

Aesthetic and Cosmological Harmony in Traditional Javanese Architecture

Titis Srimuda Pitana

Architectural Engineering Program, Faculty of Engineering, Universitas Sebelas Maret,
Surakarta, Central Java 57126, Indonesia

Email: titissrimuda@staff.uns.ac.id

Received	Accepted	Published
04.10.2023	21.11.2023	30.11.2023

<https://doi.org/10.61275/ISVSej-2023-10-11-10>

Abstract

Javanese architecture has developed into a science that serves as more than simply a representation of human contemplation and the magnitude of the universe established in seeking human consciousness in addition to the depth of beauty that so qualifies as excellent values. The objective of the study is to reveal a concept of aesthetic and cosmological harmonization adopted by Javanese through the symbolic meanings expressed in the architecture of traditional Javanese houses, from their exterior to their interiors and building structure. The study found that the Javanese people's understanding of house building structure depends on the cosmological concepts of *papat keblat lima pancer* in Javanese culture. It is a cognitive construction (universal symbolic) that serves as the foundation for developing of the Javanese architectural aims to bring together with the universe (macrocosm), which holds excellent and incalculable magical powers. The types of buildings in Javanese architecture are classified into four types: *tajug*, *joglo*, *limasan*, and *kampung*. They are the code determination for constructing the Javanese house designs. Each type of form is divided into three sections: *guru*, *pananggap*, and *emper*. All of those types are oriented in two directions, *panyelak* and *pamanjang*.

Keywords: aesthetic harmonization; Javanese; traditional house; architecture; symbolic expressions

Introduction

A traditional residential house is a work of traditional architecture with great cultural value (Fu et al., 2021). Traditional houses have been shaped by the cultural history of the region as one of the cultural factors in their development (Akintan et al., 2018). House is the most common place for humans to reside, and its very existence frequently connects it with the cosmos. Lindner (2015, p. 137) suggests that when people strive to understand the cosmos, they will develop knowledge about levels of complexity that include humans like ourselves, humans as creatures that think and live. For the Javanese, house conceptually is not just a place for rest and gatherings of family members but also a reflection of their understanding of life (Daniels, 2016). The relationship between semiotics and building architecture can be seen in the way that architectural works are materially loaded and viewed as collections of signs and semiotic objects (Hoed, 2011; Jewitt & Henriksen, 2016).

When a cognition reaches a particular level of complexity, it produces a specific type of cognitive function known as awareness. (Capra, 2015). For Ramabrahmam (2019), human awareness refers to the consciousness that exists within their minds. Meanwhile, in the domain of human cognition, will and power are reflections of human desires. In this case, Javanese people have transformed the traditional architecture of their houses into a design science that is more concerned with the expression produced by human life contemplation and the unity of the cosmos that has developed in exploring human consciousness further into the depths of beauty that are then considered to be the ideal values (Kresna, 2023; Kusno, 2010). It is expressed through symbols that do not merely exude the value of beauty, but rather are aimed at the harmonization of life which is laden with the radiant truth, as the value of beauty expressed by Thomas Aquinas, '*pulchrum splendor est veritatis*', 'beauty is a ray of truth' (Mangunwijaya, 2009, pp. 9–10). This means that beauty is not something that exists alone. Beauty as a reality which is present in the network of events. The ideal value of beauty that radiates the truth is the suitability of the text to the context. Presenting the beauty in a context is an effort of propriety and self-knowledge that is solely aimed at creating harmony, as the Javanese are more familiar with the terminology of *wewangunan* (propriety/ appropriateness) compared with the beauty itself (Pitana, 2019).

Many ancient buildings are being reinterpreted and presented in contemporary contexts. Traditional Javanese architecture can be seen and felt in a variety of structures featuring various uses and improvisations (Hakim, 2023). Various concerns and doubts have begun to develop among the public, whether the current presence of traditional Javanese architecture is in line with Javanese building philosophy, and this question can still be continued: if it is suitable, then which Javanese building philosophy? Because the geographical location of the island of Java, particularly Central and East Java, is highly distinctive and unusual in Indonesian history, while also positioning it in a vital position in Southeast Asian history due to "dual experiences." According to Lombard (1996), Central Java and East Java experienced the overlapping and interweaving of two major cultures. The first mutation was "Indianization," while the second mutation was "Dutch Colonialization." Not to mention the distinction between mountainous and coastal Javanese culture (Lombard, 1969). As it was previously highly challenging to determine the truth of its architectural representation, "Indianization" began with the clear collection of data and coding of traditional Javanese architecture. The available evidence is fairly limited, comprising mainly of inscriptions and objects left behind. Many hypotheses are based on representations of buildings observable on the walls of Hindu temples in Central Java (Lombard, 1969). The truth of this claim is questionable as it is uncertain whether these artworks existed before Hinduism or arose as a result of Hinduism. The presence of types of buildings without undercarriages (houses on stilts) is one sign of the severe influence of "Indianization" affecting Central and East Java. This design differs from neighboring regions, which feature underhangs (*kolong*) in their structures, such as West Java, Sumatra, Sulawesi, Kalimantan, and Eastern Indonesia. According to Atmadi 1984, this might be because temple buildings in India had been affected by Indian culture.

Prior studies on the aesthetic aspects of buildings in Indonesia, and more especially in Java, found that the designers of mosque minarets, which in terms of shape include rectangle, a hexagon, an octagon, and a circle. The influence of several cultures, particularly Middle Eastern, European, and South Asian cultures, contributed to the building structure diversity (Nasution, 2004). Additionally, another study highlighted the house architecture in the Chinatown style in Pasuruan, highlighting Chinese, Dutch, and local influences. However, both the design and the layout pay special attention to Chinese philosophy (*fengshui*) (Sien, 2017). Tjiok (2017) studied the Chinatown architecture and its impact on urban planning. The aesthetic components of the Chinatown house's design, content, and the decoration, as the two previous studies, pay special attention to and conform to the Chinese people's worldview. Novotný et al. (2022) studied pigments used on rural buildings as part of a study on a variety of colors in traditional architecture. It includes sixteen pigment and powder paint samples, which are prevalent in materials science and are used in restoration work and ethnological studies. Scholl-Schneider (2020) studied the Heiligenhof and Silesia houses as tourist

attractions for a variety of target audiences, including people who had been forcibly relocated, Polish and Czech tourists, as well as uninvolved tourists. These houses are, from the standpoint of tourism, an inclination to thematize the homeland / fatherland (Heimat – homeland).

The present study aspires to provide a fresh perspective on the Javanese cosmology issues which underpin the aesthetic concept in Javanese architectural houses. Among the issues highlighted is the relationship between cosmology, aesthetics, and symbolism in traditional Javanese houses. This study seeks the hidden substances (noumenon) of existing symptoms (phenomenon) by identifying associations that apply *de facto* (real) and *de jure* (supposedly). The objective of the study is to reveal a concept of aesthetic and cosmological harmonization adopted by Javanese through the symbolic meanings expressed in the architecture of traditional Javanese houses, from their exterior to their interiors and building structure.

Literature Review

Javanese House's Philosophy

The meaning of house for Javanese people can be inferred from Javanese terms. According to Koentjaraningrat (1987) and Santosa (2000), *omah-omah* denotes household, *ngomahe* 'to make feeling at home' or to tame, *ngomah-ngomahake* 'to marry', *pomahan* 'the yard of the house', *pomah* 'the householder feels at home in his house'. A Javanese residential house is made up of at least one basic unit, the *omah*, which is divided into two parts: the inner part, which is called *dhalem*, and the outer part, which is called *emperan*.

The concept of space in a residence according to the Javanese architectural tradition is unlike the concept of space by Western tradition. In Javanese, the closest synonym is *nggon*, the verb is *manggon*, and the noun *panggonan* meaning "a place". Thus, for Javanese people, the concept of place is more appropriate than space (Setiawan, 1991; Tjahjono, 1989). A Javanese residence is thus a place or arrangement of places; the concept of geometric space is irrelevant in the definition of a Javanese residence. Further understanding of place can be seen in parts of Javanese houses. In the main house building (*omah*) which has another name called *dhalem* is the first-person pronoun (I) in refined Javanese. In the Javanese worldview, the root of selfhood is union with the Divine, which is pursued throughout one's life by continually increasing a sense of origin and purpose as a creation (Magnis-Suseno, 1984). The center *sentong*, located in the *Omah* sector, is a location for homeowners to connect and unify with God, while the *pendopo* is an area for people to interact with one another (Priyotomo, 1984).

Javanese people properly understand a house as a place to live as an enclosure which is appropriate to whatever lies within. Even the universe of human life, which includes the *jagad gede* (macrocosm) and *jagad cilik* (microcosm), is the form of eternal worth that is always present in their life (Christianna et al., 2021). The dwelling house is an expression of unity of *mesu budi* and *laku kasutapan*, which is a symbol of Javanese human understanding toward life and existence (Lis, 2014; T. S. Pitana, 2019; Ronald, 1993, p. 30). In this case, the unity concept of macrocosm and microcosm can be further interpreted as humans establishing a relationship with a far greater force beyond themselves so that they are fully conscious and capable of increasing their strength, which can bring prosperity, fertility, and other positive things for life and human life. Furthermore, Pattee (2015, p. 269) suggests that to fully grasp the foundations of human consciousness, we must first understand consciousness itself, which requires knowledge of the senses in order to comprehend the fundamental relationship between subject-object, the origin of phenomena, and symbols. Rather than being constructed for purely aesthetic reasons, Javanese traditional house design is the product of meticulous inquiry into the course of life and the journey of the human soul, even to the end of life as necessary.

Research Methods

The aesthetic harmony of traditional Javanese houses was studied using a qualitative method involving descriptive qualitative and interpretive data analysis methodologies, in addition to a hermeneutic approach. In principle, there are three of the six branches of Schleimacher's hermeneutic classification (Bizawie, 2002). In the context of this study, Javanese architecture will be construed more broadly as Traditional Javanese Architecture,

which is the architectural identity of Javanese society. However, its current presence is a legacy solely in the forms of physical structures and certain old manuscript. The presence of a variety of Javanese literature on architecture is viewed as independent material in this approach. This study adopted a Javanese ancient manuscript *Kawruh Kalang R. Sasrawiryatmo* to help author elaborate on the study discussion of Javanese house architecture as the object study material. In this study, the discussion of the aesthetic characteristics of typical Central Javanese building design begins with an examination on the shape and structure of the elements that comprise it. Architectural and interior works, as a type of culture, address more than only utilitarian issues. Its physical embodiment allows for human activity. The configuration of form and space will decide how design may elevate a business, elicit responses, and communicate meaning. Form and space are presented as instruments for problem resolution, not as the conclusion of meaning.

Findings

Cosmological and aesthetic harmony of the Javanese Houses

Javanese people believe that between the "container" with "content", there is a need for balance, alignment, and even integration so as to create inner peace, welfare and prosperity in life and existence. According to Aristotle, space is a place of belonging, which is the location where every physical element tends to be, which has five essential characteristics, they are (1) enclosing the object that is in it; (2) not part of the be circled; (3) no bigger and smaller than the object inside; (4) it can be abandoned by the object and also can be separated from the object; and (5) always follows the object, even though the object must move to its position (Van de Ven, 1995, pp. 18–19). Meanwhile, in the world of architecture, "space" is commonly identified as the "place where an activity takes place". It means that human in their activities will never be separated from the existence of space as a container of their activities. The problem is how far human realize the existence and meaning of space in his life so that all his actions or decisions are considered appropriate? The accuracy of a certain action done by Javanese people is often expressed in terms of *bener iku kudu pener, lire jumbuh klawan empan papan* (true must be precise, it means that it is according to the space and time). This expression implies that the truth for Javanese people is something fragmented, which is beheaded according to time and space. Therefore, humans must keep harmony with their space to be always bring the truth closer. This is shows that the awareness of space becomes something very important for humans.

Furthermore, if the hierarchy between the aristocrats and ordinary people are constitute the determination of the social strata hierarchy space for the Javanese society lives, then it can be understood that Javanese architecture is the determination for the material space hierarchy if Javanese people whose manifestation can be seen in following three examples.

- (1) The use of partitions and dividing walls in houses are not meant as a barrier with the nature, but rather is an affirmation toward moral provisions. Thus, architecturally the existing spatial patterns in the residential buildings can be clearly identified into stages of purification or the space level of sacredness. It means that the more closed a certain room is the higher its sacredness level.
- (2) In the hierarchy of the material living space patterns, the space structure of a Javanese house has a closed courtyard (fence), consisting of a main building and additional buildings. The fence here is more interpreted as to create moral boundaries that still allow interaction with the wider outside world.
- (3) In the context of purification stages, like the myth of the mountain as a holy place, the top of the mountain is located in the highest place and surrounded by several lower places. Likewise, for traditional Javanese house, the highest floor is the most sacred space which is usually located in the main building or core building surrounded by additional buildings and/ or other spaces. For example, the core building of a traditional Javanese house consecutively consists of *pendapa* and *pringgitan*, *dalem agung*, *dapur*, and *pekiwan*. *Pendapa* and *pringgitan* are the profane buildings which is located at the front, and functions as a recipient. *Dalem agung*, in which there is *senthong kiwa* (left room),

senhong tengen (right room), and *krobongan* or *senhong tengah* (middle room), are sacred private buildings, while *dapur/* kitchen and *pekiwan* are part of the profane services.

The Javanese residential buildings are commonly interpreted as a miniature of cosmos for its inhabitants. Cosmos is not something that has dimension (Lindner, 2015, p. 177). The quality expression of the Javanese architecture is contained in the spatial structure and façade along with its ornamental designs. Meanwhile, the quality of its meaning lies in the symbolic meaning of the physical embodiment of the building which includes spatial structures, constructions, and ornamental designs. The symbolic meaning of the Javanese house building spatial structure typology which tends to be interpreted as a feminine character can be describe as follows.

- 1) *Topengan* (*kuncungan/ mask*), this part of the building is in the forefront and for public, and its existence can exist or omitted. This means that this part is not the actual portrayal of the inhabitants who are commonly placed at the very front, as mask that function as a camouflage of the actual face.
- 2) *Pendapa*, this room is behind the mask (if any) which is public and serves to receive guests. This part can be analogous to the real portrayal of its inhabitants. It means that the friendliness or the character inhabitants can be seen from this *pendapa* room appearance.
- 3) *Pringgitan*, this room is located between *pendapa* and *dalem ageng*. As the name implies, this room functions as a place to hold *ringgit* (*wayang kulit/ wayang purwa*) or leather puppet shows. The existence of this place can be analogous to a woman's neck that looks appropriate and more beautiful when given jewelry. Typically, the better and more expensive the jewelry to wear, it will increase more social status. Likewise, the social status of its inhabitants of the house, the more often they hold *ringgit/* leather puppet shows, the social status in the surrounding community will increases.
- 4) *Dalem ageng*, this room is private, closed and scared which is located behind the *pringgitan*. The existence of this room can be analogous to a woman's body that must be covered (wrapped in clothes) because it is sacred. However, in this sacred room there are more sacred rooms, it is *senhong* rooms (*senhong kiwa, senhong tengah* and *senhong tengen*). Therefore, beside wearing clothes to cover her body, a woman also wears underwear because there is something more privates and sacred that needs to be covered and protected.

Senhong kiwa, senhong tengen, and senhong tengah. These three rooms are lined at the back side of *dalem ageng*. *Senhong kiwa* and *tengen*, these two rooms are symmetrically in a row flanking *senhong tengah*. Both of these two rooms function as sleeping rooms. These room are physically closed and has a door leaf. The existence of these rooms can be analogous to a woman's thigh which must be sturdy and closed. If it is not sturdy and tightly closed, then the existence of *senhong tengah* which is functioned to save superior agricultural seeds and only covered by a white curtain will be very threatened. The existence of *senhong tengah* can be analogous as a woman's womb which is only protected by the virginity membrane. Therefore, symbolically the message to be conveyed will be able to maintain and give birth to a certain superior seed if "*senhong kiwa* and *senhong tengen*" are sturdy and well protected so that "*senhong tengah*" is not easily torn and the stored seed in it can be maintained and not taken by "wild birds" which in time can be "sown, cared for, and given the best results".

Basic Types of Javanese Architecture

Residential buildings or houses for Javanese people are not only interpreted as buildings for shelter and living, but also buildings that consist of other elements that make the buildings more meaningful or "more than just useful". In fact, the houses are considered as a material living space which also a symbol of self-orientation and a reflection of life attitudes. Therefore, Javanese houses are usually created with a high appreciation along with dynamic manifestations (Mangunwijaya, 2009).

There are four types of Javanese building roofs consisting of *tajug, juglo/ joglo, kampung,* and *limasan* which are in their use have experienced variations in development following the

needs and desires of the building owner. These roof forms subsequently become symbols of social status, aristocracy or ordinary. The nobles tend to prioritize satisfaction (desires) while the ordinary people tend to prioritize functions (needs) (Frick, 1997). This is easily observed in the embodiment of the Keraton Surakarta architecture. Almost all of the buildings in the Keraton Surakarta areas have dimensions that are on average larger than Javanese houses in general. The building materials as the physical embodiment elements are selected with complex calculations and have very good quality. The decorations as the aesthetic element of the building are made from high quality materials and techniques. All of that is as a fulfilment of the desire to bring the impression of grandeur, luxury, and the authority of its inhabitants (the king).

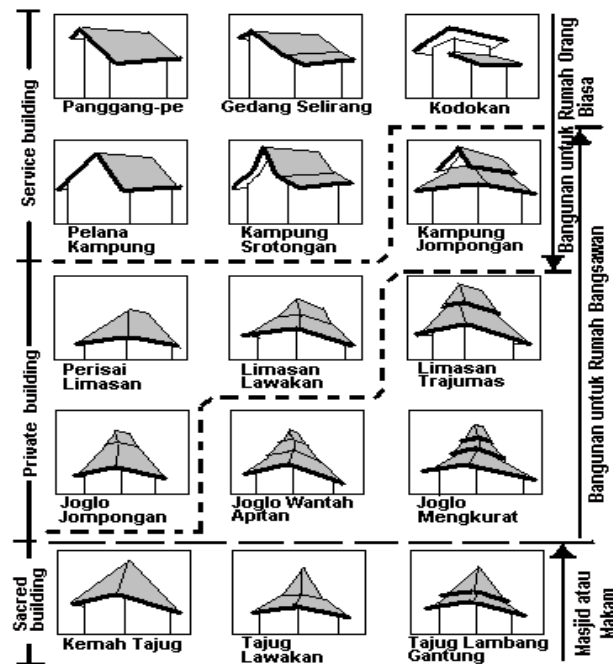


Fig. 1: Types of The Javanese roof and their use

Source: Frick, 1997, p. 113

The previous description shows that the embodiment of the traditional Javanese roof shape is very much determined by the awareness of the prevailing social moral values. As explained by Frick (1997, p. 113), in relation with the purification stages, the embodiment of a Javanese traditional building roof can be grouped into three groups. First, the roof that is commonly used by the ordinary people. The shape of this roof is in simple shape, such as *kampung* and *limasan* shapes. Second, the roof that is commonly used by nobility which is *joglo* roof shape and its development. Third, *tajug* roof shape and its development, which is a taboo roof if it used for residential buildings and it is only suitable for sacred buildings, such as mosques or temples (Figure 1). This means that for Javanese people, the embodiment of house architecture is an expression of the nature of appreciation for their lives.

The roof of a building is part of the building that overshadow the building elements and activities that are contained by the building itself. The shape of the roof and the height of the building is a reflection of sacred function level that is contained. In the context of residential building, Prijotomo (2008, p. 3) argued that basically the architecture of Javanese house is an embodiment of shelter architecture. This opinion seems to be based on information contained in traditional Javanese sources, *Kawruh Kalang* (Anonymous, n.d.) which says that "*tiyang sumusup ing griya punika saged kaupamekaken ngaub ing sangandhaping kajeng ageng*" which means "the person who enters into a certain house is like sheltering under a large tree (intention)". This means that it can be said that if the main function of a residential building is "shelter" then the underlying architectural concept is "shelter architecture".

The types of buildings in Javanese architecture are classified into four types: *tajug*, *joglo*, *limasan*, and *kampung* (Tim Sasono Poestoko Keraton, 2005). Each type of form is divided into three sections: *guru*, *pananggap*, and *emper*. All of those types are oriented in two directions: *panyelak* and *pamanjang*.

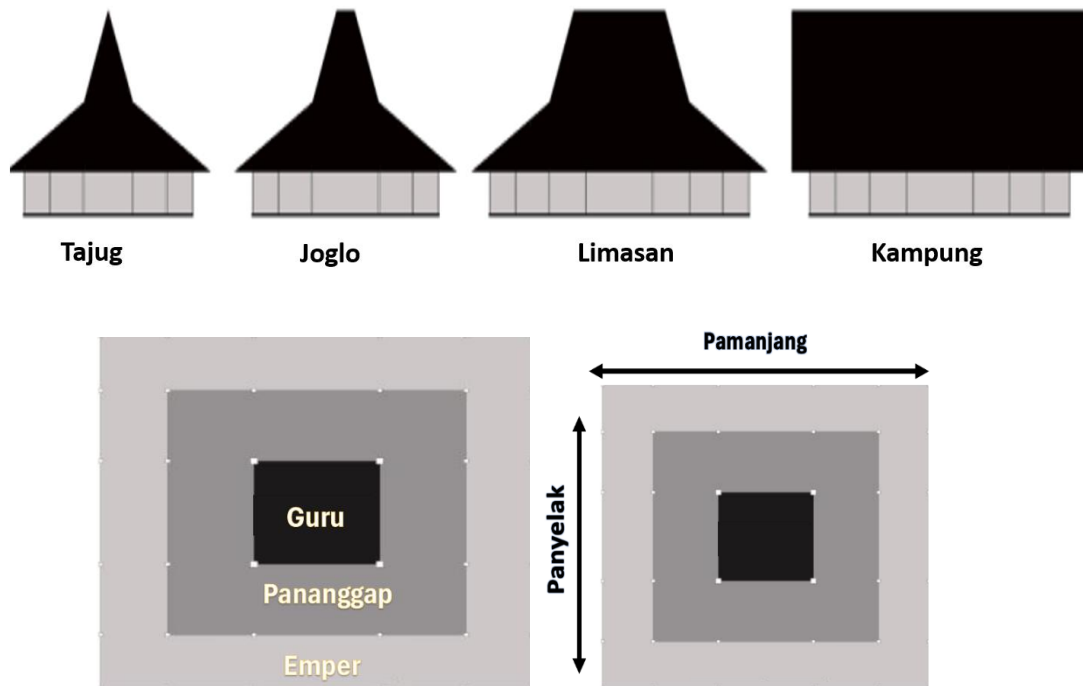


Fig. 2: Javanese building types based on Kawruh Kalang
Source: Sosrowiryatmo.

Basic code determination for constructing of four types of Javanese house designs can be found from the text of Kawruh Kalang R. Sosrowiryatmo. The *tajug* type is perceived to be the genesis of all types, while the other types are the results of the *tajug* type's dispersion.

The *joglo* type is the result of the first development of the *tajug* type, reflected by the term *joglo*, which derives from *ju-loro*, which means "two *tajugs*." In terms of creativity, the creation of the *joglo* form is the result of pulling the *tajug* type as far or as long as the *molo* (*nok*). *Molo* is a wooden beam positioned at the peak of the roof, also known as *nok*. From this pulling, the shape of the plan changes from a square to a rectangle, the long orientation is called *panyelak* and the orientation that remains fixed because it is not drawn is called *panyelak*. Changes in area occur in *guru* section, *pananggap pamanjang*, *emper pamanjang*, while *pananggap panyelak*, *emper panyelak* whose widths remain the same.

Limasan is a quadruple of *tajug* and a double of *joglo*. Folding in transformative creativity is equivalent to pulling *molo* twice. The *joglo* type was converted to the *Limasan* type as a result of this withdrawal, with the size of the *guru* section, *pananggap pamanjang*, *emper pamanjang* increasing while the area of *pananggap panyelak*, *emper panyelak* remaining the same. Similarly, with the village type, it is a process of "pulling" the *molo* as far as the breadth of the *pananggap* and *emper* sections, removing the *pananggap panyelak* and the *emper panyelak* sections.

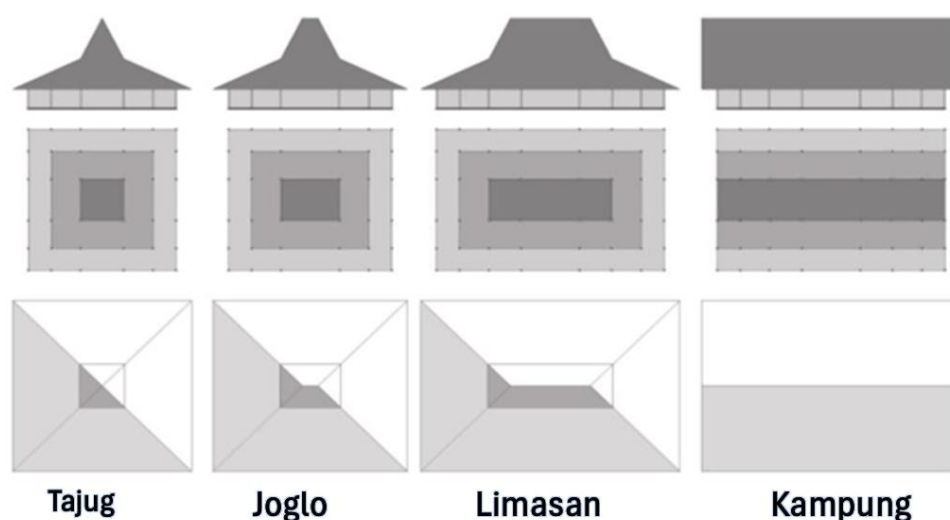


Fig. 3: The transformation process of the Tajug, Joglo, Limasan and Kampung types

There is no explanation in it that *kampung* type is a continuation of the towing of the pyramid type, but if we look at the traces, we can see that it is similar to what is described above by expanding the *molo*. The *molo* plays a vital function in this withdrawal process. The role of "initial code" in the Java architectural type of transformation process is the *tajug* type, whereas the function of controller remains to be determined. However, observing the withdrawal process, a notable shift is the attraction of the teacher sector with the emergence of *molo* in the *joglo* type, and then in the following type, the attraction happens in the guru section for a longer period of time, culminating in the village type. Thus, it is determined that the *guru* section has a controlling function in this transformation process.

The initial code of a type of Javanese architecture is the teacher sector, as for the *pananggap* and the *emper* sections, in principle their size and existence are very dependent on the condition, location, materials, desires and abilities of the home owner, as well as the presence of decoration also depends from the home owner and the craftsman who carries it out 8. In the teacher sector, measurements (*pethungan*) start from measuring *midhangan*, *soko*, *dudur* etc. Changes in measurements will determine the type, the presence of *molo* elements in the *tajug* type changes the type to *joglo* etc. Thus, the transformation in the form of "withdrawal" was carried out in the teacher sector, while other sectors followed suit. The teacher sector whose position is "initial code", its position can be present without the presence of the *pananggap* and *emper* sections. Likewise, the presence of the *pananggap* and *emper* sectors can be uneven. The length of the seat which determines the slope of the roof in the guru section also determines the type of building. Discussion of *dudur* length and its association with type was not carried out in this study, but the common thread of the connection is in the context of construction knowledge.

The Architectural Structure of Traditional Javanese Houses

In Javanese architecture, the starting point for the embodiment of house is inseparable from the notion of *griya* (residence house), which is by developing *pamidhangan*, which is realized in the size and sequence of *balandar* (beam pole) and *pangeret*, which are then placed on top of *saka* (column pillars). On top of the *balandar-pangeret* there is a roof that can be in *tajug*, *joglo*, *limasan*, or *kampung* shape. On this roof, it is hung the needs and desires of their owners regarding the use of the buildings. Therefore, the roof embodiment of the traditional Javanese house building is a reflection of the functions to hold the activities.

The concept of *papat keblat kalima pancer* in Javanese culture is commonly called as *pajupat* concept which is a cognitive construction (symbolic universal) which becomes the basis of the Javanese architectural cosmogony creation. The aim of this concept is to unite with the universe (macrocosm) which contain enormous and immeasurable magical power. In the

end this power is able to make the traditional Javanese house architecture as a symbol of microcosm which also a reflection of several instructions that lead to the purpose of perfection in life and existence and as a cohesive place between rough realm (worldly) and subtle realm (mystical). This symbolization according to Triguna (1997, p. 6) shows the relationship between the cosmological arrangement and conception of the world which is arranged around the four-cardinal point of the compass (west, north, east, and south). The midpoint is the point where the inhabitants who are considered capable of having a relationship with God, are seen as superior to their environment and serve to balance the power from the four subordinations. Javanese understanding about the structure of their house combined with the *Pajupat* concept above can be illustrated in the following illustration (Figure 2).

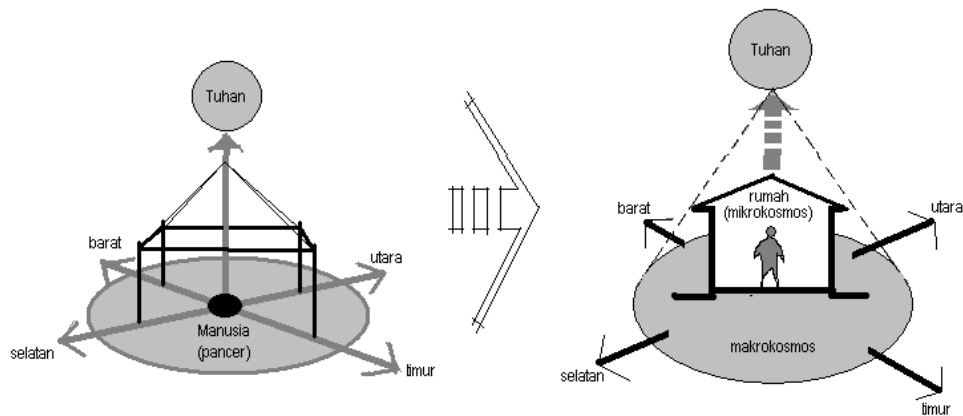


Fig. 4: The description of the house as a miniature of the cosmos as the basis for the concept of architectural building structures of the traditional Javanese houses

Source: Pitana, 2010

To present an architecture related to the awareness of its living space material, Javanese people take the starting point of the traditional Javanese house building architecture realization by determining the size of *balandar* and *pangeret* which commonly called as *pamidhangan*. *Balandar* and *pangeret* is a series of blocks that are placed on top of *saka* (collumn pillars) (Priyotomo, 2008, p. 2). It means that Javanese people do not determine the building size by designating the part of the building that is below, but which is above the head as the starting point. Therefore, *saka* then become the seating point for *balandar-pangeret*, not as the chain that lined up *saka* in two sideways rows, nor as a structural part of the structural series of beams (Figure 3). On top of *balandar-pangeret* there is types of roofs, such as *tajug*, *juglo*, *limansap* (known as *limasan*) or *kampung* which subsequently becomes the Javanese building names form. This roof also bears the main task of being as a condensing and shade for *balandar-pangeret*. Firstly, roof is used to overshadow and shade *balandar-pangeret*, not as to overshadow and shade the cavities which is built from the rows of *saka*. For Priyotomo (2008, p. 3) in this roof, the owner also hung ups their needs about the use of the building, for example as a *dalem* and *gandhok*.



Fig. 5. The roof rested on a series of beams (*blandar* and *pengeret*) placed at the ends of *saka* (pillars)

Source: Pitana, 2010

Conclusions

Residential buildings or houses for Javanese people are not only interpreted as buildings for shelter and living, but also buildings that consist of other elements that make the buildings more meaningful. Traditional Javanese house's architecture is created with profound appreciation and dynamic expressions using needs and aspirations as a means of representation. Javanese people's understanding of house building structure depends on the cosmological concepts of *papat keblat lima pancar*, often known as the *pajupat* concept in Javanese culture. This concept is a cognitive construction (universal symbolic) that serves as the foundation for developing of the Javanese architectural aims to bring together with the universe (macrocosm), which holds excellent and incalculable magical powers. The types of buildings in Javanese architecture are classified into four types: *tajug*, *joglo*, *limasan*, and *kampung*. They are the code determination for constructing the Javanese house designs. Each type of form is divided into three sections: *guru*, *pananggap*, and *emper*. All of those types are oriented in two directions, *panyelak* and *pamanjang*.

References

- Akintan, O., Jewitt, S., & Clifford, M. (2018) Culture, tradition, and taboo: Understanding the social shaping of fuel choices and cooking practices in Nigeria. *Energy Research & Social Science*, 40, pp. 14–22. <https://doi.org/10.1016/j.erss.2017.11.019>
- Anonymous. (n.d.) *Kawruh Kalang, Kasalin aksara dening Endang Tri Winarni (Maret 1985)*. MS. Sasono Poestoko Karaton Soerakarta No. 215 Ca.
- Bizawie, Z. M. (2002) *Perlawanan Kultural Agama Rakyat: Pemikiran dan Paham Keagamaan Syekh Ahmad al-Mutamakkin*. Samha.
- Capra, F. (2015) The Systems View of Life a Unifying Conception of Mind, Matter, and Life. *Cosmos and History: The Journal of Natural and Social Philosophy*, 11(2), pp. 112-134 <https://cosmosandhistory.org/index.php/journal/article/view/503%0A>
- Christianna, A., Saidi, A. I. & Sihombing, R. M. (2021) *From Domestic to Public: Representation of Working Women in Damar Kurung Painting*. <https://doi.org/10.2991/assehr.k.211228.006>
- Daniels, T. (2016) *Islamic spectrum in Java*. London: Routledge.
- Frick, H. (1997). *Pola Struktur dan Teknik Bangunan di Indonesia*. Penerbit Kanisius.
- Fu, J., Zhou, J. & Deng, Y. (2021) Heritage values of ancient vernacular residences in traditional villages in Western Hunan, China: Spatial patterns and influencing factors. *Building and Environment*, 188, 107473. <https://doi.org/10.1016/j.buildenv.2020.107473>
- Hakim, F. N. (2023) Dasar Ilmu Semiotik untuk Kajian Desain Visual. *Penerbit Yayasan Prima Agus Teknik*, pp. 1–108.
- Hoed, B. H. (2011) *Semiotik dan dinamika sosial budaya* (2nd ed.). Komunitas Bambu.

- Jewitt, C., & Henriksen, B. (2016) *Handbuch Sprache im multimodalen Kontext* (N.-M. Klug & H. Stöckl (eds.) De Gruyter. <https://doi.org/10.1515/9783110296099>
- Kresna, A. A. (2023) The Epistemology of Rasa as a Basic Foundation of the Javanese Psychology. *East Asian Journal of Multidisciplinary Research*, 2(8), pp. 3209–3222. <https://doi.org/10.55927/eajmr.v2i8.5699>
- Kusno, A. (2010) *The appearances of memory: Mnemonic practices of architecture and urban form in Indonesia*. Duke University Press.
- Lindner, H. H. (2015) On the philosophical inadequacy of modern physics and the need for a theory of space. *Cosmos and History: The Journal of Natural and Social Philosophy*, 11(1), 136–180. <https://cosmosandhistory.org/index.php/journal/article/view/392>
- Lis, M. (2014) Contemporary "Wayang Beber" in Central Java. *Asian Theatre Journal*, 505–523. <https://www.jstor.org/stable/43187438>
- Lombard, D. (1969) Jardins à Java. *Arts Asiatiques*, 20, pp. 135–183.
- Lombard, D. (1996) *Nusa Jawa: Jaringan Asia* (Vol. 2). PT Gramedia Pustaka Utama.
- Magnis-Suseno, F. (1984). *Etika Jawa. Sebuah Analisa Falsafi tentang Kebijakan Hidup Jawa*. Penerbit PT Gramedia.
- Mangunwijaya, Y. B. (2009) *Wastu citra: pengantar ke ilmu budaya bentuk arsitektur, seni-seni filsafatnya, beserta contoh-contoh praktis*. PT Gramedia Pustaka Utama.
- Marrison, G. E. (1987) Koentjaraningrat: Javanese Culture. xiv, 550 pp. Singapore: Oxford University Press East Asia, 1985. £ 7. 36. 50. *Bulletin of the School of Oriental and African Studies*, 50(3), pp. 595–596. <https://doi.org/https://doi.org/10.1017/S0041977X00040131>
- Nasution, I. P. (2004) Menara Masjid Kuna Indonesia Suatu Survei dan Studi Kepustakaan. *Wacana, Journal of the Humanities of Indonesia*, 6(1), pp. 27. <https://doi.org/10.17510/wjhi.v6i1.346>
- Novotný, M., Všíanský, D. & Frýbort, A. (2022) Pigments on Rural Buildings from South-East Moravia on the Example of the Finding Situation from the Village of Hrušky. *Národopisná Revue (Journal of Ethnology)*, 32(4), pp. 319–327. <https://revue.nulk.cz/wp-content/uploads/2023/01/r4-2022.pdf#page=57>
- Pattee, H. (2015). The physics of symbols evolved before consciousness. *Cosmos and History: The Journal of Natural and Social Philosophy*, 11(2), pp. 269–277.
- Pitana, T. (2010) *Dekonstruksi Makna Simbolik Arsitektur Keraton Surakarta*. Universitas Udayana.
- Pitana, T. S. (2019) The Architecture of Omah as an Expression of the Beauty of Javanese Culture. *18th International Conference on Sustainable Environment and Architecture (SENVAR 2018)*, pp. 153–158.
- Prijotomo, J. (2008) *Cerlangtara, Bukan Kearifan Lokal: Catatan Bagi Ke-liya-an Arsitektur Nusantara* (12 Agustus 2008).
- Priyotomo, J. (1984) *Ideas and forms of Javanese Architecture*. ajah Mada University Press.
- Ramabrahmam, V. (2019). *The Physics and Electronics of Human Consciousness, mind and their functions*.
- Revianto, B. S. (2000) *Omah: Membaca Makna Rumah Jawa*. Yayasan Benteng Budaya.
- Ronald, A. (1993). *Transformasi Nilai-nilai Mistik dan Simbolik Dalam Ekspresi Arsitektur Rumah Tradisional Jawa*. Lembaga Javanologi Panunggalan.
- Scholl-Schneider, S. (2020) A Piece of Homeland. "Haus Schlesien and Heiligenhof as Contact Tourist Zones. *Národopisná Revue (Journal of Ethnology)*, 2, pp. 125–141. <https://revue.nulk.cz/wp-content/uploads/2021/04/r2-2020.pdf>
- Setiawan, A. (1991) *Rumah tinggal orang Jawa; Suatu kajian tentang dampak perubahan wujud arsitektur terhadap tata nilai sosial budaya dalam rumah tinggal orang Jawa di Ponorogo*. Universitas Indonesia.
- Sien, K. H. (2017) The house of Kwee Sik Poo An Indonesian-Chinese merchant from Pasuruan. *Wacana, Journal of the Humanities of Indonesia*, 18(1), pp. 12. <https://doi.org/10.17510/wacana.v18i1.579>
- Tim Sasono Poestoko Keraton. (2005) *Kawruh Kalang R. Sosrowyatmo*.

<https://onesearch.id/Record/IOS1.INLIS000000000209248>

Tjahjono, G. (1989) *Cosmos, Center and Duality in Javanese Architectural Tradition: The Symbolic dimensions of house shapes in Kotagede and surroundings*. University of California.

Tjiok, W. (2017) Pecinan as an inspiration: The contribution of Chinese Indonesian architecture to an urban environment. *Wacana*, 18(2), 556–580.

Triguna, Y. I. (1997) *Mobilitas Kelas, Konflik, dan Penafsiran Kembali: Simbolisme Masyarakat Hindu di Bali*. Universitas Padjajaran Bandung.

Van de Ven, C. (1995) *Ruang Dalam Arsitektur*. Gramedia Pustaka Utama.