

# THE DISORDERING OF SPACE IN THE TRANSFORMATION OF THE BALINESE TRADITIONAL HOUSE IN TOURISM ECONOMY

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## ABSTRACT

*Many parts of Balinese social life have been impacted by modernisation in the traditional house due to cultural tourism, which has fuelled the preservation of traditional Balinese culture. This study examines how the Balinese have accepted a modern level of living while maintaining traditional areas to preserve cultural heritage in their houses to show this paradoxical phenomenon. To examine this paradoxical phenomenon, memories of the Balinese people regarding alterations in their houses over time were consolidated, and the spatial narrative of the house was reconstructed through architectural examinations and interviews. Using a graphic analysis of physical changes to the house, the meaning and values of the changes*

were tracked and adjusted. This article reveals that the house has experienced continuous transformations over its lifetime. Icons from the past have been placed in the house, but their true importance has not been conveyed. The new order of the traditional house illustrates the evolution of spatial and time perception among the Balinese. When it comes to modern living, the house represents a lifestyle that rejects old values and meanings in favour of a more streamlined and efficient design. Traditional values have played an essential role in retaining the traditional appearance of the physical transition. This research is carried out to show how the transformation of the traditional house still preserves the Balinese identity, thereby providing a novel perspective on a dynamic cultural transformation in the search for balance between economic benefit and cultural preservation in the tourism economy.

**Keywords:** Tourism, transformation, the traditional Balinese house, standard of living

## INTRODUCTION

Since tourists strive to engage with authentic local culture, the economic benefits of tourism have supported the preservation of local traditions (Dyer et al. 2003; Chong and Balasingam 2019; Wang et al. 2021), including the traditional Balinese house. However, tourist activities have also accelerated the progress of modernisation (Lin 2020), which has had a significant impact on many aspects of people's social life (Vickers 1996; Mahagangga et al. 2021), including the people of Bali, Indonesia. "Modern", according to the Balinese, is associated with the concepts of "progress" (*kemajuan*), which include advanced technologies and modern products (Vickers 1996). Since the architecture and urban setting represent historic continuity and narrative (Dinler 2021), many traditional houses in Bali have been transformed into tourist facilities. Representing cultural heritage, including the traditional dwellings in which ritual and domestic activities are carried out, the houses have an additional function of serving tourist needs or providing new experiences for tourists in a tourist area (Snis et al. 2021), such as traditional activities in traditional dwellings. The traditional dwelling is thus changed into a home-based enterprise that plays an important role in creating new income for people in developing countries (Saleem 2012; Adeokun and Ibem 2016; Nathan et al. 2019), including in Bali. The preservation of traditional Balinese culture and economic advantage reinforce each other in accommodating the new role of traditional Balinese houses as a home-based enterprise.

The traditional house is noteworthy because it captures the collective memories of renowned historical characters and provides a physical location for commemorating the family's history, forebears, and origins. The Balinese house is a social institution that facilitates peace between God, humans, and nature. This connection highlights the relationship between the house's surroundings, social activities, and spirituality. Religion and spirituality influence how people perceive the house. Multiple sources, including Eiseman (1989), Meganada (1990), and Hobart et al. (2001), stated that the Balinese landscape is organised into three categories, known as *tri loka*, which are essential to the cosmic structure: (1) the celestial realm, also known as *swah loka*, is populated by divine creatures; (2) the intermediate realm, known as *bwah loka*, is inhabited by humans; and (3) the lower realm, known as *bhur loka*, is inhabited by malignant spirits known as demons.

According to the well-established concept of the built environment and the traditional Balinese house, the universe is divided into three essential components known as *tri angga*: the head, the body, and the legs. The concept of *tri angga* alludes to a physical separation of humans, which is related to the *tri loka* concept. The head is regarded as a sacred sanctuary. This part is where people build shrines to hold various events honouring God and their ancestors. The occupants construct several pavilions, known as *bales*, to accommodate domestic and ceremonial activities. These pavilions are in a zone that represents the body of the house, which functions as an intermediary realm. The bottom section, known as the *nista* or *lebuh*, consists of legs. The legs of the house are divided into two main sections: the *teba* (backyard) and the front part. The front part consists of the front wall, the traditional gate called *angkul-angkul*, and a *telajakan*, which is a little open area between the front wall and a road. The components of the house rely on one another, much as the village is separated into the “dwelling-ground” (the head and body) and the “unlived” (the legs) (Covarrubias 2015: 42).

Despite the preceding discussion concerning the framework mentioned above, in the last 20 years, a vital paradigm shift has occurred in the tourism sector. Traditional Balinese houses have experienced significant transformation due to the integration of tourist amenities, such as culinary establishments, art stores, and lodging facilities. The inter-pavilion spaces, pavilions (*bale*), courtyard (*natah*), and backyard (*teba*) have been rearranged to accommodate the addition of new structures. Misconfigurations made to the spaces initially designated for socio-cultural events and fostering a pleasant environment for residents have impeded the effective functioning of the housing system.

There is currently a cultural phenomenon emerging in Balinese houses as they have been renovated to meet the needs of the current residents because of many reasons. Extensive research has been conducted on the effects of religious and social activities on the traditional Balinese house. Previous research focused on the role of socio-cultural influences in the transformation process. Sueca (2003) researched the changing face of residential architecture in an urban area of Denpasar. The study compared traditional Balinese houses to modern dwellings erected by developers, noting the initial dimensions of the house, the type of household, income, number of people, and socio-cultural aspects. According to Sentosa (1994), the concept of mutual cooperation began supplanting individuality, as seen in the Bali Majapahit and Bali Aga houses. However, in this situation, strong social and religious solidarity ensured the preservation of customs. Runa (2004) concentrated on restructuring the spatial system in the Bali Aga communities. He hypothesised that the traditional structure and management of the villages significantly impacted the preservation of socio-cultural practices carried out as community activities in ordinary places.

The abovementioned studies focused mainly on rural properties and those in urbanised and modernised towns. However, tourism is a different phenomenon, and its effects on or issues related to local culture have not yet been analysed by other scholars. In order to scrutinise this specific phenomenon, this study investigates the influence of tourism on residential communities, providing evidence that contradicts frequently held beliefs. This topic is significant for understanding the impact of tourism on the transformation of the traditional dwelling. The transformation, which is not based on local cultural philosophy, is perceived to pollute local culture, and the community will lose its identity. Since the Balinese seek to embrace modernity, harmonising the new standard of living and lifestyle with the residents' longstanding traditions presents an architectural challenge. To what extent has the transformation of the traditional Balinese house been influenced by tourism activities and the living standards of the Balinese people while still allowing them to uphold their traditions? This paradox addresses the cultural dilemma of balancing economic benefits and cultural preservation within the tourism economy (Wood 1993; Yfantidou and Matarazzo 2017; Scherrer 2020).

Since the spaces in the house are important for most ceremonial activities (particularly those related to human life cycles), physical transformations, including the alteration of the spaces, tend to cause the alteration and modification of the cultural activities. It is important to

understand how the Balinese have transformed their house and to what extent the transformation has changed their socio-cultural characteristics. At the same time, this article also examines the struggle between the preservation of traditional Balinese house characters and the desire to be modern, so as to provide a new perspective for the Balinese, the government, and stakeholders on more effective ways to transform the Balinese house. Using graphic and architectural examination, the article explores how Balinese efforts to modernise have led to transformation, addressing the unique challenges posed by the tourism industry.

In the next section, this article demonstrates the transformation investigation as the foundation for the research method. It then explores Balinese culture and its housing configurations, providing essential insights into understanding traditional Balinese dwellings as a continually evolving culture. By analysing modifications in the arrangement of residences, the interplay between preserving traditional configurations and adapting to new environments is explored. Finally, the last part of the article discusses the feasibility of transformed houses to fulfil traditional purposes and realise their cultural significance.

## **INVESTIGATING THE TRANSFORMATION OF THE HOUSE**

This study focuses on the houses in four tourist areas: Ubud, Kuta, Sanur, and Kamasan. The aim is to investigate various housing constructions influenced primarily by tourism activities that differ from those in other parts of Bali, such as cities, towns, and industrial districts. These four tourist destinations were selected to represent a variety of tourism phenomena. Each village has a rich and complementary historical background, contributing to its unique reputation in Bali's tourism industry. The villages were categorised into coastal (Sanur and Kuta) and inland (Ubud and Kamasan). Each location has many traditional Balinese houses, many of which have been transformed into tourist accommodations.

Sanur, a prominent beach resort, has attracted significant foreign investment, particularly from individuals far from local communities (Picard 1996). Similarly, Kuta is a coastal area where locals own and operate tourist facilities. These facilities rely primarily on physical labour and are deeply integrated into the local community, with some neighbours even offering guests accommodation in their house (Wood 1980). Ubud, located in the country's inland area, exemplifies the core characteristics of a



traditional Balinese community. Locals warmly welcome tourists and have developed novel ways to demonstrate their cultural and religious heritage to visitors (Picard 1996). In contrast to the other three locations, Kamasan attracts only a few visitors. Tourists are drawn to Kamasan for its silver handicrafts and the unique *wayang kamasan* style of traditional painting.

Visual documentation was used to investigate the physical transformation in the houses. This visual assessment acted as a supplementary examination, providing insight into the architectural issues. Graphical analysis was employed to explore and illustrate changes in the physical environment of the houses. This analysis illustrated the continuity or adjustment of patterns and orders that transform meanings and values.

The interviews with homeowners were essential for understanding the historical patterns of the houses and contextualising the architectural changes that occurred over time. Conducting field studies in the four villages posed several challenges mainly because the strategy depended significantly on interviews to capture the changes. The researchers had to ask specific questions and verify their findings with the respondents' extended families to ensure the accurate information about the transformation of the houses. Interviews were conducted with little interaction with the respondent to acquire objective results, and the respondents provide true and right information. The interviews were structured around a list of questions related to how the people in the traditional house responded the tourism economy and modernisation. Respondents were asked about their house's transformation and how various spaces' functions changed over time. In some cases, researchers needed to re-interview respondents who have previously participated to clarify responses or gather additional insights. Additionally, they frequently showed visual documentation to illustrate the alterations made to their house.

These inquiries provided information about the motivations and inspirations of those involved in the transformation process. The methods adopted provided a foundation for reconstructing the physical alterations required for spatial analysis. However, this study's findings are specifically relevant to the evolution of Bali's tourism zones.

## **THE BALINESE CULTURE AND HOUSE: CONTINUOUSLY RENEWABLE**

According to Mantra (1993) and Geriya (2007) the attitudes and interactions of islanders with people from diverse cultural backgrounds played a significant role in shaping the Balinese culture. Williams (1983) described culture as a set of everyday activities in which people participate in response to changing societal norms, He proposed that individuals cannot continue to act in the same ways they done in the past. Additionally, Clifford (1994) discovered that the distinct cultural response is still in the early stages of development and has yet to be fully realised. Both Williams (1983) and Clifford (1994) emphasised the concept of continuous cultural renewal, highlighting the importance of Balinese social ties that are both collaborative and competitive.

Nordholt (1986), Agung (1991), and Vickers (2013) made additional contributions to the evolution of Balinese culture, stating that Balinese rulers constructed this culture to show their supremacy. The emergence of Javanese kingdoms, colonial orders, and postcolonial orders, all had an impact on its growth. As a result of these changes, the Balinese had to adapt to new practices. The Balinese practised selective employment instead of adoption, which involves modifying and adapting new concepts and technologies to fit their specific conditions.

The Balinese people's assimilation of many cultures as well as the development of social and cultural movements, had a profound impact on the evolution of ancient ceremonies. Several scholarly publications, including those by Nordholt (1986), Agung (1991), Picard (1996), and Vickers (2013), identified a significant transition that influences the acceptance of new practices in diverse section of Bali. Religious thought, practice, societal background, and political conditions all impacted this development. Traditions were passed down in various ways, depending on the recipients' objectives and how they perceived and accepted these traditions. This process of cultural development varies between civilisation, influencing cultural practices appropriately.

The architecture of traditional Balinese houses reflects the distinct qualities of each village in Bali. Bali villages are categorised into two main types: Aga villages, typically located in the highlands, and Dataran villages, which are more common and influenced by the culture of Majapahit Kingdom (Parimin 1986). The Majapahit culture has significantly impacted Balinese society over time, which was shaped by colonisation and

conquest. The evolution of Balinese culture includes the dissemination of various traditions. For generations, the Balinese people have collaborated to foster this transformation. As noted by Nordholt (1986), the Balinese are continuously adapting their traditions to meet new situations and demands, a process described as a “never-ending quest” or “a state of flux” (v).

According to Geertz (1980), establishing the new Javanese court led to the creation of a cultural and political centre. Following the Islamisation of political authority in Java, which ended the Majapahit monarchy, Hindu Javanese aristocrats sought refuge in Bali. This event began a significant Hindu-Javanese cultural influence on the island (Goris and Spies 1931; Nordholt 1986). Gelgel developed a hierarchical judicial system and introduced social values and rituals inherited from the Majapahit culture. Shils (1971) argued the reformulation of Balinese culture required the development of a new authority with absolute power. The indigenous Balinese, known as Bali Aga, represented a subset of Balinese culture that historically experienced social isolation and marginalisation (Reuter 2002).

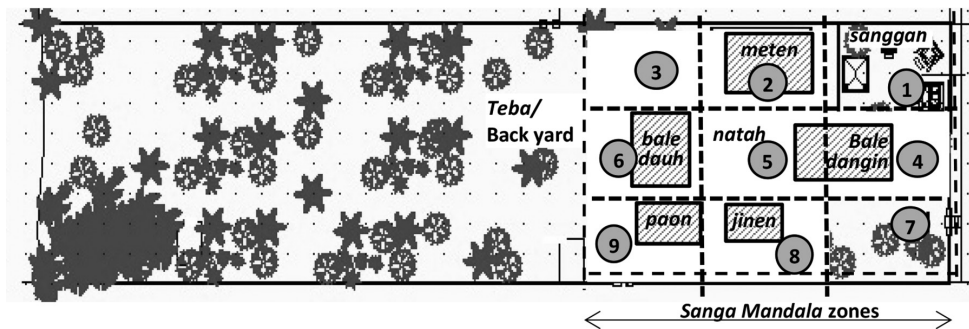
The Bali Aga villages, though scarce, hold a rich culture. These villages are characterised by a main communal axis that connects the highlands to the sea. Each Bali Aga community features a similar layout of dwellings and communal spaces (Parimin 1986). There is a straight public space with a variety of amenities. This space serves as the site for significant social and ceremonial rites that the locals participate in as parts of their communal life. In Tenganan, the communal spaces includes temples, *ayunan* (traditional swing), *bale kulkul* (wooden bell tower), *jineng* (ordinary rice granary), *bale lantang* (place of ceremonial activities), and *bale teruna* (youth meeting hall) (Samadhi 2004).

On the other hand, the Bali Dataran communities, which the Majapahit people colonised, transformed their village infrastructure significantly. The Gelgel ruler, who succeeded the Majapahit Kingdom in Bali, instituted cultural standardisation that led to the widespread adoption of a new village design in many areas. This design features a crossroads, a communal open space, and nine discrete divisions known as *nawa sanga* (Parimin 1986). The layout consists of two main axes: *kaja* (to mountain) – *kelod* (to a sea) and *kangin* (east) – *kauh* (west). The crossroads area includes temples, the village’s meeting pavilion (*wantilan*), and a market. In this locale, individuals perform rituals at temples and other public places to purify themselves, their houses, and the surrounding environment.



The distribution, number, and dimensions of socio-cultural spaces within traditional Bali houses change as the cultural context evolves. In the Bali Dataran villages, influenced by the Hindu-Majapahit tradition, houses require more spaces for rituals than those in the Bali Aga villages. This difference arises because the Bali Dataran houses serve as primary sites for numerous ceremonies, particularly those associated with various stages of human life. According to Sentosa (1994), houses in Bali Dataran numerous purposes, especially for ceremonial and socio-cultural activities. These elements have a considerable impact on the renovation of houses.

The traditional house represents cultural ethnicities and serves as a space for socio-cultural and domestic activities. Its layout is organised according to the framework of the ritual procession (Hobart 1978; Putra et al. 2019; Howe 2020), and is environmentally friendly (Pradana and Arcana 2020). This house is considered a cultural heritage witnessing historical spaces and buildings while embodying traditions and social life (Suprpti et al. 2018). In line with the *tri hita karana* philosophy, the house symbolically conveys its purposes and reflects the connection among God, human beings, and the environment. The Balinese believe they must maintain a harmonious relationship with God, other human beings, and the environment (Huang and Rockwell 2023). This philosophy is integrated into daily Balinese life, including many rituals in the house. The ceremonial stance and movement associated with these rituals hold complex meanings, which vary according to changes through the human life cycle – from birth to death and finally to the process of rebirth (Hobart 1978). To accommodate the abovementioned ritual position, the house is divided into nine divisions called *sanga mandala*, representing the cosmological order of the house's plan (Ferschin et al. 2013; Wijaya 2020). At the back of the *sanga mandala* divisions lies a backyard called *teba* (Howe 1983) (Figure 1).



#### Legend

- |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|
| 1. <i>Utamaning utama</i> | 4. <i>Madyaning utama</i> | 7. <i>Nistaning utama</i> |
| 2. <i>Utamaning madya</i> | 5. <i>Madyaning madya</i> | 8. <i>Nistaning madya</i> |
| 3. <i>Utamaning nista</i> | 6. <i>Madyaning nista</i> | 9. <i>Nistaning nista</i> |

Figure 1: The plan of *sanga mandala* division in the house.

*Note:* *Utamaning utama* = the holliest division; *utamaning madya* = middle holliest division; *utamaning nista* = lower holliest division; *madyaning utama* = main middle division; *madyaning madya* = middle division; *madyaning nista* = lower middle division; *nistaning utama* = the profane division; *nistaning madya* = the middle profane division; *nistaning nista* = the most profane division; *meten* = sleeping pavilion for older people; *bale dangin* = eastern pavilion; *bale dauh* = western pavilion; *paon* = kitchen; *jinen* = granary; *natah* = courtyard; *teba* = backyard; *sanggah* = family or household temple.

*Source:* Authors.

The *sanga mandala* divisions represent the hierarchy of divisions in the house pattern, ranging from the holliest division, *utamaning utama* (①) to the most profane division, *nistaning nista* (⑨). The *utamaning utama* serve as the family temple, while *nistaning nista* is designated for the pigsty and kitchen. The other buildings are arranged according to their specific functions. The sleeping area for older people (*bale meten*) is located in the *utamaning madya* division (②), while the ritual building (*bale dangin*), is set in the *madyaning utama* division (④). These two divisions are considered the holliest and the middle holy divisions respectively. The space for domestic activities (*bale dauh*) is located in the *madyaning nista* (⑥) and the granary is located in *nistaning madya* (⑧). At the back of *sanga mandala* divisions lies the backyard, called the *teba*, where the Balinese cultivate vegetation, raise animals, and process garbage.

The above configuration encourages air circulation around and into the building (Adhika and Putra 2020; Putra et al. 2020; Putra 2021). This design handles climate conditions and increases thermal comfort for the occupants (Yeang 1987; Silaban 1991). The house incorporates passive environmental features to protect against solar radiation, temperatures, and humidity. In a tropical climate, three key building components are overhangs,

cross ventilation between roofs and walls and verandas (Gelebet 1998; Kusuma 1999). The traditional house design facilitates wind movement within compound allowing air to flow into the pavilions. Adequate ventilation between the walls and roofs is typical component for moving air in and out of the interior and exterior (Figure 2).

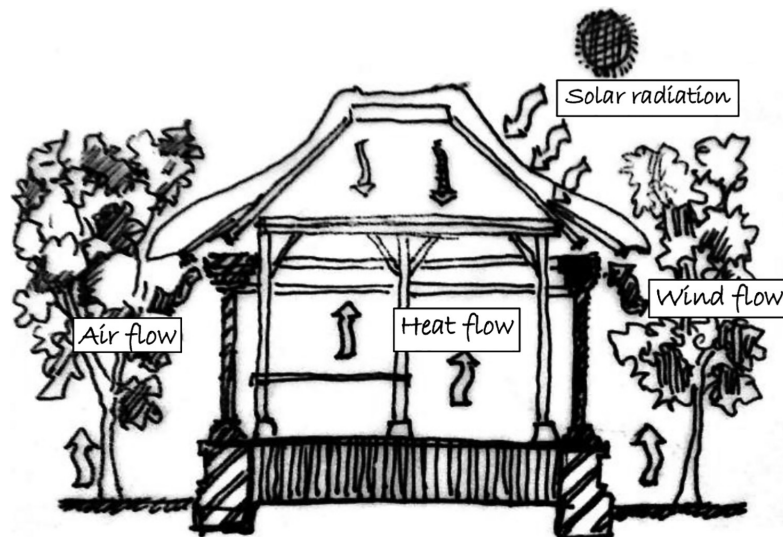


Figure 2: Air circulations in the traditional Balinese house.

Source: Authors.

Traditionally, vegetation was planted to provide material for offerings and food, and enhance thermal comfort. The shading from vegetation reduced outdoor air temperatures and facilitate cross ventilation, helping cool the interior spaces (Pérez-Urrestarazu et al. 2016; Pastore et al. 2017). However, since the early twentieth century, many traditional Balinese houses have been replaced by tourist facilities due to the island's tourism industry introduction. The process of embracing a new custom, similar to changes in other traditional communities, is significantly influenced by the locals' exposure to different cultures. This exposure leads to transformation in social and cultural ties (Gusfield 1967) that causes changes in the spatial arrangement of the house.

## THE TRANSFORMATION AND DISORDER OF SPACE

Tourism has led to cultural infiltration on local culture (Sangchumnong and Kozak 2021), mainly in traditional houses in Kuta, Sanur, Ubud, and Kamasan. However, the Balinese house temple remains sacred for honouring

deities and paying respects to ancestors. Religion and ancestral legacy are essential in Balinese culture because people believe that God owns the land and maintaining a relationship with their ancestors is essential (Goris 1984; Eiseman 1989). As a result, the family temple serves as a consecrated space within the house, where people can interact with God. Previous research presented that only a small percentage of family temples relocated to various space or the second floor of a building: 8% in Kuta , 8% in Sanur, and 5% in Ubud (Putra et al. 2015). During the reign of Dang Hyang Nirartha, the family temple experienced a change, integrating a *padmasana*, a shrine for God called Ida Sang Hyang Widhi, an essential architectural element found in all temples (Aryanatha 2019). Despite the relocation, the shrine settings remain consistent, and the family temple continued to serve its original purposes as a site for devotion to God and ancestors throughout the era of tourism.

In Kamasan, 13% of new pavilions were built in the traditional houses while in Sanur, Ubud, and Kuta were 38%, 61%, and 69%, respectively (Putra et al. 2013). New tourism amenities have replaced the traditional walls and gates. Consequently, many new constructions have emerged adjacent to, or as a result of, the dismantling of pavilions used for household and religious purposes (Putra et al. 2017).

Many properties in popular tourist areas have undergone extensive renovations to accommodate a variety of attractions. The economic benefit of a location's characteristics and environment determines whether they are changed or preserved. Tourist-friendly regions are more likely to prioritise preserving their authentic local characteristics than those predominantly used for domestic or ceremonial purposes. The refurbished home welcomes tourists by providing modern conveniences while preserving historical practices and interests. As a result, the treasured sections of the dwelling are now subject to the power and influence of the tourism sector. The properties are being renovated and redeveloped to accommodate the family's growth and the continual challenge of the tourism sector.

The current improvements have changed the construction and proportions of the house, allowing it to be used for tourist purposes. This transformation, driven by globalisation, poses an architectural challenge (Eldemery 2009; Salim 2011). Integrate domestic and socio-cultural activities while conserving architectural uniqueness as an asset for attracting tourists. Subsequently, the architectural design has developed, incorporating a new lifestyle and advanced technologies into the house.

Multiple factors have influenced the evolution of traditional residences throughout cultures, including the economic benefits of tourism, the growth of families, and changes in people's lifestyles. Recent studies have focused on traditional house alterations, investigating the elements that influence these transformations (Plaut and Plaut 2010; Zhang et al. 2021) as well as the impact of altered environments on human access and space use following transformations (Zhang et al. 2023). The study of place typically includes an assessment of their apparent appearance. The extent to which the rebuilt residential space retains its original spatial conceptual framework is unknown; alternatively, the residential transformation may have affected components of the original system. The future development trajectory and the description of alterations to traditional residential space influence this transformation.

However, the transformation of traditional houses is a unique phenomenon, and the transformation of Balinese traditional houses is also particularly distinctive. This study examines how the tourism economy influences these transformations. It does not blame current practices or suggest that there are better methods for converting the traditional house to reflect new patterns and orders. Instead, it explores how these alterations impact the houses' traditional order, forms, and functions. In the new arrangements, individuals' socio-economic environments experience continuous renewal rather than a single direct impact on the existing traditions. This transformation has led to a deterioration of many traditional elements, and the spaces' order and meaning.

## **CONFLICT BETWEEN THE TRADITIONAL AND THE MODERN**

Tourism and globalisation eliminate all geographical, ethnic, social, and national boundaries (Berman 1982). Globalisation has changed many areas of Balinese social life, most notably how people interact. Balinese believe that modernity fulfils the needs of people who can afford a higher quality of living (Vickers 1996). The refurbishment of traditional Balinese dwellings has fuelled people's desire for a more modern lifestyle. Similar to other societies, its presentation reflects individual qualities (Marcus 2006). Because of this, improved technologies and lifestyles from numerous cultural economies in affluent nations, from which visitors originate, have impacted the altered living environment. This alteration might be viewed as a part of a global Western cultural economy that has spread globally.



The alterations to residences can be attributed to changing residential preferences (Booi and Boterman 2019) and the need for inhabitants to adjust their house to meet their demands better (Femenias and Geromel 2019). People's interactions with tourists, occupational experiences, and knowledge obtained from the internet, television, newspapers, and magazines have all contributed to modernisation of the Balinese house. The Balinese define modernity as the ability to accommodate the needs of a rapidly changing population (Vickers 1996). The need for modernity impacts people's views, motivations, and inspirations and the house serves as a platform for personal expression (Marcus 2006). Tourism influences community well-being and allows for Balinese to gain modest profits, allowing them to construct their houses as a representation of "the personalisation of space" (Marcus 2006: 8). The domestic architecture is a symbol that demonstrates the people's lifestyles and social status.

This "personalisation of space" is intended to accommodate practices different from the traditional house. Houses have become expressions of individual households' interests rather than parts of traditional collective culture. Verandas and enclosed rooms in traditional pavilions were used for various purposes, including socialising with family and friends, making offerings, and eating. A veranda was a multi-purpose area for both public and private functions. Aside from being a living room, it was also a dining place, reading space, workspace, and a place for playing games.

People's desire for personal privacy has influenced the use of enclosed rooms in repurposed houses. As a result, more enclosed rooms are now required to accommodate activities carried out in the multi-purpose area of verandas. These enclosed spaces can now be used to sleep, store things, entertain friends and family, or work from home. Instead of utilising communal open spaces like courtyards and verandas, residents now prefer these rooms for gatherings and personal activities. Each enclosed space becomes a person's territory, allowing them to express themselves and minimise unwanted interactions with others. This personal zone highlights how the Balinese have become more individualised, with chambers in their home having specialised duties rather than various purposes. Consequently, some traditional practices, such as making offerings, have been relocated to the market, and many processes of cremation ceremonies have moved to village facilities (Putra et al. 2019). In some recently renovated houses, this behaviour can be observed. For instance, some sample houses had their original pavilions removed and replaced with a new structure (Figure 3). The earlier pavilions consisted of a room for storing property and sleeping,

whereas the newer buildings have bedrooms, storage areas, kitchens, or living rooms. Modern conveniences such as computers, televisions, radios, and video players are now commonly found in these newly constructed houses.

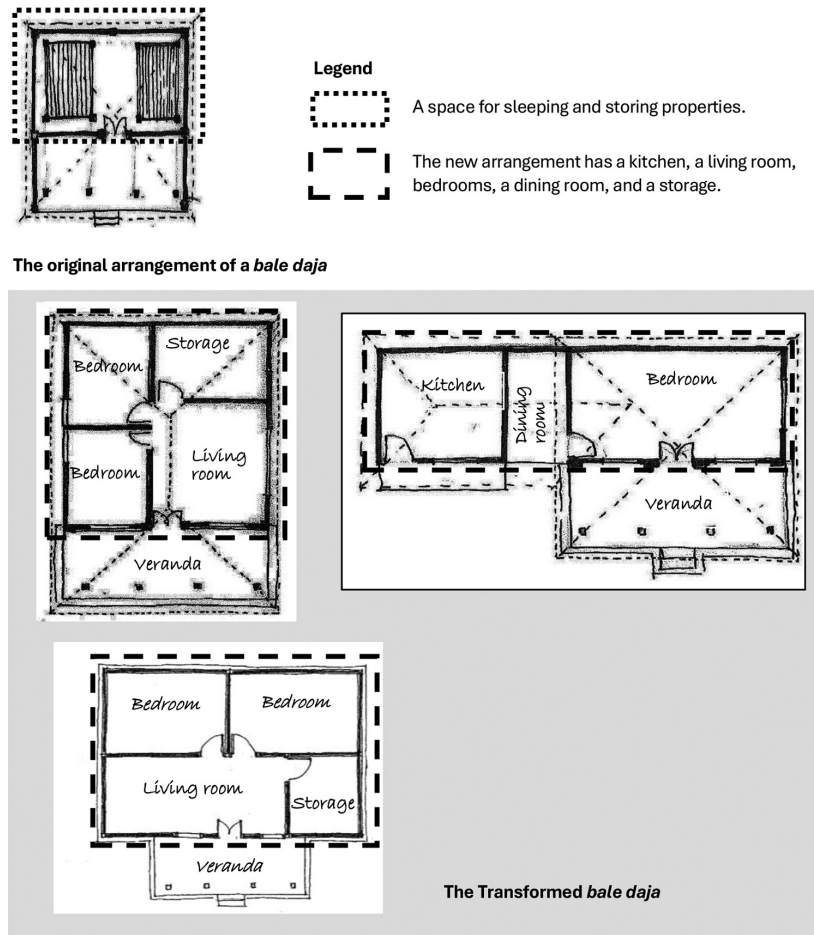


Figure 3: The traditional and the transformed pavilions.

Note: *Bale daja* = northern pavilion.

Source: Authors.

Some new pavilions were constructed in the above-mentioned sample house to accommodate the owners’ activities as the house transforms into a public environment. As a result, the structures symbolise the separation of private and public worlds, ensuring that visitor activities do not conflict with residents. The separation of spaces within the house, traditionally constructed for one family unit with some dependent family members, is also related to this “personalising of space.” In this condition, the increase of family members has caused a change in the family structure and also influences the demarcation of the domestic and public domain (Boccagni and Brighenti 2017). Since two or more family units live in this house, each family has

its area within the compound house. However, there are still shared zones, including *natah* (the courtyard), *merajan* (family temple), and *bale dangin* (the pavilion for performing ceremonies); all families can use that to perform socio-cultural activities (Figure 4).

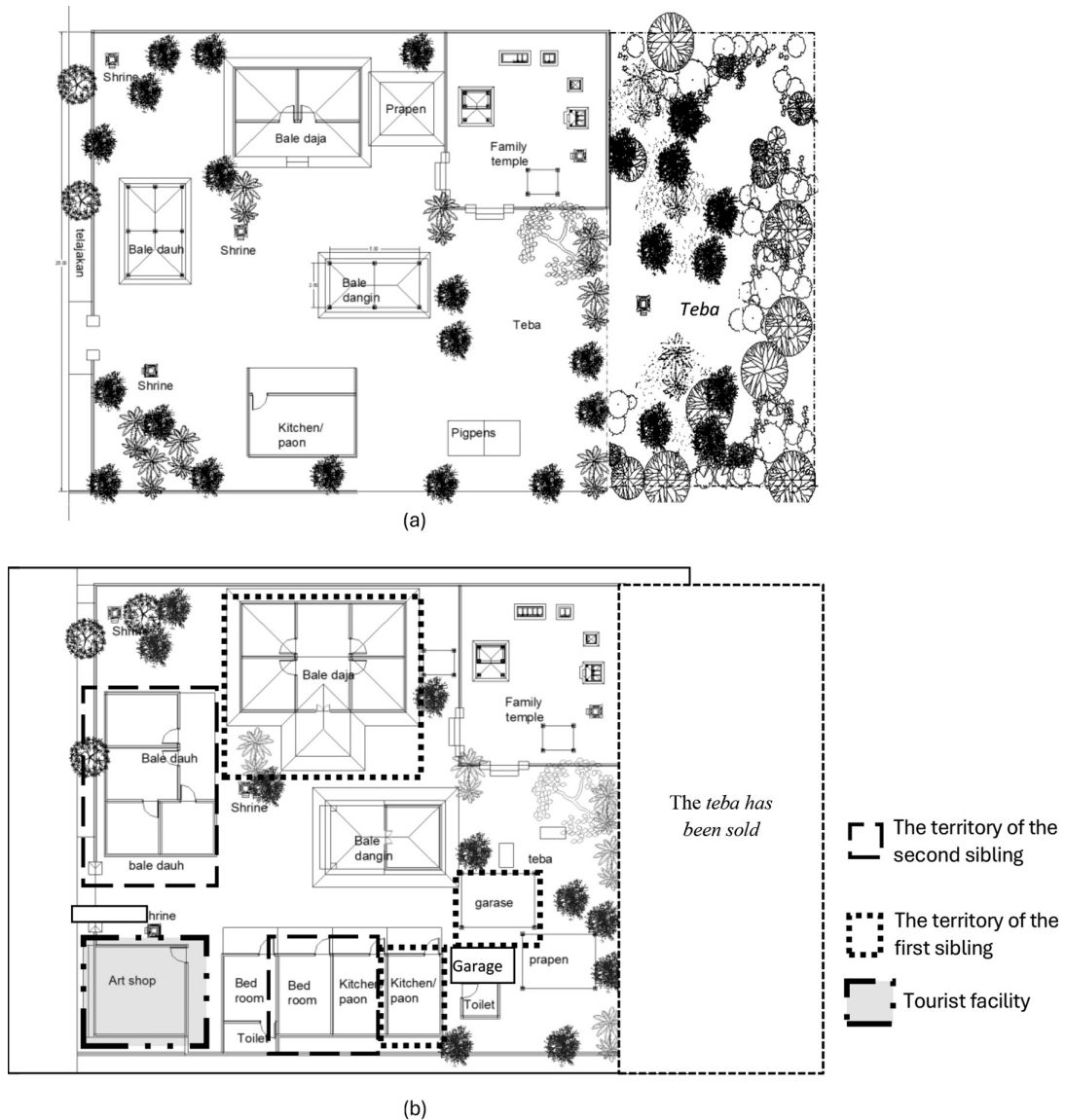


Figure 4: Space's divisions in the house transformation; (a) the original configuration and (b) the transformed configuration.

*Note:* *Bale dangin* = eastern pavilion; *bale dauh* = western pavilion; *paon* = kitchen; *jineng* = granary; *natah* = courtyard; *teba* = backyard; *bale daja* = northern pavilion; *prapen* = place for making iron or steel tools; *telajakan* = small garden between the front wall and road.

*Source:* Authors.

Each family unit has a private area within particular buildings where everyday activities occur. This space allows people to pursue their specific goals while maintaining a sense of belonging to a larger group (Westin 1970). The buildings provide various private areas for visitors to participate in leisure activities. The occupants can spend quality time with their family or friends, without worrying about annoying tourists or other residents with whom they share common interests. This private area allows the residents to practice “self-boundary regulation” (Altman 1981: 207).

The traditional Balinese pavilion is a six to nine-square-meter-sized room for maximum thermal comfort. A fresh air gap is created between the roof and the wall. As a result, air may flow freely from one side to the other and penetrate every section of the room (see Figures 2 and 5a). The gap provides two openings: one for air intake and the other for air to exit (Sutarja et al. 2021). In modern houses, a new pavilion is often created next to an existing pavilion to accommodate the occupants’ activities. A gutter links both roofs, preventing cross-ventilation and closing the gap (Figure 5b).

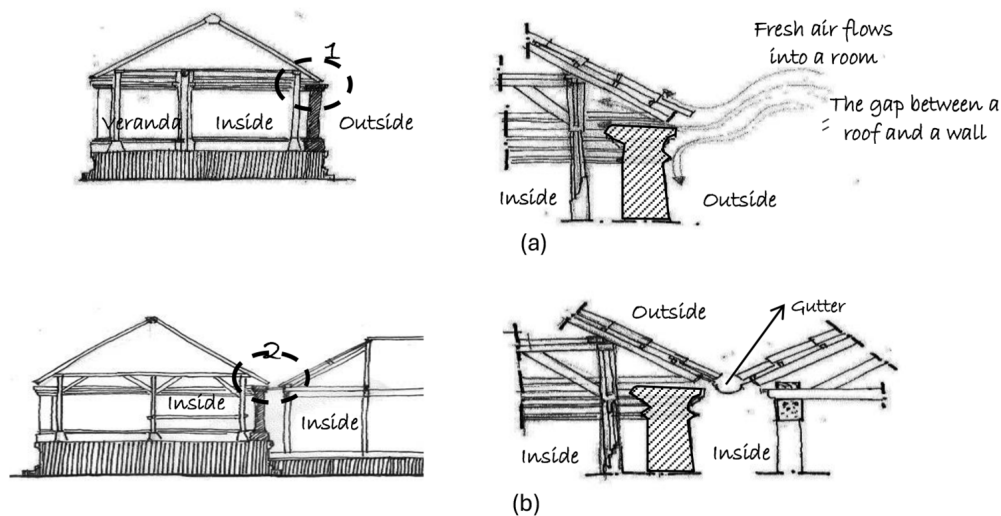


Figure 5: The traditional ventilation element transformation; (a) the section of traditional pavilion and the traditional ventilation element and (b) the section of transformed pavilions and the use of gutter in the transformed house.

Source: Authors.

Pavilions and plot walls (*tembok pekarangan*) may cause similar issues when the open space between them is reduced (Figure 6). This space, which traditionally provides air circulation around a pavilion (Figure 6c), was eliminated due to the demolition of the original pavilion and the construction of larger pavilions extending to the plot wall. The new structure uses a part of the plot wall as its outer wall (Figure 6b). This model’s inefficient

ventilation significantly harms the edifice adjacent to the following plot or adjoining dwellings. The new building is unable to provide fresh air. Natural air movements were replaced with electrical equipment such as air conditioners.

New structures have been developed for those requiring natural air circulation and sunshine, such as new buildings adjacent to the tembok pekarangan, with concrete gutters between the roof and wall (Figure 6d). This technology gives the owner a practical answer for expanding their area while improving natural light and ventilation. The structures keep occupants comfortable without artificial lighting or air conditioning during the daytime.

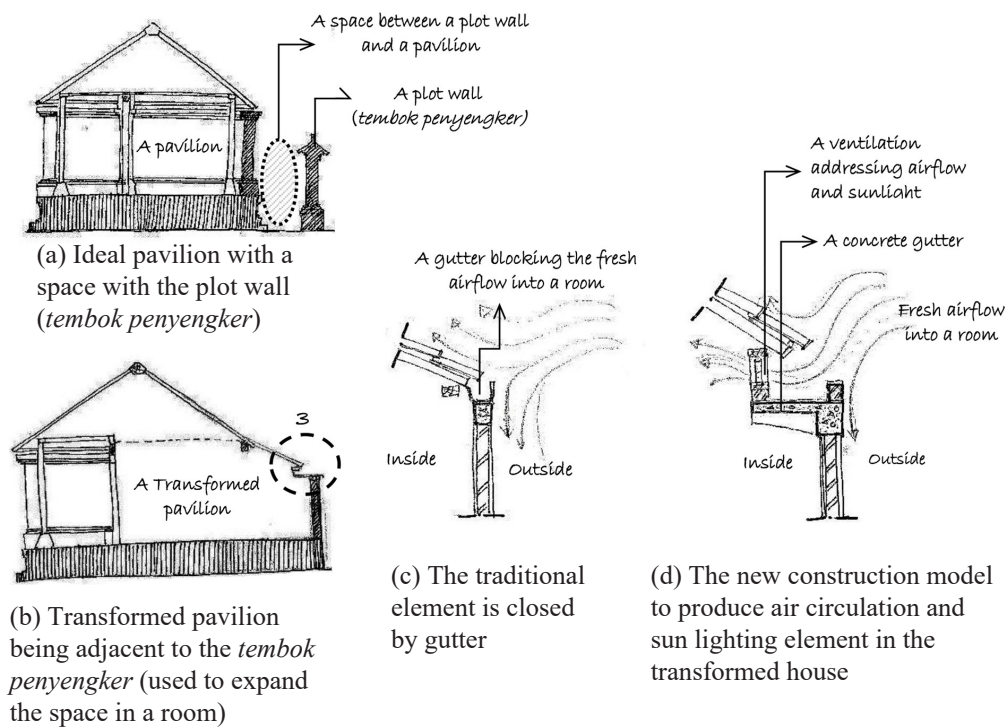


Figure 6: The transformation of a pavilion near the plot wall.

Note: *Tembok penyengker* = house plot wall.

Source: Authors.

What is particularly interesting is that some buildings, which originally featured traditional cross ventilation, have now installed air conditioning units and removed natural ventilation. This model highlights the owners' status, but increases energy consumption. For example, cross ventilation was previously utilised for fresh air circulation in a house in Ubud. However, replacing this with a glass to block off the cross ventilation to accommodate air conditioning reflects the owners' desire to meet contemporary preferences



(Figure 7). When a new technology replaces older methods, it signifies development or advancement (Dove 1988). These installations serve as a modern image to enhance social status and provide luxurious and comfortable amenities that cater to tourists' demands. This phenomenon illustrates that the Balinese are caught in a dynamic cultural transformation dilemma, struggling to conserve their culture while adopting modern lifestyles to meet tourists' expectations.

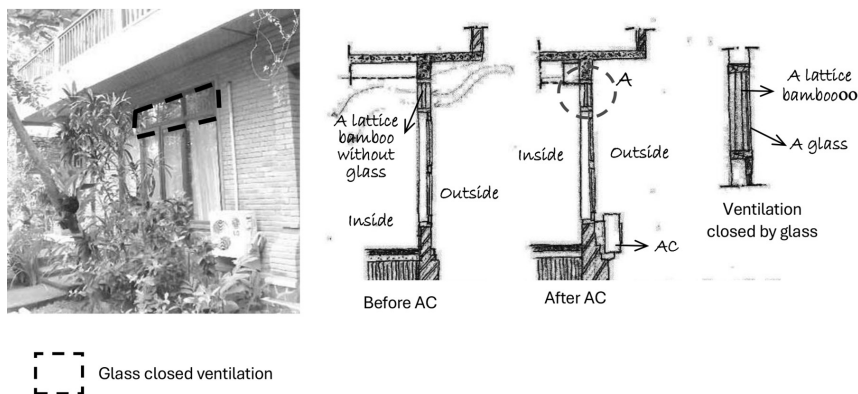


Figure 7: The loss of natural ventilation to accommodate an air-conditioning device in a transformed house in Ubud.

*Note:* AC = air conditioning.

*Source:* Authors.

Recent modernisation advances to accommodate the population's new lifestyle and tourism activities have impacted energy consumption. Traditional building materials and natural resources no longer provide thermal comfort in transformed houses; instead, a modern technology ensures thermal comfort while simultaneously serving as indicators of social status.

## THE DISORDER OF SPACE AND QUALITY OF LIFE

Hygiene is crucial in assessing and determining a person's social rank. It is reflected in various aspects of a house, including cleanliness, absence of odours and orderliness. However, hygiene extends beyond health-related concerns; it can also pertain to a person's appearance. In this context, a lack of cleanliness does not necessarily indicate dirtiness (Bradley and Stow 2012). "Dirt" pertains not only to the existence of mud or soil in a location but also to the atypical arrangement of things or the configuration inside a space. The arrangement of elements within a space influences the overall perception of cleanliness and grime. For instance, if new and clean items

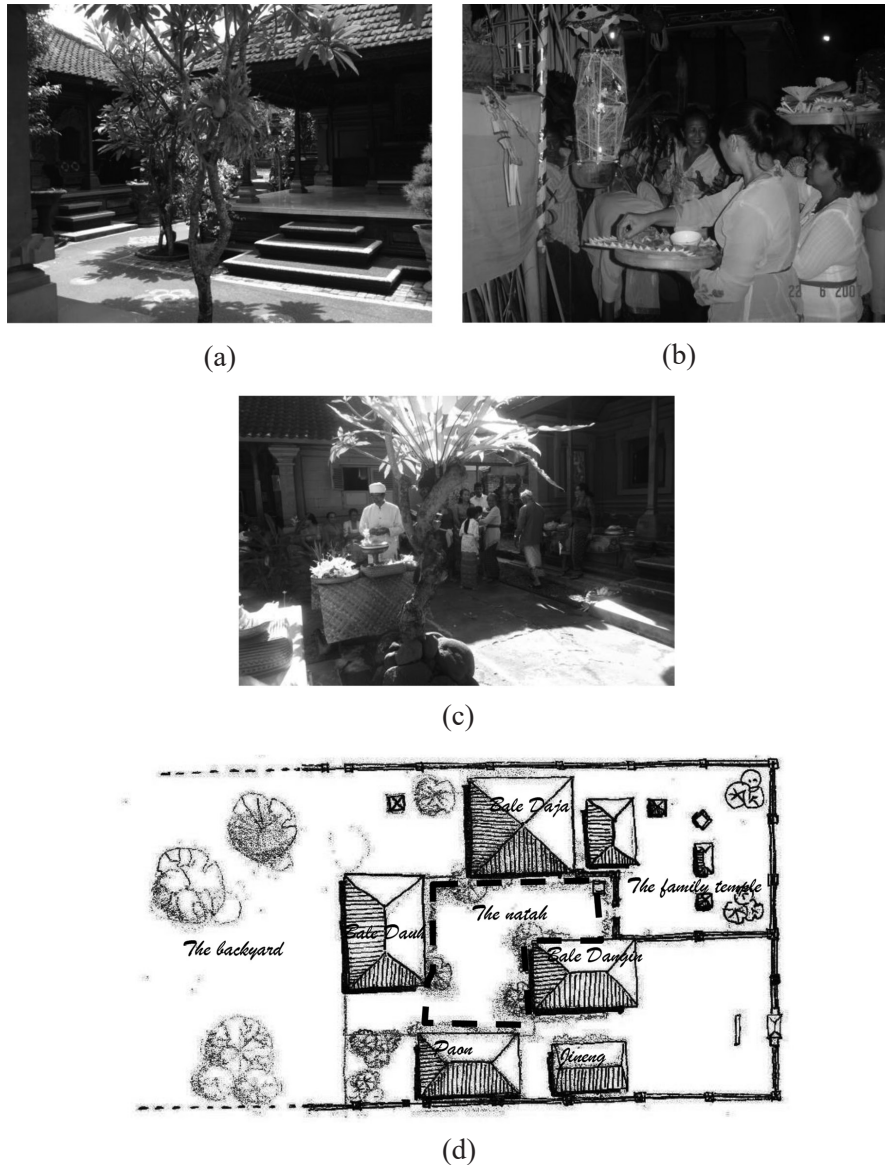
are placed inappropriately, they can create a messy environment (Douglas 1984). Rubbish in a trash can, for another example, does not automatically imply that the entire house is dirty. “Dirt” is “as a matter out of place” representing “the rejected elements of the ordered system” (Douglas 1984: 35). Using this disorder theory, the various parts of change, including the courtyard (*natah*), are analysed regarding hygiene and disorder.

As well as serving as a gathering area for family and friends, the courtyard (*natah*) in a typical Balinese house in Ubud serves as a house for various domesticated animals. For instance, pigs and ducks might roam freely in the courtyard (*natah*) or among women pounding rice. There was nothing unusual about this scenario as living in an agrarian civilisation where home and religious activities were closely linked to nature. Because everything in the house had its place, the residents felt at ease with sharing, especially in the *natah* with animals.

However, this decline is primarily due to tourism and modern influences, as Ubud has become a cultural tourism attraction in Bali. Tourism activities have transformed Ubud, a traditional village, into a tourism-centric community. The Ubudnese’s new desires conflict with the old conditions. The new concept of cleanliness rearranges the courtyard by referencing a modern level of life. Different societies attach various meanings to cleanliness, and subtle shifts in connotation occur frequently (Syrjamaa 2012). Animal faeces and odours contaminate the occupants and their neighbours, causing discomfort. Consequently, the courtyard has evolved into a new order. There are enough open spaces in the courtyard to keep most domestic animals, but they are no longer kept as part of the organised system of the house. As a part of the house’s organised system, they are rejected. However, some pets, such as dogs and birds, remain in the houses. These animals reflect the interests of the residents and are not used for food or offerings. This shift has resulted in a notably well-organised environment emphasising cleanliness and modern hygiene, creating an aesthetically appealing space.

Since the cultural activities and artifacts can represent the identity of a place (Bertacchini and Revelli 2021; Wirawibawa et al. 2021) and common symbols for people (Ngo and Nguyen 2021), the courtyard (*natah*), along with traditional pavilions, is still a space for carrying out ceremonial and domestic practices. The courtyard’s shape is similar to a theatre stage, allowing for a wide variety of equipment and activities to be set up and removed to meet ritual movements and postures (Figure 8). Once ceremonies are completed, the ritual equipment is cleared away, and the courtyard transforms into a space for daily activities, including drying unhulled rice,

socialising, and playing. Consequently, the courtyard is a dynamic and ever-changing environment without a fixed pattern, making it an ideal location for constructing temporary bamboo structures for laying offerings during rituals. A few small plants, particularly floral plants, have been planted in the open space near the pavilions.



 The *natah* in a house

Figure 8: Pictures (a), (b), and (c) shows the multipurpose spaces of courtyard (*natah*) in which the pattern is changing many times based on the rituals that are performed while (d) shows the dynamic space in the *natah* pattern of houses in Ubud, Bali.

Note: *Bale dangin* = eastern pavilion; *bale dauh* = western pavilion; *paon* = kitchen; *jineng* = granary; *natah* = courtyard; *teba* = backyard; *bale daja* = northern pavilion.

Source: Authors.

However, the *natah*'s pattern has changed in certain houses that have undergone renovation. Pavement is used in this house to connect pavilions or other spaces. The *natah* is separated into smaller sections by these circulation lines, adorned with various plants (Figure 9). Adding pavement and planting vegetation in the middle of the *natah* as a garden is “a matter out of place” (Douglas 1984: 35). This new arrangement has produced an improper and insufficient pattern about the original values and meaning. The traditional classification of the *natah* has been infiltrated and rejected, leading to a new organised approach that provides a more precise pattern. The new *natah* does not appear to be a multi-purpose area. It no longer adheres strictly to established principles in ceremonial preparation. Therefore, an integrated approach is needed in transforming the house, involving design strategies by designers to avoid potential negative effects (Adeokun and Ibem 2016) especially regarding socio-cultural aspects (Putra and Wirawibawa 2023).

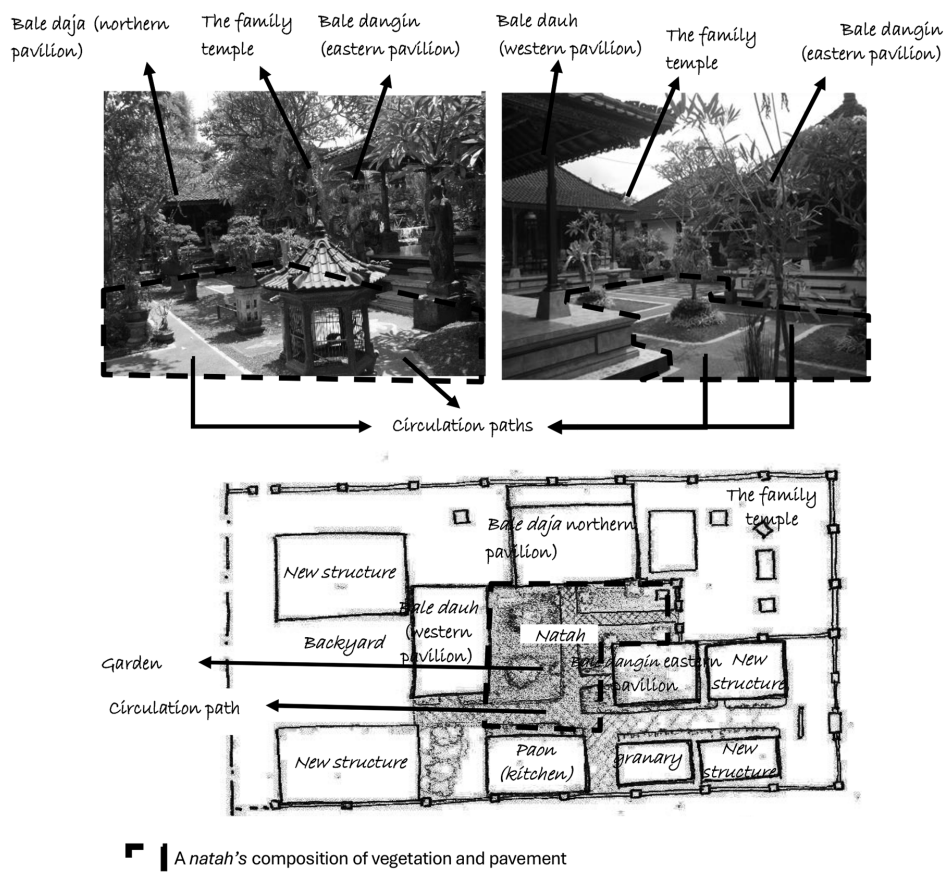


Figure 9: The arrangement of *natah* in a transformed house.  
Source: Authors.



## CONCLUSION

Balinese architecture confronts issues in preserving cultural nuances in the tourism industry, notably offering and cremation ceremonies. Under this system, the house can accommodate additional tourism activities in addition to residential and social-cultural activities. For the Balinese people, tourism has been a moderate source of revenue. The relationship between modernisation and tourism has influenced, people's desire for modernity. The Balinese people's prosperity and desire to improve their living conditions have spurred their enthusiasm for home renovations.

This study aims to understand the contradictory clash between the demand for modernity and the preservation of traditional Balinese house traits. It examines societal transformation brought about by the Balinese's embrace of modernity, emphasising the issues confronting the tourism sector. The examination was carried out through architectural and graphic investigation.

The parallel phenomenon has transformed the Balinese house's physical layout and the spaces' symbolic meanings and values. For many people, the houses represent a more contemporary way of life. Air-conditioning units have taken the place of the traditional cross-ventilation features. They are intended to enhance the social standing of their owners while also improving the quality of life for tourists. High-end tourism spots in various parts of the area have fuelled innovative ideas. The luxurious facilities have inspired the design of the house's interior spaces, such as the courtyards (*natah*) and verandas. The *natah* is a multipurpose room that serves domestic and cultural functions. However, while the domestic and cultural activities continue in the *natah* and other spaces in the houses, the installation of circulation lines connecting pavilions or other places has altered the pattern of the *natah* from a dynamic space, which has no particular pattern, into a fixed pattern. *Natah* has transformed from a plain, vacant place to a multidimensional area enriched by various vegetation, much like gardening. This new agenda eliminates the customary classification of the *natah*.

Integrating cultural preservation with modern lifestyle acceptance presents an architectural challenge for the tourism industry. The transformed house has lost its original cultural meaning and values, serving just as a replica of the past. An attempt to reorganise a traditional house does not encapsulate its essence or the expression of shape or space. Practices that emphasise the physical configuration or ornamental features impede the transition instead.



Further research on transforming the traditional Balinese house may include examining various contexts, such as urban, industrial, and port areas. An important next step in understanding the spatial configuration of traditional houses in Bali and other locations is to investigate the relationship between changes made to the spatial configuration of traditional houses and the socio-cultural evolution of the surrounding area. Investigating and evaluating preservation options that balance cultural heritage with modernisation and tourism demands provides an opportunity for further research in this area.

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This article is dedicated to Robert James Fuller who has contributed a lot of thought. He has been actively involved in completing this article. But he passed away a few weeks before this article was finalised.

## **COMPLIANCE WITH ETHICAL STANDARDS**

Survey participation was gained through informed consent of respondents in accordance with procedures standard in high degree research at Deakin University Australia. Human ethics approval for low-risk research was gained from Deakin University Ethical Committee with the approval number STEC-36-2012-DIASANA.

## **NOTES**

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