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Planning With 'Three-World Structures': A Comparative Study of Settlements in Mountain Villages

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Abstract. Mountain peoples' basic understanding of the world is based on binary space concepts such as top-down, left-right, east-west, sacred-profane, and others, which form a threefold division structure that places people in the middle of their environment. Mountain settlements in several places in Indonesia that still emphasize this primitive understanding or classification are interesting to study in terms of their similarities and differences. This study aimed to compare three cases of settlements, namely Singengu Mandailing village in North Sumatra, Tenganan village in Bali, and Kampung Naga in West Java in terms of their understanding of binary space concepts that constitute this threefold division structure and their application in the planning of the community's living environment. This study is a theoretical dialogue between the concept of binary space (bincar-bonom) in Singengu Mandailing village and two other local concepts that are similar, namely kangin-kauh (sunrise-sunset) in Tenganan village and timur-barat (east-west) in Kampung Naga. This qualitative study used data from the literature and the analysis was carried out following a qualitative descriptive research procedure. Based on previous research, each case has its own data, which the authors used to uncover differences and similarities in the binary space concepts from the three study cases. The authors employed a spatial matrix image to depict the position of each settlement element in the three cases, allowing the similarities and differences to be seen. The findings of the study show that Tenganan, Kampung Naga, and Singengu Mandailing have striking similarities in terms of addressing the middle point, namely as an axis or axis point. The difference lies in the filler elements and their value. The mountain village of Bali interprets the sacred-profane binary concept similarly to the mountain village of Mandailing, except in terms of the direction of sunrise-sunset. The settlement arrangement of Tenganan Pageringsingan village at the macro, meso, and micro scales defines the direction of the sunrise and sunset as a profane direction, whereas in Singengu village, the direction of the sunrise is a sacred direction and the direction of the sunset is a profane direction. As for the Singengu and the Naga communities, they understand the middle point to be related to the direction of the sunrise and sunset in opposite directions, so there are differences in treating certain artifacts, especially cemeteries. The binary space that influences the process of forming rural settlements in the mountains can be: (1) the physical setting due to natural/geographical conditions, (2) the cosmology and belief systems adhered to, and (3) the people's socio-cultural life. Rural settlements in the mountains can also be said to emphasize the natural aspect of the mountains with all of their spatial shaping potential. The study's findings further show that the local people's understanding of their living space patterns has been carried over from previous generations to the present day. This suggests that settlement planning for local communities,

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particularly in mountainous areas where hereditary beliefs still exist, must be approached in a specific way. In future planning projects, different locations require different planning approaches.

Keywords. Binary Space; Mountain Villages Planning; Sacred-Profane; Settlements

Abstract. Pemahaman dasar masyarakat pegunungan tentang dunia didasarkan pada konsep ruang biner seperti atas-bawah, kiri-kanan, timur-barat, sakral-profan, dan lain-lain, yang membentuk struktur pembagian tiga rangkap yang menempatkan manusia di tengah-tengah lingkungannya. Permukiman pegunungan di beberapa tempat di Indonesia yang masih mengedepankan pengertian atau klasifikasi primitif tersebut menarik untuk dikaji dari segi persamaan dan perbedaannya. Penelitian ini bertujuan untuk membandingkan tiga kasus permukiman yaitu Desa Singengu Mandailing di Sumatera Utara, Desa Tenganan di Bali, dan Kampung Naga di Jawa Barat dalam pemahaman konsep ruang biner yang membentuk struktur pembagian tiga rangkap tersebut dan penerapannya dalam perencanaan. dari lingkungan hidup masyarakat. Kajian ini merupakan dialog teoretis antara konsep ruang biner (bincar-bonom) di desa Singengu Mandailing dengan dua konsep lokal lain yang serupa, yaitu kangin-kauh (matahari terbit-terbenam) di desa Tenganan dan timur-barat (timur-barat).) di Kampung Naga. Penelitian kualitatif ini menggunakan data dari literatur dan analisis dilakukan mengikuti prosedur penelitian deskriptif kualitatif. Berdasarkan penelitian terdahulu, masing-masing kasus memiliki datanya masing-masing, yang penulis gunakan untuk mengungkap perbedaan dan persamaan konsep ruang biner dari ketiga studi kasus tersebut. Penulis menggunakan gambar matriks spasial untuk menggambarkan posisi setiap elemen pemukiman dalam tiga kasus, sehingga dapat dilihat persamaan dan perbedaannya. Temuan penelitian menunjukkan bahwa Tenganan, Kampung Naga, dan Singengu Mandailing memiliki persamaan yang mencolok dalam hal menyikapi titik tengah yaitu sebagai sumbu atau titik sumbu. Perbedaannya terletak pada elemen pengisi dan nilainya. Desa pegunungan Bali menginterpretasikan konsep biner sakralprofan sama dengan desa pegunungan Mandailing, kecuali dalam hal arah matahari terbitterbenam. Penataan permukiman desa Tenganan Pageringsingan secara makro, meso, dan mikro mendefinisikan arah matahari terbit dan terbenam sebagai arah profan, sedangkan di Desa Singengu arah matahari terbit adalah arah yang sakral dan arah matahari terbenam adalah arah yang sakral. arah yang profan. Adapun masyarakat Singengu dan Naga memahami titik tengah berkaitan dengan arah terbit dan terbenamnya matahari yang berlawanan arah, sehingga terdapat perbedaan dalam memperlakukan artefak tertentu, khususnya kuburan. Ruang biner yang mempengaruhi proses pembentukan permukiman pedesaan di pegunungan dapat berupa: (1) setting fisik akibat kondisi alam/geografis, (2) kosmologi dan sistem kepercayaan yang dianut, dan (3) tatanan sosial budaya masyarakat. kehidupan. Permukiman pedesaan di pegunungan juga dapat dikatakan menonjolkan aspek alam pegunungan dengan segala potensi pembentuk ruangnya. Temuan studi lebih lanjut menunjukkan bahwa pemahaman masyarakat lokal tentang pola ruang hidup mereka telah diturunkan dari generasi sebelumnya hingga saat ini. Hal ini menunjukkan bahwa perencanaan permukiman bagi masyarakat lokal, khususnya di daerah pegunungan yang masih memiliki kepercayaan turun-temurun, harus didekati dengan cara tertentu. Dalam proyek perencanaan masa depan, lokasi yang berbeda memerlukan pendekatan perencanaan yang berbeda.

Kata kunci. Pemukiman; Perencanaan Desa Pegunungan; Ruang Biner; Sacred-Profane,

Introduction

Background

The natural conditions of mountainous areas are different from low-lying areas, which causes differences in the creativity of their inhabitants in responding to their residential environment. According to Hefner (1999, in Rezeki, 2012) mountain communities always consider the potential of the nature, their spiritual attitudes towards the mountains, and their kinship relationships in forming their settlements. Sumardjo (2002) describes the basic paradigm of mountainous communities as being a binary concept paradigm combined with a threefold division paradigm. Binary space concepts shape the comprehension of spaces. *Timur-barat* (east-west), *utara-selatan* (north-south), kiri-kanan (left-right), suci-nista (sacred-profane), and several other binary space concepts are known in mountain rural community settlements. The former refers to the existence of elements of the micro-cosmos and the macro-cosmos, while the latter expresses one's position in relation to the environment. Mountains are considered part of the macro-cosmos, while humans as elements of the micro-cosmos must respond well to the macro-cosmos. This understanding influences the outlook of people who live in the mountains, namely that they do not recognize any level or strata in their kinship relations. Mountain communities always maintain relationships with the mountains in the form of traditions, rituals, and beliefs in legends related to the mountains, including in shaping the spatial layout of their settlements.

Mountain settlements found in several places in Indonesia adhere to this primitive understanding or classification, which is based on a division of the world related to the Hindu cosmology (Koencaranigrat, 2004). Hindu cosmology emphasizes the function of the nature/world as macrocosmos (*buana agung*) and personal space/home as micro-cosmos (*buana alit*). The macrocosmic relationship between God and humans is expressed in the spatial plans for settlements, as can be seen in settlement patterns in Java and in Bali. A primitive ideology or classification that emphasizes macro-cosmic and micro-cosmic aspects is also found in mountainous settlements in Lombok, West Nusa Tenggara (Mulyadi, 2001).

Several studies on rural settlements in mountainous areas have been conducted and are very interesting to continue. Nuraini (2014a), Nuraini (2014b), Nuraini (2017), Nuraini et al. (2018), and Nuraini (2019b) found the implementation of binary space in Mandailing Settlement. All of Nuraini's research has revealed the application of *bincar-bonom* as a binary space concept, which forms physical and non-physical spatial layouts at all spatial scales in ethnic Mandailing Batak settlements in mountainous rural areas. In a recent study, Nuraini (2019) revealed how binary space has affected the spatial layout of settlements to this day in his morphological study of Singengu village.

Another researcher, Parimin (1986 in Runa, 2004), investigated the formation of villages in several rural settlements in Bali. The binary concept of sacred-profane space was discovered to be important in structuring the spatial formation of these villages related to socio-religious aspects. The spatial pattern of the village within the framework of the concept of sacredness, as prevalent in Balinese Hinduism, is its central theme. The findings of Parimin (1986 in Runa, 2004) show that in understanding the spatial formation of rural settlements in Bali, one must always refer to the socio-religious aspect, which in turn refers to the sacred-profane binary space concept, which is one of the binary concepts in Balinese Hinduism.

Runa (2004) investigated the spatial arrangement of traditional villages in wet climate mountains using the case of Bali's Tenganan Pegeringsingan village. The central theme of Runa's study was the spatial arrangement of traditional settlements in the context of people's social lives. The study's findings were then compared to the conditions of other mountain villages in Bali. Runa's

research revealed the spatial consistency (core) of mountain villages in Bali, constituted by six concepts and components, namely *Tri Hita Karana*³, *Pura Puseh*⁴, mountain-sea orientation, traditional villages, village land tenure, and small family dwellings with thick walls. Runa's study also revealed other types of binary space, such as *kaja-kelod* (mountain direction/to the north – sea direction/to the south) and *kangin-kauh* (sunrise direction/to the east – sunset direction/to the west).

Another binary space concept can be found in Kampung Naga, also referring to a direction, namely *timur-barat* (east-west) (Saringendyanti, 2008). The myth that every boundary place has a spatial value is recognized in Kampung Naga's cosmology. According to Saringendyanti (2008), the west orientation, as the direction of the qibla, has the highest value from the village position, while the east orientation, as a prohibited position, has the lowest value.

The three previous studies have shown that there are differences in interpretation of binary space. Binary space refers to the wind directions, but each community group in Mandailing, Bali, and Kampung Naga interprets this differently. In each context, the three previous studies only partially or individually revealed the concept of binary space. There have been no studies comparing the use of binary space in mountain village spatial planning. Thus, the same binary space concept but with different meanings from these three previous studies is very interesting to investigate further. Singengu Mandailing village in North Sumatra, Kampung Naga in West Java, and Tenganan village in Bali are three community settlements in mountainous areas of Indonesia. It is interesting to compare how these three mountain villages interpret binary space and the three-world cosmology and how it has influenced the spatial planning of their settlements.

Research Problems

Based on the various backgrounds described above, the research question of this study was: How do the people of Singengu Village, Tenganan Village, and Kampung Naga interpret binary space as applied in their settlement planning?

Methodology

This study used a theoretical dialogue between the concept of binary space (bincar-bonom/sunrise direction-sunset direction) in Singengu Mandailing village and two other local concepts that have similarities in terms of the binary space concept, namely, kangin-kauh (sunrise direction-sunset direction) in Tenganan village and timur-barat (east-west) in Kampung Naga. According to the purpose of the study, namely, to find similarities and differences in settlement space planning in terms of the binary space concepts applied in the three cases, the analysis carried out followed a qualitative descriptive research procedure. Based on previous research, each case had its own data, which the authors used to uncover differences and similarities in the binary space concepts in the three study cases.

The selection of the two settlements used for making a comparison with Singengu village was based on two considerations, namely, (a) both are mountainous settlements with a wet climate, similar to Singengu village, which is also located in a mountainous area with a wet climate; (b) both have the same tendency in terms of the orientation of the wind directions, namely east-west, as Singengu village, which recognizes *bincar-bonom* as the sunrise-sunset direction. In each of the three cases, three main elements were compared: the wind directions, the residential space

³ Three factors contribute to the creation of happiness in the Balinese belief system (relationships with other people, relationship with the natural environment, and relationship with God, which are all interconnected). ⁴ The temple is part of the three-world structure (*Tri Kahyangan*) in traditional villages in Bali.

boundaries, and the three-world cosmology. To show the similarities and differences between the three cases, the author employed a spatial matrix image that depicts the position of each settlement element in each case, allowing the similarities and differences to be seen.

Literature Review

Spatial Planning of Rural Mountain Communities

Beliefs, family connections and social ties, livelihoods, formal and informal knowledge, language, art, and the natural features of mountainous areas are cultural and geographical factors that affect the spatial layout of rural villages in mountainous areas. If the cultural traits, perspectives, and values of the local population can be investigated and learned about, the settlement environment as a physical reality may be understood. The cultural system can be viewed as a complex of abstract ideas, values, norms, and regulations; the social system can be viewed as a complex of patterned behavioral activities of people in society; and finally, they can be used to assess and characterize the differences and similarities between one culture and other cultures (Koencaraningrat, 2004; Nuraini, 2014a, Nuraini, 2017; Nuraini, 2019).

The spatial layout of mountain settlements can be made up of both physical and non-physical, naturally occurring and artificially created as well as real (visible) and unreal elements. As a physical element, spatial planning has both inner and outer (spiritual) meanings. The meaning that emerges from the settlement spatial layout is linked to the natural setting of the environment, the economic system, and the social system. The inner (spiritual) meaning is related to the community's mindset, religion/belief system. The spatial layout of rural settlements in the mountains is shaped not only by the values that emerge in the social and cultural lives of mountain peoples, who take natural/geographical conditions into account when building their settlements, but also by spiritual values related to the local nature/geography.

A sustainable landscape of the residential areas of mountainous communities in rural areas can be formed by three systems: 1) the organization of landscape features (from a social, cultural, and spiritual standpoint), 2) land management (from an environmental, economic, and spiritual standpoint), and 3) the incorporation of regional values into landscape communities (from a spiritual standpoint). The tradition of prohibition has been employed in particular regions, such as those close to rivers and woods, to manage the land (Nuraini, 2016).

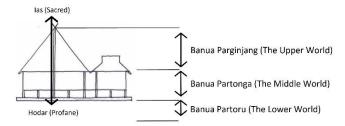
Binary Space and the Threefold Division Structure of Rural Mountain Communities

Singengu Mandailing Village, North Sumatra

The threefold division structure known by the Mandailing community as Banua (world) has been revealed by Lubis et al. (1999 in Nuraini, 2014a; Nuraini, 2014b) as an ancient belief system. The Mandailing people have a belief that nature consists of three parts, together called Banua (world) (Lubis et al., 1999 in Nuraini, 2014a; Nuraini, 2014b), as shown in Figure 1. This belief system was adopted before Islam entered the Mandailing area. The three cosmologies that constitute Banua (world) are the following:

- a) *Banua Parginjang* (the Upper World), which is the world where the Creator, Datu Natumompa Tano Nagumorga Langit, resides (denoted by the color white)
- b) *Banua Partonga* (the Middle World), which is the world where humans conduct their daily life activities (denoted by the color red)
- c) *Banua Partoru* (the Lower World), also called the spirit world, which is the world where dead humans reside (denoted by the color black)

The cosmology of the three worlds is applied by the Mandailing Julu community in building their residential houses. The house is elevated from the ground, the Lower World, because the Lower World is considered a place for humans who have died and an area that is despicable or dirty. Therefore, a building in which they live must stand on stilts (Lubis et al., 1999 in Nuraini, 2014a; Nuraini, 2014b). The findings of Lubis et al. (1999 in Nuraini, 2014a; Nuraini, 2014b) concerned the Banua cosmology at the level of the traditional house only vertically. They did not study indepth the application of the Banua (world) cosmology vertically and horizontally at the regional level.

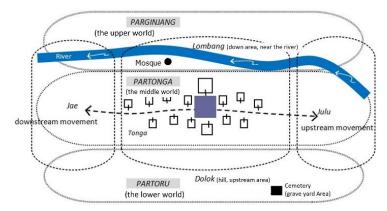


(Source: Lubis et al., 1999 in Nuraini, 2014a and Nuraini, 2014b)

Figure 1. Banua (world) cosmology of the Mandailing community

The study that was conducted in the villages of Mandailing Julu by Nuraini (2004) revealed the initial phenomenon of the application of the Banua cosmology at the kampung/village macro level. Nuraini (2004) explains that *Banua Parginjang* (the Upper World) is a *lombang* area (bottom, bottom of a hill) and is marked by a river; *Banua Partonga* (the Middle World) consists of three parts, namely *jae* (downstream direction), *julu* (upstream direction), and *tonga* (middle) while *Banua Partoru* (the Lower World) is a *dolok* (hill) area marked by a cemetery. Nuraini's research (2004) only analyzed the application of the Banua cosmology at the level of the residential environment (meso level) and did not carry out an in-depth analysis, especially in relation to other elements in settlements at the macro-regional level. The application of the Banua (world) cosmology at the *huta* (kampung) level in Nuraini (2004) can be seen in Figure 2.

Nuraini's research (2004) only looked at the application of the Banua (world) cosmology at the huta (village/kampung) level and did not study it in-depth at other levels, such as the vertical and horizontal application of the Banua (world) cosmology at the regional and house levels. The application of the Banua (world) concept in regional spatial planning more broadly, especially in Singengu village, Mandailing was revealed by Nuraini (2014a) and Nuraini et al. (2014b). Nuraini (2014a) and Nuraini et al. (2014b) revealed that the concept of two different Banua (worlds) comes from the understanding of the tor (mountain) as the place of origin, the cemetery (on the tor) as a symbol of the place of origin, and water (coming from the tor (mountain)) as a source of life from the place of origin and as a border from some taboo (places on the tor). According to the residents of Singengu, their Banua (world) is a huta (home kampung/village) while their ancestors' Banua is the tor. According to these local residents, Banua tor as a menganan najolo (place of the past) is different from Banua Tapian as inganan sannari (place of the present). Banua Sannari (place of the present) is the huta-huta (kampungs/villages) on the tapian (plane by the river). The Banua (world) for the current generation is the huta (home kampung/village) and the huta ruar (outer kampung). The huta (home kampung) is a tano inganan sorang (land of birth), while the huta ruar (outer kampung) is a place to live after getting married (Nuraini, 2014a; Nuraini et al., 2014b).



(Source: redrawn by the author based on Nuraini, 2004)

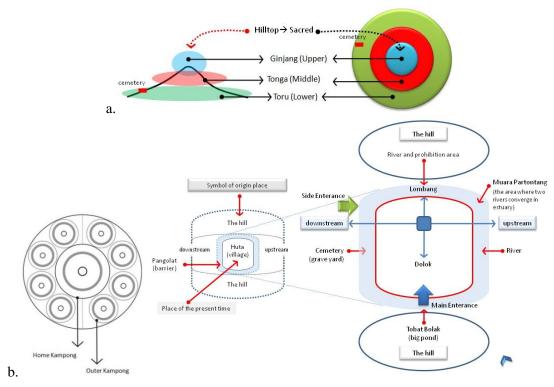
Figure 2. The application of the Banua (world) cosmology at the *huta* (kampung) level

Nuraini's research (2004) only looked at the application of the Banua (world) cosmology at the huta (village/kampung) level and did not study it in-depth at other levels, such as the vertical and horizontal application of the Banua (world) cosmology at the regional and house levels. The application of the Banua (world) concept in regional spatial planning more broadly, especially in Singengu village, Mandailing was revealed by Nuraini (2014a) and Nuraini et al. (2014b). Nuraini (2014a) and Nuraini et al. (2014b) revealed that the concept of two different Banua (worlds) comes from the understanding of the tor (mountain) as the place of origin, the cemetery (on the tor) as a symbol of the place of origin, and water (coming from the tor (mountain)) as a source of life from the place of origin and as a border from some taboo (places on the tor). According to the residents of Singengu, their Banua (world) is a huta (home kampung/village) while their ancestors' Banua is the tor. According to these local residents, Banua tor as a menganan najolo (place of the past) is different from Banua Tapian as inganan sannari (place of the present). Banua Sannari (place of the present) is the huta-huta (kampungs/villages) on the tapian (plane by the river). The Banua (world) for the current generation is the huta (home kampung/village) and the huta ruar (outer kampung). The huta (home kampung) is a tano inganan sorang (land of birth), while the *huta ruar* (outer kampung) is a place to live after getting married (Nuraini, 2014a; Nuraini et al., 2014b).

These two types of Banua Tapian (namely huta and huta ruar) are formed because they are related to the manjujur custom (a local custom requiring an adult male to leave the village when he marries and live in another village or the village of his wife's origin). Thus, every man who gets married has to leave his home kampung and start a new life in a huta ruar (outer kampung). For the Mandailing people, life in the huta ruar (outer kampung) is more important, but the huta as the tano inganan sorang (place of birth) should not be forgotten. Therefore, huta (home kampung) and huta ruar (outer kampung) are two forms of Banua (world) in the 'place of the present', namely the Banua (world) at the tapian (edge). The two concepts of Banua can be seen in the thinking of the Singengu village community, as shown in Figure 3.

The threefold division structure known as Banua in this discussion only focuses on Banua Tapian (edge) as a place for the current generation (*huta*/the main kampung and *huta ruar*/outer kampung/subkampung). Banua Parginjang (the Upper World) in the *tapian* (plane by the riverbank) are *muara partontang* (river crossing/estuary), which is located in the upper reaches of the Batang Gadis River, while Banua Parginjang (the Upper World) in the 'place of the present' is where the water originates, namely *julu* (upstream direction). The *tapian* (plane by the river/riverbank) is also marked by the presence of a *poken* (traditional market) in the direction of the *bincar* (sunrise). The *poken* (*pekan*/market) for the Singengu villagers is not only a place for

economic transactions but also a place for reunions or gatherings with relatives from other villages. On a *poken* day, all villagers in the Mandailing Julu area will go down to Kotanopan and meet in a tradition called *mardomu daro* (blood relative meeting) through buying and selling activities in the *poken*. In fact, during a *poken* day, the indigenous Mandailing tribes who still live on the *tor* (mountain), such as the Muara Sipongi tribe and the Lobu Siladang tribe, also descend to Kotanopan. This gives the *poken* a place an *ias* (holy/sacred) value.



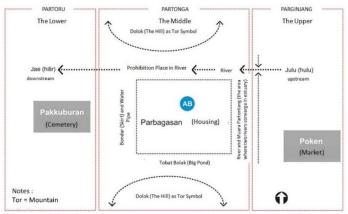
(Source: redrawn by the author based on Nuraini, 2014a; Nuraini et al., 2014b)

Figure 3. Two concepts of Banua (world) according to the understanding of the Singengu villagers: (a) Banua Tor (mountain world) as an ancestral place and (b) Banua Tapian (edge) as the place for the current generation (*huta* and *huta ruar*)

Banua Partonga in the *tapian* (plane by the river/riverbank) is the *parbagasan* (housing) area of Singengu Village, which consists of *jae* (downstream direction), *julu* (upstream direction), *dolok* (hill/upstream area/upper), and *lombang* (down area/near the river/lower) areas. Banua Partonga (the Middle World) is the place for humans to live and is characterized by the presence of a number of facilities spread across the four directions of movement, namely *jae* (downstream), *julu* (upstream), *dolok* (upper/hill), and *lombang* (lower/near the river). The place where the movement direction is a marker for the Banua Partonga (the Middle World) in its current place, namely Banua Tapian (edges/riverbank).

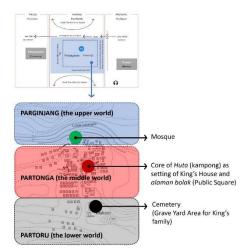
Banua Toru (the Lower World) on the *tapian* is a *pakkuburan* (cemetery/graveyard) area in the western part of the *parbagasan* (housing) neighborhood. The *pakkuburan* (cemetery/graveyard) or burial ground is a place where dead bodies reside, so that the place is considered *hodar* (dirty) and it is believed that it is inhabited by a *roguk* (watchman), namely a *jihin* (jinn) who is evil and a nuisance. The perception of the *pakkuburan* area as a *hodar* (dirty) place with a negative aura is indicated by the prohibition of approaching the area, especially for children under five and pregnant women. If there are children under five or pregnant women who are disturbed by the

jinn living in the *pakkuburan*, usually a ritual of *mangupa tondi* (inserting the spirit/soul/spirit back into the body) will be performed. The cosmology of Banua on the *tapian* (meso *huta*/kampung/village scale), which shows that the Banua Parginjang (Upper World) is in the *julu* (upstream) or the direction of the *mataniari* (sun), can be seen in Figure 4. The cosmology of the Banua on the *tapian* (environmental/meso scale), which shows the Banua Parginjang (Upper World) is in the *lombang* (lower/near the river), marked by a mosque and a *lubuk larangan* (forbidden area in the river); the *partoru* (lower) on a *dolok* (hill) with the *pakkuburan* (cemetery/graveyard) as a marker is shown in figure 5.



(Source: redrawn by the author based on Nuraini, 2014a; Nuraini et al., 2014b)

Figure 4. The cosmology of the Banua (world) on the *tapian* (meso *huta*/kampung/village) scale: the Banua Parginjang (Upper World) is in the *julu* (upstream) or *mataniari* (sun) direction



(Source: redrawn by the author based on Nuraini, 2014a; Nuraini et al., 2014b)

Figure 5. The cosmology of the *Banua* on the *tapian* (environmental/meso) scale: the *parginjang* is in the *lombang* (lower area/near the river) with the mosque and *lubuk larangani* as markers, while the partoru is on a *dolok* (hill) with the *pakkuburan* (cemetery) as a marker

Kampung Naga

Kampung Naga is located in a fertile valley at an altitude of 1,200 m above sea level, approximately 500 m from the Garut-Tasikmalaya highway and hidden near the Ciwulan River and Rancak Forest (Ismudiyanto, 1987). Actually, there are two *leuwung* (forests), namely a forbidden *leuwung* and a sacred *leuwung*. The sacred *leuwung* is distinguished by the presence of

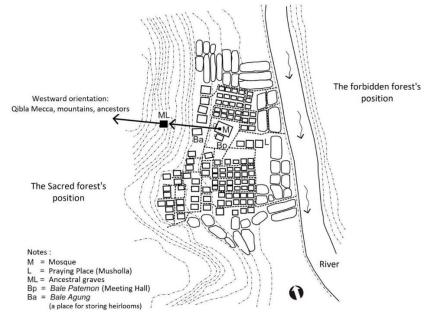
a sacred tomb and is located in the west, whereas the forbidden *leuwung* is located in the east and there is no tomb. The cosmology of the Kampung Naga community is based on Sundanese culture, in which the universe is divided into three layers, namely, the lower, middle, and upper (bad, neutral, and good respectively) layers. Viewed from the primordial understanding of the Indonesian people, the principle of life of the Kampung Naga community includes the paradigm of the threefold cosmology (Sumardjo, 2002).

The most sacred direction for the people of Kampung Naga is the west, as it is the position of Mecca. The west direction as the direction towards Mecca begins with respect for the ancestors at the ancestral graveyard in the sacred *leuweung* (forest). The kampung is in a neutral position, i.e., in the middle, while the prohibited *leuweung* (forest) position is in the east as a chaotic area; this is a place for devils, so that residents are prohibited from entering the area. Humans are in a position between good and bad, which affects the attitude of people who live cautiously in order to obtain a good living (Saringendyanti, 2008).

Saringendyanti (2008) also explains about the cosmology of Kampung Naga, which recognizes the myth that places that have the value of a border space, such as river boundaries, ditches, rice fields, or hillsides, are controlled by spirits, haunted, and house certain powers, so that offerings are needed in those places (Saringendyanti, 2008). There is a very strong syncretism between religion and local culture in Kampung Naga, so that norms of behavior and community relations with the natural surroundings are formed. Syncretism was formed between Islam as an Abrahamic religion that took hold in the village and Hindu-Buddhist religion (Ismudiyanto, 1987). As a result, very high trust was formed among the Hindu-Buddhist ancestors who coexisted with Islam, thus creating spatial behavior that was specifically guided by customs and religions.

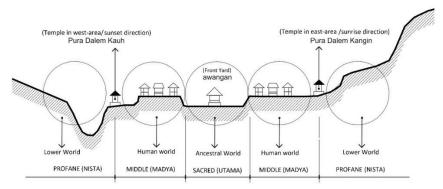
The position of Kampung Naga with respect to its environment is divided into three parts, namely, (a) the eastern area where there is the Leuweung Larangan (a forest where evil ghosts live), (b) the middle area where Kampung Naga is located, and (c) the western area where the sacred *leuweung* (the forest where the kampung's ancestors' bodies are buried) is located. Kampung Naga and the Leuweung Larangan are bordered by the Ciwulan River, while between Kampung Naga and the sacred *leuweung* there is the mosque, the *bale patemon* (meeting hall), and the *bale agung* (a place for storing heirlooms). The houses are stretched to the west with a higher western position as an expression that the west is the direction of the qibla, the direction of goodness and sacredness. There has been a change in the way Kampung Naga is reached. Initially, the kampung was reached from the west, namely from Mount Rancak, but nowadays it is always reached from the south. This happened possibly because the western route was too steep while the one from the south only has gentle slopes (Saringendyanti, 2008). The layout of Kampung Naga can be seen in Figure 6.

The life goal of Kampung Naga residents relates to the concept of *kawilujengan*, which is formed by the existence of a strong relationship between religion or beliefs, customs, and cosmology. To achieve a balance in life through the concept of *kawilujengan*, the residents show kind attitudes and behavior to their surrounding environment, which is manifested in the form of the use of certain symbols, such as red and white symbols, the use of bamboo borders and palm leaf roofs. In addition, the residents of Kampung Naga also recognize the calculation of the cardinal directions as the basis for calculating the compass orientation, namely two, three, five, seven, and nine (Ismudiyanto, 1987). Efforts to achieve *kawilujengan* are also manifested in the form of local culture that is in line with Islam, namely, (1) the westward direction, as the qibla direction, having a high value from the kampung's position, and (2) the eastward direction, as being a prohibited position, having the lowest value (Saringendyanti, 2008).



(Source: Redrawn by the author based-on Saringendyanti, 2008; Nuraini, 2014a)

Figure 6. Spatial layout of Kampung Naga in Neglasari village, Tasikmalaya: the west is sacred while the east is profane



(Source: Redrawn by the author based-on Runa, 2004 and Nuraini, 2014a)

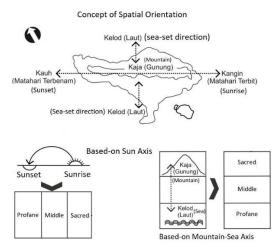
Figure 7. The concept of religious space in mountain settlements in Bali

Tenganan Village, Bali

Rural settlements in Bali's mountainous areas have the concept of a religious space that divides settlements into three worlds, namely, the Main World, which is the world of the ancestors, the Middle World, which is the place for humans to live, and the Profane World, which is the Lower World and which is considered profane. The border between the Lower World and the human world is marked by two *pura* (temples), namely Pura Dalem Kangin in the sunrise direction and Pura Dalem Kauh in the sunset direction (Runa, 2004). It can be concluded that the spatial layout of mountainous settlements in Bali is shaped by the physical aspects of the environment and non-physical aspects related to the Hindu/Buddhist cosmology. An illustration of the concept of religious space in mountainous settlements in Bali can be seen in Figure 7.

Rural settlements in Bali, according to Dwijendra (2003) are traditionally patterned settlements with three main elements, namely *kahyangan tiga* (village temple), *krama desa* (citizens), and *karang desa* (area) with a background of norms and traditional values that underlie these elements.

Settlements in Bali are principally based on concepts such as a harmonious relationship among Bhuana Agung (the vast nature, or the vast world/macrocosmos of the universe), Bhuana Alit (the small nature, or the small world/microcosmos), Manik Ring Cucupu (fetus in the womb; in the Balinese belief system, this is interpreted as the human as a fetus and nature as the womb), Tri Hita Karana (the three factors that contribute to the creation of happiness in Balinese beliefs: relationships with other people, the relationship with the natural environment, and the relationship with God, which are all interconnected), Tri Angga (local wisdom regarding the concept of space that is owned by the Balinese people), and Hulu-Teben (the idea of arranging a space in a vertical and horizontal pattern to create order), which gave birth to the Sanga Mandala values that provide spatial direction, both in terms of the house (*umah*) and the village. The orientation of residential spaces based on the binary space concepts *kaja-kelod* and *kangin-kauh* can be seen in Figure 8.



(Source: Redrawn by the author based on Budihardjo, in Dwijendra, 2003; Nuraini, 2014a)

Figure 8. Directional concept of settlement space and house orientation

Result and Discussion (Theoretical Dialogue)

Three cases of mountainous settlements were reviewed in relation to the binary space of *bincar-bonom*, namely the *timur-barat* (east-west) direction as binary space concept and the threefold division structure in the settlements of Kampung Naga, Neglasari Village, Salawu District, Tasikmalaya Regency and *kangin-kauh* as binary space concept and the threefold division structure in Bali's mountain villages from a socio-cultural perspective.

Bincar-bonom (sunrise direction-sunset direction) and timur-barat (east-west)

The history of Kampung Naga goes back to Eyang (Grandfather) Singaparna, who is highly respected by the residents of Kampung Naga. His tomb is on the west side of the kampung and is used as a worshiping place. Eyang Singaparna was given the knowledge of being able to hide in a crowd by his father Raja Galunggung (King of Galunggung). At the time of the invasion by the Sunda kingdom, the King's family hid and scattered (Saringendyanti, 2008).

Similar to Kampung Naga, the founder of Singengu village was a person, named Langkitang, who is highly revered by the villagers of Singengu and by all residents in the villages of Mandailing Julu. Langkitang is an ancestor of the Singengu villagers and the villagers throughout Mandailing Julu belonging to the Lubis family/clan. The residents of Kampung Naga consider the forest where ancestors are buried a sacred place. The place of the sacred cemetery in the west is considered the best place (upper) and has the highest value compared with other places in the

residential area. This is different in Singengu village. Singengu villagers also have great respect for their ancestors but do not consider their ancestral graveyard to be sacred. The respect for their ancestors is manifested by placing the cemetery there where the ancestors first started living in the *tapian* (edge) world. The place of origin of their ancestors is the *tor* (mountain), so that when their ancestors died, they were buried on the *tor* (mountain).

According to Ismudiyanto (1987), the location of Kampung Naga, which is hidden between a mountain/hill and a river, was most likely a hiding place. The selection of a safe location is the first consideration for escapees or people who want to hide. Originally, the entrance to Kampung Naga was on the west side of the village, so it appears that the ancestors of Kampung Naga originally came to the area by descending into a steep valley.

Singengu village was chosen as a settlement location because it was the place of origin or the place their first ancestor inhabited, and where he started a new life with his family. For the Mandailing people, a person's life will be perfect if he/she gets married because that is when their life begins. A new life must start in a new place, not in the place of origin. Therefore, after a man gets married, as a successor of the clan, he must be the leader of his family. At the time of starting his new life, every man must carry out a customary ritual called manjujur (manjujur means honesty), and in the next stage, the man will be facilitated to become a charismatic leader (harajaon) for his family, his relatives, and his people. Therefore, the area of Singengu village was chosen as a settlement location not to escape from enemy attacks but because of, firstly, the desire of the first ancestor of the Mandailing people to become a leader or king (harajaon), produce offspring (hagabeon), and obtain the glory of life (hamoraon) in a new place after coming down the mountain. Secondly, the Singengu village area was chosen because its location has the criteria stipulated by the ancestors, namely, (1) it is located in the upstream area of a river, which is identical to the direction of the source of a mual (spring) from the tor (mountain); (2) it is located in an estuary partontang area, a symbol of three new generations who start a new life in a new place; (3) it is located in a tapian area (edge), which is the new Banua (world) for the next generation of the ancestors who previously lived on the tor (mountain), and (4) it is located in the direction of bincar (sunrise). Thirdly, the formation of the Singengu village settlement did not happen in a short time but through a cyclical process from the tor (mountain) to the tapian (edge) based on the values of mangulaki pangkal (returning to the origin), namely, the origin or the beginning of life, which is always symbolized by the direction of the bincar (sunrise). This cyclical process is carried out as a form of respect for the ancestors who are the *pangkal* (origin) of the current generation and as a form of obedience to the Creator who is the source of everything that exists in the world.

The location of Eyang Singaparna's tomb in Kampung Naga, which is on the west side of the village, is considered to be the position with the highest value, because it is in Leuweung Rancak. Each place in Kampung Naga has a different value. The people of Kampung Naga, who live based on Sundanese culture, believe that the universe consists of three layers, namely lower, middle and upper (bad, neutral, and good, respectively). The cosmology of the Kampung Naga community can be equated with the cosmology of the three Banua (worlds) found in Singengu village, namely Banua Parginjang (the Upper World, place of *datu*/creator spirits), Banua Partonga (the Middle World, where humans live), and Banua Partoru (the Lower World, the world of the dead). However, the threefold division concept has different applications in each settlement. The lower part, which has a bad connotation for the people of Kampung Naga, is the eastern area of the settlement, and this area also has the lowest position in terms of its geographical situation. This area is marked by the presence of a forbidden *leuweung* (forest) and is believed to be a place of evil ghosts. In Singengu Village, Banua Partoru (the Lower World) is the area of *bonom mataniari* (sunset, west) in the *jae* direction (downstream) of the river and is marked by the *pakkuburan* (cemetery).

In the previous explanation in the literature review, it has been explained that the most sacred direction for the Kampung Naga community is the western direction pointing towards Mecca. In the settlement of Singengu village, the sacred direction is *julu* (upstream) of the river and the direction of the *mataniari* (sunrise). For the people of Kampung Naga, the east, which is the direction of the sun's rays, is a forbidden place because it has a profane value. For the Mandailing people in Singengu village, the direction the sun is coming from is also a forbidden direction, but it does not have a profane value but on the contrary is sacred. The sacred direction of the sun's rays causes a ban on placing a house in that direction. This is due to the perception of the ancestors of the Mandailing people who thought that the sun is the *pangkal* (origin) of the power of Datu (the creator), so that the direction of the rising and setting sunlight should not be opposed. To oppose the direction of sunrise and sunset means to oppose Datu. However, the direction of the sun's rays is highly recommended for future generations to open or create a new *huta* (village), produce offspring, and it even regulates the life of Singengu villagers, so that *bincar-bonom* is the basis for living on all spatial scales.

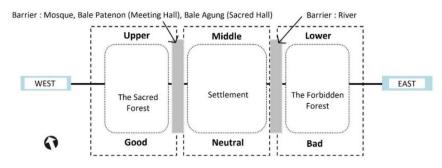
Kampung Naga's cosmology recognizes the myth that every place is a border with a specific spatial value. Singengu village also recognizes the existence of a border, the so-called *pangolat*, but this is different from the limiting element in Kampung Naga. In Singengu village, the mosque is in Banua Partonga (the Middle World), however, it is right next to the *lubuk larangan* area. Between the *dolok* (hill) in the settlement's north, specifically the Tawar Hill, and the *parbagasan* (dwelling/housing block) area, there is a barrier/border (*pangolat*) called *lubuk larangan*. The *pangolat* (barrier/border) between the *parbagasan* (dwelling/housing block) area and the *dolok* (hill) in the south is the *tobat bolak* (big pond). The *pangolat* (barrier/border) in the *julu* (upstream) direction is a river and *partontang* estuary, while the *pangolat* (border) in the *jae* direction is the *pakkuburan* (cemetery). The settlement of Singengu village in *tonga* (middle) is between *julu* (upstream of the river) and *jae* (downstream of the river).

By the Mandailing people in Singengu village, border places are considered to be inhabited by their 'guards', namely *roguk*/spirits called *jihin* (jinn). However, the presence of *jihin* is not seen as something disturbing, so Singengu villagers never give offerings in these places. Singengu villagers call these places *inganan rarangan* (forbidden places). Each of the forbidden places is off limits, so that no villager dares or tries to approach them. Entering a forbidden place means disturbing the *jihin*'s place, so it is believed that people who dare to enter will be cursed by the inhabiting *jihin*, and their *tondi* (spirit of the soul) will be disturbed. Therefore, for Singengu villagers, 'off limits' is the concept for *pangolat* (border) places in their residential areas.

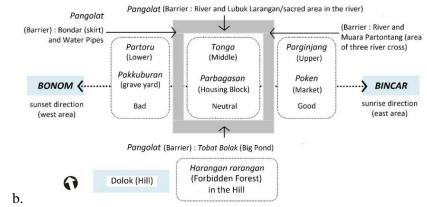
Singengu village's settlement also seems to have values of Islamic-Hindu/Buddhist syncretism. The Islam-Hindu/Buddhist syncretism in Kampung Naga is marked by the meaning of the westward direction as a sacred direction associated with Mecca, while in Singengu Village it is marked by three meanings. Firstly, humans who come from soil will return to it, so people who have died must be buried under the ground. Secondly, humans live in the Banua (world), and they are always accompanied by spirits, namely *jihin* (jinn), so there are certain places in the Banua (world) that are also places for these *jihin*. The villagers call the *jihin*'s dwelling place *naborgo-borgo* (damp-humid/wet places). The *jihin* (jinn) also have two characteristics in common with humans, namely good and evil, so that certain places are guarded by evil *jihins*, and other places are guarded by good *jihins*. Thirdly, the west direction related to the direction of Mecca is used as a reference in placing the village's mosque. The mosque in Singengu Village is in the *bonom* (sunset-direction) from *alaman bolak*.

The concept of *kawilujengan* is the life goal of the Kampung Nagar, while the life goal of Singengu Village people is *hamoraon* (the glory of life). Kampung Naga people embody *kawilujengan* in the form of a settlement that positions places in the west as having the highest

value and places in the east as prohibited, having the lowest value. The efforts of Singengu village people to achieve *hamoraon* (the glory of life) are carried out by always *mangulaki pangkal* (returning to the origin), namely, (1) *mangulaki pangkal* to their ancestors through developing their settlement towards places where there are *tor* and (2) *mangulaki base* to Datu (the Creator) through developing their houses and settlement in the *bincar-bonom* (sunrise-sunset) direction. For Singengu village people, through *mangulaki pangkal* they will continue to have an unbroken relationship with their ancestors (as the pioneers of life and representatives of Datu in Banua) and Datu (as owner of their *tondi* and giver of life), so that their *tondi* (spirit of the soul) that is in them is maintained and protected.



a. Concept of three-division, binary space : east-west, and place boundaries in Kampong Naga's settlement



(Source: Analysis and reconstructed by the author based on Nuraini, 2014a; Saringendyanti, 2008 and Ismudiyanto, 1987)

Figure 9. Relationship among the threefold division cosmology, east-west, and place boundaries in Kampung Naga's settlement (a) and Singengu village (b)

In general, there are three basic differences between the spatial layout of Kampung Naga's settlement in Neglasari Village, Tasikmalaya and that of Singengu Village:

a. The threefold division cosmology (Upper-Middle-Lower World)

The Upper World in Kampung Naga is a sacred forest and is marked by a sacred cemetery, and the Lower World is a forbidden forest. The Upper World in Singengu village is the Muara Partontang and *poken* area (*pekan*/market), while the Lower World is the *pakkuburan* area (cemetery/burial ground). The Upper World in Kampung Naga is in its western area while that of in Singengu village is in its eastern area.

b. East-west and bincar-bonom (sunrise-sunset direction)

The area in the east for the people of Kampung Naga is an area that has a profane value and the area in the west is an area with a sacred value. In Singengu village it is the opposite; the east

direction of *bincar* (sunrise direction) is a place that has a sacred value, while the west direction of *bonom* (sunset direction) has a profane value.

c. Boundaries

The residential area in Kampung Naga only has two boundaries in the east and west, while Singengu village has four boundaries, located in *bincar* (sunrise direction), *bonom* (sunset direction), *dolok* (hill), and *lombang* (down area, near the river). The relationship among the threefold division, east-west direction, and borders/boundaries in Kampung Naga's settlement and Singengu village can be seen in Figure 9.

Bincar-bonom (sunrise-sunset direction) and kangin-kauh (sunrise-sunset direction)

Runa (2004) explains that Balinese people believe that there are two world classes, namely, the world where humans live and the world where humans live after they die (the hereafter). The first life in this world will continue in the second life after a person dies, namely in the ancestral spirit world. The belief in ancestors and their world is an ancient Balinese belief. According to this belief, people who have died are divided into two groups. The first group consists of those who have died but have not been purified and are called pirata, and those who have not been completely purified and are called pitara. The second group consists of ancestors who have been completely purified and are called Dewa, Dewata, Batara, and Sanghyang, who are worshiped and sacred. *Pirata* are ancestors whose corpses have not been burned by fire but are still dirty, dangerous, and inhabiting the Lower World. These categories are similar to night, black, sea, sunset, and tilem (black moon). Offerings to pirata are usually made at the graves, or pura dalem, to penetrate their spirits. Pitara is an ancestor who has been cremated but is still considered to have a worldly soul like humans. Pitara are worshiped in the yard of the residence but not in pamerajan (Runa (2004). Ancestors who have been completely purified are no longer considered separate individuals but supernatural beings. They merge and unite with the earlier ancestors. Ancestors, gods, and God reside in heaven, beyond the real world, and are symbolized by a high mountain in the middle of the island of Bali (Runa, 2004).

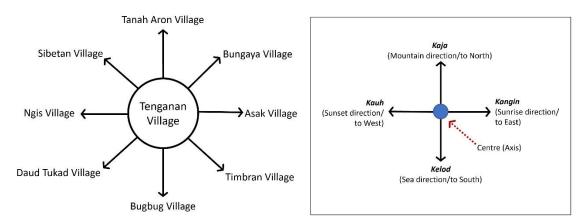
Balinese people see space not only as a homogeneous, neutral, and geometric space, but also as a unique and sacred ontological space. Space can have a variety of values and sacred directions. There are two pairs of directions, where each pair is an opposition, such as *kaja-kelod* (mountainsea) and *kangin-kauh* (sunrise-sunset) direction. The direction of *kaja* (mountain) has a good connotation, is divine, and auspicious, i.e., all things are related to the Upper World. The opposite direction is *kelod* (sea) and associated with the Lower World (land), which is not good, evil, and is closely related to worldly forces. The direction of *kangin* (sunrise) is the same category as *kaja*, while *kauh* (sunset) is in the same category as *kelod* (Runa, 2004).

According to Runa (2004), in Tenganan Pagringsingan Village, the orientation of this village is very dominant towards the shared open space in the middle area. Its orientation axis (mountain-sea/kaja-kelod) is in the form of a wide, open space (awangan) stretching north-south. The dominant village orientation to the center can be explained through a balance. The balance in the spatial structure of Tenganan Pageringsingan village is the balance between two things that are opposed but are a unity or complement each other, with the middle point as the center of the balance. This concept in Bali is commonly called 'Rwa Bhineda'.

According to Goris and Dongkers (in Runa, 2004: 279), since ancient times, the population has been divided into two parts. This division parallels struggles such as above the world (uranisch) and under the world (chthonisch), male and female, day and night, sunrise (*kangin*) and sunset (*kauh*), mountain (*kaja*) and sea (*kelod*), good and bad, and left and right. The spatial structure of Tenganan Pagringsingan village seems to be the dominant division of *kaja-kelod* and *kangin*-

kauh. This balance was later developed by Francais (in Runa, 2004) into the concept of 'Mandala', which connects Tenganan Pagringsingan village with other villages in the vicinity as a mutually beneficial cultural unit (Figure 10).

Runa (2004) also explains that at a smaller scale, for example on the *banjar* (block) scale, the balance between *kaja-kelod* and *kangin-kauh* is applied in the same manner as at the village scale. In the yard of a home, this balance is applied in the form of placing pavilion units. Such a balance also applies in the use of building materials. Building materials that were once used for *bale buga* can be used for *paon* and vice versa. Furthermore, building materials that were once used for the *bale tengah* can be used for the *bale meten* and vice versa. In addition, there is also a *sanggah kaja* and *sanggah kelod* with the opposite layout, as these names imply. Furthermore, in the *bale tengah* there is a section to perform birth ceremonies (*tebenan*) and the death ceremony (*duluan*), where the head of the dead is always positioned by considering the balance. Before the death ceremony, the position of the head of the dead is in the *kaja* direction, but during the ceremony its position is in the *kelod* direction.



(Source: redrawn by the author based on Runa, 2004)

Figure 10. Abstraction of the concept of balance in Tenganan Village, Pegringsingan.

According to Runa (2004), village spaces in Bali have variations in their values (main, middle, and profane) and sacred directions (*kaja*/mountain-*kelod*/sea and *kangin*/sunrise-*kauh*/sunset). The village space is symbolically divided into three parts. The first part is the *kaja* section, where there is a *pura paseh* as the symbol of the Upper World that is the world of ancestral spirits and God. The *pura paseh* symbolizes the ruler of the village area and the village founder. The second part is the yard of the house including the common spaces (*bale agung*, *bale banjar*, market, etc.), which are part of the profane world, or the place where humans live their worldly life. The third part is the village's *kelod*, where there is a burial ground and a *pura dalem* as a symbol of the Lower World.

Runa (2004) also revealed that in Tenganan Pagringsingan village, the structure/form of its physical environment is irregular; its group of residential buildings (the build-up area is in the middle) is in the lowlands and intersects with the southern environmental boundary. The physical environment is naturally bounded by natural elements such as ravines, ditches, main roads, and *kepuh randu* trees (to the east), ridges, ravines, and rivers (to the south), food paths, *kepuh randu* trees, and ridges (to the west), and rice fields and moorland (to the north). The structure of such a physical environment is closely related to defense, security, accessibility, and balance. A village spatially located in the middle among three hills will facilitate the maintenance of security in the village. In addition, the spatial location of the village in the lowland slightly to the south facilitates

village accessibility because the primary road is in the southern part. The village spatiality that is in the middle is also related to the balance of *kangin-kauh* and *kaja-kelod*, with the midpoint as the balance point.

The spatial structure of Tenganan Pageringsingan village is longitudinal, in line with *kaja-kelod*. The middle part of the village, which consists of shared open spaces and public facilities, is the most important space (having the highest value). On its right and left sides are the residential yard (having a medium value), and on the edge there are a cemetery and a *pura dalem* (profane). The spatial structure at the village scale is appropriate and consistent with the *banjar* scale but different from the residential scale (Runa, 2004).

In his description, Runa (2004) reveals that in a home, the space with the highest value is in front of the shared open space. The middle of the home has a medium value, and the back has a profane value. The main area is for the *bale buga*, *sanggah kelod*, and *sanggah kaja*; the middle area is for the *bale tengah* dan *bale meten*; the profane area is for the *paon* and backyard (*teba/teba pisan*). Such spatial structure is related to the balance of *kaja-kelod* and *kangin-kauh*. At the village and *banjar* scale, the balance of *kaja-kelod* can be seen in the shared open space in the middle that extends in line with *kaja-kelod*, while the *kangin-kauh* balance can be seen in the rows of houses on the left and right side of the shared open space. The spatial structure of the village and *banjar* (left) and the houses (right) in Tenganan Pageringsingan village can be seen in Figure 11.

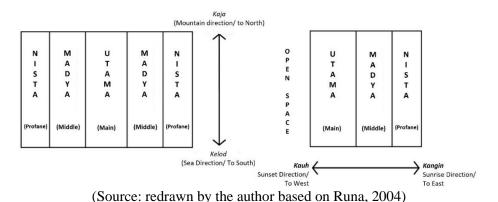


Figure 11. Abstraction of spatial structure of village and *banjar* (left) and houses (right) in Tenganan Pageringsingan village

According to Runa (2004), the physical and spatial environment of Tenganan Pageringsingan village has the meanings of honor, balance/harmony, safety, and communality. Furthermore, the home has the meanings of a small family, homogeneity, communality, and order. The meaning of honor is shown through the transfer of land rights, which is only allowed to the indigenous people of Tenganan; outsiders are prohibited from buying, pawning, or renting land. Land ownership is strictly regulated in village regulations (*awig-awig*). In 1960, the Basic Agrarian Law and several implementing regulations were issued to change the concept of land tenure, from customary land to individually owned land. This does not seem to work in Tenganan Pageringsingan village, as it has been proven that until now most of the land still belongs to the tribe (customarily owned).

Runa (2004) also explains that the meaning of balance/harmony is shown through the enactment of a ceremony, called the *neduh* ceremony, which is related to maintaining the fertility of the agricultural land. This ceremony is performed in two ways. Firstly, this ceremony is performed in five consecutive years in Tenganan Pageringsingan village (called *ngubeng*); secondly, it is

performed in the next five years outside the village (called *memargi*). This ceremony aims to eliminate pests that interfere with rice fields and other croplands. In addition, there are other ceremonies at several *pura air* (water temples) to maintain fertility as a hierarchical system.

According to Runa (2004), the meaning of safety is shown in the configuration of the area. The site of the village is located in the center slightly to the south, in a lowland surrounded by a river and three hills (the Kauh Hill, the Kaja Hill, and the Kangin Hill). The area of Tenganan Pageringsingan village is surrounded by several villages, i.e., Ngis, Sibetan, Macang, Tanah Aron, Kestala, Gumung, Bungaya, Asak, Timbrah, Bugbug, Pasedahan, and Daud Tukad. Each village cooperates with Tenganan Pageringsingan village so as to create security and mutually beneficial relationships. Since the days of the kingdom up to the present, Kestala people have been specially placed in the north of the village to protect Tenganan village from attacks from the people of Sibetan village. The village spatiality is also surrounded by a fence with doors in the four cardinal directions.

Runa (2004) explains that communal meaning in the village space is shown through the shared open space in the middle. Based on its location, the shared activity space is divided into two parts. The first is a shared activity space that is within the administrative area of Tenganan village, and the second is a shared activity space that is outside its administrative area. Most of the types of collective activity spaces in Tenganan village (47 types) are in its residential complexes. Most of the shared activity spaces in these residential complexes are in shared open spaces, especially the western open spaces. The number of shared spaces and activities are in accordance with the local calendar, centered in Bale Agung and coordinated by the village, making Tenganan village communal. On the other hand, *banjar* only has a territorial meaning because there are not many activities carried out at the *banjar* scale.

According to Runa (2004) the meaning of the small family home is shown through the rules of residence and the area size of the house. If a new family is formed, then within six months it must move to a new residential plot. The selection of the residential plot can be based on inheritance from both the husband's and wife's side of their family or by choosing an empty plot that has been prepared by the adat village. One residential plot with an average area of 150 m² to 200 m² is only intended for one extended family. The meaning of the homogeneity or orderliness of a house can be identified based on its site plan (configuration of a pavilion unit) and its residential value system. In one yard there are at least six pavilion units (bale-bale). There are four pavilion units whose dimensions are quite large, namely the bale buga, bale tengah, bale meten, and paon. The other two pavilion units, namely sanggah kelod and sanggah kaja, have relatively small dimensions. The configuration of the pavilion units in one home can be said to be uniform. In general, this configuration can be divided into three parts, namely the front, which is close to the shared open space, the middle, and the back. At the front there are the bale buga, sanggah kelod and sanggah kaja. In the middle there are the bale tengah and bale meten, and in the back there are the paon and teba. In general, the spatial value system in each home's yard can be divided into three values, namely the front area has the highest value (sacred), the middle area has a medium value (semi), and the back has a profane value. The front yard is very important because it is the closest to the shared open space as the center of activities that have sacred values. The closer to the shared open space, the more sacred the living space of the house. On the other hand, the farther away from the shared open space, the more profane the living space will be.

Runa (2004) reveals the core spatial system of mountain villages, namely Tri Hita Karana, Pura Puseh, mountain-sea orientation (*hulu-teben*), *adat* villages, village land ownership, and small family houses with open shared walls. The physical means for the implementation of Tri Hita Karana is a ceremony (*yadnya*) based on an understanding of time that is considered good (auspicious). All villages also have three main holy places (*pura kahyangan tiga*), consisting of

pura puseh, pura desa/bale agung, and pura dalem. The placement of the pura kahyangan tiga in the village, including the sanggah/pamerajan in each house's yard, always pays attention to the mountain-sea orientation (kaja-kelod/upstream-teben). The pura puseh is consistently in the kaja/hulu part.

Adnyana (2003) revealed that every mountain village has several social organizations/institutions. The social organization that has relatively strong functions and regulations is the *adat* village. The area of a mountain village is very large, and a lot of agricultural land is also controlled by the *adat* village, including the land for the yard of a house. Most of the residents of Bali's mountain villages live in small family yards with no clear boundaries among the houses of inner families.

In Tenganan Pageringsingan village, the orientation is directed towards the mountain through a fairly large core in the middle of the village (Runa, 2004). Subsequently, it proceeds to the mountain or hill to the north (kaja) of the village site. The mountain in the north has more primary value than the other two mountains. This can be seen from the location of the *pura puseh* on the northern slopes of the mountain, while the cemetery and the *pura dalem* are on the eastern and western slopes of the mountain. In the villages of Bungaya, Sidatapa, Kiyadan, Jatiluwih, and Denpasar, the orientation to the mountain in the kaja of the village site is through an inter-village road in the middle of the village. In Penglipuran Village, the orientation to the mountain/hulu is through the inter-village road in the middle. The road has a strong axis impression (except for Denpasar Village). In Sukawana village, the orientation to the mountain in the kaja of the village site is through a relatively narrow inter-village road with a less dominant axis impression (Runa, 2004).

According to Runa (2004), Balinese ancestral beliefs affect the spatial formation of the villages there. The village axis is the main road that runs along the *kaja-kelod* direction (north-south for Southern Bali and south-north for Northern Bali). The village space is symbolically divided into three parts. The first part is the village's *kaja* part, symbolized as the world of ancestral spirits or the world of God. In this section there is the *pura puseh* (the center of *merajan*), which is manifested as the ruler of the village area and the founder of the village. The second part is the center of the village, where there is a residential yard including shared spaces such as the *bale agung* and *bale banjar*. This part is the world of the humans, also known as the profane world. The third part is the *kelod* of the village, functioning as a symbol of the Lower World. In this section there are a burial ground and the *pura dalem* as the *pura* of the Lower World.

The differences between the Pagringsingan village settlement in Bali and Singengu village in Mandailing include the following:

(a) The threefold division cosmology in Tenganan Pageringsingan village and Balinese mountain villages has always been consistent from the past up to the present. This division consists of the Upper World (the world of ancestral spirits/world of God), which is in the *kaja* (mountain direction) and has the highest value, the Middle World (the human world) is the place to live and has medium value, and the Lower World (the world of the dead), which is in *kelod* (towards the sea) and has a profane value. Singengu Village's cosmology has two different understandings, namely the threefold division in *inganan najolo* (the former place/place of origin, namely *tor*/mountain) according to the ancestors' understanding, and the threefold division in *inganan sannari* (the place of the present time, namely *tapian*/edges) according to the understanding of the Singengu villagers.

In *inganan najolo* (the former place), the Banua Parginjang/the Upper World (the world of Datu/Creator/God and ancestral spirits) is at the top of the *tor*/mountain, close to a *mual*/spring and has the value of being *ias*/clean. The Banua Partonga/the Middle World (human world) is

on the slopes of the *tor* between the Banua Parginjang and the Banua Partoru and has an ordinary value, while the Banua Partoru/the Lower World (world of the dead) is in *dolok* (foot of the mountain/hill) and is considered *hodar*/dirty.

In *inganan sannari* (the place of the present time), the Banua Parginjang/the Upper World (the world of Datu/Creator/God and ancestral spirits) is in the *julu* (upstream) of the river, close to the *muara partontang* and has the value of being *ias*/clean. The Banua Partonga/the Middle World (human world) is on the riverbanks between *julu* (upstream) and *jae* (downstream) and has a neutral value, while the Banua Partoru/the Lower World (world of the dead) is in the *jae* (downstream) direction of the rivers and is considered *hodar*/ dirty.

However, the settlement of Singengu village, which is the *inganan sannari* (the place of the present time) as a place to live, turns out to also use the same instructions as the ancestors in choosing a place to live, namely the direction where the *mual* (holy spring) comes from, which is the *tor* (mountain). The *julu* (upstream) direction for the residents of Singengu village is the *mual tor kulabu* (spring) in the southeast area of the village (*bincar* direction) as the main source of clean water for all Mandailing Julu villages. However, the place of the present time, which is considered different from the place of origin of the ancestors in the *tor*, Singengu village as *banua tapian* has a tendency towards the concept of the *bincar-bonom* axis as a reference to shape the architecture of its settlements. This is shown by all aspects of the settlements, both physical and non-physical.

(b) The understanding held by the residents of Tenganan village about people who have died or the ancestors is different from the understanding held by the Mandailing people in Singengu village. The Balinese believe that the body of a deceased person must be purified through cremation, so that his spirit can go to the Upper World (the world of spirits/God's world). This understanding is also manifested in physical symbols in the form of temples, namely the *pura dalem* in *kelod* (the direction of the sea) as a place to worship *pirata* (bodies that have not been purified) and the *pura puseh* in *kaja* (the direction of the mountain) as a place to worship *pitara* (bodies that have already been purified but are not yet perfect).

Singengu villagers' understanding of the dead is strongly influenced by their beliefs in the past (Sipelebegu) and in the present, namely Islam. Singengu villagers consider that people who have died/ancestors are humans who came from the soil, so that they must return to the soil (mangulaki pangkal/returning to the origin). Therefore, the place of the deceased must be under the ground. A person who has died occupies a new world, namely, the Banua Partoru (the Lower World), which is located in tano inganna sorang (the land where he was born). The deceased person does not need to be purified through certain rituals; it is enough to honor him by returning him to his homeland (mangulaki pangkal) and placing his grave close to the people of his native village.

According to Sipelebegu (worshiping ancestral spirits), the spirits of the dead will reside at the top of the mountain, close to a *mual* (sacred spring) and will go to the world of Datu (Creator/God), i.e., the Banua Parginjang (the Upper World). During the Sipelebegu period, the *mual* (spring) on the *tor* was used as a medium for worshiping ancestral spirits. The Sipelebegu belief system also reflects that humans are created by Datu (Creator/God), and after death they will return to Datu (*mangulaki pangkal* concept).

Tenganan Pageringsingan village has only a cemetery area in one place, namely in *kelod* (the direction of the sea), which has a profane value (the Lower World), while in Singengu village, *pakkuburan* (cemetery) areas are found in many places. Each graveyard area has a hierarchy based on the person's seniority and social status in Mandailing. The more senior and higher

the position they had in the *huta* (*adat* village), the farther their cemetery will be. The ancestor who is the first Singengu villager (*pamungka huta*/village founder) and the first king of Singengu Village were buried far outside the settlement, which is to the west of Singengu Village, on Tor Sihite (Sihite Mountain). The ancestral cemetery in Singengu village is the farthest cemetery. The concept of choosing a location for *pakkuburan* is also in accordance with the concept of *mangulaki pangkal* (returning to the origin). Tor Sihite was the first stopover place of the founder of Singengu village when he first descended the mountain and looked for tapian (edge) areas. Therefore, when he died, he was returned to Tor Sihite. The location of the cemetery is also determined using the *bincar-bonom* axis by placing the grave of the original/oldest generation in the *bonom* direction and the graveyard for the next/younger generations in the *bincar* (sunrise) direction.

(c) In Tenganan Pageringsingan village in Bali, the spatial structure at the village scale is different depending on the scale of the house. In a home, the space with the highest value is in front or in the shared open space, the middle has a medium value, and the rear part has a profane value. This is comparable to the spatial structure of settlements at the *huta* (kampung/village) scale and the *bagas* (house) scale in Singengu, which is also different. However, the spatial structure at the *bagas* (house) scale in Singengu village is oriented towards the north-south, which is different from that in Tenganan village, where it is oriented in the *kangin-kauh* (sunrise-sunset) direction. In Singengu village the direction of the sunrise is the forbidden direction because the sun is considered the source of the power of Datu (Creator/God). There are no houses facing the rising sun. However, a sub-*huta* (a subkampung/subvillage of the parent village, Singengu village) may develop towards the sunrise; all the spatial phenomena of Singengu village settlements even refer to one single principle, namely, the *bincar-bonom* (sunrise-sunset) axis.

The homes in Singengu village stand on their own without any special grouping as found in Tenganan Pagringsingan Village in Bali. In Singengu Village, although the villagers are grouped in clans, there is no grouping of houses based on these clans. The houses of each clan family are located throughout the *parbagasan* (housing) area. The structure of the *bagas* (house) is determined using the concept of *marsidopan* (face-to-face) as a symbol of the value of *mangulaki pangkal* (returning to the origin). The houses that are mutually *marsiadopan* form an *alaman* (yard). The *jolo* (front) part of the house, which is near the yard, has an *ias* (clean) value and is a symbol of the place of origin of the villagers' ancestors, namely the *tor* (mountain). This means that although spatially Singengu village has a different structure from the spatial structure of the place of origin (*tor*), at the *bagas* (house) scale its physical structure is determined using the structure of the place of origin. This is what is meant by *mangulaki pangkal* (returning to the origin) at the micro scale.

Mangulaki pangkal at the micro scale is also indicated by the direction of the development of the housing, which always refers to the direction of bincar. However, at all scales – macro, meso, and micro – the sun is a symbol of the beginning of life and is the main reference. This is shown by using the bincar direction as a reference direction for shaping settlement spatial plans as found by Nuraini (2014b), Nuraini et al. (2018), and Nuraini (2019). Therefore, the Banua structure in the settlement layout of Singengu village is a structure that refers to the bincar-bonom axis with the bincar direction as a sacred direction. The religious space of villages in Bali and Singengu village can be seen in Figure 12.

The Singengu village locus can be described as a mountain village on a riverbank. The emphasis on the river aspect is crucial because for the people of Mandailing a river is the main tool for determining the position or location of a physical settlement, namely a *partontang* estuary and/or a *partonuan* estuary, which is also related to the concept of *bincar-bonom*. The link between the

river and the *bincar-bonom* concept is the *julu* (upstream) direction, which refers to the origin of the water, namely the spring from the mountain located in *bincar*. River elements are also found in the case of other mountainous settlements, such as Kampung Naga in Neglasari village, Tasikmalaya and mountain settlements in Bali, but the role of the river in forming these settlements does not have a major effect. This research contributes to a new type of settlement in terms of its substance, namely rural settlements in the mountains that are on riverbanks.

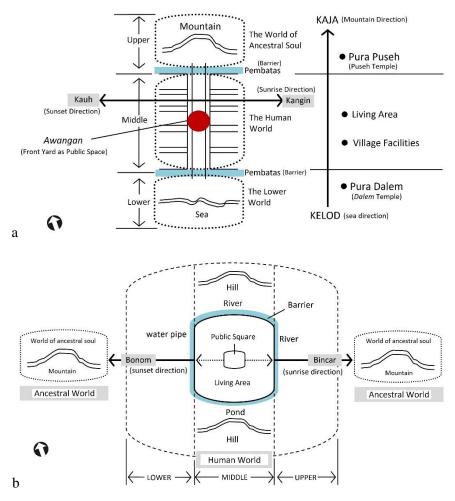


Figure 12. Religious space of villages in Bali: (a) direction of the sacred mountain; and (b) the *bincar* direction of the religious space in Singengu village in Mandailing Julu.

The locus of mountainous settlements relating to the threefold division principle in the two cases discussed above shows that the east direction, where the sun rises, is the profane direction in Kampung Naga and Tenganan Pageringsingan village. On the other hand, in Sengengu village the direction of the sunrise is the sacred direction. Kampung Naga, mountain villages in Bali, and Singengu village all recognize the existence of borders at the village scale. There are two borders in Kampung Naga, namely (1) the river in the eastern area, which separates the residential area from the forbidden hill in the east, and (2) the mosque, the *bale patemon*, and the *bumi agung*, which separate the residential area from the sacred hill in the west. The boundaries in Kampung Naga are on the east and west sides of the residential neighborhood. There are four borders in Tenganan Pageringsingan village, namely two temples (*pura*) in the direction of *kangin-kauh* (sunrise-sunset) at the village scale and two temples in the direction of *kaja-kelod* (mountain-sea) at the regional scale. There are four borders in Singengu village at the village scale, namely the

river and the *partontang* estuary in the *bincar* (sunrise) direction, the *bondar* and water pipes in the *bonom* (sunset) direction, the river and *lubuk larangan* in *lombang* and *tobat bolak* in *dolok*.

In addition, the ancestral cemetery in Kampung Naga is considered sacred and is located in the western area of the village. The western direction in Kampung Naga is also identical to the qibla direction, so that the sacredness of the western direction is not only that of the ancestral cemetery but is also influenced by religion, namely Islam, which is the religion of the local people. In the case of Tenganan Pageringsingan village, the cemetery is located in the kelod direction (toward the sea), i.e., to the south, which is considered profane. Balinese mountain people are still strongly bound by Hindu customs and traditions. The location of the cemetery in Singengu village is unique and different from the cemetery in Kampung Naga and in Balinese mountain villages. The cemeteries in Singengu village are in the western and southern areas. The cemetery in the western area is an ordinary cemetery located far from the parbagasan (housing) area, while the cemetery in the southern area is the cemetery of the king's descendants and is located in the parbagasan (housing) area. All burial sites in Singengu village are considered profane, similar to the ones in the mountain villages of Bali but different from the cemetery in Kampung Naga, which is considered sacred and holy. The location of the cemetery of the descendants of the king in the parbagasan (housing) area is only a form of respect for the ancestors, but the cemetery is still considered to have a profane value.

The position of the cemetery as something profane in Singengu village causes a different form of the threefold division principle at the village scale and the *parbagasan* (housing) scale. At the *parbagasan* (housing) scale, the profane area is the area of the cemetery of the king's descendants in the *dolok* (upper) area, while the sacred is in the *lombang* area, marked by the presence of a mosque and the *lubuk larangan* (forbidden area in the river). The mosque in Singengu village is considered sacred and holy because it is a place of worship. However, the position of the mosque in *lombang* is in the *bonom* (sunset) direction from the *alaman bolak*. At the village scale, the profane area is the cemetery area in the *jae* (downstream) direction towards the *bonom* (sunset) while the sacred area is the *poken* (*pekan*/market) area in the *julu* (upstream) direction towards the *bincar* (sunrise).

This research in Singengu village found a new phenomenon, namely the market as a sacred area. In other cases, the market is usually considered a profane area. The sacred value of the *poken* lies in the tradition of *mardomu daro* (meeting blood relatives), which is held every Saturday. On this day, all residents of the villages in Mandailing Julu gather in the *poken* and exchange the produce of their crop fields. This *mardomu daro* value positions the market as a sacred space for the Mandailing people. *Mardomu daro* as a daily tradition has formed a spiritual space, namely the *poken* that is in the direction of the *bincar*.

Figure 13 shows some similarities and differences among the three villages. The spatial layout of the settlements contained in the three cases above, namely Kampung Naga in Neglasari village, Tenganan Pageringsingan village, and Singengu village have striking similarities in terms of their midpoint. The position of the midpoint among the settlement cases is also similar; this midpoint functions as an axis. The difference lies in the filler element and its value. In Kampung Naga, the middle point is the mosque and the *bale patemon* (meeting hall), while in Tenganan Pageringsingan village, the middle point is the *awangan* (public open space/shared space) in which there is a temple (*pura*) as a symbol of the ancestral place.

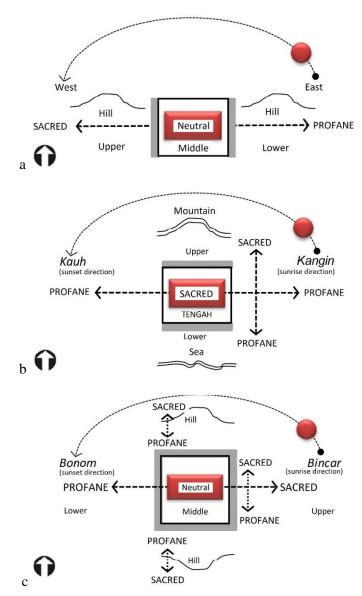


Figure 13. (a) Binary space (sacred-profane) in Kampung Naga, (b) Balinese mountain village, and (c) Singengu village in relation to the direction of sunsunrise-sunset and the threefold division structure (Source: Analysis, 2022)

Conclusion

In all the study cases, binary space has a central point, known as the axis. Each society interprets the midpoint between binary spaces differently. In Singengu village, the middle point is *alaman bolak selangseutang* and *bagas godang*. The midpoint in Kampung Naga has a neutral value, because areas in the west have a sacred value are, the qibla direction, such as the sacred forest, where the ancestral cemetery is located. The profane direction is towards the east, where the forbidden forest is located. The midpoint in Tenganan Pageringsingan village has a sacred value, both in terms of the *kaja-kelod* and *kangin-kauh* concept. This makes the *kangin-kauh* direction a profane direction in Tenganan village. Similar to Kampung Naga, the midpoint in Singengu village also has a neutral value, but the east as the direction of the sunrise is sacred, while the west as the direction of the sunset is profane.

The people of Singengu village and Kampung Naga understand the midpoint in relation to the direction of the sunrise and the sunset as opposite directions, so that there are differences in treating certain artifacts, especially cemeteries. The ancestral cemetery for the people of Kampung Naga is sacred, so that the place of this cemetery is considered to lie in a sacred direction. Singengu people do not recognize sacred cemeteries. Every person that has died always has a profane value. The mountain village of Bali has similarities with Singengu village in interpreting the sacred-profane concept, except in terms of the direction of the sunrise-sunset. In Tenganan Pageringsingan village, the settlement arrangement at the macro, meso, and micro scale is still determined by interpreting the direction of the sunrise-sunset as a profane direction, while in Singengu Village, the direction of the sunrise is a sacred direction, and the direction of the sunset has a profane value.

A settlement always has both functional and symbolic meanings. All of the symbolic manipulations found in residential spaces were originally physical manifestations of an intangible structure. As a result, the binary space that influences the process of forming rural settlements in the mountains can be: (1) the physical setting due to natural/geographical conditions, (2) cosmology and belief systems, and (3) the people's socio-cultural life. Rural settlements in the mountains can also be said to emphasize the natural aspect of the mountains with all of their spatial shaping potential.

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Glossary

Mandailing Local Term	Meaning
Banua Parginjang	The Upper World
Banua Partonga	The Middle World
Banua Partoru	The Lower World
Huta	Kampung/village
Huta Ruar	Outer kampung (a place to live after getting married)
Jae	Downstream of the river
Julu	Upstream of the river
Dolok	Upper area that is hilly and distant from the river
Lombang	Lower area near the river
Manjujur	A local custom in Mandailing that requires an adult male to leave the village when
	he marries and live in another village or the village of his wife's origin.
Tapian	Edge
Banua Tapian	A place for the current generation
Poken	Daily traditional market
Tor	Mountain
Taboo	Prohibition
Inganan najolo	The place of the past time
Inganan Sannari	The place of the present time
Tapian	A plane by the river
Tano Inganan Sorang	Land of birth
Mardomu Daro	A blood relative meeting
Parbagasan	Housing area
Pakkuburan	Cemetery/graveyard

77 1	D' /
Hodar	Dirty
Mangupa Tondi	The ritual of inserting the spirit/soul/spirit back into the body
Muara Partontang	Three rivers cross area
Lubuk Larangan	Forbidden area in the river
T	M
Kampung Naga Local Term	Meaning
Leuweung Rancak	Rancak Forest
Leuweung Keramat	Sacred Forest (the location of the ancestors' graves)
Leuweung Larangan	Forbidden Forest
Kawilujengan	The Naga villagers' life goals are shaped by the existence of a strong relationship
	between religion or belief, custom, and cosmology.
Tongonon Village I agal Torm	Mooning
Tenganan Village Local Term	Meaning
Pura	Temple
Pura Dalem Kangin	Temple in east-area/sunset direction
Pura Dalem Kauh	Temple in west-area/sunrise direction
Pura Puseh	Temple as a part of <i>Tri Kahyangan</i> in a customary village in Bali
Bale Agung/Pura Desa	A memorial to Sang Hyang Iswara and a place of education in the intangible world
Pamerajan	A sacred place for a specific group
Kahyangan Tiga	Village temple
Krama Desa	Citizens
Karang Desa	Yard land owned by the village
Bhuana Agung	The vast nature or the vast world (macrocosmos) of the universe
Bhuana Alit	Small nature or small world (microcosmos)
Bale Patemon	Meeting hall
Manik Ring Cucupu	Fetus in the womb. In the Balinese belief system, this is interpreted as humans as
	fetuses and nature as wombs
Tri Hita Karana	Three factors contribute to the creation of happiness the Balinese belief system
	(relationships with other people, relationship with the natural environment, and
	relationship with God, which are all interconnected.
Tri Angga	Local wisdom regarding the concept of space that is owned by the Balinese people
Hulu-Teben	The idea of arranging a space in a vertical and horizontal pattern to create order
Kaja	Mountain direction/to north
Kelod	Sea direction/to south
Kangin	Sunrise direction/to the east
Kauh	Sunset direction/to the west
Pirata	The name given to the Balinese people's ancestors
Tilem	Black moon
Teba	Bottom or back area
Sanggah/pamerajan	A sacred place for a particular family
Paon	Dapur
Pura Kandang	A place to purify animals
Pitara	A person who entered the divine realm first to one day become deity
Tumpek Uye/Tumpek Kandang	A pleasant day for animals. According to the Balinese calendar, every Saturday-
	every six months. This occurs on March 25th
Bale tengah	A sleeping area for both young people and teenagers and frequently used for
	reception
Bale meten	A residence built out of rocks, having a floor that is around 75 to 100 centimeters
	off the ground
Bale Buga	The object for bed or seat
Sanggah Kelod	A sacred space for the family group in a yard facing the sea or the south
Sanggah Kaja	A sacred space for the family group in a yard facing the mountain or the north
Kepuh Randu	Name of local tree in Bali
Bale Banjar	A place to meet and talk
<i>ран</i> е рапјат	A place to meet and talk

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