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Manifesting Locality and Identity in Traditional Houses in Response to Environmental Change

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ABSTRACT
Houses manifest particular spatial identities that reflect the character of their owners and/or occupants. Thus, they offer a medium for exploring diverse values, technologies, forms, and ornaments, which are located within the framework of traditional systems that are perceived as a perfect for ensuring occupants' survival and for environmental sustainability. Among the Tana Toa of Kajang District, Bulukumba Regency, such locality is manifested in the *Pasang ri Kajang* philosophy that guides the local people in their individuality and social lives. This uniformity has created a new locality, a collective identity with unique characteristics that distinguish the settlement from others. This locality is a manifestation of residents' physical adaptation to their surroundings, including their ability to prepare for the worst-case scenario, thus offering a means of cultivating knowledge of sustainable development. As such, this study seeks to understand the manifestation of locality and identity in Tana Toa Village, Kajang District, which is known for its curved piles, and in Toa Bitombang Village, Selayar Islands Regency, which is known for its tall piles. Applying a case study approach, this article qualitatively explored the history, geographic conditions, customary laws, and architectural components of the houses in these settlements. It shows that the horizontal and vertical planning of houses in Tana Toa and Toa is influenced strongly by customary values that embody traditional philosophies. Meanwhile, their architectural forms have been achieved through trial and error to maximize comfort, safety, ease-of-construction, and social cohesion. These villages' localities are manifested in their materials, construction systems, and layouts, which have—through synchronicity and harmony—created specific forms that have been through environmental change for centuries.
Keywords: *Identity, Locality, Settlement, Bent Pole House, High Pole House, Environmental Responses, Tana Toa Kajang, Bitombang*

1. INTRODUCTION

Although locality is not a 'new' movement in architecture, it has gained renewed vigor in the modern world. It has been perceived as the best weapon for curbing the incursion of capitalist spaces into human life. Alexanander Tzonis writes that locality is best understood not as a movement, but as a conceptual device used for analysis and synthesis. It helps us prioritize local identities over international interventions and universal dogmas.

In this paper, it is beneficial to borrow from Vitruvius, who writes that architecture is created through the union of nature and human rationality. Vitruvius argues that the differences between architectural forms stem from humans' diverse discourses with their environments. He writes, for instance, "*There is an in-between 'temperate' kind of environment that creates temperate architecture and temperate people*." Building on this argument, locality may be understood as involving spatial differences that emerge from local particularities. Localities differ one from another. Is locality, then, the mere manifestation of identity? Or is locality nothing more than opposition to globalism?

Referring to Lewis Mumford, five points may be used to understand locality and local values, among others:

1. Locality is not rooted solely in historical grandiosity, i.e. works in the 'vernacular brick tradition'. Rather, locality is manifested in all coherent forms used by human beings to ensure their survival. It would be a mistake to simply transplant historical tradition into empty spaces that lack the human dimension.
   Mumford thus argues that we must not merely imitate the past, but to understand it, to comprehend it, and even to creatively adapt it. We must not simply borrow traditional materials or copy forms from centuries past, but use our understandings of ourselves and our environments to create architectural works steeped in local tradition.

2. Locality holds that it is necessary to recognize architectural works as having a personal touch, an unexpected beauty. Ensuring that human beings feel at home in their environments is of paramount importance. As such, locality is necessary as a means of meeting humans' needs, be they social, economic, political, or even environmental.
3. In developing and applying locality, sustainable technologies and principles must be adopted and then incorporated into new traditions.
   In this increasingly complicated world, tradition must be positioned within a global context. Where a tradition proves incapable of negotiating with technology and its seductions, it will be abandoned. An enduring locality, thus, is one that sustainably and correctly employs new technologies.
4. Locality must benefit its users, and as such any modifications must do more than simply meet their needs. Locality can be explored not only in terms of its order, cooperation, power, and sensitivity, but also in terms of specific characteristics of its community.
5. The global and local are not inherently opposed; they may be mutually complementary. Mumford emphasizes the need to strike a balance between the global (which produces capitalist machines) and the local (which produces communities).

Identity, meanwhile, refers to the unique and essential elements that distinguish beings from each other. These characteristics reflect beings' particular developments and experiences. By extension, it may be understood that houses have distinctive identities that distinguish them from houses in other communities, with these identities being shaped over generations by the social and environmental factors within communities.

This discussion has highlighted the importance of understanding locality, even within the framework of universal values. Understanding specific localities means learning about particular histories, construction methods, materials, social contexts, and conservation issues. This knowledge can then be used to explain how specific materials, technologies, and social formations are translated into architectural forms.

Several previous studies have found that the indigenous architectures of the Indonesian Archipelago incorporate design and construction techniques that enable them to adapt to environmental change. Such findings have motivated the current study, which seeks to identify the elements of locality that have enabled traditional houses to endure for centuries.

2. METHOD

This study is a qualitative one, which descriptively applies a case study approach. It seeks not only to explain its research objects, but also to explore the existence and development of said objects within the contexts of locality and identity. As its cases, it takes the traditional houses of Tana Toa Village, Kajang District, and Bitombang Village, Selayar Islands Regency. The former was chosen for its unique structure, which employs curved piles that stand strong for generations, while the latter was chosen for its tall piles that endure for centuries. Data for this article encompasses information on the history, material, social context, and construction of these houses. After being collected, data was analyzed descriptively to identify the elements that constitute these houses' locality and architectural identity.

3. RESULTS AND DISCUSSION

3.1. Locality of Traditional Houses in Tana Toa and Toa Bitombang

The traditional houses of Kajang, also known as the Ammatoans, are shared by several communities in South Sulawesi that are known collectively as the Kajang people. These communities have a lengthy history, reaching back more than five centuries, and thus have deeply entrenched historical values.

As with most other traditional homes in South Sulawesi, Ammatoan houses employ a stilt design. It is distinguished primarily by the homogeneity of their designs (including lack of ornamentation and relatively small size), construction, spatial order, and materials; because of this homogeneity, these houses offer no evidence of social stratification.

Ammatoan houses are divided vertically into three levels (Figure 1). The top level, known as the *para* (3), is considered sacred and is often used to store foodstuffs and family heirlooms. The middle level, known as the *kale balla* (2), is used by the occupants as living space. The bottom layer, known as *siring* (1), is used for weaving the traditional black sarongs (*topeh le'leng*) worn by the Kajang people. This design not only reflects the cosmology of the Kajang people, but also analogizes the human form: the head, the torso, and the legs.

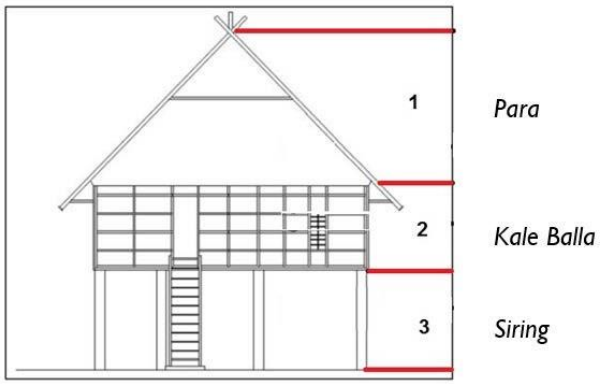

Figure 1 Vertical Layout of the house

Continuing this analogy, the "torso" (*kale balla*) contains elements akin to the human shoulders: a series of racks

(*para-para*) ± 60 cm wide, which run along the walls and jut outwards. These racks are located approximately at the same level as the occupants' ears/eyes, to ensure that the occupants and hear/see any ill tidings or intents. This *para-para* is used to store kitchen utensils.

The above-mentioned *para* is covered by a roof (*ata'*). At the front and rear of this roof is a triangular panel that serves to cover the *para* and protect the foodstuffs/heirlooms stored within. This panel also contains small holes to facilitate air circulation (Figure 2). Another important architectural component is the central pile (*pocci balla*), which is analogous to the umbilical cord through which human embryos receive nutrition and protective antibodies. The *pocci balla* is understood not only as necessary for creating balance, but also as having a mystical or religious value. As such, particular attention is given to this pile, which is constructed with special materials and processes. This pile is embedded deeply into the ground, and its height is determined by the activities conducted within the house. Stairs and entrances are located at the front of the house, on the left or right side. Construction is completed using simple peg-and-binding system. Likewise, the doors and windows are constructed using simple sliding system.

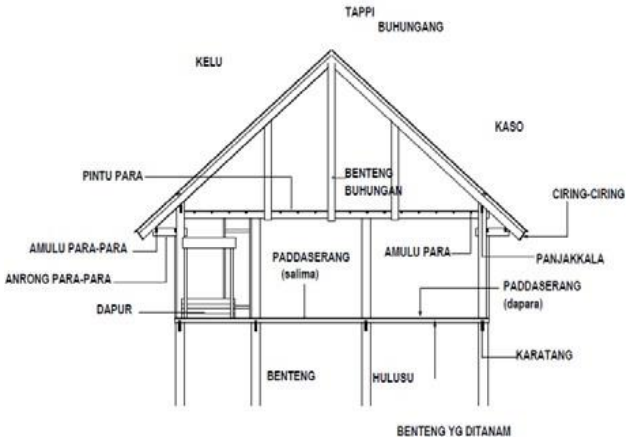

Figure 2 Components of traditional Ammatoan houses

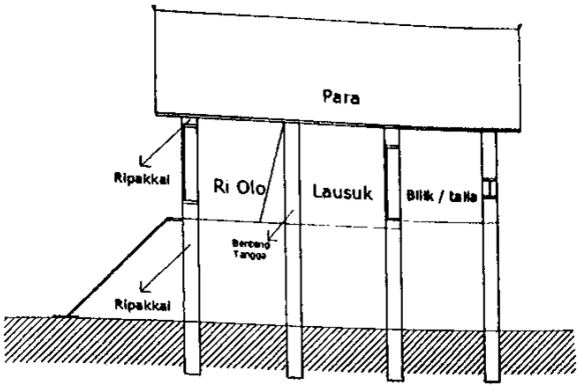

Figure 3 Building elements of traditional Ammatoan houses

These traditional houses are rectangular in design. Their sixteen piles are arranged in a 4 x 4 pattern, with 1 to 2 meters between each pile. As such, the average Ammatoan house has an area of ±54 m^2. Traditional Ammatoan houses are divided horizontally into three spaces, which may be of different sizes. The front space, known as the *rio olo*, contains the kitchen and the guest room. The center part of the house, or *lausuk*, is used both as a family room and as a sleeping space for the male members of the household; it is separated from the front space by only two pillars. At the very rear of the house is the *ri boko*, which consists of three rooms divided by board or bamboo walls. These rooms are:

a. *Tangngai*, the sleeping space for parents.
b. *Simpang*, the sleeping space for unmarried daughters
c. *Makabiring*, a space for storing heirlooms.

The different elements of the spatial order reflect particular values and philosophies. The positioning of the kitchen in the front space reflects the Kajang emphasis on openness and honesty, which reflects residents' religious values, attitudes, and behaviors. The Kajang believe that the kitchen provides a space in which goodness can be found, and therefore offers a means of achieving eternal happiness.

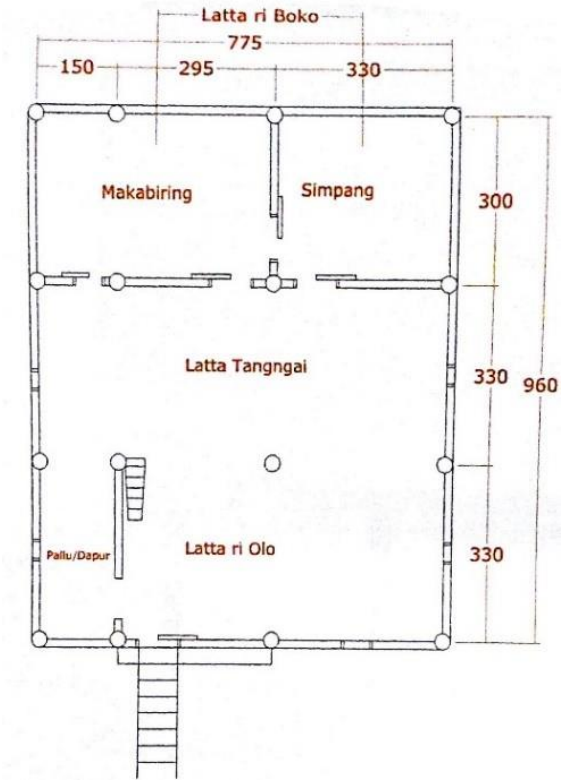

Figure 4 Horizontal layout of an Ammatoan house

The middle space (the *lausuk/latta tangngai*), meanwhile, is used for dining, family gatherings, and as a sleeping space for unmarried male children. Finally, the rear space—the *latta ri boko*—consists of a room for

unmarried female children and parents. This space is not only separated from the other spaces by a wall (*panampa'*), but also by its elevation; the floor in this space is some 25–30 cm higher than in other spaces. This division is rooted in the belief that this space is more important than the spaces in which everyday activities are held. This importance is also manifested in the space's use by women, protected and respected in Kajang society out of concern for their *siri'* (self-worth) and for family honor. Traditional Ammatoan houses have relatively small windows, averaging 50 x 30 cm. Each window has a wooden trellis, installed vertically (one) or horizontally (three or five). In Kajang society, odd numbers are perceived as indicating imperfection or incompletion, while even numbers are understood as signifying completed activities; in the Kajang cosmology, completion is solely the realm of the dead, and ill-suited to the living. Meanwhile, the traditional houses of Toa Bitombang Village, Selayar Islands Regency, are characterized by their tall piles (reaching heights of 20 meters or more). These houses are ornamented with piles, pillars, and columns made of white bitti wood (known locally as Holasa'). These houses, some of which were built almost 400 years ago, still stand strong. Some, however, have been renovated by the local government as a means of preserving this cultural heritage.

Figure 5 Traditional houses in Bitombang

Bitombang Village is constructed on mountainous terrain, and as such traditional houses require wooden supports to ensure they remain straight. For further support, piles are often buttressed by stones. Houses are built high, at heights of 20 m or more, to ensure that the foodstuffs contained therein are not stolen during times of conflict. At the same time, the height of the piles is understood as reflecting the age of the occupants. Height is likewise believed to signify the strength and firmness of the building.

Key to the strength of traditional Bitombang houses is the wood; local residents rely solely on wood of proven strength, which is often capable of standing for hundreds of years. These buildings are covered with bamboo roofs, while their walls are made of panel. This architecture has changed little over time, as the same buildings are passed from generation to generation.

3.2. Identity in the Traditional Houses of Kajang and Bitombang

Central to the identities of the traditional houses of Kajang and Bitombang are their piles. Ammatoan houses are known for their curved piles, while Bitombang houses are famed for the height of their piles.

According to interviews with local residents, the strength of traditional Ammatoan houses comes from their use of paired piles. Before a house is built, residents choose an even number of wooden piles; owing to their curve, these piles would lack strength in odd numbers and be unable to support the load of the house. Figure 6 shows examples of these curved piles in use.

Figure 6 Curved Piles on Traditional Ammatoan Houses

Not all piles have the same curve, as their curvature is informed by the wood available. The researchers observed that some piles could curve up to 45 degrees. Nonetheless, owing to their pairing, which facilitates the even distribution of the load, these piles can endure for more than a century. The use of curved piles may be attributed to the limited availability of technology and equipment, with which they could not readily change the natural shape of the wood. As such, this unique characteristic of traditional Ammatoan houses is not rooted in tradition, but rather pragmatic considerations.

On the other hand, the traditional houses of Bitombang have piles 10–20 meters high in the rear and 2–3 meters high in the front. This important element, which has become characteristic of traditional Bitombang architecture, can be attributed to environmental considerations. Residents have been forced to adapt to their terrain.

Figure 7 Tall Piles in a Traditional Bitombang House

Amongst both peoples, architectural identity is marked by unique and distinguishing characteristics, recognition of which allows immediate identification. These buildings are thus important for creating identity, as it offers a traditional assertation of these communities' senses of being and self.

3.4. Traditional Ammatoan and Bitombang Houses: Facing Environmental Change

Although they are both constructed in highlands, traditional Ammatoan and Bitombang houses have significant differences in their forms. Over generations of trial and error, these houses have achieved an optimal form for enduring in their specific environment. These forms have enabled occupants to endure animal attacks, extreme weather, and even rapid technological advances. Traditional Ammatoan and Bitombang houses are both sustainable technologies and structures, which are suited to specific geographic, climatic, topographic, and environmental conditions. Such locality has enabled these traditional houses to endure, and may even be consulted as an example of sustainable development.

4. CONCLUSION

Traditional Ammatoan and Bitombang houses show extensive homogeneity, which consistently reflects the traditions and values of these peoples. Such homogeneity is evident in these houses' spatial orientations, forms, and structures, including their piles and their distribution of weight. To understand locality, we must know how to learn their history, social contexts, and construction. It is to understand how local technologies, materials, and social formations are translated into architecture.

Locality provides an architectural identity, an example of how development and settlement can be undertaken sustainably. Such traditional houses can adapt to diverse conditions and situations, thereby guaranteeing the security and comfort of their occupants and their living environment.

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