

CULTURAL AND ECOLOGICAL RELATIONSHIP THROUGH BIOPHILIC CONCEPT IN INTERIOR DESIGN

Adisti Ananda Yusuff^{1*}, Erina Wiyono², Jhon Viter Marpaung³

^{1,2,3}Universitas Esa Unggul, Jakarta

adisti.ananda@esaunggul.ac.id*

ABSTRACT

Human are basically social beings, they need social interaction has become the basis for humans themselves in order to be able to overflow the feelings that exist in humans. So it has become a primary need for a place to socialize and gather for all of us. However, the pandemic caused a lot of changes that occurred in human life, causing an increase in the number of stresses that occurred in Indonesia due to the limited interaction caused by the pandemic that occurred. The change in habits after the pandemic makes human need a space that can provide a positive relationship between humans and the surrounding nature so that incoming humans feel calm and comfortable. So that they can improve their quality of life. The concept of biophilics is a concept that can build positive relationships between humans, culture and ecology in a design. This is very appropriate to be used in residential space that will be lived by humans at this time a residential house is often used by humans to seek a tranquility to improve the welfare of living beings in terms of physical and mental. And through biophilic concepts, we as a human can restore a lifestyle that is free to connect with nature naturally.

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**Corresponding Author*

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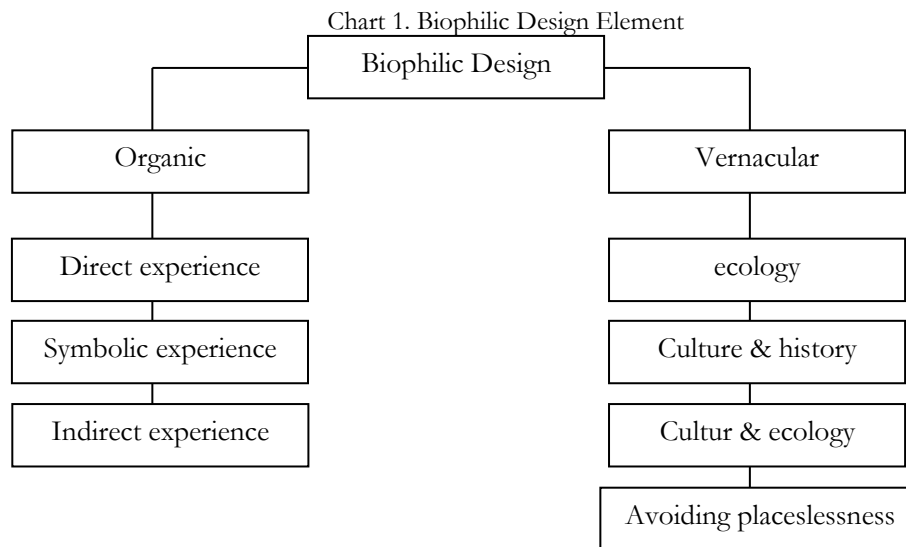
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A. INTRODUCTION

Biophilic design began from the phenomenon that humans must love the natural environment. The term biophilic was initially developed by Steven Kellert to include elements of the constructed environment to provide benefits and connections between humans and nature in a structure to be in harmony with the development of the modern era. Humans tend to be more passionate about life in the world and its processes; therefore, humans require nature to balance their physical, aesthetic, intellectual, cognitive and spiritual necessities (Stephen R. Kellert, 2015). Therefore, the biophilic theory becomes a frame of reference for analysing the needs between humans and nature and the way humans and nature interact.

Biophilic design is entirely developed in the interior design industry, particularly with the pandemic that has hit the world, making designs that connect with nature becomes a much-needed consideration. Since humans can obtain experience directly, indirectly and symbolically according to the necessities of the space they create, this is conducted to represent natural elements that can enter an interior space. Biophilic is also closely related to the vernacular dimension; this means

that vernacular design creates a space that connects culture and ecology. There are 4 (four) classifications of vernacular dimensions in biophilic designs, including (1) related to the ecology of a place, (2) related to local history and culture, (3) a blend of culture and ecology, and (4) designs that avoid the impression of lack of space or absence of place (Stephen R. Kellert, 2015). There are two dimensions in the biophilic design, organic and vernacular, which designers can use as an element in designing biophilic concepts.



The two biophilic dimensions have six elements that can be integrated into a design, of the six elements consisting of 72 design attributes used as elements and attributes for designers to synergies between space and the built environment (Kellert, 2009).

Chart 2. Attribute and element can be expressed within the built environment

1. Environmental Features	2. Natural Shapes & forms	3. Natural Patterns & Processes
Color	Botanical motifs	Sensory variability
Water	Tree & columnar support	Information richness
Air	Animal motifs	Age, change, patina of time
Sunlight	Shells and spirals	Growth and efflorescence
Plants	Oval and tubular forms	Central focal point
Animals	Arches, vaults, domes	Patterend wholes
Natural Materials	Shape resisting straight lines and right angels	Bounded space
Views and vistas	Simulation of natural feature	Transitional space
Façade greening	Biomorphy	Linked series and chains
Geology and landscape	Geomorphology	Integration of parts to wholes
Habitats and ecosystems	Biomimicry	Complementary contrast
Fire		Dynamic balance & tension
		Fractals

Hierarchically organized ratios and scales

<p>4. Light and Spaces Natural light Filtered and difused light Light and shadow Reflected light Light pools Warm light Light as shape and form Spaciousness Spatial variability Space as shape and form Spatial harmony Inside-outside spaces</p>	<p>5. Place-based Relationships Geographic connection to place Historic connection to place Cultural connection to place Indigenous materials Landscape ecology Integration of culture and ecology Spirit of place Avoiding placelessness</p>	<p>6. Evoloved Human-Nature Relationship Prospect and refuge Order and complexity Curiosity and enticement Change and methamorphosis Security and protection Mastery and control Affection and attachment Attraction and beauty Exploration and discovery Information and cognition Fear and awe Reverence and spiritually</p>
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B. METHOD

This study employed a quantitative method with a descriptive approach by using a case study method in the interior space of a public area. The steps include formulating problems, determining study samples in the form of interior design objects with biophilic concepts, collecting data from literature studies on biophilic theory, and subsequently processing, presenting, and analysing all the gathered data with existing theories. This descriptive study aimed to draft a systematic description of the relationship between ecology and culture in a biophilic design in an interior space.

C. RESULT AND DISCUSSION

Is there a relationship that existing theories can explain? The relationship between culture and ecology in a space. Humans are territorial creatures that are constantly evolving; therefore, they tend to constantly think about safety and security and move to be better. Cultural and ecological values can enhance this tendency. Typically, designs relevant to cultural and ecological values strongly connect with their users. This connection and feeling are a human identity that can foster an emotional connection to a place and motivate humans to always preserve and maintain nature and the artificial environment. The following is an interior object that will be analysed according to the existing biophilic attributes and elements.



Figure 1. Biophilic Lobby Interior Design - Figure by Felita Calista 2020



Figure 2. Biophilic Waiting Area Interior Design - Figure by Felita Calista 2020



Figure 3. Layout Interior Design - Figure by Felita Calista 2020

Chart 3. Description of interior space against the elements

No	Attribute and Element	Explanation
1	Environmental Features	<ul style="list-style-type: none"> - The explanation utilises natural and natural colours. - Wood was employed as the primary material in the interior.

		<ul style="list-style-type: none">- Vertical plant walls reflect that life goes hand in hand and goes with the surrounding environment.
2	Natural and Shape Forms	<ul style="list-style-type: none">- Simple shapes and blends with nature.- Wall columns with wood motifs create a more natural impression.
3	Natural Patterns and Processes	<ul style="list-style-type: none">- Vertical garden walls as points of view from this room.- The interplay of patterns between the floor, walls, and ceiling will create a natural sense of lack of space, and the existence of a play of materials will stimulate the variability of the human senses.
4	Light and Spaces	<ul style="list-style-type: none">- The combination of natural and artificial light.- Natural light is widely used using the use of large windows.- The reflection of the lights on the walls creates a warm impression in a space.- The harmony between the spaces is obtained by merging the indoor and outdoor spaces.
5	Place-based Relationship	<ul style="list-style-type: none">- The ecological relationship between a location and its layout, site, and structure.- There is an interaction between the exterior and interior of the building; a large pool serves as a connection between the two buildings; this indicates an integration between ecology and the design.- The building and layout are relevant to cultural and ecological values; thus, they have a strong connection to the users in it.
6	Evolved Human-Nature Relationships	<ul style="list-style-type: none">- The installation of a pool as a relaxation space gives psychological peace.- Interaction and exploration of forms formed in the lobby image. Simple forms, however, provide aesthetic value directly to room users.

From the discussion and description above, there is a fairly close relationship between biophilic design in interior space and ecological and cultural values in humans. This is clearly seen in the discussion of houngan which is based on space (point 5) that in fact a space designed with an approach to biophilic elements and attributes will have an effect of harmony and deep relationships with the humans in it.

D. CONCLUSION

The obtained description is intended to serve as a practical methodology for environmental design and more effective construction. For the application to return to the application and awareness towards a better life. The biophilic design requires us to recognise how much the quality of the human relationship with the natural environment in the world. In addition, a link between cultural and ecological values to the biophilic concept in the world of interior design has been proven to be

complete with the 6 elements and attributes in an interior design space. It is expected that this research may create a new motivation for the interior design industry and provide input on the importance of good interaction between humans and the surrounding nature to form a better life for the future. Esa Unggul University is acknowledged for providing material and non-material support for the research conducted. This research is expected to provide numerous benefits in both the educational and professional spheres.

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