multi-functional spatial characteristics that operate on two scales: micro and meso. The village is inhabited by the Coastal Malind, a sub-tribe of the Malind Anim, whose spatial practices generate distinctive multi-functional spatial phenomena. In contemporary urban contexts, the concept of multifunctionality and the pursuit of modernity often require flexible spatial arrangements to accommodate diverse activities within a single space. This tendency is largely driven by the limitations of land availability amid increasing population pressure and escalating spatial demands. In contrast, rural settlements such as Makaling reveal a different manifestation of multifunctionality known as kamem la sai, which embodies deeper spatial and cultural layers beyond what is physically perceptible. This phenomenon is rooted in a local philosophical concept referred to as otih ka kaleh wabla. The study employs eidetic reduction analysis within the framework of Husserl's transcendental phenomenological qualitative research. Data were collected through in-depth interviews and direct field observations, leading to the identification of several observation units, thematic structures, and conceptual layers each corresponding to stages of phenomenological reduction. The primary objective of this research is to articulate the intentional awareness inherent in the kamem la sai phenomenon in Makaling, as revealed through the phenomenological reduction process. The implications of this study extend to the development of human resources in architectural academia, the formulation of government policies, spatial planning practices, and architectural design approaches in Merauke, Papua. Furthermore, the research contributes to the advancement of theoretical discourse on multi-functional space, local wisdom, and transcendental meaning within the context of Papuan vernacular settlements.</i></p>

### Introduction

The symbiotic relationship in architecture is also expressed through creativity aimed at optimizing spatial use and efficiency, as exemplified in the

flexible space's characteristic of modern architectural movements. Flexibility is inherently adaptive and continuously evolving (Banerjee and Goel 2023) serving as a means to enhance quality of life (Hosseini Raviz et al. 2015). The



multifunctional concept has emerged as a strategy to address spatial challenges, particularly limitations caused by decreasing land availability among young professionals and millennials (Karyono et al. 2019). Moreover, multifunctional space is linked to future development policies, serving as a fundamental principle for the formulation of differentiated spatial planning systems and territorial management strategies (Denipitiya and Udalamaththa 2020; Lau, Giridharan, and Ganesan 2003; Zhang, Liu, and Chang 2019). At the micro-spatial scale, multifunctionality is also reflected in furniture design (Farida et al. 2024; Moeljanto and Setiawan 2021). On the mezzo scale, multifunctional space relates to multi-functional land use (LUMF), aimed at enhancing the quality of urbanization amidst increasingly complex interactions between humans, lifestyles, and the natural environment (Zhou, Xu, and Lin 2017; Coupland 2004).

However, the implementation of multifunctional concepts is observed not only in urban contexts but also in rural areas (Bórawski 2015; Gu et al. 2019; Shi et al. 2022; Tang, Liu, and Li 2024). Studies on multifunctional space in traditional architecture have further explored its potential to generate distinctive and unique insights into design development (Voicu 2023). Nonetheless, the multifunctional spatial concept among black and curly-haired ethnic communities of Papua Island remains under-researched. In Makaling, such multifunctional spaces are referred to as *kamem la sai*, intimately tied to cultural practices. Within the relationship between environment and design, vernacular architecture demands a deeper exploration of meaning, which is effectively and conceptually articulated through cultural frameworks (Oliver 2007; Rapoport 1960; 1987). This investigation is inherently interdisciplinary, intersecting with environmental science, behavioral studies, and architectural history (Rapoport 1990a; 1990b). The process of deriving meaning, or transcendental value, is approached through the principle of layering, whereby the most externally observable phenomena facilitate access to transcendental meaning and truth the essence, or *epoche*, as formulated in Husserl's eidetic reduction (Sudaryono 2012). This reduction occurs in three stages: beginning with phenomenological reduction, progressing to intentional consciousness, and culminating in the recognition of the essential and highest meaning,

termed transcendental value. Consequently, this study aims to serve as a foundation for reaching transcendental value by describing the process of examining multifunctional spaces up to the second stage of eidetic reduction, namely intentional consciousness, conceptualized as the *otih ka kaleh wabla* framework.

This research contributes to the development of spatial policies concerning multifunctionality in rural settlements across Papua, Melanesia, Asia, and other regions. It also enriches the repertoire of multifunctional design applications (Pereira Guimarães and Dessi 2022). The concept of multifunctionality further intersects with resilience and sustainability in local design approaches, contributing to the evolution of the built environment (Kauko 2024). Local knowledge extends beyond physical space, encompassing social, psychological, and cultural dimensions attached to the environment (Hauge 2007; Seamon 2020). Leveraging local wisdom as an intelligence of place is essential for articulating environmental identity, fostering design creativity (Antoniades 1992; Tuan 2001), and initiating spatial resilience at broader, global scales within an integrated lived experience (Cumming, Morrison, and Hughes 2017; Seamon 2020).

## Methods

This study employs a qualitative inductive paradigm, in which conclusions are derived from field data and observed phenomena (Sudradjat 2020). The multifunctional concept is examined through phenomenological techniques within a constructivist framework. Field data is not predetermined by the researcher but is collected using bracketing techniques and a disciplined *epoche* approach. Analytical procedures involve uncovering phenomena layer by layer within observation units, themes, and concepts, ultimately revealing deeper structures through reduction.

### Research time and location

The research was conducted in Makaling, which comprises two hamlets: the coastal area, Duh Millah, and the more inland area, Pale Millah (Hematang, Sastrosasmito, and Kurniawan 2025). The primary focus is Duh Millah, a historically rich ecosystem supporting traditional and cultural activities, including the location of ancestral

houses and annual ceremonial practices, notably the *sal tapak* ritual. Duh Millah itself is divided into Weme Millah, the ancient village with a decreasing resident population primarily consisting of younger generations, and Noh Millah, a larger coastal village hosting the center of customary houses. Data collection spanned from July to November 2023, followed by analysis from December 2023 to June 2024.

#### Data collection process

Data were gathered through direct observation and interviews. Observations involved firsthand engagement with the environment, utilizing the senses (sight, hearing, smell, touch) and tools such as cameras and sketches. Observational principles adhered to non-interventionism and pure observation (Denzin and Lincoln 2009). The researchers are lifelong residents living near the study site in Papua. This positionality does not compromise the objectivity of the data; rather, it serves as a strategy to engage more deeply with the research subjects, specifically the residents of Makaling Village.

Observations were further enriched through direct participation in community activities, with prior consent from the Makaling residents. This approach ensures adherence to research ethics, guaranteeing that data were collected with the informed willingness of participants and with the approval of the village leadership.

Face-to-face interviews were conducted with key informants, including village heads, traditional leaders, residents across all generations from children to the elderly and newcomers or immigrants, locally referred to as *pu anim*. The interviews were unstructured and conversational, rather than based on pre-formulated questionnaires, and utilized a snowball sampling technique. Importantly, the identification of research participants was guided by the Makaling community itself, rather than being predetermined by the researcher. This method ensures that the resulting data authentically represent the perspectives and experiences of Makaling residents, rather than the researcher's own viewpoint, aligning with the researcher's disciplined *epoche* approach.

## Results and discussion

Some phenomena in Makaling Village represent a convergence of multiple functions within a single space, giving rise to spaces that serve more than one purpose. Locally, such spaces are referred to as *kamem la sai*, which denotes a space accommodating numerous activities simultaneously. Empirical manifestations of this concept occur both at the micro scale, within individual houses, and at the mezzo scale, across hamlets (figure 1).

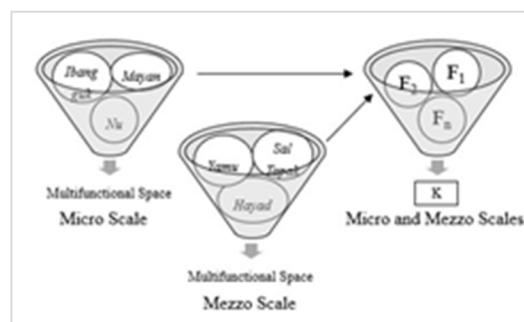


Figure 1. Scheme of the *kamem la sai* in Makaling

The *kamem la sai* is symbolized by the letter K, representing a container for community activity functions, while the activities themselves are denoted as F. Within this container, F may encompass multiple functions, including *ibangguk* (discussion), *mayan* (parent-to-child advice), *nu* (sleep), *yamu* (death-related activities), *hayad* (children's play), and *sal tapak* (annual traditional cultural ceremonies).

#### Phenomenological reduction stages: the *kamem la sai*

At the micro-spatial level, the *kamem la sai* is embodied in the *kimbakai* (terrace) space of houses. At the mezzo scale, it is represented by the *takla sai* (open communal space) within the *millah* (hamlet) context. Both scales host a variety of functions beyond their primary purpose, such as drying rooms, *nu sai* (bedrooms), *sal tapak* rooms (cultural spaces), *mayan sai* rooms (family gathering spaces), *lanik sai* (sitting areas), religious spaces, *hayad sai* (play areas), and *ghr'anakeh* (cooking/toasting spaces).

The *kimbakai* (terrace) primarily serves as a space to receive guests but also functions as an altar during worship within the Catholic religious belief system introduced to the village by immigrants or *pu anim*. This terrace also operates

as a venue for family discussions between parents and children, typically conducted in the afternoon to evening, known locally as *mayan sai*. During *sal tapak* (annual cultural activities), the *kimbakai* functions as an *mbulalo* (spiritual traditional memorabilia) room. Additionally, residents use it for grilling fish and bananas (*ghr'anakeh*). Another function of this terrace is to accommodate the *isala* a bamboo seating installation serving as a resting place, locally referred to as *lanik sai*. From day to night, children also utilize the *kimbakai* as a playroom (*hayad sai*). Furthermore, it serves practical household functions, such as drying clothes on the side or in front of the house (figure 2), and functions as a sleeping area (*nu sai*) during cultural activities, such as the *yamu*, a 40-night post-death ceremony.



Figure 2. The layout of the *kimbakai* (terrace) in front and on the side of the house (marked in yellow) in Makaling Village

Multifunctionality is also evident in the interior spaces of both *malind aha* (traditional houses) and *pu aha* (modern houses) in Makaling. The *malind aha* represents a vernacular house type predominantly constructed from local materials such as sago, bamboo, and coconut leaves. In contrast, the *pu aha* is a type of house introduced by newcomers (*pu anim*) and is primarily built using materials sourced from outside Makaling Village (Hematang, Sastrosasmito, and Kurniawan 2025).

The terrace in *pu aha* houses has been adapted to serve multiple functions, including the *mayan sai* (figure 3). The family room in a *pu aha* is used not only for internal family discussions but also as a waiting area for deceased bodies before burial. Similarly, the *mayan sai* serves identical functions in both *malind aha* and *pu aha*, including hosting marriage proposal activities (*mbi wati*) during engagement processes. This multifunctional adaptation extends to other rooms, such as the *nu sai* (bedroom).

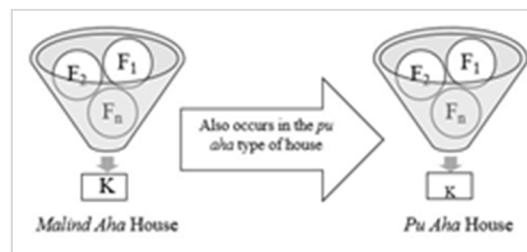


Figure 3. The *kamem la sai* in two types of houses in Makaling

At a mezzo spatial scale, the *takla sai* (open space) is a sandy area most commonly found in the Duh Millah settlement cluster on the coast. Residents define the *takla sai* as a free space with changeable functions. When inactive, it appears empty; however, it can accommodate various activities at other times (figure 4). During *sal tapak*, for example, it serves a ritual role in the *mes tamak*, where coconuts kicked by ritual performers are buried. As (Ching and Eckler 2013) explain, space can be understood as the void between forms. Occupiable space thereby becomes the central medium through which architecture accommodates diverse activities, continuously encompassing human existence. Though seemingly empty, spaces like the *takla sai* contain invisible yet meaningful functions within their physical dimension (figure 4).

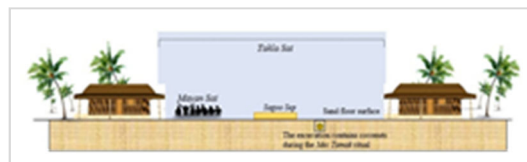


Figure 4. The illustration of the *takla sai* that contains various activities in Makaling

Space transforms into a place when imbued with meaning and value. Tulistyantoro (2020) posits that while space is an open, abstract expanse, place is that portion of space inhabited by humans and enriched with significance and value. Similarly, Altman and Zube (1989) note that space becomes a place once it acquires psychological or symbolic meaning. Space, therefore, is framed by expectations, values, norms, and customs, becoming a unique place through human activities. The *kamem la sai* exemplifies this, appearing empty yet hosting essential activities for the Makaling community.

The *takla sai* is also associated with sacred and secret functions, notably serving as one of the locations for initiation rooms. Consequently, the

*takla sai* can transform from a free, open space into a restricted, sacred, and secret environment. For instance, this transformation occurs when the space is enclosed by a physical element, such as a coconut leaf fence known as *kudla*, which functions to shield initiation activities conducted by each traditional custom group in Makaling. Certain spaces can assume a sacred character, and Saile (1985) explains, ritual locations may possess significantly greater power and potential danger than others.

The Makaling community's adherence to maintaining the sacredness of these spaces is also closely related to the sustainability of their residential environment. Spiritual and sustainability values are embedded within these spaces, and any violation of their sacredness may disrupt the continuity of the living environment. Nuryanto (2019) emphasizes that spaces and places may be regarded as supernatural and sacred, warranting respectful treatment through specialized rites to maintain harmony with nature.

Intentional consciousness stages: The *otih ka kaleh wabla*

Functions within multifunctional spaces often intersect, and these overlapping functions may also be accommodated in other multifunctional spaces elsewhere. This results in multiple spaces serving the same function intentionally, a concept referred to as *otih ka kaleh wabla*, meaning "multi-spatial."



**Figure 5.** The *nu sai*, that located in many locations as multi locations (inner or outer of the house) in Makaling village as *otih ka kaleh wabla*

The concept of *otih ka kaleh wabla* can be observed at both micro and mezzo scales, such as through multiple rooms designated for a single *nu* (sleep/rest) function. Residents of Makaling Village employ various spaces for sleeping activities (figure 5). During the day, the *mayan sai* serves as a sleeping area, while at night, children

are put to sleep on the *kimbakai* (terrace) (figure 6). At the mezzo scale, sleep activities also occur in the yard, referred to as the *takla sai*. During traditional and cultural events, such as the *yamu* mourning ceremony (spanning 40 nights), sleeping takes place in the yard around the *kam mbulalo* (wooden pole). Residents believe in guarding the *kam mbulalo* throughout the night, following messages and traditions passed down from their ancestors. Residents may also rest on *isala* bamboo structures freely distributed across the hamlet (*millah*).



**Figure 6.** The sleeping place in many locations (*kimbakai*/terrace and *takla sai*) in Makaling

## Conclusions

Multifunctional spaces in Makaling Village exist at both micro scales (within residential houses) and broader scales, such as open spaces between houses. The *takla sai*, as a free space, demonstrates flexibility in function, adapting over time to accommodate multiple activities. These spaces may also assume sacred or secret roles during ritual processes, exemplified by initiation activities enclosed by *kudla* fences.

Across both micro-scale (e.g., terraces) and mezzo-scale (e.g., *takla sai*) multifunctional spaces, there are striking similarities in accommodated functions. These include hosting annual cultural activities, facilitating deliberations and family discussions (*mayan sai*), providing children's play areas (*hayad sai*), accommodating cooking and dining, offering leisure and rest (*lanik sai*), supporting religious activities, enabling laundry functions (especially clothes drying), and serving as sleeping locations for families during all-night mourning rituals.

The concept of *otih ka kaleh wabla* represents a secondary layer of the initial stage (*kamem la sai*), reflecting intentional consciousness. In

Makaling Village, multi-functionality refers to multiple functions within a single space, while multi-spatiality (*otih ka kaleh wabla*) refers to a single function distributed across multiple locations. Hence, multi-spatiality emerges as a subsequent stage arising from the occurrence of multifunctional spaces across numerous locations, representing a distinctive spatial phenomenon in Makaling Village.

## Acknowledgments

The authors sincerely thank Yohanes Kondo, Village Head Officer of Makaling Village; Mr. Martinus Aluend, Makaling's imo traditional head; Mr. Julianus D. Gebse, Makaling's mayo ndaman traditional head; Mr. Isaias Ndiken; and all residents of Makaling Village for allowing this research. The authors also express gratitude to anonymous reviewers for their insightful suggestions and careful review of the manuscript. This research was supported by the Ministry of Finance (Indonesia): LPDP – Indonesia Endowment Fund for Education Agency Scholarship [grant number KET-1916/LPDP.3/2022].

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**Author(s) contribution**

**Yashinta Irma Pratami Hematang** contributed to the research concepts preparation, methodologies, investigations, data analysis, visualizations, articles drafting and revisions.

**Sudaryono Sastrosasmito** contributed to the research concepts preparation and literature reviews, data analysis, article drafts preparation and validation.

**Harry Kurniawan** contributed to methodologies, supervision and validation.