

An Investigation of Boat Symbolism in West Lampung Traditional Houses, Indonesia

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Abstract The Kenali traditional houses in West Lampung that still survive today, built and shaped by the cultural heritage of boats, show original and unique characteristics. Ship cloth and boat toponyms have shown their influence on Kenali traditional house, especially related to the conception of belief. Through a case study of five Kenali traditional houses, this paper aims to investigate, identify and analyze important elements regarding the brief history of the morphology of the Kenali village, local terminology, general and specific architectural characteristics of traditional houses, as well as the social culture of the Kenali people in West Lampung. This research is based on observations and in-depth interviews within the framework of interpretive qualitative research. As a first step, we identified several local terminologies related to boats sourced from the results of interviews, then conducted in-depth and intensive observations on ten observation units. In the final stage, the interpretation process was continued in stages to obtain the meaning of the boat symbol embedded in the Kenali traditional house. The findings of this study show that the symbolism of the boat has been embedded in the architecture of the traditional Kenali house. The *bilik kebik* room is the main bedroom intended for the eldest male child through hereditary or patrilineal kinship. It symbolizes steering the boat, the eldest son symbolizes the boat's helmsman, and the son represents the ancestor. Therefore, the house symbolizes a boat where ancestors are the orientation of life through the inheritance of good values in the transition of the human life cycle from birth

to death. This paper hopes that the results of this study will provide a better understanding of the cultural context in the practice of spatial content of the Kenali traditional house. In addition, these findings can enrich the treasury in the search for Indonesia's identity as a maritime country.

Keywords Patrilineal Kinship, Boat Symbol, Structure and Construction, Traditional Architecture, Coastal Lampung, Maritime Country

1. Introduction

Architecture serves a communicative function by conveying meaning (cultural or symbolic significance) through its physical form, space configuration, usage patterns, and landscaping [1]. The conventional notion of housing typically refers to basic structures; however, it is frequently intricate [2]. Each part in it is used according to the circumstances of its occupants. We too often view the pioneering technological products of the past as ancient and backward, even though these products were quite complex and of high quality. Humans, from their intimate experiences with their bodies and other people, organize space to suit their biological needs and social relationships [3]. Among the several architectural styles, residential structures undergo the most swift transformations in form; conversely, domestic culture remains enduring and stable across time. This aligns with Rapoport's [4] perspective

that socio-cultural forces predominantly shape the design of a dwelling. Cooper [5] proposed that our homes represent our self-image. This is emphasized by Mangunwijaya [6] that the house is not just a place of shelter, as something that has a use, but must also have an image. Thus, traditional houses in Indonesia have an important meaning for a certain community group as historical heritage, symbols and identity of a region [7].

Various cultural or symbolic values can be expressed through the physical appearance, spatial arrangement, use patterns and landscaping of a building. Every factor that influences architecture and the built environment departs from a series of related structures and meanings that society has passed down from ancestor to descendants [1]. Meanwhile, Auersbach [8] reviews the relationship between original architecture and cosmological relevance for its inhabitants, either through sacred instructions [9] or ritual processes [10]. Mountains and water (seas, lakes) are used as sources of inspiration and value for pragmatic, spiritual and economic orientations. Domenig [11] emphasized the importance of mountains for Indonesian people as places where ancestors are buried. Mountains become more associative with higher spirituality. The conception of mountains and water (seas and lakes) as a symbolic orientation is often associated with cosmological conceptions spread in remote places in Indonesia [12], [13], [14], [15], [16].

Asnan [17] mentioned the importance of rivers for settlements, especially in Sumatra. Meanwhile, Utomo [18] also emphasized that rivers play an important role in the lives of people on river banks. As an archipelagic country, boats and ships are used to navigate inland areas and the open sea. The exchange network model in a river political system was demonstrated and applied to the maritime state of Sriwijaya in the 7th century [19]. Agriculture is an important element in the rise of human civilization, and it is characterized by the increasing network of villages and agricultural communities along rivers [20]. Rice cultivation gives importance to rice barns, which are physically realized in the design and are an integral part of settlements. Lumbung contains functional values and spiritual values.

In a global society that is always dynamic, it is often difficult to identify the principles underlying a particular spatial phenomenon, especially in the homes of ethnic communities. However, each ethnic community still maintains its culture and philosophy of the form of its residence. The Indigenous population, with the characteristics of coastal communities in West Lampung, is at a cultural crossroad, living side by side with culturally diverse groups as a result of the transmigration program. The diversity of these groups has resulted in mingling, starting from settlement levels and architectural forms. Each community group brings culture according to its land of origin, including its architectural culture. Cultural identity, especially customs related to housing, has influenced its residents' behaviour and spatial arrangements, such as kinship culture [21]. West Lampung traditional

houses represent part of traditional residential (*kampung*) architecture, are an important part of the historical structure of the West Lampung region, and have architectural and cultural value with their original characteristics. Most of these houses have cultural heritage characteristics that have tried to survive until now in the face of the onslaught of material technology and building construction. Therefore, the cultural and architectural characteristics of traditional houses in West Lampung are unique and different from other ethnic communities in Indonesia.

The influence of boats and boat building on homes is often seen in world maritime societies [22]. In its most direct and striking form, it produces unusual curves on the roofs of buildings. For a long time, the structure of house roofs in Indonesia, in particular, has challenged observers of traditional houses and given rise to a number of theories, the most popular of which is the explanation of the shape of the roof as a representation of a boat. Domenig [23] does not completely deny the theory that specific roof shapes are interpreted as boats, but he considers this interpretation secondary because it is ideological or symbolic. The symbolism of boats in architecture, especially houses, is understood as a form of expression of the symbolic relationship between sea and land, humans and communities, individuals and their ancestors, death and survival [24], [23], [25]. Other research also shows a descriptive relationship between architectural roof shapes and boats [26], [27], [28], [29], [30], [31], [32]. In a global context, all of these studies generally use the findings of Vroklage [33] as an essential reference that the influence of boats on traditional houses is associated with belief in the journey of ancestor spirits. Furthermore, coastal and inland buildings also show boat analogies and metaphors [34].

The people of West Lampung often connect traditional houses with boats through narratives using local terminology. Toponyms for boats such as *lamban*, *biduk*, *perahu terbalik*, *anjung*, *bubung perahu*, *bukhi*, *halunan*, *tebelayakh*, *lambung*, and *gagading lunas* are often related to the conception of belief, house shape, structure-construction system, spatial layout patterns, ornaments, orientation of traditional houses in West Lampung. The stage structure is separate from the body of the house, and the cantilevered floor depicts a boat anchored on a hillside. Apart from that, the shape of the house also looks like the boat hull with a spatial arrangement like a parachute compartment. The layered beam structure with a peg and tie construction system, the boat-like *paku sukha* ornament, and the strong orientation of the house towards the river are also essential features to show the connection between the house and the boat. Ship cloth with boat motifs and other very detailed motifs is typical of coastal Lampung cloth and is also seen as having a symbolic and sacred function and a symbol of a person's wealth and status. The *bilik kebik* room (main bedroom) is always present and is strictly regulated in the order of the house. This room is specifically intended for the oldest male child for generations (patrilineal). Previous research confirms that

patrilineal kinship culture influences the typology of traditional houses in West Lampung. The unique position and function of the *bilik kebik* room are closely related to the steering elements and functions of traditional boats in Indonesia. These findings will make an essential contribution to boat symbolism in traditional houses. Therefore, an analysis of the existence of boat symbolism in traditional West Lampung houses was chosen as the core subject of this research.

The symbolism of the boat being a philosophical and physical structure that controls the form and function of the West Lampung people's house is a unique characteristic that must be protected and passed on to the next generation. These findings can provide important insights into understanding the identity of contemporary Indonesian homes. Numerous research examine the correlation between architecture and watercraft, whether perceived as a representation or a symbolic function. Nevertheless, comprehensive and current research on the significance of boats in architecture need enhancement. This research seeks to examine and analyze the symbolism of boats represented in the architecture of Kenali traditional houses in West Lampung through case studies. As a basic stage in uncovering the symbolism of boats and living cultural identity in West Lampung traditional house architecture, this research investigates, identifies and analyzes important elements regarding the brief history of the morphology of the Kenali village, local terminology, general and specific architectural characteristics of traditional houses, as well as the social culture of the Kenali people in West Lampung. The results of this research will provide a better understanding of the cultural context of practice in the spatial content of traditional West Lampung houses. Apart from that, these findings can enrich the repertoire in the search for Indonesia's identity as a maritime country.

2. Materials and Methods

There are several reasons why Kenali village was chosen as the research locus. One of the main reasons is that the ancestors of the Lampung people came from West Lampung, which had been associated with the *Paksi Pak Sekala Bkhak* kingdom since the 15th century [35]. The indigenous population, which is scattered in several places, especially those characterized by coastal communities, basically comes from this area, including those in Lampung Cikoneng in Banten (Java) and the Kayu Agung and Komerang areas (South Sumatra). Traditional villages are located on ridges, arranged according to river routes, far from each other and quite isolated due to the position of the West Lampung area at the intersection of the geographical landscape structure of rivers, mountains and valleys. Apart from that, the characteristics of traditional houses on stilts are still often found in this area compared to others. Traditional houses that still survive today have unique characteristics in layout, shape, structure and construction,

ornamentation and orientation.

2.1. Argumentation and Research Method

This study focuses on the relationship between boat symbolism and traditional Kenali houses. The selection of this focus is based on three arguments: first, the results of a preliminary survey through open interviews that showed the significance of the term boat through the expressions *lamban, perahu terbalik, bubung perahu, bukhi, gagading lunas, biduk, tebelayakh, lambung, kain kapal* in traditional Kenali houses (Table 2). This view is supported by Purwanto [36], who states that local terminology is meaningful because it relates to the context of events experienced by the community. Second, we conducted direct observations of traditional houses according to the instructions of the initial survey. In our opinion, several unique characteristics of conventional houses seem to be related to boats, such as the typical roof shape of "serotong" or a *bubung perahu*, a hanging floor structure, the use of whole wood without joints and a layered beam structure (4 layers of beams), and the shape of the body/floor of the house like a boat hull, which is characterized by the spatial arrangement in the form of a boat compartment. Third, investigating research references to assess the urgency of the ontology of architectural science concerning boats and traditional buildings, as previously addressed in the background part. The preliminary survey was executed in the latter quarter of 2023. This study seeks to examine the meaning of boats within the traditional Kenali dwelling. This is predicated on the notion that human existence in space is invariably imbued with symbolic significance [37], [38], [39].

Two steps have been determined and implemented to achieve the objectives of this study. The first step is determining the research method. This study uses an interpretive naturalistic approach by studying natural conditions to understand and interpret a phenomenon through empirical collection and study [40], [41], [42]. Furthermore, this study also uses a qualitative method because it is a non-experimental study with data collection and analysis that focuses on understanding and emphasizing meaning or based on interpretations that emphasize how the phenomenon of concern is interpreted, understood, experienced, produced, or formed. Interpretive efforts acknowledge that humans are organisms that make meaning [43]. In addition, this method is quite flexible, trying to build a holistic description and is sensitive to social and cultural contexts [44], [45]. Research with cultural analysis does not seek a single law but rather emphasizes the process of searching for meaning [46]. The qualitative research category in this study is grounded theory research, which produces theories, concepts, or patterns based on empirical data or the complexity of phenomena in a particular context. Grounded theory is the simultaneous data collection and analysis through constant comparative analysis [47]. In the second stage, the author

selected five traditional Kenali houses using the purposive method [41] and analyzed them for this study (Table 1). The author achieved this through observation, taking notes and sketches, and analyzing them to obtain results. Furthermore, these subjective results were questioned through face-to-face interviews with knowledgeable people such as owners and traditional leaders (Figure 1).



Figure 1. Interview with key informants for data collection and confirmation






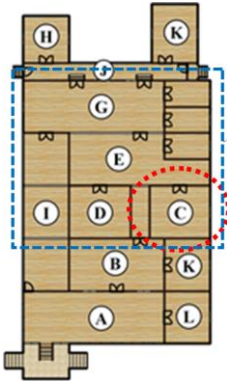
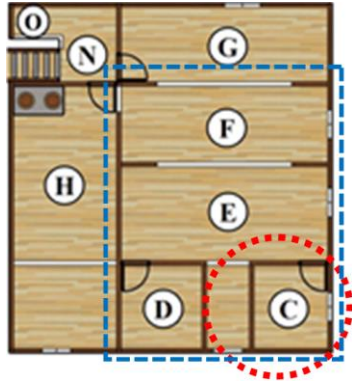
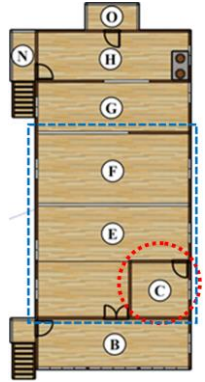
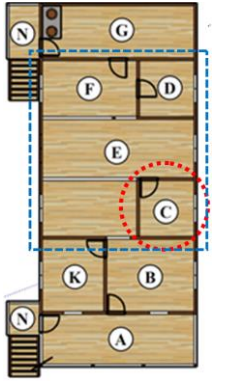
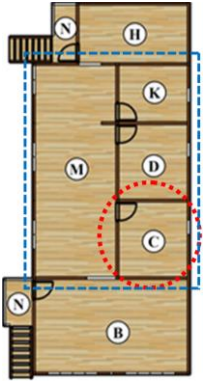
To evaluate the significance of the boat within the traditional Kenali house, the case study must focus on a residence that embodies distinctive, essential, and meaningful attributes related to the symbolic implications of the boat. Five traditional Kenali houses were designated as case studies to do this. Remarkably, these traditional houses include old houses that are over 50 years old and continue to be developed extraordinarily without leaving the essential pattern identity of a house. The tradition of inheriting the house to the eldest son or patrilineal has been going on for a long time and has become a character of the Kenali people's personality. This culture is characterized by a *bilik kebik* room (main bedroom) that is always there and strictly regulated in every house. At first glance, although the form and material are simple, when someone enters the house, the journey of space with a romantic treat in the nuances of the past, the experience of spatial movement

and the visualization of the tectonic effects of the house's wood imply life in the space of the boat's hull ready to sail.

2.2. Process

Ten different observation units focus on five cases of houses that are determined and appear to be related to boat culture in producing symbolic meaning. The elements in question are the shape of the roof, the hanging floor, the structure of the undercarriage that is separate from the floor/body of the house, the layout in the form of compartments, the position and function of the cubicle space, the layered beam structure, the construction of ties and pegs, ornaments, and the structure of the space-limiting beams, and the orientation of the house. After that, the existence of the symbolic meaning of the boat was investigated in each of the ten space units in two stages. The first stage was carried out through the author's in-depth observation of the elements of the space by conducting a coding process, followed by the researcher's interpretation according to the grounded theory method of Corbin and Strauss [47]. Likewise, data from interviews and documentation, such as ship cloth (traditional cloth), became integral to the researcher's interpretation process. In the results, several comments from the informants were quoted directly, if considered very illustrative, and their identities were anonymized. The second stage was carried out by confirming the credibility (validity) of the results of the researcher's interpretation through interviews with informed people. Face-to-face interviews with homeowners and traditional leaders were conducted in the first quarter of 2024 (Figure 1). Interpolation interpretations between phenomena were carried out at a higher level of abstraction of meaning and representing the core phenomenon. To maintain the level of consistency, reliability, and trustworthiness of the research results, repeated observations were carried out, triangulation processes, peer debriefing, conducting member checks, and finally, to ensure the truth of the research, an "audit trail" was carried out.

Table 1. Profile of selected houses in *Kampung Kenali*

	House A	House B	House C	House D	House E
Front picture of houses					
Floor plan (Not to scale)					
Houses status	Sultan's house	People's house	People's house	People's house	People's house
Houses Type	Sultan's house	<i>Dalom</i> type	<i>Lapang luakh</i> type	<i>Bekhanda</i> type	<i>Lamban gasukh</i>
Log post	Exist	Exist	Exist	Exist	Nothing
House archetype	Identified	Identified	Identified	Identified	Identified
<i>Bilik kebik</i> room	Exist	Exist	Exist	Exist	Exist
House inheritance	The eldest son	The eldest son	The eldest son	The eldest son	The eldest son



Description:  *Bilik kebik* room  House archetype
A: *Bekhanda* B: *Lapang Luakh* C: *Bilik Kebik* D: *Bilik Tebelayakh* E: *Pitak Unggak* F: *Pitak Tengah* G: *Sekhudu*
H: *Dapukh* I: *Bekhanda samping* J: *Bekhanda belakang* K: *Bedroom* L: *Ex Office* M: *Lapang Lom* N: *Lebuh* O: *Gakhang*

Table 2. Significance of boat in house elements in Kenali

No.	House Terms	Boat Terms
1.	<i>Lamban</i> House term for Kenali people.	“Lamban” is the term for the mast on a konting boat.
2.	<i>Perahu terbalik</i> Analogizing the shape of a house roof like an upside down boat.	There is a similarity in shape to the boat's hull.
3.	<i>Bubung perahu</i> Roof ridge of the house.	Boat keel The lowest structural element of a boat.
4.	<i>Bukhi</i> The term for the back of a house.	Boat stern Back of the boat.
5.	<i>Gagading lunas</i> Another term for a <i>bujukh</i> beam. The place where the bottom of the wall is attached.	The boat's frame structure is supported by tusks, which are essentially the ribs of the boat, providing the necessary shape and strength for the boat. The boat planks are then placed on these tusks. Meanwhile, the keel functions as the lowest structural element on the boat.
6.	<i>Atung</i> beam The 2nd layer of beam on the lower beam structure that has a round, octagonal, and rectangular cross-section. The body of the house can still stand firmly without the presence of a lower pillar only by relying on the <i>atung</i> beam.	The method of building, repairing, and lifting or lowering a boat into the water at a boatyard by placing the boat on a round or floating wooden structure that can be filled or emptied.
7.	<i>Biduk</i> A tool for harvesting rice in the form of a canoe.	There is a connection with boat.
8.	<i>Tebelayakh</i> The term second bedroom for the second son and so on is used in turns. Therefore, they are encouraged to form their family's economic independence without relying on their eldest brother.	The function of the <i>bilik tebelayakh</i> is equivalent to sailing or going on a journey.
9.	<i>Lambung</i> They point to the upper part with a higher position above something (object). <i>Lambung</i> refers to the body of the house (<i>tengah khesi</i>), which is where all family members are active. The spatial arrangement is divided into several compartments of space separated by <i>bujukh</i> beam (<i>gagading lunas</i>).	Boat hull The body of the boat that serves to provide buoyancy so that the boat does not sink. The hull of the boat consists of several compartments separated by tusk structures.
10.	<i>Kain kapal</i> Traditional cloth with a boat motif for the coastal <i>Saibatin</i> community, including the Kenali people.	There is a connection with boat.
11.	<i>Bilik kebik</i> room The main bedroom, a space of historical significance, is situated at the front and left of the house. This room has been traditionally reserved for the eldest son, a practice upheld from generation to generation.	The boat's side rudder is a wooden blade located at the stern and functions to control the direction of the boat's movement.

3. Results and Discussion

The *Paksi Pak Sekala Bkhak* Kingdom has inhabited West Lampung since the 15th century [35]. According to the historical understanding of *Kepaksian*, all of its founders came from Pagarruyung, West Sumatra, and came to *Sekala Bkhak* (West Lampung) to spread Islam and form a kingdom called *Paksi Pak Sekala Bkhak*. The kingdom consists of four *kepaksian*, namely the *Kepaksian Buay Belunguh* in Belalau District, *Buay Pernong* in Batu Brak District, *Buay Bejalan Di Way* in Batu Bkhak District, and *Kepaksian Buay Nyerupa* in Sukau District. The four regions form an axis towards Pesagi Mount, which is to the north. Apart from that, the villages in the territory of each *kepaksian* are also bound by a river stretching from the eastern and western upstream until it flows into Semangka Bay at the southern tip of Sumatra Island. Due to the distance between West Sumatra and West Lampung, the founder of *Kepaksian* can arrive by boat, sea, or river. In the history of the spread of Lampung people, rivers were used as a means of transportation. Geographically, West Lampung has many rivers (way). One of the largest and longest is Way Semangka (220 km), which originates from Pesagi Mount. This river divides the West Lampung region. All the tribes spread across Lampung, even the tribes in Muara Dua, Komerang, and Ranau in South Sumatra, come from the land of *Sekala Bkhak*. Lampung Cikoneng is in Banten, and his descendants come from West Lampung.

Indeed, in the downstream area approaching the river mouth, local residents can still see the use of boats. However, no boats are visible upstream in West Lampung on the river flow. The boat can be seen on Ranau Lake, on the border between the territory of the *Kepaksian Buay Nyerupa* and South OKU Regency. Rivers for the Lampung people are used to support domestication, such as bathing and washing. The villages (*kampung*) are arranged and oriented according to the river route and do not turn their backs on each other. Meanwhile, villages far from rivers support domestication by relying on nearby springs, as seen in Kenali village. Boats, also known as *biduk*, were once used by residents as agricultural tools, especially during the harvest season.

"In the past, it was taken from the stalk only, so in the middle because it was wide and the water was quite deep, there was a boat-like boat, well that was a place to put the rice so that it could reach the pemelang, so that it could be taken to the barn. Because on average the water here can reach this level, the mud is also deep." (Informant PH, 5 January 2024)

The natives of West Lampung call themselves coastal people. However, in practice, the native population has the main occupation as farmers. Before the Dutch came to power in West Lampung, the British first came to power in West Lampung. At that time, *Paksi Pak Sekala Bkhak's* territory was under the Bengkulu Residency, whose centre of power was in the Krui area, West Lampung.

3.1. House Roof Shape

Traditional houses in Kenali villages inhabited by coastal communities are shaped like stilts. For coastal communities, the term permanent home is called *lamban*. Meanwhile, a temporary house is called *sapu* while *walay* is the term for a rice barn. Therefore, both *lamban*, *sapu*, and *walay* are a unified architectural characteristic for coastal communities. These architectural features not only reflect the cultural identity of the coastal communities but also serve practical purposes, such as protection from floods and pests. The typology of house plans is divided into two shapes, namely square (*pesagi*) and rectangular (*mahanyuk'an*). A house with a square floor plan is a type of house that is classified as very old, such as *lamban pesagi*. The roof shape of a traditional house can be divided into two, namely a curved pyramid roof (*bubung kukus*) and a *serotong*-shaped roof or called a *bubung perahu* or inverted boat (Figure 2). The houses inhabited by West Lampung people to this day have basic patterns that are still maintained. Some physical traces of traditional houses that still remain today can still be recognized and identified. The physical traces in question are log posts, three compartments of space, the presence of *bilik kebik* (main bedroom) and *tebelayakh* (companion bedroom) rooms, *bujukh* beams, characteristic roof shape, layered beam structure, complete beams without joints, walls and floors made of *pelupuh* (bamboo), *sabuk* roof covering (fiber), and tie joints made of fiber and peg techniques. Apart from that, the patrilineal kinship culture of the eldest son's lineage is still adhered to today.

3.2. Local Terminology

The local terminology related to boats on a *lamban* (house) is *biduk*, *perahu terbalik*, *anjung*, *bubung perahu*, *bukhi*, *halunan*, *tebelayakh*, *lambung*, and *gagading lunas*. The term *lamban* itself is found in the element of a konting boat, which means sail mast. Almost all residents interviewed often described an upside-down boat of their houses.

"Indeed, the roof model of people's houses here is an upside down boat." (Informant PT, 6 January 2024)

This term is entirely unreasonable if we refer to the shape of the roof on *lamban pesagi*, a pyramid. However, the remaining *lamban tuha* (old houses) in the Kenali area have a different roof shape from the traditional *lamban pesagi*. Another type of roof shape has a ridge with curves on four sides. The upside-down boat in question is the shape of the sluggish roof, which, when turned upside down, has similarities to the boat hull. The temporary house of the Lampung people, called a *sapu* or *anjung*, has a roof ridge called a *bubung perahu*, in Lampung terms, which is called a *serotong*. Houses inhabited by Lampung people generally have roof shapes like that, including the old houses that remain in the Kenali area. Apart from that, the roof of a

traditional house is shaped like a curved pyramid as a symbol of the four positions. The *culu langi* ornament at the top of the roof symbolizes one belief that *Paksi Pak Sekala Bkhak* is bound by one belief, namely Islam (Figure 2).



Top Picture



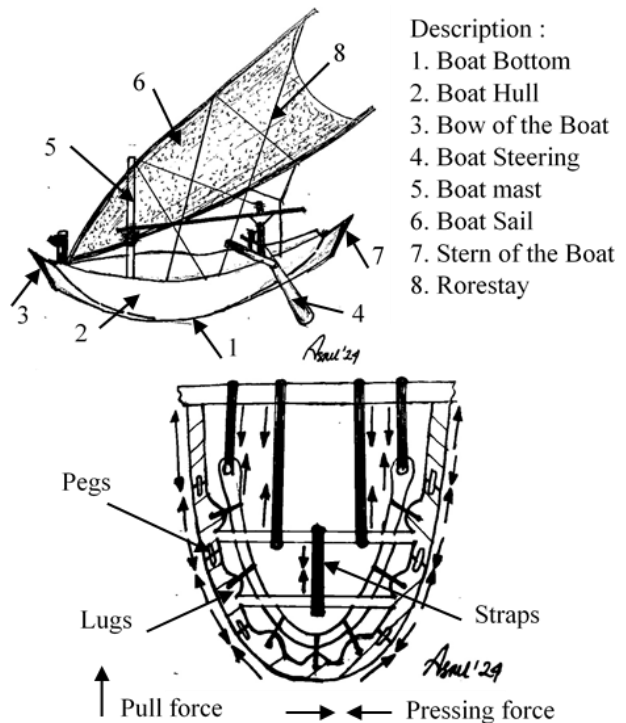
Bottom Picture

Figure 2. Various types of traditional house roofs in Kenali, West Lampung, Top Picture: *Serotong* type as simbolize boat ridge - *lamban gedung dalam* as sultan's house; Bottom Picture: *Bubung kukus* type - *lamban pesagi*

The term *bukhi* is similar to the term stern on a boat. Lampung people call *bukhi* (*huri*), which means the back of the *lamban* (Figure 5). This is similar to the term stern on a boat, which means the back of the boat. The term *halunan* in *lamban* means front. The toponym *halunan* is similar to the term bow on a boat which means the front of the boat. Meanwhile, the term *tebelayakh* in the name of the *tebelayakh* room means sailing, where the second son must try to be independent to make his own house. *Tebelayakh* room are only provided temporarily if the second son is still economically capable of building a house. The term *lambung* for Lampung people means the upper part. Meanwhile, the hull is a boat's main component, consisting of the keel, trusses, planks, rudder, bow and stern (Figure 3). This expression is made possible by the

house floor, which is supported by spindle poles that float, forming a kind of overhang on each side of the house. So, the structure of the lower pillar is disconnected only from the floor of the house, which is different from that found in traditional houses in Indonesia. By separating the structure under the house/*bah lamban* from the structure of the house/*khesi lamban*, the house's body can still stand without the pillars supporting it. Therefore, as a whole, the body of the house is an analogy of the boat hull (Figure 5); it is part of the house, which is the core space of life for the bath (nuclear) family. The round beams (*Atung* beams) that support the body of the house can represent rolling logs on a boat ready to sail.

"In Lampung terms, *atas* has two meanings, namely if the *atas* in question is above towards the center; it is called *unggak*. If the position is higher above something (an object) it is the *lambung*. As for the back of the house, it is called *bukhi*." (Informant GM, 11 February 2024)



Source: Adapted from (Horridge, 2015; Oktavia, 2009)

Figure 3. Parts of traditional boats in Indonesia (Top); Basic construction of the austronesian lashed-lug built-up outrigger canoe (Bottom)

3.3. Structure and Construction System

Besides local terminology, boats' influence can also be seen in traditional house structures and construction systems. One of the phenomena discovered during field observations was the existence of a layered beam system (Figure 4). In addition, the structural beams used in the lag are complete beams without joints that stretch from end to end of the wall support. In the *Lamban Gedung Dalam*

Kepaksian Belunguh, a complete 15-meter-long beam with an octagonal cross-section was found that stretched between the house's outer walls. Other old houses, such as *lamban pesagi*, also use intact beams even though they are only 9 meters high. In the system, the top beams are stacked crosswise using ties made of palm fibre. Meanwhile, lower beams do not use tie techniques but free pegs and supports. This kind of structural and construction system is also found in boats, as expressed by Asfarilla and Prihatmaji [30] and Wasilah et al. [29]. The term *gagading lunas* on *lamban* refers to the unity of the *tihang* (pole) with the *bujukh* beam which is the main structure of the body of the house (Figure 4). The toponym *gagading lunas* is closely related to the ivory and keel on boats. The tusks are a structural element supporting the boat hull where the planks are attached to the tusks. Meanwhile, the keel structure on a boat is the main structure that supports the structure above it using intact wooden beams according to the boat's length. In addition, the planks on the boat hull often avoid many joints to avoid leaks. Likewise, boat trusses generally use intact beams without joints; this is done considering durability aspects when facing waves in the open sea. The body structure of the house has the same system as the structure of the tusks on a boat. The unity between the *tihang* (pole) and the *bujukh* beam has the same structure as a traditional boat. In expression, *lamban* is like a boat anchored on a village ridge. The toponyms of boats in *lamban* have similarities with several terms for elements in traditional boats (Figure 3).

3.4. House Layout

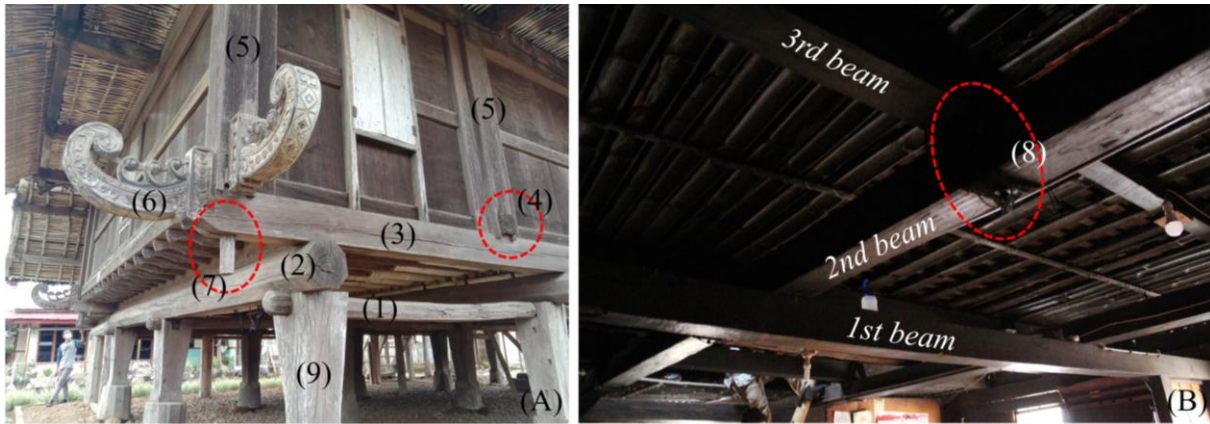
In a *lamban* spatial pattern, spaces are arranged without many partitions. The space division is placed in compartments (Table 1, Figure 5). Each space compartment is only separated by a beam that runs across the floor (Figure 5). To maintain the occupants' privacy, the partition is only visible in the *bilik kebik* room. The *lamban* spatial layout in the form of plots with specific functions is a characteristic of West Lampung people's homes. Apart from that, a bedroom called the *bilik kebik* which is on the left-front side, and the *ijan* (stairs) on the right-back side are the core elements that regulate the spatial layout of the *lamban* (Figure 5). The *bilik kebik* room is explicitly reserved for the oldest boys. In West Lampung, women traditionally live with their husbands,

known as *mentudau* marriages. Various boat toponyms are found in the architectural elements of houses, expressions of *lamban*, and structural and construction systems, and a *lamban* has a close connection with a boat. In this case, *lamban* is an analogy for the shape of a boat. Therefore, the *bilik kebik* room that is always present on the *lamban* also represents a boat rudder. Thus, the eldest son, who occupies the room of the *bilik kebik* can also be declared as a symbol of the boat's helmsperson.

The traditional houses scattered in Kenali villages are oriented to the river's position. There needs to be a more clear orientation in the cardinal directions. However, several traditional houses, classified as *lamban tuha* (old houses), including the *lamban pesagi*, and the *Lamban Gedung Dalom Kepaksian Buay Belunguh* in Kenali, have an imaginary orientation towards the north. *Lamban Gedung Dalom Kepaksian Belunguh*, the Sultan's house, occupies a position in the north. The houses that appeared later developed towards the south. Apart from that, the direction of space development is *lamban* with the addition of several space plots based on the front and back directions, and there is rarely additional space towards the sides. The sacred nature of the *bilik kebik* is shown by the sleeping position where the head is directed forward. The *bilik kebik* is in the north-front direction; with a sleeping position like this, a person's face faces the Kaaba (Figure 5).

“... *It is not permissible to step on or sit on the bujukh.*”
(PIS Informant, 11 February 2024)

The level of sacredness of a house is shown through myths, such as the appearance of boils when going against the direction of a sleeping position. Apart from that, a person cannot sit on a *bujukh* beam and extend his legs forward. This legendary narrative is one method for preserving positive ideals so that they are not lost between generations. The *bilik kebik* chamber, which has been occupied by the eldest son for generations, represents a person's obedient relationship with his ancestor. All moral lessons received from ancestors are interpreted as beneficial ideals that their descendants must uphold, such as avoiding mixing with men and women. Therefore, the form of obedience to the ancestor is shown by a principle called *pi'il pesenggiri*, which means being ashamed of committing disgraceful actions. This principle is applied in the form of spatial layout patterns in a house, one of which is the existence of a *bilik kebik*.



Description: (1) 1st beam; (2) 2nd beam (*Atung*); (3) 3rd beam; (4) 4th beam (*bujukh*); (5) Tihang (post); (6) *Paku sukha* ornament; (7) Pegs; (8) Palm fiber ties; (9) Wooden logs post

Figure 4. Tectonics of a traditional house as a representation of a boat: (A) Layered beam on the bottom structure; (B) Layered beam on top beam structure

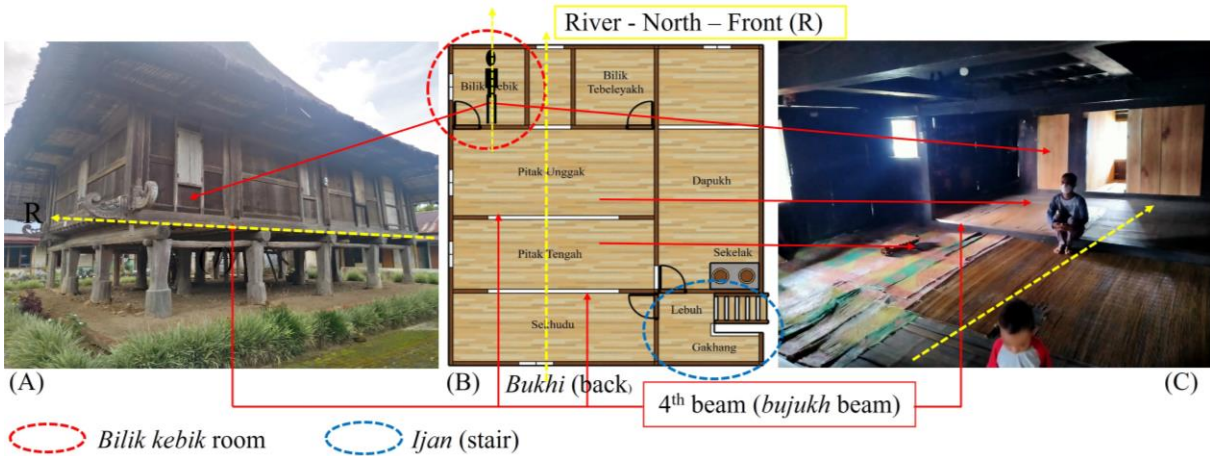


Figure 5. Exterior (A), floor plan (B) and interior (C) views of the house body (*Khesi*) as an expression of the boat hull



Source: Private Documentation from Lampung Museum (2023)

Figure 6. West Lampung ship cloth

3.5. Ship Cloth

West Lampung, which has a *saibatin* tradition, has a traditional cloth called the *tapis* ship cloth because its main motif is a ship (Figure 6). Ship cloth is used in various traditional events but not used as clothing. There are several images of people and elephants standing on a ship. The ship cloth of both the *palepai* and *tampun* types depicts a ceremonial ship for ritual scenes such as traditional Lampung weddings. Two venerable men rode on elephants facing each other in the middle of the ship. The entire scene is set in red, yellow and black. The tree-like motifs on both sides of the ship represent the ceremonial poles (*kayu ara*) erected for traditional Lampung weddings. The people standing under the tree were holding spears and umbrellas. The ships are lined with small human shapes that appear on each level. The curved motif on both sides of the ship is similar to the *paku sukha* ornament on both sides of the front of a traditional West Lampung house (Figure 4). Forms like this are almost found at every corner of gates and government buildings.

"Tapis, that's the picture of a ship, now even though there's a picture of an elephant there, there's a picture like this (pointing to the curved shape), that paku! Picture that paku! Well here, the kebuayan is here, the paku sukha. Well, the paku sukha symbolizes a fertile area, it has many roots, it spreads everywhere, it is a symbol of the buay belunguh, the paku sukha." (Informant PH, 7 January 2024)

The red colour on the ship's cloth symbolizes the sacred realm, while the blue colour represents the natural world [48]. Apart from that, some objects depicted on ship cloth may have come from trade objects from mainland Asia, indicating that the Lampung settlements were part of the Srivijaya maritime empire. The images are deeply embedded in ship fabric motifs as a series of ancient traditions from Asian civilizations rich in cosmological celebrations and based on revered ancestors [49]. Gittinger (1990) proposed that the ship motif that appears on most Lampung textiles symbolizes the transition of the life cycle and does not refer specifically to the death ship that carries the soul to the afterlife. The *palepai* type of ship cloth owned by the Lampung nobility was specifically intended for the oldest men who were descendants of the community's founders in the male line. This view aligns with the patrilineal kinship culture, which is still firmly held by the people of West Lampung and is related to the architectural order. The small human shapes on each ship layer represent family generations or social ranks [50].

The shape of the roof of a traditional West Lampung house represents the shape of an upside-down boat in line with the theory that has been developing as seen in the shape of the roof of the house in the Viking fort, Fyrkat [30], a house in Manggarai, western Flores [33]. Furthermore, the house is like a boat moored in the middle of the village, as seen in Toraja houses [25]. Likewise, the shape of the body of the house resembles the boat hull, as

depicted in the shape of the houses of the Batak and Pasemah people in Sumatra [33]. However, the shape of buildings with roofs that curve upwards in extreme ways, as seen in Toraja, Mamasa, Tanimbar, Batak and Pasemah houses, differs from the shape of the roofs on traditional houses in West Lampung. The division of space at the back and front of a traditional West Lampung house is related to the placement of the stern and bow sides of the boat.

This division has similarities with houses in Ambon and Maluku Islands [24]. The *paku sukha* ornament resembles the prow of a boat, which is placed on the front of a traditional West Lampung house as a symbol of fertility. Meanwhile, the boat-shaped ornament on the roof of the Nage tribe's house in Flores [33] symbolises protecting babies from evil spirits. The symbol of a boat as a fortress of protection can also be seen on the roof ornaments of houses in Tanimbar [33]. Meanwhile, the roof ornaments of traditional West Halmahera Jailolo houses [31] resemble boats because they are related to the belief in the origin of ancestors who used boats. Likewise, traditional Nias houses are claimed to be shaped like boats because they are related to the community's activities as fishermen [27]. The boat-shaped roof, called a gable roof, is a sufficient indicator to show that the quality of life must be contextual, considering the population's customs and culture [28].

The term boat, structural technology and construction techniques, shape and layout of Kenali traditional houses have similar characteristics from archaeological discoveries that show maritime technology or boat making in ancient times until now. The basis of all Austronesian boats is the basic construction of an outrigger canoe with a rope (Figure 3). In addition, pegs and tusks tied with coconut fibre rope and lashed lugs were used to unite the boat's body boards. The primary material is wood, a hollow hull base, twoside rudders placed on the left and right sides of the stern of the ship, and compartment division with boat tusk separators [51], [52], [53], [54]. This finding is an early and important clue in viewing the architecture of the Kenali traditional house as part of the Austronesian cultural constellation, as stated by Bellwood et al. [55]. The glory of civilization and the unique cultural life of the archipelago in the archipelago was triggered by the migration of Austronesian speakers from Formosa (Taiwan) since around 4,000 BC. This is supported by the findings of metal technology goods, pottery, jewellery made from shells, and agarwood, which are strongly suspected to be traces of the migration of Austronesian speakers who exchanged across long distances [56].

Apart from explaining the forms of traditional houses as representations of boats and structural logic, ideological or symbolic aspects are also seen in traditional West Lampung houses. Domenig [23] does not deny the theory that interprets certain roof shapes as boats, but he considers this interpretation secondary or symbolic. So far, a theory has developed that the shape of the roof is an image of a boat because it is related to the medium of ancestor travel or spirit boats [57], [22], [24]. Meanwhile, according to

Vroklage [33], people create houses with boat roofs related to beliefs about life after death. The people's view is that their ancestors sailed the seas by boat. The ancestor spirits returned to their native land, travelling across the sea in spirit boats. Another manifestation of the symbolic role of boats in Oseberg, Norway, is boat burials [26], [58]. Burial using a boat is believed to be useful in the journey to the afterlife. A contrasting view from Domenig [11] is that the shape of the coffin usually has a cover and some roof, sometimes imitating the typical roof of a house in general. Meanwhile, traditional houses in West Lampung are oriented towards the river. Besides its domestication function, rivers are understood as symbols of ancestor journeys. The toponym of rivers about beliefs in architecture is rarely expressed. In fact, rivers are bridges between coastal and inland areas. Rivers are proven important for the people of the archipelago, as described by Asnan [17] and Utomo [18]. Likewise, Marsden [59] has stated the role of boats as a means of transportation by local kingdoms in Sumatra against the Portuguese.

The orientation of a *lamban* towards the river and the north is closely related to the beliefs of the Lampung people. The river is a symbolic element of the journey of the Lampung ancestor, both regarding the origin and the process of returning to the ancestor's lap or the land of origin. At the same time, the orientation to the north shows the ancestor origin of the Lampung people. The founders of *Paksi Pak Sekala Bekhak*, who came from Pagarruyung in West Sumatra, went to the land of Sekala Bekhak, Belalau area in West Lampung and occupied the slopes of Pesagi Mount, which is called *Barnasi* (Figure 7). The slopes of Pesagi Mount are a memory of the emergence of a new belief, Islam, where previously local people adhered to Hinduism. Therefore, mountains are a symbol of ancestor memories; the north is a symbol of ancestors originating from the north, namely Pagarruyung in West Sumatra, and rivers are a symbol for ancestor journeys related to the beginning and end of the ancestor's life

journey. The existence of a *bilik kebik* room in the order of a *lamban* is a form of recognition or respect for the magnitude of responsibility that a man carries in social and domestic lives. Every *kebuayaan* group (a lineage of blood from the male line) must have an original house called *lamban tuha*. Furthermore, in a larger kinship group, namely, a combination of *kebuayaan*, the home of origin is the house of the sultan, the highest leader of the *kepaksian* who has authority over customary land. Therefore, a *lamban* (house) with titles indicates its status as the house of origin (*lamban tuha*), apart from the titles attached to men. *Lamban tuha* is a representation of the ancestor house.

The patrilineal kinship system adopted by the native population is shown by the closeness of the marriage *lamban* to men. The responsibility carried out by men in a family is to be the head of the household. Men have the vital task of providing for, protecting, being a protector and setting an example for their wives and children. The role of decision-makers lies with men, but women are still involved through deliberation in decision-making. The *bilik kebik* room is a symbol of men, which means that the continuity of harmonious family life is judged by a man's ability to control all problems that arise in the family. This man's role is the same as that of a helmsman in controlling a rudder. The success of a boat in arriving at its destination depends greatly on the stability of the boat in facing obstacles in the open sea, including control of the boat's steering by a helmsman. So, the house is a symbol of the boat. Likewise, men represent the ancestor as a symbol of a boat's rudder. Patrilineal kinship culture, which contains good values and is based on the *pi'il pesenggiri* principle of life, is the core of ancestral teachings. This study effectively elucidated the cultural significance of the boat symbolism inherent in traditional West Lampung residences. This corresponds with Rapoport [60], which asserts that it is crucial to define culture operationally and accurately to understand its relationship with the built environment.

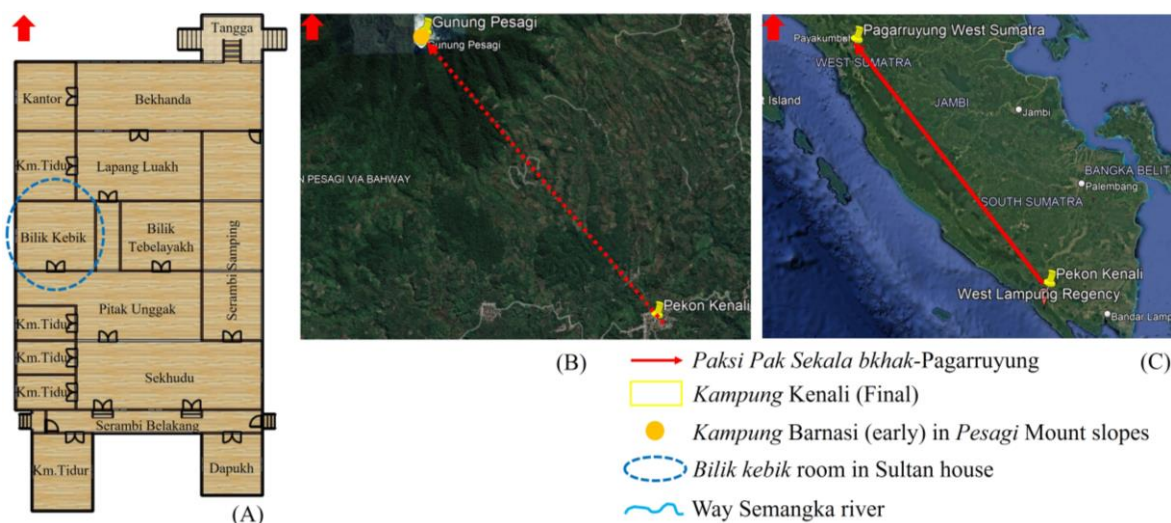


Figure 7. Origin of the arrival of *Paksi Pak Sekala Bkhak* founder: (A) *Lamban gedung dalam* (sultan's house); (B) The position of the sultan's house towards the river and *Barnasi* village; (C) Position of the Pagarruyung with the *Paksi Pak Sekala Bkhak* kingdom

4. Conclusions

The importance of boats is notably evident in the traditional houses of West Lampung, especially in Kenali village. The boat's symbolism originates from the toponym of the residence, the shipcloth, the building's morphology, its structure and construction, spatial arrangement, ornamentation, and orientation towards the river. Even though the physical transformation of the house is still ongoing, the architectural identity needs to be eliminated through the form of symbolic space and patrilineal culture for the Lampung people. The symbolic meaning of the boat can be expressed as follows.

The house shape of coastal people in Kenali is an analogy to the shape of a boat. Houses are like boats moored to the village ridge. The shape of the roof represents an upside-down boat. The body of the house is like a boat hull. The compartment layout of the house is like the arrangement of spaces on the boat hull. The layered beam structure and use of whole wood without many joints, ties, and peg construction are similar to boats' structure and construction. The main bedroom, which is always present in every house, represents the steering wheel of a boat. This room is the main bedroom, intended for the eldest male child through a hereditary or patrilineal system. It symbolises steering the boat, the eldest son is a symbol of the boat's helmsman, and the son represents the ancestor. So, the house symbolises the boat where the man is the

helmsman to reach the "home of origin," namely the ancestor. The boat that successfully reaches its destination dock ultimately depends on its helmsman to control the challenges of the waves in the open sea. Likewise, men are the controllers in domestic life to achieve their household goals. Therefore, the ability to control various good and bad human characteristics is the key to achieving stability in domestic life. As representatives of ancestors whose good values have been instilled, men can be a source of example for all their descendants, as the central provision in undergoing life cycle transitions from birth to death (Figure 8). The patrilineal kinship culture still firmly held by the Kenali people is a cultural heritage with good values. *Pi'il pesengiri* is the philosophy of life of the Kenali people in West Lampung, which is the embryo and accumulation of good values.

Because only a few traditional houses located in Kenali village were studied here, the results of this research cannot be generalized. However, this provides a starting point for further discussion regarding the influence of boat symbolism on architecture, mainly residential homes. Research on traditional houses in Indonesia has so far only focused on land; very rarely does research involve water elements (rivers, seas, lakes) as an integral part of the Indonesian archipelago. Rivers and boats are considered necessary in the historical development of locality-based architecture and have become an enrichment in seizing national identity, Indonesia as a maritime nation.

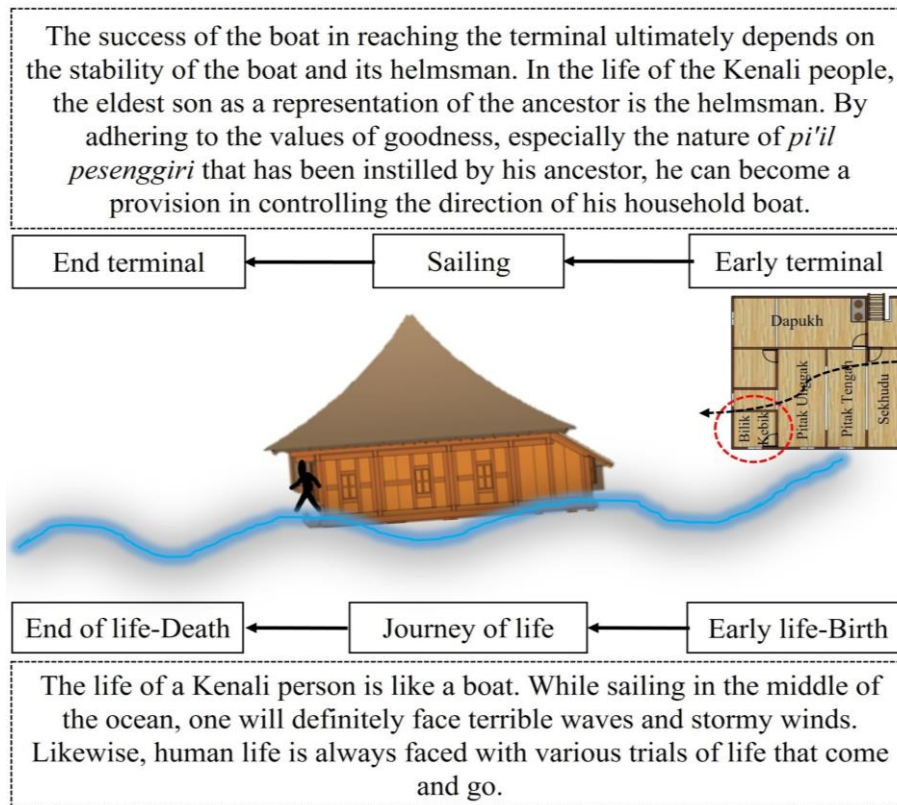


Figure 8. Visualization of the boat as a symbol of the Kenali people's life journey

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