Identification and Orientation on Spatial Arrangement of Wajo Traditional Village, Keo Tengah, Nagekeo Regency

Reginaldo Christophori Lake¹, Yohanes Djarot Purbadi², Herman Florianus Harmans³

¹Program Studi Arsitektur, Fakultas Teknik, Universitas Katolik Widya Mandira
²Program Studi Arsitektur, Fakultas Teknologi, Universitas Atma Jaya Yogyakarta
³Program Studi Arsitektur, Fakultas Teknik, Universitas Katolik Widya Mandira

Corresponding Author: egilake@yahoo.com

Abstract

The purpose of this paper is to describe the uniqueness of spatial arrangement of Wajo traditional villages in Nagekeo district, which is designed based on local wisdom. Traditional settlements in Indonesia have a spatial concept that has the potential to become the basis of contemporary architecture. The spatial arrangement of traditional settlements of Wajo village is interesting to disclose the principle and its constituent elements as one of Indonesia's architectural properties that maintaining local culture. The problem under study is the dominant (important) aspects underlying the spatial concept of traditional village settlements Wajo custom. The method used is to study literature in various writings on the spatial layout phenomenon of traditional settlements, as well as the elaboration of physical theories (structuring principles) and non-physical theories (identification and orientation) to find the dominant relationships that form the spatial layout of the Wajo traditional village. The analysis is based on Schulz's phenomenological paradigm and Salura's design principle theory. From the results of the analysis, it was found that the spatial concept of the Wajo traditional village is a relation of the perception of the surrounding environment, site, shape, figure and natural-cultural cycle influenced by dominant factors namely the top-down orientation (sacred and profane) and physical adaptation of the topography of the place, as well as elements binding (datum) in the form of tribal order (the existence of mosalaki), cultural symbols (customs), and spiritual (ancestors).

Keywords: spatial arrangement, traditional settlement, adat village Wajo, orientation, identification

1. Introduction

Architecture as a cultural artifact is influenced by the changing times, technical knowledge, and the development of community values or ideology. In a study conducted by I. Asmarani, it was found that each architectural element (ward house) had types of elements that were influenced by cultural, social and climate factors (Asmarani, 2016). The ideology of occupants influencing architecture is found in the study of Osing's house form, the elements of home architecture are closely related to the social structure of egalitarian societies, the names of the parts of the house are the expression of messages, meaning and will as expressions of the owner's feelings and intentions (Suprijanto, 2002).
Architecture is a building that obeys functions and works of art in the form of symbols that have meaning. Understanding architecture as meaningful symbols is design products that are in line with intuitive patterns (Hersy Yamanto, 2003). The perception that states architecture is the ideology of residents in the form of meaningful symbols becomes the basic concept of traditional architecture. As a cultural artifact, traditional architecture tends to become something symbolic. Traditional architecture in Indonesia as a whole is an architectural typology that is full of symbols based on the concept of residence, both in the mountains and in the lowlands. In other words, the physical appearance of traditional architectural objects, both overall and partial, is a meaningful symbol (Rogi & Siswanto, 2009).

The uniqueness of traditional architecture design can be a basic concept in present-day architectural design, thus characterizing symbols related to the ideology of its inhabitants. From Andi Yusdy's investigation, it is known, the use of the concept of transformation of traditional architectural forms in Makassar city shows the adaptation of traditional architecture in urban spatial planning through macro-micro schemes as landmarks of urban areas (Dwiasta, 2014). From Jeni Messakh's research on the building of the Kupang Mayor's office building, it is seen that there is a transformation that reveals the relation of functions, forms, and meanings of the traditional architecture of Sumba, Timor, and Ende Lio (Messakh, 2014). The uniqueness of traditional architectural concepts, especially spatial layout, is scientifically researched, for example, the spatial concept (spatial layout) of traditional architecture is determined by the concept of local wisdom living in the community (Azzahra & Nurini, 2014), spatial layout of tribal-based settlements (Purbadi, 2010), and settled culture is known from spatial symbolism (Tallo, 2013). That is, the spatial concept of traditional architecture has the potential to become a reference in contemporary architectural design.

The concept of space occurs because of the relationship between an object and humans who see it. The philosophy of space reveals two things, namely the macro cosmos and the microcosmos (Tallo, 2013). In-depth studies of traditional settlement arrangements, among others, are in the case of the spatial layout of the Dawan tribe in the Kaenbaun village in North Central Timor, the Tamkesi traditional village in North Central Timor, Gampong Lubuk Sukon in Aceh, and the Mantran Wetan village in Magelang. In spatial planning research in the village of Kaenbaun, North Central Timor Regency, an in-depth understanding (verstehen) about the culture of settling among the Dawan tribe based on (1) faotkana (sacred stone); (2) oekana (sacred water-spring); (3) umesuku (clan sacred house) and (4) the dogma of the Catholic church and supported by tribal order based on four specific concepts (the concept of ethnic brotherhood; religious concepts; the concept of culture in unity; and the concept of integrating with nature) (Purbadi, 2010).

In the research of the Tamkesi traditional village, North Central Timor Regency, it was found that one of the important elements in forming the spatial structure was the ritual activity (Tallo, 2013) and the principle of hierarchical orientation as the binding (datum) of tribal order, gender governance and tradition observance (Lake, 2016). In research on the settlement of the Gampong Lubuk Sukon community in Aceh, the characteristics of settlements are based on the dualism between patriarchal and matriarchal (religious teachings and social kinship) (Burhan, Antariksa, & Meidiana, 2008). In the case of settlement patterns in the Mantran Wetan settlements, Magelang, the settlement patterns are influenced by the symbolization of Javanese culture, which has two sacred points and two communal
spaces as places that are always a communal ritual reference in the community (Refranisa, 2019).

The phenomenon of spatial planning as the focus of this study was raised to be a key potential for discovering contemporary architectural concepts. The spatial discussion needs to be based on a method of elaboration of physical theory and non-physical theory to express the phenomenon of “body and soul” (Lake, 2014). Thus, the way to find the spatial concepts of traditional settlements is to elaborate on certain theories, namely physical theories, and non-physical theories. The object of study studied is one of the traditional villages in Indonesia, until now it is still sustainable and is still in the form of traditional settlements, namely the village of Wajo in Nagekeo.

In Indonesia there are many unique traditional architectural styles, even in East Nusa Tenggara there are ten kinds of traditional architecture that still survive today (Unwira, 2010). One that is very unique, especially in the phenomenon of traditional architectural spatial layout, is the traditional village of Wajo. The traditional village of Wajo still stays true to the site, culture (activity), and physical presence, surviving in the context of nature and globalization. Based on the potential and scarcity of language about traditional Wajo architecture, this study aims to reveal local concepts in the village's spatial patterns using the theory elaboration method (Lake, 2014). Hopefully, the conclusions and findings of this study can be used as a reference to the concept of contemporary architecture that puts forward the characteristics and local character for the creation of a synthesis between local architecture and modern architecture.

2. Identification and Orientation of Spatial Arrangement

The focus of this study is the concept of the spatial layout of traditional Wajo settlements. The concept of architectural space is always in the form of (1) functions, one type or collection of activities; (2) forms, in the form of physical space or space to accommodate activities; (3) meaning or meaning, which is revealed by the observer from the display of activities and buildings (Lake, 2014). Understanding of space is basically the relationship between objects and subjects (humans) who see. Relationships are initially determined by vision if viewed from an architectural sense of space, and the relationship is influenced by smell, hearing, and touch. Therefore, to explore the meaning of space must be linked in two physical theories (form) space and non-physical theory (Lake, 2014). There are two inherent properties in space; namely, space is a feeling (non-physical) and a container (physical). The use of non-physical theories is closer to the phenomenological theory, whereas physical theories are related to the theory of architectural spatial planning (ordering principles) (Lake, 2014).

The foundation of the non-physical theory is used by Schulz’s phenomenology, namely orderly identification and orderly orientation. The orderly identification is marked by the arrangement of the balance of parts and whole, namely; axis, binder, rhythm, and symmetric. An orderly orientation is marked up-down hierarchy; front back; far near; and left-right (Habib & Sahhaf, 2012). Because of Schulz’s phenomenological theory, identification and orientation are two functions of psychology. To be found in an existential footing, one must orient oneself; he must know where he is (space). Besides, he must identify himself with the environment, so he must know how he is in a certain place (space) (Undi, 2013).

The basic physical theory relating to the elements that make up space is used the ordering principle theory. For Bruno Zevi, space is the essence of architecture (Levin &
Jencks, 1978). Zevi believes that a spatial perspective is the most appropriate to understand the phenomenon of architectural essence (Lake, 2014). Purnama Salura (Salura, 2010) emphasized that the more measurable the boundaries of the elements of the scope of space, the firmer space becomes a form of architecture. Ching (1991) outlines six main principles namely axis; symmetry; hierarchy; rhythm and repetition, datum, and transformation (Ching, 1991). Salura puts forward the ordering principles include: the scope of the surrounding environment (elements surrounding the local settlement); site scope (appropriateness of topography and arrangement in site/settlement site); scope of form (building mass in the site); scope of figure (figure structure and figure of scope) and scope of cycle (fit this nature and specific culture) (Salura, 2010). The three ideas above convey the same concept, although in different expressions.

The principle of arrangement is a fundamental principle in designing spaces where activities or functions are contained within. The principle theory from Salura (2014) is more relevant concerning living space in traditional architecture because it includes the elements that form a complete traditional architectural space. Two important points in the principle of the spatial settlement are (1) the scope of the surrounding environment, the spatial elements of the surrounding environment to form the context; and (2) site, establishing supportive relations between buildings as text and sites as context. (3) Scope of form, applying a harmonious relationship between a large system with relations between systems, how the relationship between the scope of space with its constituent elements and material; (4) the scope of the figure, applying the level of openness or closure of boundaries that connect activities inside and outside; (5) the scope of the cycle, how to create a system of sustainability or space sustainability, which is the main thing is that the activities placed can continue to take place comfortably over a relatively long period of time.

3. Methodology

The spatial layout study of traditional villages in this study was conducted by reading secondary data in the form of written information about the spatial concepts of traditional architecture from previous studies, including a description book on Tamkesi vernacular architecture (Lake, 2015), field research (Lake, Boli, Djonda, & Siwa, 2018), and thesis (Lake, 2014) and the spatial layout of the Dawan in Kaenbaun Village (Purbadi, 2010). Also, there are field data in 2010 in the study of Wajo vernacular architectural excursions (UNWIRA, 2010) and use for the re-reading of the spatial phenomena (tread) of the traditional village of
Wajo. Furthermore, all data examined through the elaboration of physical theory (Salura, 2018) and non-physical (Habib & Sahhaf, 2012).

The analysis steps undertaken in this study are: (1) to record in detail the three-dimensional and two-dimensional conditions and spatial physical arrangements of the Wajo traditional village; (2) confronts the results of the anatomical classification of the principles of structuring physical theory with the principles of identification and orientation. In the identification principle, what factors underlie the creation of each classification are examined, whether the principle of axis, symmetry, datum and rhythm. The principle of orientation is traced up-down, far-near, left-right, and front-back hierarchy (Salura & Lake, 2014); (3) confronts the second stage of findings with local concepts; (4) conclude the local concepts that become the dominant concepts underlying the spatial layout of the Wajo traditional village. In essence, the elaboration of the two theories will classify the dominant time of the principle of identification and orientation towards the elements forming the spatial layout of the Wajo traditional village. The local concepts that were successfully read and concluded as the spatial concept of the Wajo traditional village.

4. **Wajo Traditional Village**

Wajo traditional village is located in Keo Tengah sub-district, Nagekeo District. Nagekeo Regency is geographically located between 80°26′00″ - 80°64′40″ South Latitude and 121°6′20″ - 121°32′00″ East Longitude. The northern part of Nagekeo Regency is bordered by the Flores Sea, the southern part is bordered by the Savu Sea, the eastern part is bordered by Ende Regency, and the west is bordered by the Ngada Regency.

The name of the village of Wajo was adopted from the name of a typical tree species in the Nagekeo area (the fruit is red, small in size). The philosophy of the Wajo traditional village based on understanding is the love of the land of birth because for the Wajo indigenous people, comparing the land of the birth of Wajo is like dignity (identity) of high value. The history of the ancestors of the Wajo people used to use the seeds of a Wajo tree as a gold weighing tool. So the more Wajo seeds are compared, the higher the selling price of gold (higher).

The top social structure of the Wajo community is called *wuku udu enga eko* (village head), the next social layer is the tribal chief (mosalaki) consisting of 6 tribes with their respective descendants. The middle social strata are called soma heads and the lowest layer is the Wajo indigenous people, who have more obligations than their rights.

The ‘pondo’ ("Periuk") pattern is a form of Wajo Traditional Village settlement resembling a circular shape, in which Sa’O Pile and Pu'u Peo become the central (coordinate points) in the middle of the village. Pondo is used as an open court by the people of Wajo. There are several levels of pondo courtyard patterns, according to the topography (contour) of the soil, including; tangi kodi, as the entrance to Pu'u Peo, as well as the entrance to all series of activities; and the sacred place for Pu'u Peo's placement which is at the highest topography (contour). Thus, pondo plays an important role as forming, as well as binding the orientation of the houses that surround the court facing Pu'u Peo. This pattern is a manifestation of a culture characterized by the unity of the Wajo people.
The number of houses in the traditional village is 23 units, with the position of each tribal chief separated by 2 ordinary units. Traditional houses in the highest hierarchy are called Sa’O Pile (pemali house) and the house of the chief (Sa’O with enda), in principle the difference between the two types of houses lies in the size (dimensions), function (status) and spatial pattern. Sa’O Pile (pemali house) has the main function as a gathering place for villagers (6 tribes) and a religious function, namely a place to perform traditional rituals (ceremonies) as well as a place to store heirlooms belonging to the tribes.

Specifically, the pemali house (Sa’O Pile) is in the form of a stilt house, with a rectangular floor plan (dimensions 8m x 6m), using natural materials, such as wood for wall construction and main construction (6 rounded columns) according to the amount the tribe in Wajo; bamboo for the floor (split bamboo), reeds and fibers for roof coverings. The material comes from their own gardens and gardens belonging to other tribes. Pemali's house (Sa’O Pile) became the unifying house of all residents equipped with carvings (reliefs), statues of ancestral symbols (retha: as a housekeeper as well as a village guard), and buffalo bones produced by sacrifices to the ancestors.
5. Findings and Discussion

This section describes five findings related to the concept of the spatial layout of the village of Wajo, consisting of two important aspects, namely orientation and identification. These findings are the five main elements of the Wajo traditional kampong spatial layout concept. From these findings, it can be seen that the concept of the spatial layout of the Wajo traditional village is based on the local wisdom of the Wajo people. The phenomenon of spatial order in the village of Wajo is juxtaposed with similar phenomena that occur in Timor, Flores, and Bali in order to obtain a solid understanding.

5.1 Perception of the Surrounding Environment

Principle of Identification (Part and Whole). Wajo traditional village as a form of core space (hence understood as a sacred place) Wajo village made central in the order of the elements forming settlements. The direction (axis) of the settlement faces one axis, namely Pu‘u Peo, Peo Ia (sacred pillar), and Sa’O with Enda / kedha (pemali house). The pattern of layers of elements outside follows the topographic pattern of the Wajo traditional village, which is circular (cluster). The binding factor (datum) is greater than the other factors, but the building blocks of the residential space are the rhythm of the rectangular building. The dominant element affecting the spatial layout of the Wajo traditional village is the datum element, which is in the form of traditional, cultural and natural rules. The principle of respecting culture and nature like this also occurs in the Sasak village, nature and the existence of ancestors are used as a reference in the settlement arrangement in the village of Sade (Widisono, 2019) and Bena village in Flores (Achmad, 2019).

Principles of Orientation (Hierarchy). Wajo traditional village is the center (main part) of the orientation of elements outside the settlement, for example, customary forests, outside
villages and gardens. The relation of the orientation of the scope of the surrounding environment (customary forests, outer villages, and gardens) is related to the proximity (near-far) to the traditional village of Wajo as the central activity of the Keo Tengah indigenous people (Wajo and surrounding areas). The pattern of human occupancy in the middle of customary land and being the point of orientation of all settlement arrangements in the village like this also occurs in Kaenbaun village, human housing (kuan) being the middle element surrounded by plantations (lele) and village forest (nasi) (Purbadi, 2010).

The relationship of closeness (far-near) is influenced by traditional ritual activities that take place in the traditional village of Wajo. The front-back orientation influences the existence of the Wajo traditional village, which is arranged based on the pattern of social kinship (tribal chief) who inhabits the traditional village of Wajo. The tribal arrangement becomes a standard pattern in living in the traditional village of Wajo (arranged from right/east to left/west). The central part (traditional village of Wajo) as the center of Central Keo (district area) has a higher value than the part of the surrounding environment that binds the existence of outer space, which is manifested in the arrangement of elements of the surrounding environment (customary forest, outer village and gardens). The natural presence around the spatial structure determinants of settlements such as in the village of Wajo also occur in the village of Penglipuran in Bali (Arimbawa & Santhyasa, 2010) and Bena village in Flores (Achmad, 2019) and Kaenbaun (Purbadi, 2010).

5.2 Perception of Site Scope

**Principle of Identification (Part and Whole).** The zone of division in settlements consists of ancestral grave zones located in the South (low topography), the middle zone which is shared space (flat topography), the core zone which is the sacred zone of Sa’O Pile and Pu’u Peo (high topography) and the buffer zone, which is a row of people's houses that surround the village. The pattern shows the positivity level of the spatial layout of the Wajo traditional village in line with the creation of residents' sense of ownership. The more positive the nature of space, the stronger the territory of occupants. Territorial ownership is the rules of customs (culture) and forming elements in the scope of the site, for example, contour/topography, tribal order in the village, and the boundary of stone (stone fence). Spatial patterns that determine the existence of space for humans and ancestors are also carried out among Kaenbaun people in Timor (Purbadi, 2010) and Bena village in Flores (Achmad, 2019).

**Principles of Orientation (Hierarchy).** Wajo traditional village patterns in the form of a circle, Sa’O Pile and Pu’u Peo become the central orientation of the mass of buildings in Wajo traditional settlements. Tribal order and topographic conditions reinforce the dominance of the top-down hierarchy as the principle of structuring the Wajo traditional village footprint. The top (sacred/sacred) hierarchy is marked by the presence of Pu’u Peo and Sa’O Pile, the lower part is the common room (profane space). The orientation in the pattern of Wajo village footprints is influenced by customary rules which relate the term headrest on the mountain (northern part) as a zone of the existence of Sa’O Pile and Pu’u Peo; "Prop on feet in the sea" (the southern part) as a zone of public space (community houses, open yard), in traditional terms called "Udu mbeli kedi-ai ndeli mesi". With the territory governed by the concept of settling Wajo indigenous people, outer space is created which is controlled and maintained culturally, giving rise to a sense of ownership and care for space.
5.3 Form Scope Perception

Principle of Identification (Part and Whole). The pattern of the spherical arrangement (arch), the spatial layout of the Wajo traditional village, has a dynamic and light impression. The binding composition (datum) is more dominant centered in the core zone. The forming site elements have a square shape composition (impressed in contrast to the shape of the site) but neatly arranged around the site according to natural contour (topographic) patterns. Circular village design patterns were also carried out among Kaenbaun village in Timor (Purbadi, 2010) and Bena village in Flores (Achmad, 2019).

Principles of Orientation (Hierarchy). Pondo is a local term that means "circular like a pot." The cluster of site scoping elements in the form of residential buildings (houses of tribal chiefs and tribal residents), stone fences, graves, and open yards are arranged and form a top-down hierarchy pattern (from the core zone) circular patterned composed of elements outside the site that are general; the second layer of stone fence around the site is the outer and inner boundary zone; quadrangle; the fourth layer, namely the open yard consisting of megalithic buildings and ancestral graves, the fifth layer is the core zone into a sacred space on the site scale. The orientation of the scope of the Wajo traditional village footprint is circular from broad to narrow-based on function and quantity forming elements. The more concentrated (orientation to the core zone, the number of forming elements is only 3, namely Sa'O Pile, Pu'u Peo, and Pe'o Ia).

5.4 Perception of Scope of Figure

Principle of Identification (Part and Whole). Scope of the figure, applying the level of openness or closure of boundaries that connect activities inside and outside. The existing activities are two, namely profane and sacred. The profane activity takes place in inner and open spaces (the outer courtyard of the building mass unit). Sacred activities take place both indoors and outdoors, especially in important main building units. Overall, some activities mixed activities outside and inside the building. That is, the openness and closure of space become relatively dynamic and naturally intermingles. The dynamics of the relationship between inner and outer space in terms of openness or closure are easily found in Penglipuran (Arimbawa & Santhyasa, 2010), Bena (Achmad, 2019) and Kaenbaun villages (Purbadi, 2010).

Principles of Orientation (Hierarchy). The orientation of profane and sacred activities has a different direction. Profane activities are natural and can be oriented in all directions, as needed, including inward and outward-oriented. In the sacred activities generally are always centered, relying on the sacred point, which is the orientation of activities. Sacred building units, including sacred objects inside or outside the building, become important orientation points in sacred activities. The pattern of profane and sacred activities is based on traditional principles or rules that are hereditary. The orientation of profane and sacred activities are also occurred in Penglipuran village in Bali (Arimbawa & Santhyasa, 2010), Bena village in Flores (Achmad, 2019) and Kaenbaun villages in Timor (Purbadi, 2010).

5.5 Perception of Cycle Scope

Principle of Identification (Part and Whole). The condition of Wajo traditional villages is formed from nature (topography), so the elements forming the space and activities of Wajo indigenous people are bound to nature. Cultural symbols are tied to the concept of the local belief that has existed for a long time. Thus, the datum is the dominant element in the scope of the Wajo traditional village cycle marked by the presence of a continuous traditional ceremony. The orientation to nature and existence of sacred and profane space
have also occurred in Penglipuran village in Bali (Arimbawa & Santhyasa, 2010), Bena village in Flores (Achmad, 2019) and Kaenbaun villages in Timor (Purbadi, 2010).

**Principles of Orientation (Hierarchy).** The dominant site layout of Wajo traditional villages is influenced by physical and non-physical factors. Physical factors, such as climate, weather, vegetation, and topography. Non-physical factors influence social status, culture, beliefs and community activities. The top-down hierarchy concept becomes the dominant composition for village site orientation. The tribal system (ancestor "ana deo", and the adat holder "mosalaki") is the highest element in the customs of the Wajo people. The relation between tribal and spatial planning applies when the orientation is centered on culture, which is a ceremony that takes place in the middle of the Wajo traditional village. The top-down orientation is strongly influenced by climate and topography. The sacred part (in the form of a hill) as the upper zone will feel safe compared to the lower part of the plain during the rainy season. The hierarchy of space also occurs in Penglipuran village in Bali (Arimbawa & Santhyasa, 2010), Bena village in Flores (Achmad, 2019) and Kaenbaun villages in Timor (Purbadi, 2010).

6. **Conclusion**

The spatial structure of Wajo village is unique and based on culture (local wisdom). The dominant aspect of the spatial layout of the Wajo traditional village is the orientation and hierarchy of the top-down space, namely: top as a sacred zone and bottom is a public or profane zone. The principle of top-down hierarchy is formed from tribal order, and natural factors (topography). The dominant aspect of the principle of identification is the datum, formed due to the principle of observance of tradition, cultural symbols, and community kinship. Thus, the spatial layout of adat villages is physically and non-physically elaborated, so that it can be used as a reference for current architectural design concepts. The spatial layout of the Wajo traditional village is closely related to the relation of function, form, and meaning. The spatial layout of the Wajo traditional village starts from the core zone (the center point of the village, which is the existence of the sa'o pile and pu'u peo) to the outer layer (the boundary of the residential building). The type and orientation of residential buildings follow the local land contour.

**References**


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