RESEARCH ARTICLE

# *Tambale:* Behavior of Activities, Space, and Time in the Kaili Ledo Community, Central Sulawesi, Indonesia

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## Abstract

*The place attachment phenomenon, which was marked by the post-disaster in Palu City, Central Sulawesi, Indonesia, in 2018, affected the Kaili Ledo community, located in the Petobo area. Even though the government prohibited the former liquefaction land from being inhabited, it is necessary to know that some lives and properties were lost due to the disaster. Therefore, this research aimed to determine the behavior of activities, space and time in the Kaili Ledo community, Central Sulawesi, Indonesia. Data collected through the historical tracing of this community using the Grounded Theory method showed that the Kaili Ledo community originated in the Palu Valley Mountains in the Raranggonau settlement, Central Sulawesi. The result also showed that a space, namely, Tambale, was used as an element of housing in the Kaili Ledo community. The space was interpreted as a terrace, front porch, yard, and living room used for sacred and profane activities. Tambale is also associated with a place of longing because it makes humans have a psychological feeling of comfort with relatives and friends in their daily life.*

***Keywords:*** *Tambale, Behavior of Time and Space, Kaili Ledo Community, Raranggonau.*

## Introduction

The 2018 Central Sulawesi earthquake in Palu City, which measured 7.5 SR, was devastating, and claiming several lives. The earthquake caused liquefaction in the Petobo area, prompting the government to build shelters in October, which were occupied in December 2018, and is still inhabited presently. The affected areas, particularly Petobo, Biromaru, and the surrounding regions, experienced loss of houses and severe damage. Considering the analysis, this has become a phenomenon in human behavior and culture. Several research on the earthquake in Palu City and Sigi Regency discussed Petobo liquefaction. However, there is need to carry out research on the inhabitants and cultural behavior, to discover the tribe's origin before occupying Palu Bay. The current research was found to have empirical gaps, prompting the need for further analysis to determine the reason. The majority of the Kaili Ledo people residing in Petobo, Biromaru, and Sigi Pombewe are part of this community. The Kaili Ledo community, was selected as the research sample from the diverse Kaili communities in Palu City due to its heterogeneous nature. Based on several interviews with traditional leaders, it originated from the Lando mountains in the Raranggonau settlement, and the knowledge that the Palu Valley area is an ocean was conveyed by parents (*Tutua*), orally (*Tutura*).

In line with the description above, the main variables identified were the settings of space and time activities. Moreover, due to the PLD, there is a phenomenon of ties between lost and damaged places, including rebuilding in forbidden locations, where space was perceived as meaningful in respect to the cultural behavior within the setting. This research was conducted using a qualitative, inductive approach and grounded theory method to trace the activities associated with space and time to cultural behavior in settings and territories. Data collection was carried out through interviews including both direct and participant observations. Additionally, relevant information was collected in areas around the Valley, namely Pombewe, Petobo, and the highlands, particularly the Raranggonau settlement, regarded as the main object, including 30 housing cases. Data analysis was conducted using coding based on empirical exploration related to the phenomena. The codes obtained were arranged into substantive themes associated with the Raranggonau settlement value system concept. However, the findings showed that *Tambale*, a manifestation of the value system in the Raranggonau settlement, was arranged through the elements of *Tomanuru* (ancestors), *Katuvu* (Life), and *Sampesuvu-Roa* (Brothers, Cousins, and Relatives) values. The spatiality of *Tambale* as the basis for arranging these values was regarded as a medicine that cures the longing for bonds and spatial experiences. *Tambale* also offered gender roles, particularly for women who are dominant in customary activities and heritage.

## Literature Review

The review of place attachment portrayed the relevance of behavioral theory in disclosing the activity of space and time in a phenomenon. The search process starts with place attachment and ends with the behavioral theory. According to Altman and Low (1992), including Arief et al., (2024a), place attachment evaluates the relationship between humans and places in a unified framework of thought or integrated concept. Scannell and Gifford (2017), as well as Boley et al., (2021), described this integrated concept as an affective bond that includes the physical aspects of the place itself, human background and psychological processes formed between the two. One of the main aspects is culture, a factor in the formation of attachment, which aids in obtaining information about how the local community interprets a place. Additionally, emotional ties to places with cultural value served as meaningful consideration in the design process. These could be considered in every decision related to the places, (Indrianingrum et al., 2023; Ujang, 2012).

Based on the description above, Relph (1976) and Meetiyagoda et al. (2024), stated that the dimensions of human and places can be used as a construct to determine identity due to the significance of the place in developing and maintaining self and group identities. According to preliminary studies, the characteristics of a place were properly identified and significantly perceived by users, which provided the conditions to meet functional needs. The process is in addition to providing support for behavioral objectives due to the existence of social ties, duration of stay, and features (Lewicka, 2008), better than other alternatives (Williams et al., 1992). Place attachment causes psychological processes and collective accumulation of memories, resulting in the ownership of a residence (Hernández et al., 2007). In the psychological process, meaning was connected to social and individual association, resulting in perception, rooted in the rules of the place's identity (Hallak, 2024; Stokols, 1981). According to Hidalgo and Hernandez (2001), as well as Inal Cekic, (2023), place attachment referred to the development (affective bond) or relationship between social communities or individuals and certain areas expressed through interactions, beliefs, behaviors and actions. Regarding this perception, disclosing the behavior of space and time was needed.

The behavioral regulation theory proposed by Lewin (1951) and Arief et al., (2023b), stated that human behavior, was explained by studying the immediate environment where it was exhibited. Lewin reported that the flow of activity

called human behavior evolved from continuous interaction between internal and external factors originating from the environment. This belief was captured in the concept of life space, defined in terms of behavior, personality, and environment. The proposed basic formula B = f (PE), or (Behavior) (B) becomes a (Function) (f) of personality, other factors/(Person) (P), and the (Environment) perceived by the individual (E) Ittelson (1974) (Arief et al., 2023b). Lewin (1951), and Arief et al., (2023b), further stated that several environmental influences, impacted human behavior. The physical environment was regarded as a significant group of these environmental factors. As a result, Lewin adopted ecological concepts including movement, valence of objects, and obstacles to describe the environment, as well as used the characteristics of objects and spaces in evaluating life space.

Barker and Arief et al., (2024a), stated that behavioral regulation is a mutual relationship between the environment and behavioral patterns. It also refers to human behavior in a reciprocal relationship with the environment. Meanwhile, regulation is the interaction between an activity and the setting in which it occurs. The term behavioral setting was first used by Barker (1963), who described it as a perpendicular pattern of behavior and environment. Additionally, the environment surrounding the structure of behavioral space enabled it to explain the relationship between behavior expressed in a particular situation or the characteristic structure of the problem. At the fundamental level of analysis, the evolution of Barker's (1963) theory strongly focused on spatial and temporal elements, which gradually shifted to behavior. (Arief et al., 2023b; Popov, 2012). Lang (2016), and Arief et al., (2023a), described behavioral regulation as an effort to design a built environment for desired activities. The appropriateness of these activities depends on the moral and cultural order of the local community. According to Barker (1965), and Arief et al., (2023a), several variables of behavioral regulation such as (1) a pattern of activity repeated in the form of behavior, (2) a particular environment or setting, (3) an isomorphism or a relationship between activity patterns and the environment, as well as (4) a specific period. Therefore, the marked environment or territory is required to explain the behavior associated with the regulations, which notified the activity and system settings in the built environment.

## System Settings

Rapoport (1975) proposed the set theory similar to the behavioral setting outlined by Barker. However, the lack of cultural variable known to significantly influence the regulation of behavior was criticized. This led to the suggestion of four regulatory systems aspects, namely (1) Organization of space, time, meaning, communication, (2) Regulatory systems, (3) Cultural Landscape, (4) Combination of fixed, semi-fixed, and non-fixed elements. Barker (1968), Arief et al., (2023a), and Popov, (2012), also reported additional aspects of behavioral regulation asides from the four main elements. The complete settings comprised Temporal, and Geographical loci, social events, Duration, Population, occupancy time, Functional position of the population, Action Patterns, Behavioral mechanisms, Pressure, Autonomy, and Welfare. In addition to the aspects stated by Barker, the built environment consisted of two types of behavioral settings, such as (1) Places where related patterns occur and (2) Links, namely relationships between movements drawn towards the system for a series of objectives. Kent (1990), Arief et al., (2023a), and Ramadhani et al., (2017), reported that a system setting consisted of the following (1) the nature of the setting, some of which may be counterintuitive, (2) How and by whom the setting was used, depending on the precise meaning, and (3) Who was included or excluded. Others include (4) Penetration gradients, (5) Applicable rules, (6) Ongoing user behavior and activities, (7) Cues provided by settings, (8) Nature of boundaries, (9) Reasons for particular sequences, (10) Extent of systems to which, relevant with home ranges, known areas, including regions used or avoided (11) interrelationships and separation between settings, alongside (12) Nature or interrelationships between obstacles.

## Activity System

Rapoport (1975), Arief et al., (2023b), and Ramadhani et al., (2017), carried out a research focusing on the four aspects of the activity system, namely (1) The most apparent instrumental aspect, (2) How activities were carried out, (3) How these were linked to a system, and (4) Meaning the most latent aspect. In analyzing behavioral settings, several key questions focused on the relationship between the environment and activity patterns. According to Rapoport (1975), and Ramadhani et al., (2017), the questions consisted of Who does what, where, when, including or excluding whom (and why). Four components were used to explain this activity, namely (1) the activity itself, (2) how it is carried out, (3) side activities that occur, and (4) the meaning of the activity. (Arief et al., 2023a; Rapoport, 1977). There is also need to understand how activities are connected to a system, including when and where it occurs. How can a better explanation of the process for each contextualization activities that represent choice and reflect variability within the group, be realized? (Altman, 1980; Arief et al., 2023a). Moreover, activities in residential spaces or places can be combined in cycles through repetitive patterns.

## Territorial

Rapoport (1977), and Arief et al., (2024a), stated that space used patterns in specific environments, including analyzing five essential elements: House Range, Core area, territory, controlled region, and personal space. The use of space in territoriality is related to the human behavior exhibited toward the environment. The research conducted by Weissman (1981), Arief et al., (2024a), and Zubaidi et al., (2013), described territoriality as a behavioral attribute relating to individuals, groups, and physical settings. This was in line with the research conducted by Haryadi (1995), Arief et al., (2024a), and Zubaidi et al., (2013), that individuals in physical settings were characterized by behavior, activities, place, and time. Based on these points of view, there are three main territorial elements, namely the physical setting (territory), actors (individuals/groups), and various activities performed by an individual at a certain distance in time. Lang (1987), Arief et al., (2024a), and Zubaidi et al., (2013), reported that territoriality had four main characteristics, namely ownership or rights to a place, personalization or marking of a particular area, the right to defend oneself from external interference, and control of several functions, ranging from the satisfaction of basic needs to psychological, cognitive, and aesthetic requirements. Furthermore, Porteus (1977), and (Arief et al., 2024a), identified three typical levels of territoriality: personal space, home base (a well-maintained space), and range (a behavioral setting built by a person's life). Brower (1976), and Arief et al., (2024a), differentiated regions into three types, such as personal, community, and free territories, with each category related to the culture of a specific society.

## Theoretical Framework, Space and Time Behavioral

Based on behavioral theory, in respect to setting, activity, and territory, this research formulated a theoretical framework that produces related variables for use in the field to complement data from observations and interviews. Behavioral regulation theory, within the environment where there are activity and setting systems, was described using independent and dependent variables, with the results serving as indicators for the formulation of research questions.
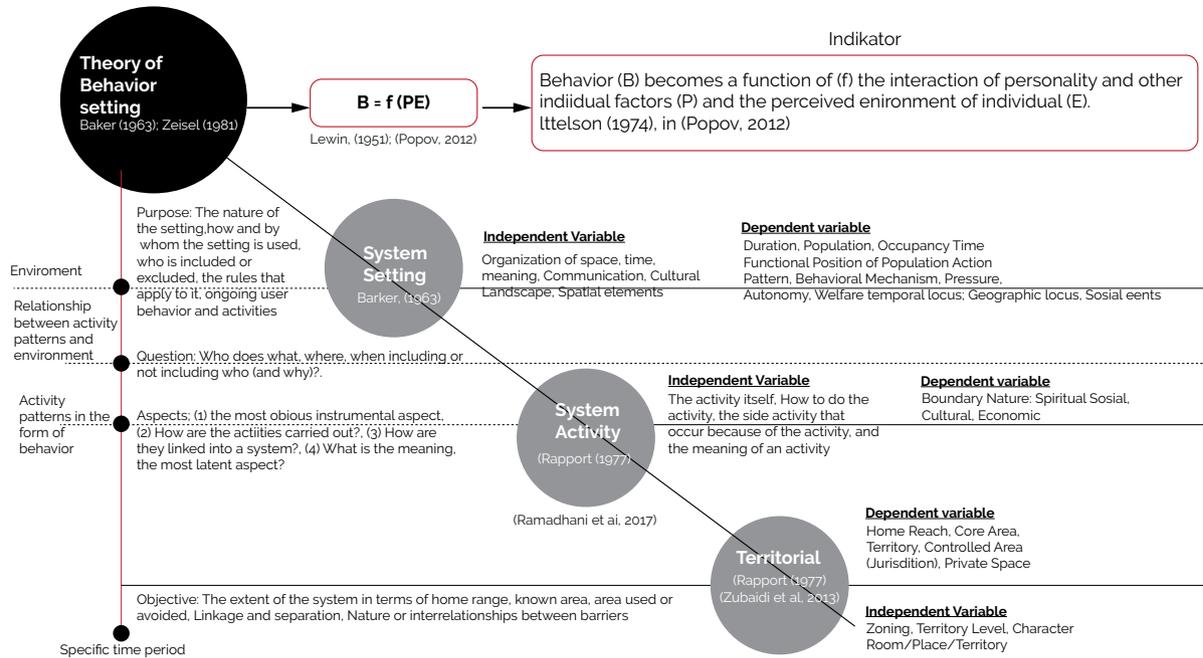
Figure 1: Behavior Setting of space and time in the field. Source: Author, (2024)

Figure 1 shows that variables from the setting, and activity systems, as well as territory, served as direction during interviews (theory-based) and data collection. Based on this perspective, data collection focused on detailed information regarding settlements. This information could be in the form of phenomena observed at the research location.

## Research Method

In accordance with the observations made, the grounded theoretical or research method adopted was essential for important spaces in the Raranggonau settlement. This method was adopted during exploratory analysis conducted in the field directly with the local community. The exploration data, obtained either in the form of documentation or interviews with the community, was used to review the research objectives (Martin and Turner, 1986; Arief et al., 2024b) Meanwhile, the adoption of the grounded theoretical method, led to the formulation of a hypothesis drawn inductively based on empirical data from observations in the field.

## Research Location

The Raranggonau settlement consists of mountains and hills with an area of 7,958 Ha, situated at an altitude of approximately 1000 meters above sea level, as shown in Figure 2. The inland area had certain beliefs, evident in various traditional ceremonies, agricultural activities, and other customs. This was because of the assumption that there are gods, sacred objects, individual, and other symbols. For example, the belief in gods or spirits called *Anitu,* namely *Anitu ri langi* and *Anitu ri tana* (sky and earth spirits), is passed down from one generation to another (Arief et al., 2024a). The individual also believe in the figure of *Tomanuru*, referred to as the mother of heaven, or the incarnation of God. This particular belief is reportedly observed by the inhabitants of all inland areas. The individual believes that the supernatural is the source of all disasters and life disorders, including illness, failure of crops and agricultural products. It is also believed that nature has a power source that can cure disease and other disasters. This was interpreted as black magic, such as *doti*, by individuals who detest others. The belief was practiced in society because of human behavior.
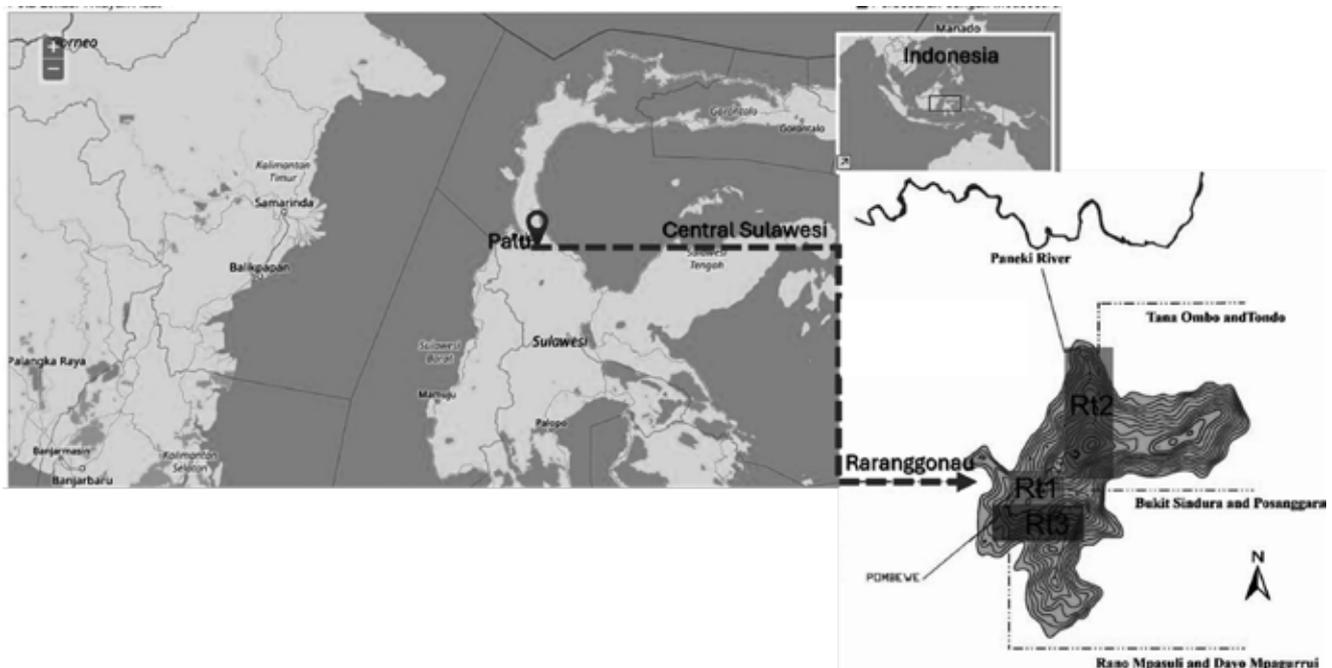
Figure 2: Figure (a) Geographical layout of the research location. Figure (b) Map of the Raranggonau settlement. Source: Author, (2024)

The Raranggonau settlement was selected as the research location because the area is an entity. This homogeneous, and the oldest settlement, interacted with the Palu Valley in the Kaili Ledo community as shown in Figure 3. In addition, it was also associated with the following supporting factors:

1. The case started in the Palu Valley area (lowlands), Petobo, Biromaru, and Pombewe. In 2018, after the disaster in the Petobo area, there was a phenomenon of attachment, aimed to strengthen the Kaili Ledo community, including the origins of Raranggonau (highlands).

2. The case focused on a homogeneous community, termed Kaili Ledo. It was found that the ancestors of the original Kaili Ledo community were from the Raranggonau settlement area, Dusun IV, Pombewe Village. Therefore, the case in Petobo was only perceived as an introduction to unlocking the value of strength and establishing attachment with the Kaili Ledo community.

3. There was physical evidence of artifacts in the Raranggonau settlement of the Kaili Ledo community, which were not transferred, or lowered into the valley. This was proven by the statement made by the head of Neighborhood Association (*Rukun Tetangga*/RT) of Raranggonau who stated that "*Sandanatana Ledo Leriapalaika Kami*"/ *Sejengkal Tanah Leluhur Tidak Akan Kami Tinggalkan*, the individual would not move the slightest inch from the ancestral land.

Figure 3: There is an inscription on *Tambale* in the house of one of the residents, "We will not leave an inch of our ancestral land". Source: Author, (2024)

4. There was movement, but those concerned still returned to the Kaili Ledo community, irrespective of disaster (after the disaster), economic (during the New Order era), and social issues (during the *Madika* and Colonial eras).

## Data Collection

In this research, the initial phenomena in Petobo and the Raranggonau settlement were the leading cases of events, artifacts, and settings. Furthermore, there were perpetrators, including individuals and groups, other than those residing in the Raranggonau settlement. Some of the perpetrators had moved to other areas such as Petobo, Tompu, Loru, and Biromaru because it is covered by the Kaili Ledo community, can be seen in Figure 4.
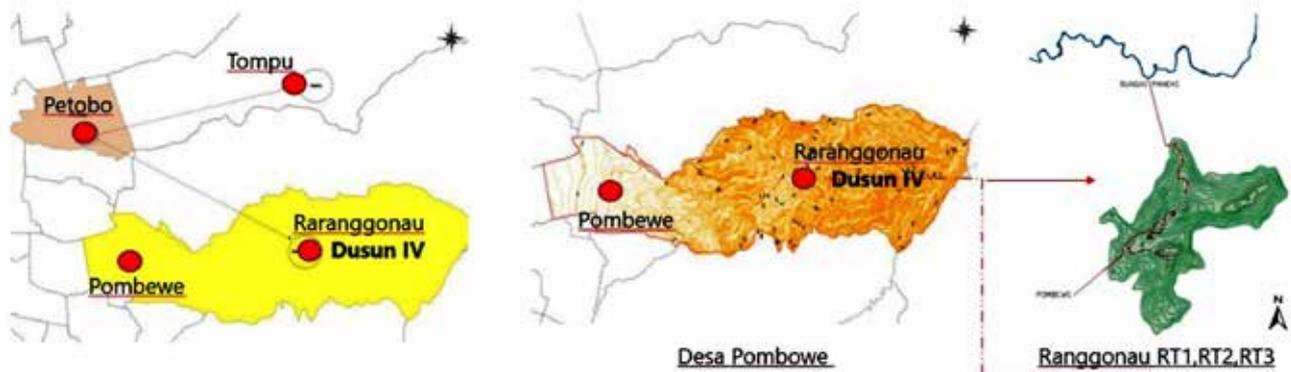


Figure 4: Map of Purposive sampling locations at the research location. Source: Author, (2024)

Regarding the general explanation of purposive sampling, the method adopted was an element of data sources obtained through field observations with interviews. This was also used by Creswell (2015), and Manara et al., (2023), in grounded theory research, with the data collection process paying attention to the following principles, (1) various individuals who responded to actions or participated in the phenomenon process, (2) the sampling strategy focused on finding homogeneous, theory-based, and theoretical samples, meaning theory, directed empirically to the field, as well as built and induced empirically based phenomena. (3) Data was collected through interviews with 20 to 30 individuals to reach a particular detailed level in the theory, (4) recording of information was carried out using interview protocols and memos, including (5) stored in the form of transcriptions and computer data. The selected purposive sampling in Table 1 was associated with the research location, setting, actors, and artifacts.

Table 1: Purposive Sampling Research. Source: Author, (2024)

| Place | Setting | Actor | Artifact |
|---|---|---|---|
| Petobo, Biromaru, Pombewe and Raranggonau | Raranggonau Settlement in RT1, RT2, RT3, | Community Kaili Ledo in Raranggonau and traditional figures who once lived in Raranggonau, in Pombewe, Petobo, Tompu, and Biromaru villages. | Residential, spatial elements, cultural landscapes, and others. |

Based on the principles of data collection, the target materials could be summarized. The data obtained from various sources such as (1) the empirical conditions of the Raranggonau Settlement. Other sources include (2) participants who were clearly and profoundly aware of the organization and distribution of the Kaili Ledo community in the Palu Valley. This is in addition to (3) notes or writings regarding the history, and socio-cultural conditions in the Raranggonau, Tompu, and Sigi Biromaru Settlements alongside (4) secondary data realized through document collection and analysis of related theories (Secondary data). The following is a recapitulation of the target materials for data collection based on sources shown in Table 2.

Table 2: Targets and Data Acquisition in the Field. Source: Author, (2024)

| | Type | Targets | Data | Research Duration |
|---|---|---|---|---|
| | | Primary Data | | |
| 1 | Observation | 30 Residential Housing in Raranggonau | Physical Artifact Data Activity Data | One year |
| 2 | Unstructured Interview + Residential Sketch | Hamlet Apparatus Hamlet's Head and Traditional Leader Residents in the Raranggonau settlement | Raranggonau settlement data Non-physical data | |
| | | Secondary Data | | |
| 3 | Documentation + Literature | Raranggonau Settlement Pombewe Village Sigi Biromaru | Raranggonau Settlement Pombewe Village Sigi Biromaru Economic, social, cultural, and environmental data | One year |

## Data Analysis: Grounded method in determining categories and concepts in the Raranggonau Settlement

The research focused on finding activity and space data using grounded methods, with the iterative analysis process carried out repeatedly during dialogue to obtain codes. The analysis process centred on environmental data characterized by the Raranggonau settlement. This was characterized by a system of activities, including residential and settlement settings. The results of data collection, as well as observations and interviews were further discussed in stages. The initial stage started with the territory's environment, followed by an activity and a setting system, such as the spaces in the Raranggonau settlement. This also included the following social spaces *Tana lapa* (Field), *Sikola* (School), *Talua* (Field and Garden), *Kalampa* (Public Kitchen). In addition, cultural Spaces consisted of *Bantaya, Banua, Sou, Rovu, Palava, Buvu* (Well), *Dayo* (Tomb), *Binangga* (River), *Talua* (Field) *Vana* (Forest), as well as the following House of worship *Gareja* (Church). At this stage, the research questions were formulated from the theory used in the field, a typical example of the system setting is what are the characteristics of space (3) in *Sou* or *Banua* (4)? characterized by who, and where (2)? What is the mechanism? (1). Examples of activities in the cultural space are, what is the Latent meaning in *Tambale*? Why is it done? What is the nature and method of conducting

these activities? Examples of the territory in cultural space are as follows, where is the preserved room? Why and who designed it? Is it privately owned? (1. Variable. 2. Question indicator. 3. Parameter 4. Variable indicator). Meanwhile, the data collection method was selected through purposive sampling related to the phenomenon, which consisted of various cases (*Rukun Tetangga*/RT1) (Bukit Sindura and Posanggara), (*Rukun Tetangga*/RT2) (Sindura, Limpo, Tana Ombo and Tondo), (*Rukun Tetangga*/RT3) (Rano Mpasuli, Tamangawa, Dayo Mpagurrui and Pantono Ibo), and residents who once lived in Raranggonau.

Based on data collection and analysis of references regarding territory, activities, and settings of the Raranggonau settlement, including the use of a Grounded Theory method, the underlying phenomena was constructed in Petobo and other Kaili Ledo settlements in the Palu valley. All information focused on sub-categories to review the system setting of essential values in the Kaili Ledo community, as shown in Figure 5.



Figure 5: Categories (Focused coding) Related to System Settings in the Kaili Ledo Community. Source: Author, (2024)

The grounded theory method is a repeated process of discussing the codes and data collected. In addition, the focused coding process was also carried out to obtain initial codes. This stage aimed to obtain focused codes, which were then arranged into themes and interpreted to provide more focused themes or coding. In this stage, focused codes were related to phenomena in the interpretation of facts, such as the post-disaster place attachment in the Petobo settlement. It further determined the origin of the settlement from the majority of the Kaili Ledo tribe in Petobo. The Kaili Ledo community, originally located in the mountains, currently has old settlements, which served as a reference in simplifying the understanding of the phenomenon in Petobo.

The process of forming themes from categories was described as follows:

1. The first stage centred on exploring space and meaning, regarded as the initial process or opening of the code. However, categories such as water, land, cardinal directions, moon, residence, and family were sub-categorized for redevelopments such as family or *Sampesuvu-Roa (Keluarga)* or Family, residence; *Sou, Palava*, and *Banua* with each possessing a *Tambale*, as well as ancestors or *Tomanuru* who became human intermediaries for the land, water, moon, and weather. This research used Nvivo visualization software to compile diverse categories from interviews using qualitative research methods.

Figure 6: Visualization of Words from Nvivo; the Most Frequently Found Words are Family "*Sampesuvu-Roa*" (Family), Teras, "*Tambale*", Tanah (Land), and Raranggonau.

There diverse categories of Family and Raranggonau constituted the main subjects of the Kaili Ledo community. The call from the valley to the ancestral land implied the inhabitants are all brothers, or in the Kaili Ledo language, *Sampesuvuroa*. Meanwhile, the space accommodating the family is *Tambale*, with the land considered as the birthplace of the Kaili Ledo community— as shown in figure 6.

2. The second stage is an iterative code exploring space, meaning, and territory. The categories consisted of *Anitu-Anitu*, sky and land, while the territory in dwellings were *Sou, Palava*, and *Banua*. Subcategories of *Anitu*, included *Boya*, *Talua,* and *Binangga,* designed to respond to weather and seasons during land cultivation. Meanwhile, resident related subcategories of gender symbols were derived from *Tombi* and *Tambale*. All these constituted the territory of the macro and micro scales in the Raranggonau settlement.

3. The third stage is an iterative code exploring activities that influencing setting and time. The following categories spiritual, cultural, social, and economic, resulted in various subcategories, including settings of *Tambale, Avu, Tombi* inside the residence, and *Talua*, as well as *Binangga* in sacred settings outside the residence. The activities that constitute the setting were influenced by activities such as *Givu, Nolibu*, and *Pinikaso*. Moreover, there are periods for the activities that form the setting, namely the *Dopa Mebonda Eo* and *Tanga Eo times,* refer to Figure 8. These were also influenced by the gender of *Tomanuru*'s ancestors, *Mombine* and *Tomalanggai, Toama*.

4. The fourth stage centred on the choice of repeated codes based on the exploration of meaning, space, and time, adjusted to the research objectives. This code choice was summarized through general or language codes. The categories were summarized as follows land, water, chickens and livestock, moon, wind, and stars, as well as residence and family. The subcategories included *Anitu-anitu, Katuvua* or home life based on gender, *Tomanuru*, and *Sampesuvu-Roa*. This process continues until the code is focused on material from empirical themes adapted to the phenomenon. In this case, the theme is interpreted from the perspective on empirical phenomena.

5.  Focused code is the stage of theme formation, with all themes concentrating on the existence of the *Tambale* as a determining factor for settlement in the Kaili Ledo community. *Tambale* is connected to other codes, including occupancy. *Sou, Palava, Banua,* have *Tambale*, with the existence of gender and ancestors, regarded as sacred activities such as *Nolibu* in *Tambale*. Of all these themes, three basic codes regarded as the Raranggonau residential space concept were determined, namely *Tomanuru, Katuvua,* and *Sampesuvu-Roa,* in Figure 7. This refered to forming a substantive or local theory from the Kaili Ledo Community settlement in Raranggonau.
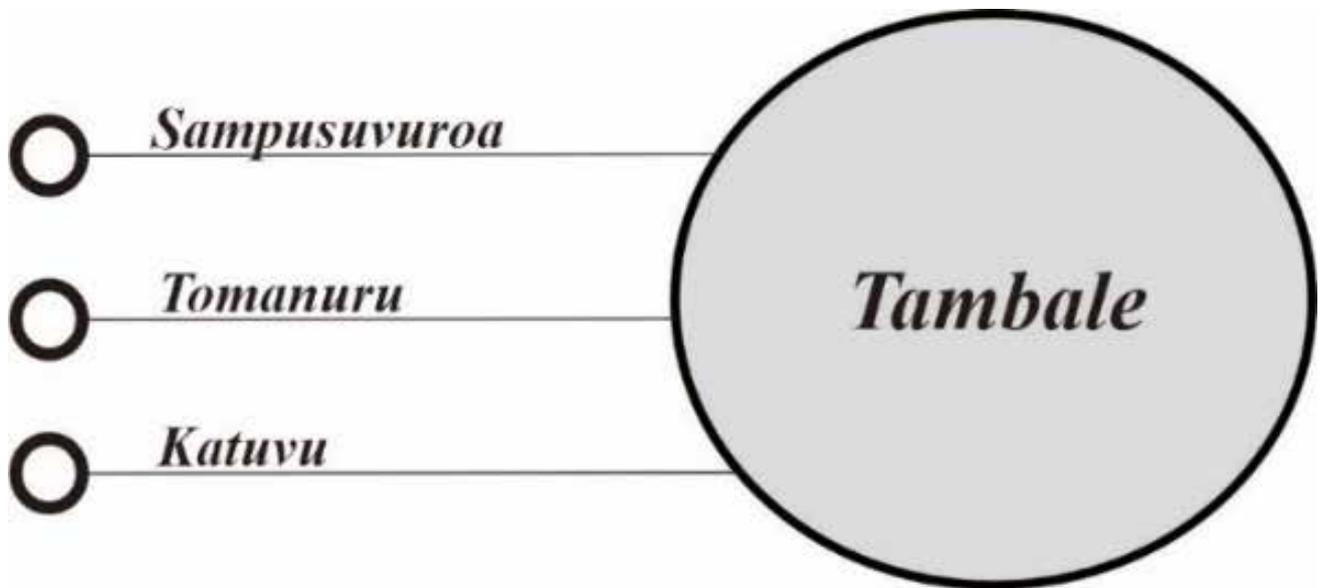


Figure 7: *Tambale* is an element of the values of the Kaili Ledo Community. Source: Author, (2024)

## Results and Discussion

The spatiality of *Tambale* as a theoretical product in the Kaili Ledo community was interpreted as a bond of cultural identity experienced at home, by siblings, cousins, relatives, and ancestors. These values were passed down from one generation to another based on spatial experience, originating from the Kaili Ledo community in the sacred power of space in Boya on the highlands spreading to the settlement on the Palu valley. The following are significant findings on the spatiality of *Tambale*.

### *Tambale* in Utilizing *Sampesuvu-Roa* Spatial Settings

Kinship and togetherness in respect to the strategy of using domestic and non-domestic spaces, through consensus and connectivity, included the flexibility from multifunctional spaces, addition, division, and separation. The themes of consensus and connectivity showed togetherness, cooperation, mutual agreement (*Nolibu*), help, or willingness, bound together by a beneficial family. There were also kinship values for agreement. In kinship, to get an agreement (*Nolibu*), parents, family, or ancestors must be present before taking a stance and setting an objective. The phenomenon of family (siblings and cousins) or kinship in a homogeneous community space is part of *Sampesuvu-Roa,* practiced by the Raranggonau settlement community. *Sampesuvu-Roa* is performed as a collective effort to reject disaster or an individual who violated the agreement of the village from bad luck. This agreement was carried out by parents or older individuals, as mediators in considering the common objectives of the community such as during weddings or

*Nasompo* and *Poraabinangga* also known as repel disaster activities. During the preparation of *Nasompo*, the spaces often used domestically were *Tambale* and *Avu*, while non-domestic spaces included *Tambale* and *Posambu*, found in the field (*Doyata*). There is an agreement (*Nolibu*) between residents in the community space, during the *Nasompo* activity. A joint agreement (*Nolibu*) was also reached regarding space connectivity, exemplifying the ancestors' values passed from one generation to another, such as in each family's united residency with shared space and access between houses. This finding showed that the values of kinship and togetherness in the sibling and cousin system in the Raranggonau settlement community represented the principles of *Sampesuvu-Roa*.

Table 3: The *Sampesuvu-Roa* Concept in the Utilization of Space and Time in the Raranggonau Settlement Viewed from Domestic Space and Non-Domestic Perspective, (Arief et al., 2024b)

| Identify Space Utilization Strategies | Themes | Domestic Space | Non-Domestic Space | Times |
|---|---|---|---|---|
| Use of shared space (open space and residential) | Consensus | *Tambale* | *Tambale, Doyata, Tanalapa, Kalampa, Bantaya* | *Dopa, Membonda Eo, TangaEo* dan *NasoloEo* |
| Consensus on the use of community space | Consensus | *Avu, Tambale* | *Tambale, Talua, Enau, Bantaya* | *Dopa, Membonda* |
| Connectivity between residences through space | Connectivity | *Tambale, Avu* | *Tambale, Bantaya, Kalampa, Doyata, Tanalapa* | *Dopa, Membonda Eo, TangaEo* |
| Multifunctional use of space | Multifunctional | *Tambale, Lundue, Pomboli, Avu* | *Tambale, Posambu, Tanalapa, Doyata* | *Dopa, Membonda* |
| The addition of space becomes a new room | Addition | *Tambale* | *Posambu* | *Dopa, Membonda* |
| Division of space with curtains | Distribution | *Tambale, Tombi, Avu* | *Boya, Talua, Bonde, Oma, Pangale, Vana, dan Binangga* | |
| Separation of space based on room type for use together | Separation | *Avu, Lundue, Pomboli* | *Patotai* | |



Figure 8: The sun, or *EO*, is a basis for recognizing time in the Raranggonau Community Settlement. Source: Author, (2024)

These themes were arranged to promote *Sampesuvu-Roa* in both domestic and non-domestic space usage strategies. The empirical results found were associated with references from diverse opinions (Pena & Parshall, 2012). This reflected the three elements of the flexibility concept, such as: expansibility, convertibility, and versatility. In the Raranggonau community space, themes of consensus and connectivity described the concept of togetherness and kinship, in addition to the themes of multifunctionality, division, separation, and inclusion, leading to expansibility, convertibility, and versatility. (Arief et al., 2024b)

## Tambale as a Space for Honoring Ancestors

Customary activities honored ancestors through human intermediaries and spirits of the rulers *Anitu ri Langi* (sky spirits) and *Anitu ri Tana* (land spirits). Meanwhile, in *Tambale,* particularly in *Sambulu*, the leading custom of marriage containing *pinang, gambir, sirih,* and *kapur sirih* were completely human symbols

that manifested the origin of human events. *Sambulu* is categorized as a custom seven because, according to the Kaili tribe, ancestors originated from heaven or *Tomanuru*, which provided customary devices from heaven, overseeing custom seven was transitioned to custom nine (*Tina Nuada*). This also included symbol of respect, because ancestors were considered as betel eaters. The terms Customs nine customary devices (*Palaka*) and seven Custom devices (*Bulo*) were categorized in respect to meaning for Customs seven (*Pua*) and nine (*Pue*) or (*Ntina*) (women).

Ritual activities during marriage proposal or *Pinikaso* in *Tambale* and *Poraabinangga* in the river included *Sambulu* and *Guma* as intermediaries for humans. (Arief et al., 2023b). This was also explained in Figure 9, by displaying a piece of the customs in *Tambale,* in *Boya* (Settlements)*, Talua* (Farm), and *Binangga* (River), as well as the belief in *Anitu*. The cultural space in *Tambale* was sacred, in addition to antique plates, where three *Guma* offerings were given to the bride by the groom. *Guma* is also similar to the *Poraabinangga* ritual, symbolizing position in society. It was initially a weapon mainly used by *Tadulako* (Leader) and the troops for cultural and era equipment. Therefore, the function as an equipment for various traditional and other customary ceremonies was regarded as sacred and art in respect to the ceremonies. Guma was also considered to have various supernatural powers and was practiced during certain ceremonies.



Figure 9: *Pinikaso* and *Guma* activities in *Tambale*. Source: Author, (2024)

## Tambale as a Determinant of Residential and Space Layout

*Tambale*, a terminology referring to terrace, living room, and common space, can be explained in large and small scales. This included Micro scale, or dwellings from *Sou, Palava,* and *Banua*, mezzo scale, namely *Boya*, consisting of *Talua, Oma, Bonde, Pangale, Vana,* and *Binangga*, or *Boya* from *Petobo, Loru, Pombewe*. The macro scale, namely Ngata, or a village larger than a region, comprising Palu City, Sigi Regency, Biromaru area, or Donggala.

Table 4: Room Layout in the Kaili Ledo Community. Source: Author, (2024)

| Subject | | Space | | *Kalampa Pangale, Vana Bantaya Posambu Doyata* *Talua Oma Bonde Binangga, Buvu, Uwe Tanalapa* | | |
|---|---|---|---|---|---|---|
| **Longing** | Against /to | **Residential, *Sou, Palava, Banua*** | **Settlement** | **City** | | **Me & Us** |
| *Nalentora* | *Ante-Ri* | *Tambale* | *Boya* | *Ngata* | | *ku, yaku* |
| | Preposition | Micro | Mezzo | Macro | | Property: Personal, and Individual Group |
| | | | Raranggonau Petobo Tompu Loru Pombewe | Palu Sigi Biromaru | | |
| | | *Tomanuru Katuvu Sampesuvuroa* | | | | |

Table 4, explains the influence of *Tambale* as a local space and refers to the meaning of the Kaili Ledo tribe's language, often used in daily activities. The Kaili tribe is aware of its culture and customs but lacked knowledge writing. This tribe depended on oral language until the spread to other areas. The meaning of this language was outwardly found in the views of the Kaili Ledo community, in fragments of words and several other expressions. Moreover, it was subject to answer the phenomenon of the post-Petobo disaster in the existence of the *Tambale* place. If the subject was interpreted as longing or *Nalentora*, then the fragments of words could be interpreted as *Nalentora sampesuvu ante roa ri Tambale*, (Miss you brothers, cousins and friends in *Tambale*), or *Nalentora ante Tambale ri Ngataku,* (Missing *Tambale* in my village, Missing reminiscing, memories of times with family living in a house in Petobo). Figure 10 describes an activity that once took place in the Sigi-Pombewe area in the Siga installation event held for traditional leaders in the *Tambale* room. Meanwhile, for the Kaili Ledo Community, the values upheld were Custom, Government (power), and Religion, with agreement (*Nolibu*) being the main objectives.



Figure 10: The T*ambale* room is used in the traditional *Siga* installation ceremony in the Sigi-Pombewe area. Source: Author, (2024)

The *Tambale* Spatial plan is a determining factor in the residential construction of the Kaili Ledo community. This was based on function, capacity area, location, and number, as well as relevant information from the *Tambale* (Table 5).

Table 5: Function, Capacity Area, Location, and Number of *Tambale* in Raranggonau Settlement. Source: (Arief et al., 2024b).

| *Tambale* Room | Types of Housing in Kaili Ledo | | | Information |
|---|---|---|---|---|
| | Sou | Palava | Banua | |
| Wide | 4m² - 6m² | 9m² - 12m² | 14m² - 16m² | Each *Tambale* has a varying area, depending on the capacity, which was agreed in advance. |
| Capacity | *Sampesuvu* | *Sampesuvu-Roa* | *Sampesuvu-Roa* | Not all *Sou* was accommodated by *Sampesuvu*, depending on the agreement. |
| Function | *Nolibu* | *Nolibu-Pinikaso* | *Nolibu-Pinikaso* | Religious rituals were usually performed in *Pinikaso* and resting places in *Tambale.* |
| Location | On the Front and Side Terrace | A similar Terrace with a 60cm Wall | On the front porch and inside the room | The average orientation of *Tambale* differed from the Rising Sun. |
| Amount | 1 or 2 | 1 big | 1 big, bigger | The number of *Tambale* varies depending on the homeowner. Usually, *Tambale* has no more than three rooms. One of the rooms was used for *Sampesuvu-Roa.* |

## Gender Roles in *Tambale*

Gender was first introduced by Stoller, (1968), to separate human characteristics based on socio-cultural definitions with biological, and physical characteristics. Kaili Ledo adopted a gender role in housing known as the *Tambale* space, which is a place for ancestors. This also included the existence of a woman's room (*Tombi Mombine*) in the *Banua* and *Palava* residences, always located at the front, close to the *Tambale* space, followed by the man's room behind. In the *Sou* residence, there is only one room (*Tombi*), men sleep outside or in *Tambale* because there are only mothers and children *in Sou*. If the residence is formed *in Banua, the man's room (Tombi Langgai)* would be near the kitchen. The men's room was usually behind the layout of the house, passing through the kitchen (*Avu*). The King's Pillar or *Tinjabumvu* was interpreted as *Tomalanggai*, meaning father, or man. However, *Tomanuru* or *Tina* was interpreted as a mother, who was perceived as an intermediary both on earth to heaven (*Langi*) between humans and sky spirits. (Arief et al., 2023b). *Tambale*, as a local space in the Kaili Ledo Community, had a dominant gender role, as shown in Table 6.

Table 6: Gender roles in *Tambale.* Source: Author, (2024)

## Conclusions

In conclusion, the correlation between activities, space, and time (*Dopa Membonda Eo)-* led to the commencement of activities in *Talua*, Enau, till the break time (*Tanga Eo*) in *Tambale*. This was followed by the periodic rituals, termed *Poraa* engaged in when demanding for rain, or *Pinikaso* traditional events in *Tambale*, besides *Bantaya*, performed in the evening (*Nasolo Eo*), when rest had previously gathered in *Tambale* before bedtime. All the activities and times mentioned correlated with *Tambale* as the dominant space and determinant of residential spatial planning. Moreover, these were based on both domestic and non-domestic space and time.

*Tambale* referred to a local theory that met the principle of parsimony (simpler is better). Similarly, an accurate theory was expressed concisely and precisely adequately explaining the phenomenon. (Sudradjat, 2020). *Tambale* was well known in the Palu City community scale and the government other than Kaili. The challenge faced was that *Tambale* lacked the formal basis for implementing development and orderliness in the Palu City area due to modernization pressure. Efforts were also needed for collaboration between stakeholders. *Tambale* was also a spatial concept in inhabiting the Kaili Ledo community, as well as a manifestation of the *Sapemsuvu-Roa*, *Tomanuru*, and *Katuvu* values from the original settlement and the Kaili Ledo community in the Palu valley. However, three types of *Tambale* aimed to rebuild post-disaster settlements and phenomena that influence place attachment were discussed, namely: (1) a form of meaning to return and repair homes destroyed in post-disaster areas. (2) to rebuild housing in post-disaster locations, even though it is prohibited by the government and (3) a community pilgrimage, which evolved at the moment of commemorating the date of the natural disaster on September 28, 2018. This moment was collectively remembered in respect to residential space and the surrounding environment, by ancestors, and relatives. The implementation of the *Tambale* for settlements lost due to the disaster in Palu City in 2018 was a longing for space and place attachment, hometown, and mother figure (gender). Furthermore, the setting of the room determined whether the *Tambale* theory was applicable. It was also considered effective when the conditions of space value (activity, time, space) felt by the Kaili Ledo tribe were relative and not absolute, such as the Yogyakarta *Alun-alun*, sacred space.

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