

Tambale as a Determinant of Residential Spatial Planning in The Kaili Ledo Community, Central Sulawesi, Indonesia

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Abstract

Tambale is a common element of houses in the Kaili Ledo community, which is used as the terrace, front porch, courtyard, and living room. *Tambale* comes from the native language of the Kaili Ledo tribe, who inhabit the Palu Valley and the original Kaili Ledo Raranggonau settlement in the East Mountains of Central Sulawesi, Indonesia. *Tambale* is unique because it is the determinant of space in the residential spatial process when building a house, adding new rooms, and arranging a space. It is the first determiner made, added, and set. As a vernacular product of the society, it is also a communal space used by the nuclear family and the community because the Kaili people like spiritual, cultural, and social gatherings and celebrations carried out together.

This study explores *Tambale* as a determinant of residential spatial processes. It uses grounded theory as a research method, which will construct meaning and symbols from the nature of the space.

It concludes that *Tambale*, as a vernacular product of the Kaili Ledo community, differs from other residential spatial processes anywhere in the world. Indeed, it is a dominant determinant of space in the dwellings of *Sou*, *Palava*, and *Banua*.

Keywords: *Tambale*, Residential layout, the Kaili Ledo community, Raranggonau Settlement.

Introduction

Tambale is an element of houses in the Kaili Ledo community. This is defined as the terrace, front porch, courtyard, and living room; it is ordinary everywhere. Various terms refer to the terraces, such as in the case of *Balé-balé*, a vernacular product in the traditional *Bali Aga* dwelling. It is the most fundamental building component because all the domestic activities are carried out on the *Balé-balé*. Ritual preparation activities, preparing dishes, storing household and work equipment, sleeping, working, and sitting with family and guests occur on the *Balé-Balé*. (Hanan, 2017). The terrace as a space in the landscape responds to the values practiced in the residential communities, as people do in terraces in big cities (Said, 2001). This terrace is multi-purpose because of its flexible layout and provides comfortable conditions for various activities. (Sawasdee & Phiboon, 2022). It is also a space that anyone in a nuclear family can use. It is easily accessible and flexible. The area is elevated and related to the surroundings.

Certain factors determine the terrace space, such as privacy, appearance, scale, and function (Gupta, 2019). *Tambale* comes from the Kaili Ledo community, in the language of the Kaili Ledo tribe. This tribe inhabits the Palu Valley and the Raranggonau settlement of Kaili Ledo, which originates in the East Mountains of Central Sulawesi, Indonesia (Sairin, 2020). For them, *Tambale*, as a terrace, as well as the living room of *Tambale Ronjou*, located in the front, inside, beside, or behind, is a unique space. *Tambale* determines the residential spatial process when building a house, adding a new area, and setting the room. The qualifier is always first created, added, and set.

The process of arranging a residential space independently is carried out by the Kaili Ledo community, who needed to learn precisely how the identity or the meaning of a space become a crisis of cultural identity living in the Kaili Ledo community-dwelling. They build dwellings and know the complex meanings of the space. For example, the *Tambale* room, which turns out to have many functions, not only the terrace, but other functions, has deep symbols, such as a connection with *Tomanuru*, or ancestors, and *Sampesuvuroa*, or brotherhood.

Raranggonau settlement is of tribal origin from the hinterland of the Kaili Ledo people who live in the eastern mountains of Palu City and Sigi-Biomaru District. Later, they moved to the Palu Valley. There are similar residential spaces of different materials and spaces in *Banua*, *Palava*, and *Sou* too. Although their function is the same, they are all residential spaces.

This research is carried out at the Raranggonau settlement, consisting of mountains and hills with an area of 7,958 hectares, 950 meters above the sea level, Palu Bay (BRWA, 2022). This can be seen in the Fig. 1.

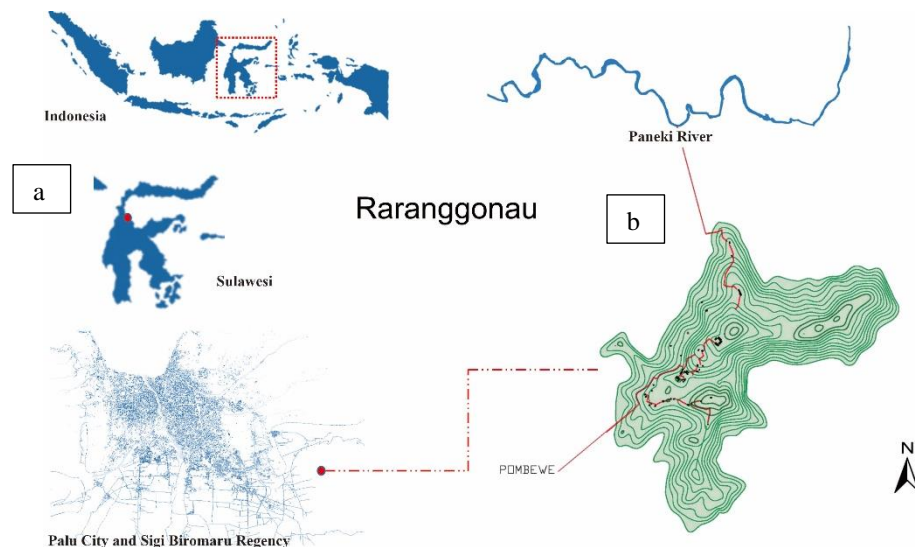


Fig 1: (a) Geographical layout of the Study Site, Indonesia, Palu City, Central Sulawesi.
(b) Raranggonau settlement map

Source: Author, 2023

This study aims to explore the space of *Tambale* as a determinant of residential spatial processes. Its objectives are:

- (1) To find out the behavior of space and time activities in the houses of the Kaili Ledo community.
- (2) To find out the dominant spatial setting in the Kaili Ledo community in the Raranggonau settlement.
- (3) To determine the values in residential settlements, especially the *Tambale* room.

Literature Review

This research examines the residential space of the Kaili Ledo community with the help of literature on behavior in activities that produce spatial settings, and values, to obtain spatial

determinants. For this purpose, it employs the behavior setting theory, initially formulated by Barker and Lewin and explored by researchers as a variable in generating categories. Lewin (1951) is the most prominent pioneer of behavioral regulation theory.

Proposing the field theory, he says that human behavior can be explained by analyzing their environment. Lewin argued that the 'flow of activity' or human behavior is due to the continuous interaction between personal and external factors originating from the environment (Lewin, 1951). The theory presents the concept of behavior as an outcome of the interactions between a person and the environment. This is expressed in the basic formula "B = f(P.E)," where behavior (B) is a function (f) of the interaction between a person and other individual factors (P) as well as the perceived environment (E) as stated by Ittelson (1974), a "living space" is thus defined as a behavior setting.

According to Barker (1963), the theory of behavior setting in behavioral patterns of a given space is determined by the mutual relationship between an environment and a person. Barker (1963) revealed several behavioral regulation variables as follows.

- (1) Patterns of repetitive activities in the form of behavior.
- (2) Certain characteristics of an environment or environmental setting.
- (3) synopsis or relationship pattern of activities with the environment, and
- (4) Period of occurrence.

According to Rapoport (1978), there are four aspects of the activity in setting behavior: They are the most apparent instrumental aspect, how the activity is carried out, how they are linked into a system, meaning the most latent aspect.

Analyzing behavioral regulation, several key questions related to the relationship between the environment and activity patterns has been raised by Rapoport (1977): Who does what, where, when, including or excluding who (and why)? Rapoport then suggests four aspects of regulatory systems. They are organization of space, time, meaning, and communication, control system, cultural landscape, and combination of fixed, semi-fixed, and non-fixed elements.

Barker (1963) also mentions additional aspects in setting behavior apart from the three main elements. The complete settings are Temporal locus, Geographical locus, Social events, Duration, Population, Residence time, Functional position of population, Pattern of Action, Behaviour, Mechanism, Pressure, Autonomy, and Welfare, in addition to the aspects mentioned above by Barker. Lang (2016) states that the built environment consists of two types of behavioral arrangements: Where the pattern of behavior occurs, links, and the relationship of movement that draws them towards the system for a set of goals.

Meanwhile, according to Kent (1990), the setting system may include the nature of the arrangements, some of which can be counter-intuitive, how and by whom the arrangement is used, depending on the exact meaning, which is included or excluded, penetration gradient, applicable rules, ongoing user behavior, and activities. The signal is given by arrangement, boundary properties, reasons for a particular order, or the breadth of the system which, in terms of home range, is known, as the area used or avoided, linkages and separations between arrangements, and the nature of the relationship between the obstacles.

In the discussion above, it shows that there is a gap in the theory of regulation of behavior as Barker said, regarding the regulation of behavior. Human behavior has a reciprocal relationship with the environment; a more profound explanation is needed regarding the dependent and independent variables. Rapoport adds a cultural aspect to home because the space in which people live always has specific patterns and structures unique to every culture, time, and place. The relationship between people, Nature, and God is one of the determining factors for spatial design and structure (Rapoport, 1977). The cosmological aspect as part of culture is a pattern-forming factor, and spatial structure occurs based on the cosmological influence of the dominant group. The society is relatively homogeneous in terms of ethnicity and culture in general. According to Altman (1980), the home environment is part of a more extensive and culturally varied system of settings (residential and housing systems).

As a result of regulating behavior, a value is obtained, formulated into words and spaces that have meaning, as value has been a central concept in the social sciences since its inception (Davidov, 2015). Values are essential for explaining social and personal organization and

change. Values have played an important role in sociology, psychology, and anthropology. They are used to characterize cultural groups and people, track changes over time, and explain the motivational basis of attitudes and behavior (Schwartz, 2012).

Research Methodology

This study uses a constructivist paradigm approach to understand the behavior and mindset of the Kaili Ledo indigenous people in the scope of social and cultural meaning. Adom et al. (2016) describes the philosophical paradigm of constructivism as an approach that builds understanding and knowledge of world things and reflects on that experience. This research uses the grounded theory method, which constructs symbolic meanings and philosophical values of local culture, which are inherently integrated with the spaces of the building (Subroto, 2019). It is a form of exploratory research in field research where researchers are directly involved with the local community. According to Umanilo (2018), the Grounded Theory method will produce a theory that is inductively drawn based on empirical data from field observations.

Interview guidelines, sketches, and recordings were presented to informants of village officials, traditional leaders, traditional descendants, hamlet heads, heads of households, and the present and past residents of Kaili Ledo in Raranggonau. The informants were classified according to house, age, gender, and social strata, and the interviews were focused on their direct experience using questions formulated based on the selected theory—the data collected concerning the setting system and activity system.

This research was carried out with a focus on finding activity and space data; the analysis was carried out repeatedly in the data dialogue. Repeated analyses were performed on the data to obtain the codes. The data analysis process was carried out through the environment; there is an activity system and a setting system. The data collection results are dialogued—following the research stages.

- (1) The initial stage is through with the environment from the territory. In the environment, there is an activity system, an activity system, and a setting system, such as spaces in the Raranggonau settlement, including Social Space; *Tana lapa* (Field), *Doyata* (Yard), *Sikola* (School), *Talua* (Field and Garden), *Kalampa* (Public Kitchen). Cultural Space; *Banua*, *Sou*, *Rovu*, *Palava*, *Buvu* (Well), *Dayo* (Tomb), *Binangga* (River), *Bonde*, *Oma*, (Former paddy fields), *Pangale* (Forest) *Vana* (Deep Forest). House of worship; *Gareja* (Church). At this stage, research questions are also formed, formulated from theory to be used in the field; one example is about system settings: What is the nature of space (3) *Tambale* (4)? Who did it, and where did it (2)? What is the mechanism? (1) (1. Variables. 2. Question indicators. 3. Parameters 4. Variable indicators). For activity questions, for example, what is the Latent meaning in *Tambale*? Why is it done? What is the nature and method of conducting these activities? What activities are carried out in *Tambale*, and how are they linked into a system?

The data collection method was selected through purposive sampling related to phenomena, which included variant cases in area RT1 (Bukit Sindura and Posanggara), area RT2 (Sindura, Limpo, Tana Ombo and Tondo), area RT3 (Rano Mpasuli, Tamangawa, Dayo Mpagurru and Pantono Ibo), and residents who once lived in Raranggonau.

- (2) This stage continues the initial stage, the back-and-forth relationship from non-physical aspects such as activity systems, which can understand related physical themes in the previous stage. The activities of the Raranggonau settlement community are analyzed by categories, such as how to carry out activities, side activities, and the meaning of an activity. Activities are arranged based on the categories of aspects that influence them to get spiritual, cultural, social, and economic aspects. The results are based on the actors; the categories of individual activities, collective activities, spiritual activities, daily activities, and periodic activities are obtained.

- (3) At this stage, selective coding, called theoretical coding by Charmaz (2006) was carried out. According to him it involves “the process of integrating and refining categories”. This is where things come together for researchers to form theories. For example, cultural evolution seems to cover most topics, but it does not fully explain environmental degradation or how relationships and communities degrade. Evolution does not imply anything negative; when it does, it exhibits positive characteristics for the better; however, more and more people are discussing disintegration and collapse. In “writing the storyline” (Corbin & Strauss, 2008), the theory becomes clearer and validated through the application of data and by returning to several informants for their responses.
- (4) This stage is also a stage that runs parallel to the previous step. As for the activity system associated with space, the results are analysed using space flexibility expressed by Pena & Parshall (2012) regarding expansibility, convertibility, and versatility. Expansibility is the ability to expand space. Convertibility means that a space or building can allow changes to its configuration. Versatility implies that a room or building can be multi-functional. Thus, it can be understood with the keywords: addition, setting, and multi-function. Besides that, there is a use of Domestic space, According to Zubrow et al. (2010), on the identification of domestic space by analyzing how activities and their different settings are combined in the room and delimit concentric areas: the inner domestic space of the environment and the activities around it, the outer domestic space where activities and settings requiring more space are located, with the outer space non-domestic.
- (5) Finally, it produced focused coding which aims to find specific themes related to the Raranggonau settlement space. At this stage, it processes the analysis to enrich the findings. Enrichment is carried out to accommodate existing theoretical buildings and serve as a basis for building substantive theories in architectural science.
- (6) Categories, coding notes, memos, networks, and diagrams were then developed to define the main phenomena by summarising the directives and diagrammatic representations. The main phenomena are described as core categories and are present in formulating the research question. The results are the formulation of themes and words, empirically, that the word "*Tambale*" is one of the main subjects in the Kaili Ledo Community, in home life (*Katuvu ri Sou*) other than family in Kaili Ledo language (*Sampesuvuroa*), as well as ancestors (*Tomanuru*).

Findings and the Discussion

The Kaili Ledo community calls a settlement “*Boya*” in the language of the Kali Ledo tribe. The territory spreads out from several families having kinship relations establishing dwellings near each other. Inside *Boya* are residential spaces, *Banua*, *Palava*, and *Sou*, as seen in Fig. 3, which are constructed with materials sourced from the natural surroundings. *Sou* dwellings, built in places that served as rest areas for traveling between villages, usually resembled huts and were very simple (Kaudern, 1925). *Sou* is the initial house before having *Banua*. *Palava* is a dwelling like *Banua* but uses wood materials, while *Banua* is a stone dwelling combined with wood. Some people have both, namely *Sou* and *Banua*, where when the community already has *Banua*, *Sou* functions as a kitchen (*Avu*) and storage room (*Pomboli*).

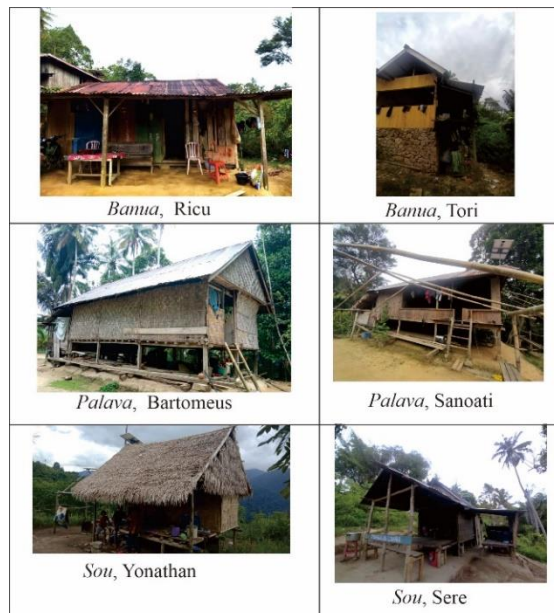


Fig 2: Types of Houses in Raranggongau Settlement
Source: Author, 2023

Based on the observations of the residential spaces in the Kaili Ledo community, it was found that the *Sou* residential space has three rooms, a terrace (*Tambale*), a room (*Tombi*), and a kitchen (*Avu*), *Palava* has five rooms which include a terrace (*Tambale*), a room (*Tombi*), a room that has a cupboard (*Kamara*), a kitchen (*Avu*) and a food storage room (*Pomboli*). In contrast, *Banua* has six or more, including a terrace (*Tambale*), living room or inner terrace (*Tambale Ronjou*), rooms (*Tombi*), a room that has a cupboard (*Kamara*), a kitchen (*Avu*), and a food storage room (*Pomboli*), and (*Lundue*), a storage area for agricultural produce. Suppose seen in the existing plan Fig. 4, verified against the theory disclosed by Rapoport (2000), by the values in the spatial attributes indicated by the final means-end chain theory. In this case, Rapoport in Dwelling features as an attribute in a choice of five spaces because, in the Kaili Ledo community in *Sou* and *Palava* dwellings, only three and four rooms are required for details. In residential areas in the Raranggongau settlement, except for *Banua*, which has been modified with stone and wood materials.

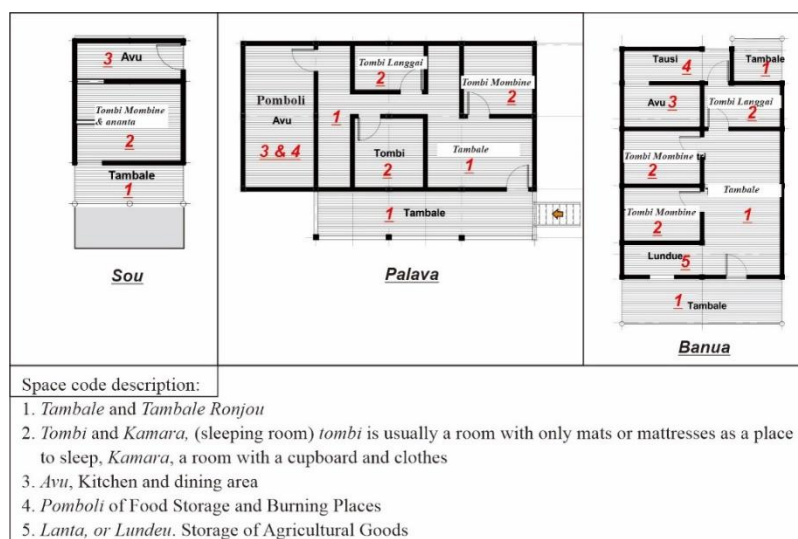


Fig 3: Existing floor plan of residential examples: *Sou*, *Palava*, and *Banua*
Source: Author, 2023

Based on empirical data and data analysis, through exploration, it was found that, *Tambale*'s findings as a determinant of space, including, *Tambale* has the meaning of *Sampesuvuroa*, *Tambale* as a 'place of respect for the ancestors', Entry access to *Tambale* has female domination, in Residential Spatial Planning.

Tambale* has the meaning of *Sampesuvuroa

Tambale, as a symbol of "family" in the presence of brothers, cousins, and relatives, is interpreted in the Kaili Ledo language as "*Sampesuvuroa*." This is because *Tambale* can be enjoyed and used by everyone, even newcomers, as shown in the Fig 5.

For example, in Raranggonau, several families have built houses close to each other between the child (*Ananta*) and the father (*Tuama*). The distribution of living areas is based on family. Indeed, the Kaili Ledo community is very familiar with the diction "*Nosampesuvu*," meaning the activities of brothers or *Sampesuvuroa*. It implies that "we are all brothers and kin" and can be seen by the kinship in all the regions in Raranggonau. Marriage within the immediate family circle is common in Raranggonau. Some families are in marriage relationships involving first cousins.



Fig. 4: (a) *Tambale* Outside the residential space, (b), *Tambale* in the residential Space
Source: Author, 2023

For the people of Raranggonau, individual and group spiritual activities are usually carried out in *Tambale* in the morning or the Kaili Ledo language (*Dopa Mebonda Eyo*). The Kaili Ledo people meet in *Tambale* in social activities such as informal and formal conversations. Formal talks are held when receiving new guests, and cultural activities are held when discussing traditional activities involving relatives, cousins, and relatives. (*Sampesuvuroa*)

***Tambale* as a Space of Respect for the Ancestors**

Tambale is a sacred space beside the *Bantaya* room for residents to gather to negotiate a joint agreement. *Bantaya* is used for traditional activities such as traditional ceremonies, traditional parties, weddings, village peace, and harvest rituals, and can also be used as a place to store sacred objects, a place for village/village peace, a place for a large number of village/village guests to spend the night, a place to carry out traditional parties and so on. This can be seen in the Fig 7.



Fig. 5: *Bantaya* in Raranggonau Settlements
Source: Author, 2023

Tambale is an alternative to *Bantaya*, to hold traditional meetings, such as sacred activities in sacred rituals in adat; one of the customs is the *Pinikaso* ritual which is a tradition before marriage at every marriage between *Sampesuvuroa*, friends, cousins, and relatives. This activity is one of the activities in respecting the ancestors because, for them, the ancestors brought a set of traditions to the world. This activity begins with preparations, plates, and machetes in the *Tambale* room to determine the exact wedding day and use of offerings, *Sambulugana*. In the offerings, there are Adat 9, symbols of ancestors, and Adat 7, human symbols, as shown in Fig. 7. These numbers refer to the number of offerings prepared, even more, but they are still said to be Adat 7, and Adat 9.

In the Kaili Ledo tradition, the *Guma* symbol is a machete, which denotes a man, and *Pinikaso*, a plate, represents a woman. Adat 9 means the beginning of the earth; according to the seven layers of the planet, seven layers of soil, seven colors of the rainbow, plus two characteristics, it becomes 9. The number 9 shows *Tomanuru* as the incarnation of a god from heaven, his ancestor for the population, as a mother figure who previously lived on earth from the sky, bringing a set of customs and rules. At the same time, men are more concerned with livelihoods, springs, and being a leader (*Madika*). Adat 7 is a human custom that signifies seven human points or human spiritual organs. Adat 9 and Adat 7 have the same position, but everything is equal, but Adat seven is overseen by Adat 9. Until now, this has been used in adat processes in ritual activities in the process of slaughtering animals and livestock for men, cooking activities for women, and relatives and cousins, as well as relatives are invited to give rice, sugar, and salt to the hosts who are holding traditional party activities.



Fig. 6 : (a) *Pinikaso* and *Guma*, (b) Ritual Preparation of *Pinikaso* in *Tambale*
Source: Author, 2023

Entry Access to *Tambale*: Female Domination

Kaili Ledo community lives as extended families. They live together in a large house and have a large *Tambale*. The extent of *Tambale* indicates the presence of the ancestors who have attended traditional events or activities, such as *Pinikaso*. In this *Tambale* space, there are distinct gender roles, as presented in Fig. 8. As a place for the ancestors, there is a women's room (*Tombi Mombine*) in *Banua* and *Palava*, which is always placed in the front, close to the *Tambale* room, while the men's room is at the back. At *Sou*'s residence, there is only one room (*Tombi*). The men sleep outside or in the *Tambale* because only mothers and children are inside *Sou*. If the dwelling is formed in *Banua*, the men's room (*Tombi Langgai*) is close to the kitchen because it is meant for security. Men usually pass behind it. However, if they know the house, they will go through the kitchen (*Avu*). If you want to enter the dwelling, men always say, "We will just go through the kitchen." In the language of Kaili Ledo, "*Langgari Ribenggona Ria Avu*" is in the kitchen. That means there is no front because parents (*Tutua*) used to say it is fine if you go through the show. Only *Tomanuru*, or maternal ancestors, are in the front. The vestibule in question is *Tambale*, close to *Tombi Mombine*.

The existence of *Tomanuru* in the Kaili Ledo community as an ancestor is well known as the Woman who descended from heaven. According to the folklore and myths, *Tomalanggai*, on one of his travels, met a beautiful woman incarnated by a god who came out of a yellow bamboo or (*ne bete ribolo vatu mbulava*), which is abundant in Rarangonau. The Kaili people

call it *Tomanuru* (a person who descends from heaven) (Evans, 2003). Along with the belief in natural rulers controlling human life in the form of gods and spirits, the presence of *Tomanuru* was also associated with the ideas that developed at that time. *Tomanuru* further strengthens the people's belief that change will occur because it is believed to be the incarnation of a god who comes out of the golden yellow bamboo or (*bolo vatu mbulava*), who is also destined to become the wife of *Tomalanggai*.

The occurrence of the marriage of *Tomalanggai* and *Tomanuru* has influenced changes in the behavior or attitude of *Tomalanggai*, who was originally a dictator and turned wise because he was influenced by the divine qualities of his wife (*Tomanuru*). In addition, the role of women is also the heirs to the house and its devices. They are said to be "*Bulonggo*" who has the task of storing and guarding the inheritance from their parents. Becoming a *Bulonggo* in the family is related to the beliefs of the Kaili Ledo people, who believe in the nobility of daughters, which is implemented from the nature of *Tomanuru*.

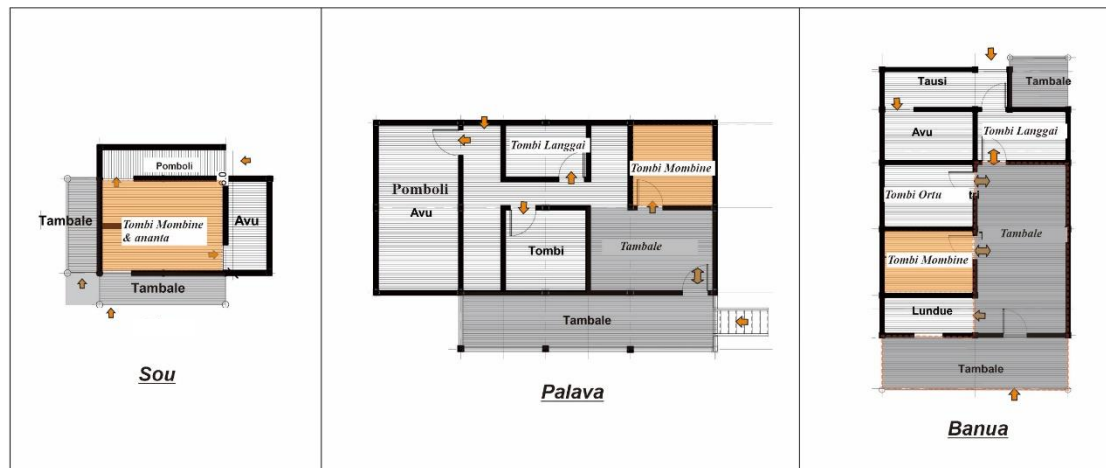


Fig 7: *Tambale* and *Tombi Mombine*, in different houses in the Raranggonau settlement.

Source: Author, 2023

***Tambale* in Residential Spatial Planning**

Tambale is the determinant of the first space created in a building. Afterward, other spaces are added and arranged; *Tambale*, as a vernacular product of society, is also a communal space used by the nuclear family and the community because the Kaili people like gathering activities and carrying out celebrations together in spiritual, cultural, and social activities.

A theme makes *Tambale* a space determinant, as found in the following observations.

- (1) *Tambale* has the meaning of *Sampesuvuroa*,
- (2) *Tambale* is a place of respect for the Ancestors,
- (3) Entrance access to *Tambale* is more for the Female Gender.
- (4) *Tambale* as Multi connectivity between indoor space and other spaces, including outdoor space
- (5) *Tambale* as Room additions and new room functions



Fig. 8: Addition of *Tambale* to *Sou*
Source: Author, 2023

In Fig 9. On *Sou* construction, the first room to be made was *Tambale*, then *Tombi Mombine* and *Ananta*, or the mother and child's room; the material was made of wooden planks, and *Tambale* was lower. The roof above the courtyard (terrace) is sometimes an extension of the house's roof, but there is also a separate roof with its pillars.

The spaces in the settlement of Raranggonau include living quarters and fields, courtyards or streets; in each case for *Banua* and *Palava*, there is a *Tambale* space to *Tambale Ronjou* because *Tambale* is outside, there is also an inside residential space, which is connected to *Avu* and *Pomboli*, as some cases of Fig. 10.

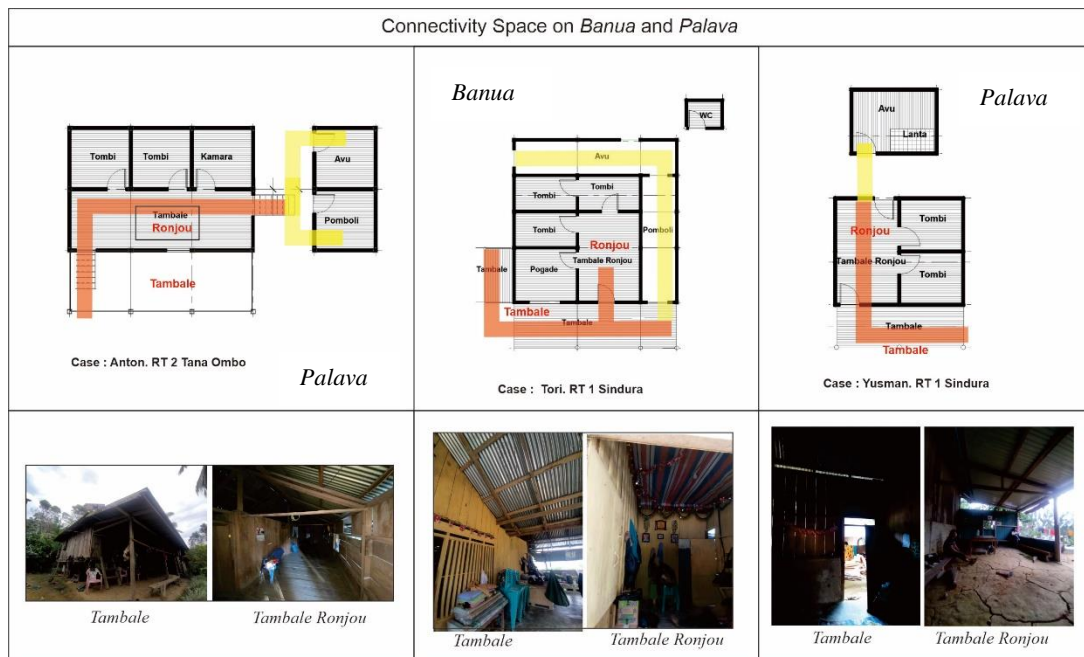


Fig. 9: Connectivity Room from *Tambale* and Other Spaces in *Banua* Residence and *Palava* Residence. Source: Author, 2023

In the case of *Sou*'s residence, there is a difference in connectivity between rooms; in *Sou*, there is a *Tambale* room which is also *Tambale Ronjou*, *Tambale* in *Sou* is outside and partly inside the dwelling, which is connected to *Tombi* or room and *Avu*, in *Sou* the mention

of food storage space namely *Pomboli*, and storage of agricultural goods *Lanta/Lundue*. The connectivity of this space, is always found in all *Sou* cases, some examples of topics are as shown in Fig. 11.

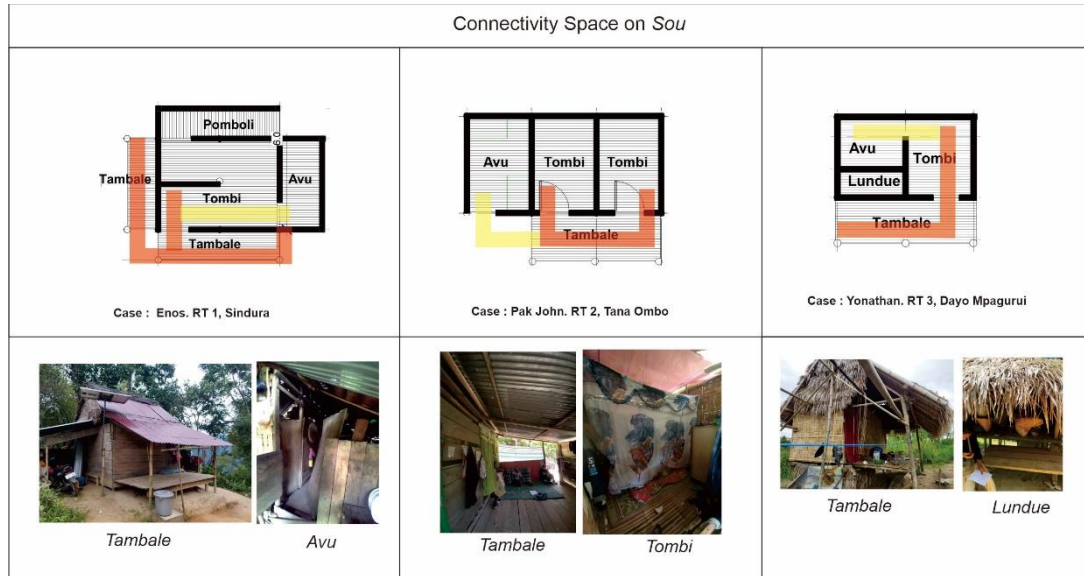


Fig. 10: *Tambale* Connectivity Room and Other Rooms in *Sou* Residence
Source: Author, (2023)

The dominant space in the residence is the *Tambale* Room, as a multiconnection space. There was new building connectivity before (*Banua*), which was initially (*Sou*) because some residents experienced an increase in economic factors in the future, residents made *Banua*. In several cases, the old building, namely *Sou*, was not torn down but instead used to become *Avu* and *Pomboli* to connect the old building to the new building, where there are always spaces for connectivity.

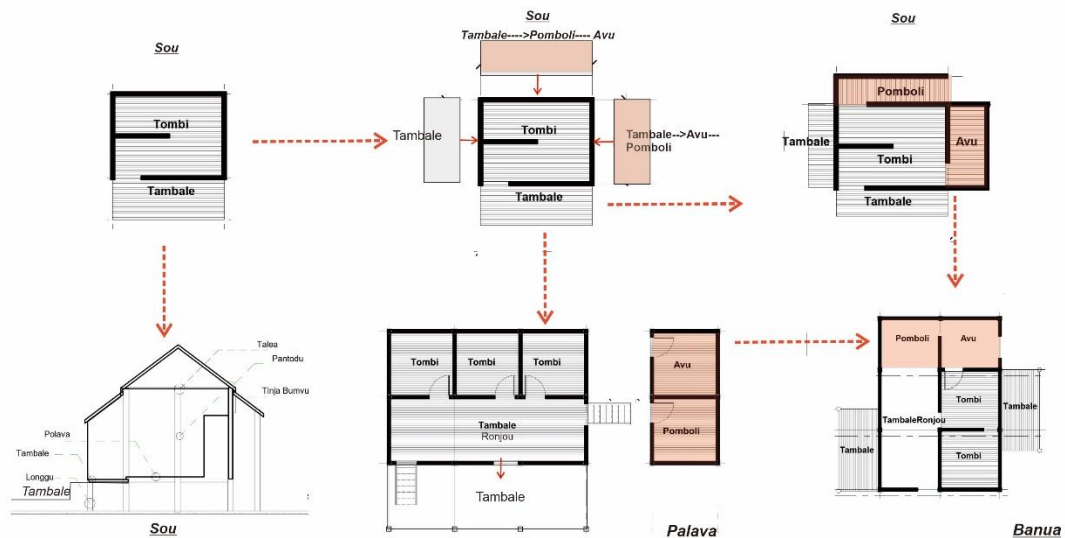


Fig. 11: The *Tambale* Additional Room at the *Sou* residence became the *Palava* residence until the *Banua* residence was formed
Source: Author, 2023

In the Raranggonau settlement, there is an addition of space in *Sou* and *Banua* in the domestic room, often found in several cases. *Sou* is often found in the *Tambale* function in Fig. 12; activities in *Tambale* are gathering, resting, and sacred and profane activities. According to

residents of Raranggonau, *Tambale* or courtyard is the core of adding space that can consistently and flexibly change the function of other rooms if it was initially *Tambale*.

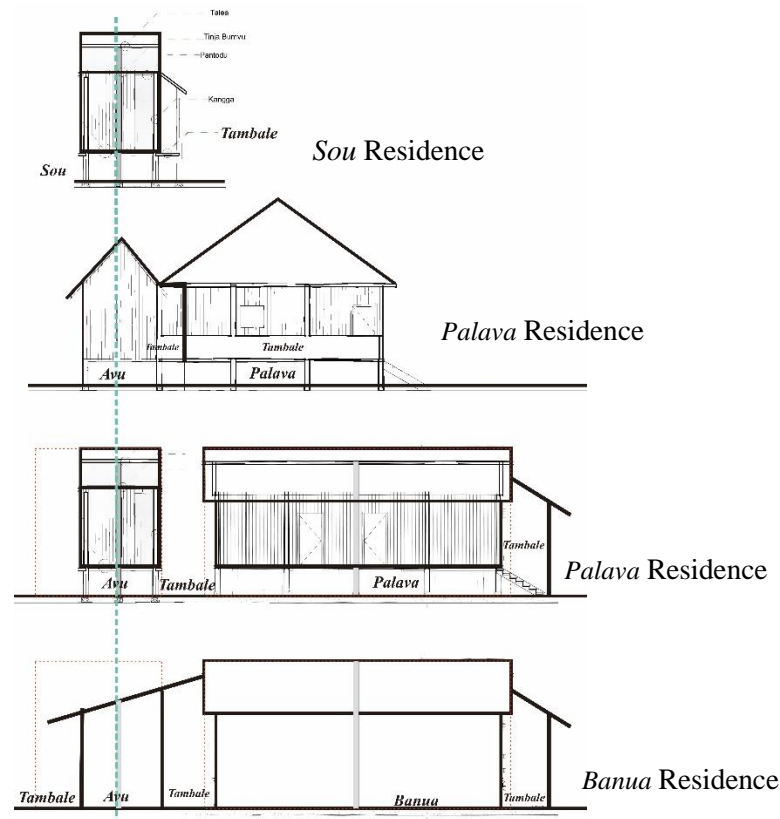


Fig. 12: Space conversion in several types of houses in the Raranggonau
Source: Author, 2023

In the Raranggonau settlement, in various cases, one of the spaces that often becomes the division and addition of space and the conversion of space is *Tambale*, which regulates the house from the outside and manages the house from the inside. The community made *Tambale* wide so that it can be divided into *Tombi*, *Avu*, as well as transitional spaces and changing other functions (conversion), as shown in Fig. 13. The *Tambale* space will become a new connecting space, even a *Palava* or *Banua*. *Tambale* is positioned as a transitional space, whether additional space or just outdoor space, such as the ground. Unsurprisingly, the Kaili Ledo community residence has two building mass units. Fig. 14 shows that spatial connectivity occurs when more than one space must be connected. Through spatial connectivity, a room can be easily reached through another space. This strategy appears in residential settlements Raranggonau, Domestic and non-domestic spaces, including residential areas and courtyards (*Doyata*) as well as fields (*Tanalapa*), squares or streets, in each case for *Banua* and *Palava*, there are *Tambale* to Ronjou spaces, because *Tambale* there is outside, there is also inside houses area, which is connected to *Avu* and *Pomboli*.

This activity is formed in the relationship between activity, location, and time. Activities in the Kaili Ledo community in the *Tambale* space are spiritual, cultural, and social aspects, which have symbolic meanings of a family and siblings (*Sampesuvuroa*).



Fig 13: Additional Room Connectivity, *Tambale* in Domestic and Non-domestic Spaces
Source: Author, 2023

Conclusions

Problems related to an identity crisis in the knowledge of the Kaili Ledo community in the spatial setting have been found, one of which is the existence of the *Tambale* space in *Sou*, *Palava*, and *Banua*, which is very dominant. *Tambale* is a spatial element in determining residential houses' spatial planning, which can be added to become new spaces and new functions. *Tambale* has the nature of a multi-connected space with indoor and outdoor spaces in the Kaili Ledo community settlement. Besides that, the main objective of knowing the activity system of the Kaili Ledo community's residential space has been answered: *Tambale* is a sacred space beside the *Bantaya* room for residents to gather to negotiate a joint agreement. *Tambale* is an alternative to *Bantaya*, to hold traditional meetings, such as sacred activities in sacred rituals in adat; one of the customs is the Pinikaso ritual, a tradition before marriage at every marriage between *Sampesuvuroa*. There is a symbolic meaning of *Tambale*, such as a family symbol in *Sampesuvuroa*, because *Tambale* can be enjoyed by everyone, even guests from other Kaili communities.

The *Tambale* room is dominated by the female gender because, as an ancestral residence, there are women's rooms (*Tombi Mombine*) in *Banua* and *Palava*, which are always placed at the front, adjacent to the *Tambale* room. At the same time, the men's room is at the back. In *Sou*'s residence, there is only one room (*Tombi*). The men sleep outside or in *Tambale* as only mother and son are inside the *Sou*. The existence of *Tomanuru* in the Kaili Ledo community as an ancestor is known as a woman who descended from heaven. That is why women dominate access to *Tambale*.

Tambale is part of a unity of life, brotherhood, and ancestral values; until now, these values are still preserved in the Kaili Ledo community. These values express values in transient values and transcendent values. Transient values are always associated with the present time and place; the values in *Tambale* in *Sou* and *Palava* also exist in the values in *Banua* because *Banua* is a contemporary product with additional materials such as stone and cement. *Tambale* has a value associated with short-term memory, forms of expression, change, and renewal. *Tambale* also has transcendent values that transcend present place and time. These values are always associated with long-term memory and moral values carried from generation to generation. In its role in living culture, *Tambale* summarizes the value of houses of all types in the Kaili Ledo Community.

There are weaknesses and strengths in this research, namely the lack of knowledge of the native people regarding their space; they say, "My ancestors used to do this activity, but we do not know for sure what it means; we just go with it." besides that, it is difficult to access to the Raranggonau settlement, which is still densely forested. The advantage of this research is that the world knows that *Tambale* makes the standard of the initial modulation system in adding new and old space and has a latent meaning in the Kaili Ledo community.

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References

- Adom, D., Yeboah, A. & Ankrah, A. K. (2016) Constructivism philosophical paradigm: Implication for research, teaching, and learning. *Global journal of arts humanities and social sciences*, 4(10), 1-9.
- Altman, I. R. A. W. J. (1980) *Human behavior and environment*. 4, 4. Plenum Press. <https://link.springer.com/content/pdf/10.1007%2F978-1-4899-2266-3.pdf>
- Barker, R. G. (1963) The stream of behavior: Explorations of its structure & content. BRWA. (2022) *Wilayah Adat Ngata Raranggonau*. Badan Registrasi Wilayah Adat. <https://brwa.or.id/wa/view/dC13T2lsb1BIUIk>
- Charmaz, K. (2006) The power of names. *Journal of Contemporary Ethnography*, 35(4), 396-399.
- Corbin, J., & Strauss, A. (2008) Qualitative research. *Techniques and procedures for developing grounded theory*, 3.
- Davidov, E. (2015) Social Psychology of Values. In. Elsevier. <https://doi.org/https://doi.org/10.1016/B978-0-08-097086-8.25098-8>
- Evans, D. (2003) *Kamus Kaili-Ledo-Indonesia-Inggris*. Pemerintah Daerah Propinsi Sulawesi Tengah, Dinas Kebudayaan dan Pariwisata.
- Glaser, B. G. & Strauss, A. L. (2017) *The discovery of grounded theory: Strategies for qualitative research*. London:Routledge.
- Gupta, P. (2019) Relevance of Terrace Space in Architecture. *International Journal of Research and Analytical Reviews*, 6(1), 1345-1352.
- Hanan, H. (2017) Bale-Bale: 'Archetype' Arsitektur Tradisional Bali Aga Di Desa Pegotan. *Jurnal Tesa Arsitektur*, 15(2), 88-100.
- Ittelson, W., Proshansky, H., Rivlin, L. & Winkel, G. (1974) An introduction to environmental psychology. New York: Holt, Rinehart and Winston
- Kaudern, W. A. (1925) *Ethnographical Studies in Celebes: Results of the Author's Expedition to Celebes, 1917-20* (Vol. 2). M. Nijhoff.
- Kent, S. (1993) *Domestic architecture and the use of space: Aan interdisciplinary cross-cultural study*. Cambridge: Cambridge University Press.
- Lang, J. M.W. (2016) *Functionalism revisited: architectural theory and practice and the behavioral sciences*. Routledge.
- Lewin, K. (1951) Field theory in social science: Selected theoretical papers (Edited by Dorwin Cartwright.).
- Pena, W. M. & Parshall, S. A. (2012) *Problem seeking: An architectural programming primer*. London: John Wiley & Sons.
- Rapoport, A. (1977) *Human aspects of urban form : Towards a man-environment approach to urban form and design* / London: Pergamon Press. <https://doi.org/https://doi.org/10.1016/C2013-0-02616-3>
- Rapoport, A. (1990) System of activities and system of settings. *Domestic architecture and the use of space*.
- Rapoport, A. (2000) Theory, culture and housing. *Housing, theory and society*, 17(4), 145-165.
- Said, I. (2001) Pluralism in terrace housing community through ethnic garden. *Jurnal Teknologi*, 4153-4153.
- Sairin, M. (2020) Sawerigading Mengembara Ke Lembah Palu: Analisa "Legenda Terjadinya Lembah Palu" Dengan Menggunakan Paradigma Strukturalisme Lévi-Strauss. *Jurnal Penelitian Sejarah dan Kebudayaan Islam*, 1(1), 25-51.
- Sawasdee, P. & Phiboon, C. (2022) Adaptation of Vernacular Houses to Coastal Basin Environments of Pak Phanang, Nakhon Si Thammarat, Thailand. *ISVS e-journal*, 9(1), 85-97.

- Schwartz, S. H. (2012) An overview of the Schwartz theory of basic values. *Online readings in Psychology and Culture*, 2(1), 2307-0919.1116.
- Subroto, T. Y. W. (2019) Koeksistensi alam dan budaya dalam arsitektur. *ARTEKS: Jurnal Teknik Arsitektur*, 3(2), 5-8. <https://doi.org/http://dx.doi.org/10.30822/artk.v3i2.244>
- Umanailo, M. (2018) Teknik praktis grounded theory dalam penelitian kualitatif. In: April.
- Zubrow, E., Audouze, F., & Enloe, J. G. (2010). *The Magdalenian household: unraveling domesticity*. Suny Press.