The Application of Balinese Tri Hita Karana and Tri Loka Concept in Children’s Creativity Hub in Kuta, Bali

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Abstract. Balinese cosmological beliefs have become a very important foundation in Balinese lives, including architecture. Balinese architecture does not simply consist of physical and natural materials, it also seeks balance and propriety. It needs to be in a harmonious balance relationship between humans with humans, humans with their natural surroundings, and humans with God or known as Tri Hita Karana. This study tries to apply this concept that is usually used in architecture, within an interior space with a children's creativity hub in Kuta, Bali as a study case through the qualitative method. The result of this study proposed a design concept 'Jelajah Riang' a concept that is suitable for the function of the space and can be embedded with Tri Hita Karana as well as Tri Loka concept, with three rooms used as a sample; the break room, dancing studio as well as painting and drawing studio. In these three rooms, not only the activities designed suitable to those concepts but also the interior elements, such as wall and floor finishes, lighting, ventilation, and so on

1. Introduction

Architecture is not just about physical manifestations; more than that architecture is the substance of the physical being. As part of human creations, traditional architecture considered as a masterpiece not only from the shapes, forms, and functions but also their philosophical aspects, such as the balance between function, construction and beliefs, suitability with the environments, meaning and symbolism of space, ornaments application and so on. Modern architecture usually focuses on three central elements of architecture, which are strength, function, and aesthetic, while traditional architectures are formed through several considerations such as kinship system, geographical conditions, and social belief systems [1]. Thus, in discussing traditional architecture, one cannot only focus on the forms and other physical elements of the architecture, other immaterial aspects, such as the social beliefs and philosophy; the spatial organization and arrangements that show society's perception about their cosmological environment and how man adjusted to the physical environment should also be analysed and discussed as well. In traditional architecture, certain rules bind the production of architecture, these rules were passed down in generations and should not be ignored. This concept is found in many of Indonesian traditional architecture, including the Balinese traditional architecture. Even though has transformed and undergone various modernization, Balinese traditional architecture is still preserved under the daily practices of local cultural traditions.

Balinese culture regard cosmology, the small world – microcosm or Bhuana Alit and the big world – macrocosm or Bhuana Agung. Both of these worlds are the vitality that influences all aspects of Balinese life, they are highly influenced by the power that emerged from themselves as the Bhuana
Alit and from the power beyond themselves or their surrounding nature and environment as Bhuana Agung. Thus, they always need to maintain balance and harmonization between both worlds. Furthermore, this cosmological concept consists of three elements, namely Atma (soul), Prana (energy), and Angga (physical). Another important philosophy for Balinese as a microcosm or as human beings is the Tri Hitra Karana, a philosophy that underlies all aspects of Balinese life in their interaction with their Gods, their surroundings as well as other human beings. For the Balinese, the implementation of these concepts needs to be in balance and harmony to achieve serenity, peace, and joy. All these cosmological and philosophical concepts have become a very important foundation in various aspects of Balinese life, from daily rituals, religious ceremonies, daily activities, religious ceremonies, and architecture. Balinese architecture does not simply consist of physical and natural materials such as woods, grass, and stone and shaping them to fit human needs. Instead, it seeks balance and propriety, in a Hindu sense, between occupant and building, and building and cosmos [2]. The underlying architectural principles are very complex containing intrinsic 'parametric rules' based on both philosophical and a building tradition [3]. Not only in architecture, but these underlining concepts also become the foundation of how they organized and programmed their living spaces inside the traditional houses. However, in modern-day design these concepts are no longer applicable and mostly ignored. Can this concept also be applied in modern-day space organization and interior design?

Sustainable traditional architecture can be achieved through various modifications without losing its main essence and philosophies. This study aims to find out how these traditional concepts can be applied further not only in modern-day architecture but also in modern-day interior design, through space organization as well chosen materials, with a children's creative hub, located in Tamora Gallery as a case study. The site location is Tamora Gallery, a shopping centre that caters to premium food and beverages as well as other retail shops targeted at mostly tourists or ex-pats. The shopping centre is situated in Jalan Pantai Berawa No. 99, Tibubeneng, North Kuta District, Badung Regency. It is situated nearby various types of retail and commercial buildings, including supermarkets, cafes, or even villas. This gallery originally functioned as a rented commercial and recreation space which will be redesigned into a children's creative hub.

2. Method
Sachari points out several approaches commonly used in art and design studies include qualitative approach, quantitative approach, and multimethod approach [4]. To achieve the aim of this study to design children's creative space that implements Balinese cosmological and philosophical value, the qualitative method with a case study approach will be used. By using this approach, an in-depth study about a case of phenomena will be done by collecting detailed information through various data collecting methods within a determined time frame [5].

Based on the determined approach, data collecting was done qualitatively in two stages. The first stage is through desk research. In this stage, all relevant data from various sources that had been done about the subjects will be studied and analyse. The purpose of this stage includes giving general information about the topic, analyse previous studies that had been done, as well as to know what other writers think, and to have basic theory and understanding about this topic. The next stage was the primary data collection through observations to Tamora Gallery and several children's creative spaces to find out about the activities, facilities, and other requirements needed. Both primary and secondary data were analysed using descriptive analysis in relation with the Balinese cosmological concept, architectural design as well as facilities and requirement needed, continued with the design process which includes space programming and concept analysis, and the proposed design itself.

3. Results
3.1. Tri Hitra Karana
To achieve this balance and harmony, the Tri Hitra Karana concept has underlain Balinese people's lives in fostering harmonious relationships with God, fellow human beings, and the environment.
**Hita Karana** or the three causes of happiness have become the fundamental concept of the Balinese people which is still relevant and deeply rooted among the Balinese until today. It is known as the philosophy taught in Bhagavadgita, which teaches three main subjects to achieve ultimate happiness [6]. Through this concept, the Balinese attempt to create a harmonious and balanced relationship between humans and God (parahyangan), humans, and their natural environment (palemahan), and humans with other human beings (pawongan). When balance and harmony between the three aspects is achieved, the humans will find peace, joy and happiness.

**Parahyangan** is the relationship between humans and God as the provider and creator for all existing creatures, usually carried out through Dewa Yadya ceremonies, a form of prays and offerings with pure sincerity addressed to the creator, Ida Sang Hyang Widhi Wasa. They build temples in every village as well as houses and held religious ceremonies for many different occasions. Parahyangan comes from the word of Hyang which means God, while parahyangan means deity or things related to religion to worship God. The Balinese live harmoniously in groups known as sekaa and live in communities known as Banjar. They do a lot of activities together in these groups. This concept is known as pawongan, which is derived from the Javanese word Wong, which means people. Pawongan is about relating to people in community life to create a harmonious relationship between fellow human beings, thus it is considered necessary for human beings to keep maintaining contacts and communication with others, especially within their communities or Banjar, through Sima Krama or gatherings. Lastly, humans need to maintain a harmonious relationship with their natural environment or palemahan, which comes from the word lemah, meaning land. In other sense, palemahan means the area of settlement or residence. Humans living on earth, live in nature and from nature itself, thus, to live in peace and tranquillity both physically and mentally human need to maintain and preserve their natural surroundings to keep the ecosystem balanced, thus harmony between humans and their environment will be created. This is what underlies the concept of palemahan. Various religious ceremonies are conducted to celebrate the environment which shows that this concept is still deeply rooted in the Balinese.

**Tri Hita Karana** has been a fundamental concept that is still practiced and applied in various facets of life to create balance and harmony to achieve ultimate happiness. The Tri Hita Karana concept has also been applied in the space programming of Balinese compound houses, which can be seen from the availability of family temples (parahyangan) as a place for human relations with the creator, the living quarter itself (pawongan) as a place for human relations with other human and lastly the courtyard (palemahan) as a place for human relations with the environment [7].

### 3.2. Tri Loka, Tri Mandala and Tri Angga

Balinese house is a compound consists of a variable number of buildings enclosed by a high wall and regulated with Tri Mandala and Sanga Mandala concept to achieve the harmonious relations between Bhuana Agung, Bhuana Alit and Tri Hita Karana [8]. According to the Balinese, man's body as microcosm has three parts – high, middle, and low – just as the universe macrocosm, has three parts: the upper world of God and heaven (Swah), the middle world of man (Bhuwah), and the underworld (Bhur), responding to those of macrocosm, the head of man is holy, conversely the feet are profane and unclean; the torso is the middle part. As Balinese considered their architecture as a scaled-down version of the Balinese cosmos [2], this is known as Tri Loka. The basic principles of Balinese architecture also refer to these concepts. Tri Mandala, the spatial hierarchy consisting of Utama Mandala, which denotes things that are "high" or "above" and identified with all that sacred and pure, where the family temple usually stand, Madya Mandala, the place where man lives, the living quarter, the mundane world of everyday existence and lastly is Nista Mandala, denotes things that are "low" or "below", where the animal pen, the garbage pit is located as well the entrance door from the outside is also located this area. As a transition area from the vile outside, this area considered as low and dirty [9]. This spatial programming clearly shows the division between the sacred and profane area, however to a more complex arrangement where the three divisions were interlocked vertically and
horizontally according to sunrise – sunset and mountain – sea, into nine squares known as Sanga Mandala [10]

Furthermore, not only in spatial programming this concept is also vertically applied in the physical embodiment of the buildings, known as *Tri Angga*. Similar to a man's body concept which has the head as the holy part, torso as the middle part and feet the profane and unclean lower part, buildings also have parts of the head (roof), body (enclosed space), and legs (the bottom, building foundation) these parts represent the *Utama Angga, Madya Angga and Nista Angga* [11]

4. Discussions
Further discussion on how these concepts can be applied in modern interior design to embrace the Balinese traditions not only in the function of space but also in the interior of the space. The design concept proposed for the Children's Creativity Hub is "Jelajah Riang" which translates to "Gleeful Exploration". The design concept aims to create a space that can both inspire and strengthen children's way of thinking creatively and innovatively. The word "Jelajah" or exploration is meant to describe the capability of children to explore their talents and skills. Meanwhile, the word "Riang" or gleeful is meant to describe the new experience they receive. It is hoped that this experience will bring a valuable result for the children therefore they will feel joyful once they partake in the activities held in this Children's Creativity Hub. The design concept and *Tri Hita Karana* are both related to each other as these two concepts share the same goal and that is to achieve happiness. Not only *Tri Hita Karana, Tri Angga* concept, with head, body, and feet will also be applied within the space. Although these concepts are applied in all rooms available in the Children Creative Hub, only 3 rooms will be discussed further as samples, they are the break room, painting and drawing studio, and dancing studio.

4.1. Break Room
The break room serves as a transition space for the children before and after activities in the studios and as a creative play space which is a part of the creative process. *Tri Hita Karana* 's spirit proposed in this room is within one of the corners of the Break Room. This corner is part of the creative play where the children can draw on a large chalkboard within groups as a symbol of *Pawongan*, where humans need to cooperate and to be in harmonious relations with one another. In this corner, The *Tri Angga* and *Tri Loka* concepts are also visualized, wherein this corner's "foot" is the seating steps, a "body" as part of the wall with black chalkboard paint finish, and a dropped ceiling as part of the "head". The relationship between human and natural surroundings or *Palemahan* is shown in the organic shapes of the furniture, not only to stimulate children's creativity, but these shapes also serve as a symbol of nature. Furthermore, the availability of a small inner courtyard and various indoor plants will make this concept stronger. The ceiling on the existing building is relatively low, thus the
use of a plain white ceiling paint finish helps maintain the height and width of the room. The doors and partitions are also designed in a way that they are comparatively higher than the height of doors in general. This goes in line with being able to experience "the magnitude of God", referring to the last of *Tri Hita Karana*, human relationship with God or *Parahyangan*. Another way this concept is applied can be seen from the use of natural lighting. The general and main lighting of this room comes from natural sunlight therefore the intensity of general lights is not too bright thus the accent lighting throughout the room becomes more prominent. This supports the daily ritual of Balinese Hindus where one's relationship with God is usually done outdoors.

![Figure 2. Break Room Axonometry](source)

![Figure 3. Break Room Perspective](source)

4.2. Dancing Studio
The Dance Studio is widely used as a place where children can receive cultural awareness, specifically on Balinese traditional dances. The form concept is inspired by the basic movements of traditional Balinese dances. These forms symbolize basic Balinese dance movements starting from the stance of the feet, hands, and body. Starting with the stance of the feet known as *Tapak Sirang Pada*, which is a position that is maintained throughout most of the dance. The next studied form is derived from the finger movements of the Balinese dancers called *Jejiring* or *Gegirah*. This hand movement is done by moving the fingers to the left and right in a quick motion therefore it is seen as a vibration. The final form is called *Agem*, a position in which is a posture that curves up and down.

As a vocal point of this studio, can be seen a framed mirror and small steps, which look like a small stage. This area functions as a performing area for a child or small group of children, while the other children will watch their friend's performance. Although the dance lessons are done together, there will be a time that the children will take a turn to perform by themselves in front of their friends. This particular action of children appreciating each other's talents and dance skills motivates the person who is performing with their self-esteem as well as character development. This activity also goes in line with the *Tri Hita Karana* concept, especially ones' relation with others. The application of the *Tri Angga* and *Tri Loka* concept is apparent in one of the corners of the room, the stage area. The steps act as the 'legs', the framed mirror is part of the "body" and the carved decorative element on top of the frame as part of the "head". The material used for the mirror framed is made of Balinese sandstone, a
material that is commonly used as decorative elements on relives and other traditional carvings. Other *Tri Hita Karana* concept also visible in this studio almost similar with the previous room is the availability of inner courtyard and indoor plants as a symbol of a harmonious relationship between human and their natural surrounding and doors that designed comparatively higher than the height of doors in general as a symbol of human relationships with God.

![Figure 4. Dancing Studio Perspectives](source: Yogita, et. al (2020))

### 4.3. Drawing and Painting Studio

A paint blob form is used as inspiration for this Painting Studio, these clumps of paint can give an open and harmonious impression due to its organic shape. This goes in line with the purpose this room wants to serve and that is a space where children can feel calmer. The furniture concept this room is oriented towards furniture that is modular, stackable and has an adjustable height. Each type of furniture has its function that will support children's ergonomics, especially those between the ages of 5 and 15 years. The curated selection of furniture that is oriented towards the main user, is one form of *Tri Hita Karana*, especially human-human relations. This is due to the furniture that is specifically designed for its users therefore providing a good relationship amongst its users. Modular furniture also goes in line with this idea, as they can be separated or combined to support joint or collaborative activities. This collaboration will also encourage good relationships between children who use the furniture. As a vocal point of this studio is a raised floor area which requires the children to sit cross-legged style, mimicking the ambiance of a Banjar, where activities are carried out together within a local community group. Besides symbolizing human-human relations this specific area also applied the concept of *Tri Angga*, which can be seen within one of the corners of the room. The raised floor acts as part of the "legs", the decorative wall element that acts as a curtain rail partition is seen as part of the "body", and a dropped ceiling acts as the "head".

The floor concept also related to *Tri Hita Karana*’s concept specifically the relation between one with nature. This can be seen through the application of the floor material that supports natural instincts, such as the use of a darker colored floor that resembles the illusion of stepping on damp soil and the use of materials that are classified as sustainable materials, ensuring that it does not contain ingredients that can endanger the health of its users as would VOC or Volatile Organic Compounds. Polished cement floors have a high level of resistance because the floor is classified as heavy duty making it more durable against friction, it is also easy to care. Furthermore, polished cement can create a cool atmosphere, making it suitable for application in the Balinese climate. Another warm and natural atmosphere within the room can be seen through the application of wall materials, such as brick walls, which widely applied in Balinese traditional architecture thus supporting the concept of one's relation with nature, and also the used are ceramics tiled walls. The use of ceramic tiled walls also bare the several activities at this Children's Creativity Hub because of its durable and easy to clean. Going in line with the relationship between humans and God, the interior application can be seen through the use of indirect lighting. The use of general lighting should not be too bright so that the accent lighting used becomes more prominent. This specific lighting application gives off a dynamic feel therefore letting natural light peek through. The concept of lighting is also related to the
way the Hindu-Dharma people in Bali perform their daily devotion to God in outdoor areas with shadows coming from the silhouettes of a tree or other elements from nature.

Figure 5. Drawing and Painting Studio Perspectives  
Source: Yogita, et. al (2020)

5. Conclusion
In this modern era, Balinese life still greatly influenced by their cosmological beliefs, as well as *Tri Hita Karana* as their foundation of live. Not only applied in architecture, these believes are also influenced their living quarter and traditional houses. With the rapid development of modern architecture and interior spaces, these concepts are mostly ignored. In accordance with sustainable architecture concept, Balinese architecture not only consist of physical materials, human needs and beliefs also play a dominant role, thus this study attempt to design an interior space based on the philosophical beliefs, whilst still using a sustainable material and finishes, to achieve balance, in a Hindu sense, between user, the facilities itself and the surrounding environment. Through the concept “Jelajah Riang” as the general interior concept of this space, which is used for various activities that will encourage and stimulate children’s creativity and self-esteem such as dancing, drawing, pottery making, and so on. As an attempt for sustainable design, this modern interior space also applies Balinese cosmological concepts, *Tri Hita Karana* and *Tri Angga* as part of the design.

*Tri Hita Karana* concept used in this space as follows, harmonious relationship between human and human (*Pawongan*) applied in the break room can be seen within one corner of the room which can be used for group activities and creative play whilst waiting before or after their main activities in the studio. The creative play including board games and group drawings the big blackboard provided. In the dancing studio, this concept emerged in the practice performance activities, where the children take turns to perform in front of their friends to gain self-esteem. While in the drawing studio, this concept can be seen in the drawing or painting activities that can be done whether in groups or on their own with the modular furniture provided or in the special raised floor area. Harmonious relation between human and natural surroundings (*Palemahan*) can be seen from the use of natural lighting, the availability of indoor plants in the various rooms as well as windows and door openings to the inner courtyard. The various organic form inspired by nature is used as a basic form for furniture and other elements design. While the harmonious relationship between humans and God (*Parahyangan*) showed from the doors and partitions that are designed in a way that they are comparatively higher than the height of doors in general. This goes in line with being able to experience "the magnitude of God", the general lighting of these rooms used mainly natural lighting, with accent lighting that is more stand out. *Tri Angga* concept is also applied in one corner or a part of these rooms, the creative play corner in the break room, the performance area in the dancing studio, and the raised floor special drawing area in the drawing and painting studio, where in each of these parts consist of three main part; the head, the body and the feet.

The proposed interior design in the children's creative hub is an attempt to implement the Balinese cosmological concept that is usually used in architectural design, to be applied in interior spaces. In this design, the *Tri Hita Karana* concept can be seen, while other concepts such as *Tri Loka, Tri*
Angga can be explored and applied further. The application of the Balinese cosmological concept is only seen in the furniture and other interior elements, even though it can also be applied in the zoning and layout of the room and studios. The used for sustainable materials are also still limited. This area is an opportunity for further studies.

References

[1] N. K. A. Siwalatri, J. Prijotomo, and P. Setijanti, “Spatial Concepts of Bali Indigenous Architecture,” Procedia - Soc. Behav. Sci., vol. 179, pp. 118–127, Apr. 2015, doi: 10.1016/j.sbspro.2015.02.415.

[2] F. B. Eiseman. Jr, Bali Sekala and Niskala: Volume II: Essays on Society, Tradition and Craft. Hong Kong: Periplus Editions (HK). Ltd, 1990.

[3] P. Ferschin, M. Di Angelo, and G. Paskaleva, “Parametric Balinese rumah: Procedural modeling of traditional Balinese architecture,” in Proceedings of the DigitalHeritage 2013 - Federating the 19th Int’l VSMM, 10th Eurographics GCH, and 2nd UNESCO Memory of the World Conferences, Plus Special Sessions fromCAA, Arqueologica 2.0 et al., 2013, vol. 2, pp. 199–206, doi: 10.1109/DigitalHeritage.2013.6744755.

[4] A. Sachari, Pengantar Metodologi Penelitian Budaya Rupa: Desain, Arsitektur, Seni Rupa dan Kriya, 1st ed. Jakarta: Erlangga, 2005.

[5] J. Cresswell, Research Design: Qualitative, Quantitative and Mixed Methods Approaches. California: Sage Publications, 2009.

[6] I. G. A. A. O. Dewi, “Culture of tri hita karana on ease of use perception and use of accounting information system,’’ Int. J. Soc. Sci. Humanit., 2018, doi: 10.29332/ijssh.v2n2.131.

[7] I. D. G. A. S. Pranditha, A. A. G. Sugiantara, and N. L. M. Pradnyawati, “Tata letak tanaman pada rumah berkonsep arsitektur tradisional Bali di Kota Bangli, Kabupaten Bangli Provinsi Bali,’’ J. Arsit. Lansek., p. 144, Oct. 2018, doi: 10.24843/JAL.2018.v04.i02.p03.

[8] N. P. Aryani and G. Tanuwidjaja, “Sustainable Architectural Design in a Traditional Balinese Housing in Accordance To the Concept of Tri Mandala,’’ Int. Conf. Green Concept Archit. Environ., 2013.

[9] J. Davidson, Introduction to Balinese Architecture. Hong Kong: Periplus Editions (HK). Ltd, 2003.

[10] G. Suharjanto, “Membandingkan Istilah Arsitektur Tradisional Versus Arsitektur Vernakular: Studi Kasus Bangunan Minangkabau dan Bangunan Bali,’’ ComTech Comput. Math. Eng. Appl., vol. 2, no. 2, p. 592, Dec. 2011, doi: 10.21512/comtech.v2i2.2808.

[11] R. Hasudungan Irianto Sitinjak, L. Kusuma Wardani, and P. Firtawentyna Nilasari, “Traditional Balinese Architecture: From Cosmic to Modern,’’ SHS Web Conf., vol. 76, 2020, doi: 10.1051/shsconf/20207601047.

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