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Expression of Biophilia on Ceramic Forms Through the Seed Image

Biophilic Ceramics; Carrying Nature into the Interior with Seed Form

Abstract

Reusing forgotten values in design promotes creativity, sustainability and a deep respect for the rich cultural heritages. It allows designers to find beauty and inspiration in overlooked and forgotten elements. By breathing new life into forgotten elements, restoring creativity, sustainability and overlooked aspects of our cultural heritage, designers can bridge the past and present. Biophilia, a design concept that integrates the benefits of nature into interiors, is an example of this approach. It also shows its presence in the field of biophilic art.

This article describes the process of transformation into designs that allow us to apply our ancient agricultural habits to ceramic forms, and the concept of biophilia and its application in ceramic art to promote sustainability and connection with nature. The seed forms were used as inspiration to create ceramic structures that allow people to grow micro greens and herbs indoors.

Introduction

This research highlights the positive impact of nature on well-being in indoor environments. It explores biophilic design principles that use indirect experiences of nature combined with spatial elements to create healthier living and working environments. The study combines the concepts of biophilia, biophilic design and biophilic art, all of which emphasize the importance of sustainability.

This paper attempts to explain how nature can be incorporated into interiors through ceramic art and biophilic design principles. The purpose proposed in the development of this study was to bring the relationship between nature and man back into close proximity by combining our biophilic bond from the past and our old agricultural habits.

The seed form is chosen as a symbol of this concept. The research uses Hegel's dialectic theory (thesis, antithesis, synthesis) to explore how ceramic art and biophilic design principles can be used to integrate nature into interiors. This paper aims to reconnect people with nature by combining our innate love of nature (biophilia) with our agricultural heritage.

Project Context

More than just a casual reminder, the phrase "remembering to stay in touch with nature" underscores the profound importance of fostering a deep connection with the natural world. This connection isn't merely about environmental awareness, though that's certainly a crucial aspect. It's about cultivating a profound respect for the myriad ways nature contributes to our health, well-being and spiritual wellspring. From the direct benefits like improved mental and physical health to the sense of peace found in meditation amidst serene landscapes, nature constantly reminds us of the critical need for sustainability and inspires action to protect the very environments that nourish us in such profound ways. This concept is a reminder that we are part of nature and that our well-being is intricately linked to nature. Biophilia enables this connection to be established and maintained.

Erich Fromm, a social psychologist, coined the term biophilia in 1964 to describe the psychological obsession with living and vital things. Fromm explored these concepts in his book *The Origin of Love and Violence* and in his clinical work *The Origins of Human Destructiveness*. He saw the love of life as a passion for all living things (Fromm, 1973).

This study explores ceramics shapes that promote sustainability and contact with nature through biophilic design principles, highlighting the evolving relationship between humans and nature in the Anthropocene era. Research is being conducted to understand the impact of nature on health and quality of life, with the aim of creating sustainable, natural and healing built environments. People tend to be happier and more productive in green environments, and there is a direct link between a person's psychological make-up and their environment (Fromm, 1992).

According to Amirow biophilia, a term used in interior design, refers to the historical use of green elements in homes and urban spaces, influencing materials and forms in built contexts (Amirow, 2017). Kellert's biophilic design emphasizes the importance of providing the greatest benefit to people in today's modern environment, with eight biophilic values directly related to human health and well-being. These values are affection, attraction, aversion, control, exploitation, intellect, symbolism and spirituality (Kellert, 2012).

This study explores sustainability as a cycle in philosophy, focusing on the immanence and transcendence of change, transformation or dialectical approach. Coccia adopted Anaxagoras' "everything is in everything" approach in this context. Anaxagoras described sustainability in the healthiest way with the concept of immersion. "The world is not a place, it is the immersion of each thing in the other; this mixture reverses the topological inseparability relationship moment by moment" (Coccia, 2021).

Sustainability, influenced by Heraclitus' movement, using Hegel's dialectic, focusing on thesis, antithesis and synthesis. D'hondt says Hegel introduced dialectic into the dynamics of thought,

focusing on the intertwining of opposites and three moments within the process. The stages are not sequential or separate (D'hondt, 1994).

In his *Natural Philosophy-Mechanics*, Hegel describes the logic of transformation as follows: The design of metamorphosis is also based on a single idea that is consistent across species and, increasingly, within individual organisms, so that it includes only metamorphoses of the same species. This is how we talk about metamorphosis in an organism like an insect, because the caterpillar, the pupa and the butterfly are one and the same individual. In the case of individuals, the development is undoubtedly temporary, but in the case of species it is different (Hegel, 2011).

Goethe's theory of continuity of change, as outlined in his book; *The Metamorphosis of Plants*, suggests that plants, interconnected with seeds, undergo continuous changes throughout their life cycle, highlighting the interconnectedness of life and sustainability (Goethe, 2009).

In his essay 'Participatory Science as the Basis for a Healing Culture', Barnes expresses Goethe's approach from a new perspective. According to Barnes, Goethe believed in the coherence of nature, a goal of organic science. He discovered that plant parts such as leaves, calyxes and petals are metamorphoses that demonstrate nature's coherence. Metamorphosis, he argued, living wholeness formed by the intertwining of formative elements (Barnes, 2000).

Nature's transformations inspire art, and the seed is a prime example. Despite its passive structure, the power and instinct of the seed allows it to disperse and move, reflecting the power and instinct of nature. Stefano Mancuso's book "The Plant Revolution" explores the unique physical characteristics of seeds, which, despite their lack of a muscular structure, can propagate their species far from their origin (Mancuso, 2018).

Inspired by nature, biophilic art uses painting, sculpture and installation to bring nature indoors and promotes mental health and environmental awareness through artistic insight. Browning puts it this way: Through the use of light, texture, density, radiating warmth, and visual complexity,

biophilic art and craft provide an enhanced sensory experience that is not readily available or feasible on a wider spatial scale. (Browning and Ryan, 2020).

Awais contributes to this view by offering a new perspective. Biophilic art promotes environmental awareness and a healthier environment by combining natural elements and creative expression, bridging the urban-wilderness divide. This bridge reminds us of our connection to the land (Awais, 2023).

Environmental psychologist Stephen Kaplan and physicist Richard Taylor have further explain this relationship with a similar approach biophilia supports personal restoration by fostering a connection with life, while nature's organic forms and fractal patterns enhance experience, mood and happiness (Frazier, 2020).

Methodology

In the study, natural seeds were collected and their shape, texture and colour characteristics were examined. Clay was used to preserve the identity of the seed and biophilic design principles were applied to the works. Natural seed textures were abstracted and stylized for the texture and structure used in the seed series. Because of their protective qualities, which impact both the seed and the capsule, the forms are closed. Seed germination occurs within the ceramic seed forms. Because the seed forms are spherical, a common language of expression was produced. The series consists of 20 ceramic forms.

In the study, the general survey model, which is a descriptive research model, was adopted and the relational model was used in the evaluation of trends. A questionnaire was used to interpret the relationship between biophilia and well-being in art and design students and to evaluate the views of those who watched the exhibition consisting of biophilic interpretations of ceramic seed forms.

Development

The seeds' spherical forms are intended to symbolize nature and provide drip or spray irrigation to the plant's roots. Several distinct seed interpretations are depicted in the images,



Fig. 1 Canan Salman "One of The Twenty Seeds"
1200 °C Stoneware Chamotte Clay Hand Shaping Ø=10 cm



Fig. 2 Canan Salman "One of The Twenty Seeds"
1200 °C Stoneware Chamotte Clay Hand Shaping Ø=10 cm

all of which are backed by spherical shapes and textures. (Figures 1-5).

In order to preserve the organic aspect of the shapes made, the Seeds series use chamotte clay. In order to let nature show itself, spheres with various textures and spaces were created by hand using a shaping technique. For its sculptural qualities, clay is utilized, which is a natural habitat for plants. The 10 centimeter spherical forms, which are meant to be hung on the wall, bring nature within to inside. Even in little spaces, the biophilic influence of the seeds fosters sustainability and happiness. Ceramic forms were processed without glaze. When the plants are watered, the soil and organic substances inside the forms are moistened. This causes a discoloration on the surface of the ceramic form. In addition to the development of living forms, the color change in the ceramic form also exhibits changes that support naturalness.

This series focuses on the fact that ceramic forms can be used on a table or countertop as well as mounted on a wall using the hole underneath, showing that creating space for

nature in built environments does not require square meters. This form can be used as a group on a wall near the cooking area in the kitchen, or placed in the bathroom, bedroom and living room for scent therapy.

Results and Conclusions

Because of the varied and ever-changing nature of its objects, art and science can benefit much from nature. Evaluations of the closed structure and surface texture characteristics of seed forms have been conducted using carving applications; in certain cases, supporting texture has been used to create gaps.

From the principles of biophilic design, which are the basis of the ceramic pieces, the contexts of direct experience of nature, indirect experience of nature and experience of nature as space have been used. By integrating art forms with living life forms, the designs follow the principle of experiencing nature as space. The experiences have been evaluated in the context of shaping solutions in ceramics, focusing on the transformation of natural forms into art forms and



Fig. 3 Canan Salman "One of The Twenty Seeds"
1200 °C Stoneware Chamotte Clay Hand Shaping Ø=10 cm



Fig. 4 Canan Salman "One of The Twenty Seeds"
1200 °C Stoneware Chamotte Clay Hand Shaping Ø=10 cm

the creation of a formative language to convey the researcher's experiences.

When considering the designs, consideration was given to the designer's relationship with nature, artistic knowledge, mechanisms of perception, personality, approach to the work's subject matter. The works created as part of the research were created through interpretation and abstraction of selected seed shapes. Language, used in study, renews and sustains this environment. Clay can be transformed on a permanent form by firing. Living forms, on the other hand, represent the movement of life, uniting body, mind, matter and idea in a fragile balance. The fired state of the soil provides life-sustaining space, while its pure state creates life.

With the ceramic forms produced, it has been possible to transfer the experience of micro-farming to the interior, in accordance with the principles of biophilic design. The beneficial effect of biophilia is achieved through designs that facilitate direct contact with nature in man-made environments. In addition to the freshness and flavour that the fresh greens used in cooking

add to the food, the idea of being able to use the material fresh also provides psychological wellbeing. In addition to culinary use, the cultivation of plants such as basil and lavender, which have a place in olfactory therapy and well-being practices, can also be evaluated in seed forms designed as instruments that can be used for psychological recovery and relaxation in human-built environments. Finally, it was thought that this study would serve as an example for the development of new projects that reveal the benefits of being in a relationship with nature.

These interrelated media serve as unique tools for expressing experiences and memories, allowing living substances to absorb and express these experiences.

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Fig. 5 Canan Salman "One of The Twenty Seeds"
1200 °C Stoneware Chamotte Clay Hand Shaping Ø=10 cm

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