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# **FOUND IN THE LANDSCAPE - INTRODUCED TO THE INSIDE. BIOPHILIC SPACE IN THE CONTEXT OF ISOLATION**

**Art research paper**

## **Contents**

Abstract 125

Keywords 125

Introduction 126

The pandemic 126

The isolation 127

The deficit of space 128

The need for contact with nature 129

The three groups of biophilia patterns 130

The contact with nature 131

The variability 132

The use of the forces of nature 133

Features of natural forms 135

Spatial configurations 136

Personal configurations 137

Conclusion 138

References 139

Sources 140

## **Abstract**

The article written as part of the research task „Found in the landscape – inconspicuous / desired – imagined spaces” focuses on the residential space, that was most affected by the COVID-19 pandemic. It characterizes the negative effects of confinement and isolation, for which biophilic design may be a solution. It shows the similarities between the patterns of biophilia and the Japanese aesthetics focused on contact with nature. The article gives examples of architecture that may positively influence the user thanks to its relationship with nature. This problem has been investigated on the basis of scientific publications and analysis of projects, including studies.

## **Keywords**

biophilia, isolation, dwelling, home, architecture, interior design

## Introduction

The CoViD-19 virus, which took over in 2020, has made significant changes in people's behaviors and, therefore, had and continues to have an impact on the shaping and reception of space. The ubiquitous Perspex partitions, the social distance determined by the flight range of infectious particles and the prohibition of meetings were the main factors of isolation leading sometimes to social phobia. The forced seclusion, on the other hand, had good sides, such as slowing down life and strengthening ties among loved ones. It is difficult to talk today about the post-CoViD era while the virus still controls the lives of millions and there is no end to this situation. However, the impact of the pandemic on human space – especially the closest, present and future (post-CoViD) – is already visible. This is related to the dissonance that has arisen between the quality of space and the conflicting emotions and needs of isolated people, such as fear of people and the need for contact, its digitization and the need for intimacy, the need for open space and privacy. This gap leads interior architects to revise their existing approaches to the design of living space (currently over-exploited) and to look for new design routes.

## The pandemic

The CoViD-19 epidemic has paralyzed the whole world. For how long? No one can predict this: now the first year of its reign is over. The emergence of the rapidly spreading virus in December 2019 and its global expansion, starting in February 2020, came as a big surprise to everyone.<sup>1</sup> The overly confident society of the early 21st century did not expect an assassination attempt on its own well-being. However, it was not the very fact that the epidemic appeared that was so surprising, but rather the level of change that the state of the pandemic brought to our lives.

The beginning of the 21st century in western countries was a time of prosperity. The spirit of war had gone away – the struggles in the East concerned us only in the context of the inflow of, or rather the decision to accept or reject, refugees – which has become a tool in the hands of politicians, thereby discouraging many people from taking up the subject. Hunger and poverty were niche topics – living standards were equalized by the European Union's funds. Open borders have resulted in an unprecedented increase in tourist traffic, resulting in the emergence of low-cost airlines and low-budget accommodation – the tourism industry started to make a lot of money. New opportunities were opening up: the long journeys, the compulsive acquisition of goods and the development of abilities and self-awareness. The absence of problems caused the center of gravity in the perception of the world to shift to the ego and people were often even over-focused on themselves. New concepts have entered

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1 Some still do not believe in it today.

the vocabulary – slow-living, slow-food, mindfulness – and bookstore shelves carried items titled: “*How to think less*”,<sup>2</sup> “*The art of simple life*”,<sup>3</sup> “*How to attract good things*”.<sup>4</sup>

When television reported on a new virus in China in December 2019, no one in Europe considered it a serious threat. This message aroused sympathy among some, and in others taunts from another media escalation, as with the previous epidemics with limited extent. Two months later, there was a belief that the virus was transmitted by Asians, which resulted in fear of people with slanted eyes. In the first days of March, however, we understood the magnitude of threat which, in the next two months, reached its apogee. Locked in our own homes, we came out only of necessity. We were holding our breaths while passing by another person. The forced isolation begun and has been continuing for more than one year.

## The isolation

Isolation, in general, consists in keeping people at a distance one from another to restrict interactions.<sup>5</sup> In the case of the pandemic, the obvious benefit is a containment of the transmission of the virus but the absence of “interaction” also applies to other aspects of life, which are nevertheless negatively affected. Detachment of an individual from the society for a long time can lead to mistrust and fear of people, which can turn into a phobia. Japan has been experiencing a morbid withdrawal from society since the 1990s, referred to as *hikikomori*. It is manifested by a person’s staying closed in one room. In extreme cases, the sick person does not even use the toilet, and meals are delivered to them at the door. Until now, this phenomenon affected mostly young people entering adolescence and sometimes persisted in them throughout their lives. It had a family background, it was associated with social pressure and a contrast between one’s own feelings or desires and the expectations of others. It was the choice of the so-called “easy life”: no commitments, no responsibilities, no relationship with others. This begs the question: will the current isolation cause an increase in the incidence of this and other mental illnesses? Or will the fear of getting infected lead to the paranoid situation described in Michel Houellebecq’s novel “*The Possibility of an Island*”, where people replaced by clones – successive, improved versions of themselves – live in complete isolation, dealing only with learning and interpreting the events of the life of their predecessors and with preparing their version for successors, and the few “old-time people” – those who had not undergone cloning and isolation – fight for survival like wild animals outside the mighty walls of safety?<sup>6</sup> The question arises: which ones are happy?

2 The series of books by Christel Petitcollin also includes an offer for children.

3 Author: Shunmyo Masumo

4 Author: Marian Rojas

5 The most general, yet most relevant, definition I found in Wikipedia

6 We witnessed similar events at the beginning of the pandemic, when store shelves in some countries were empty.

The lack of “live” contacts results the silencing of their social needs in people with introverted tendencies. It can be said that isolation serves them. For extroverts, on the other hand, the need to suppress emotions, the inability to throw them out of themselves when meeting people, increases the need for socialization. Other problems resulting from isolation have affected more singles or those living alone than families. On the one hand, the lack of compulsion to go to work or school has seemingly slowed down time. Life has become more lazy and peaceful. Many people have finally found time for themselves. On the other hand, families had to contend with a great deal of responsibilities, excessive burden and the need to introduce a hitherto unthinkable organization of time and space. Until March 2020, parents and children spent most of the day separately: some at work, others at school and in extracurricular activities. They met in evenings and on weekends. After the closure of schools and the introduction of remote work and learning, their apartments, until now used mainly as bedrooms, suddenly became too multifunctional: they began to function simultaneously as an office (or two offices) and a school, sometimes comprising more than one grade or even a kindergarten and or nursery. Such build-up of people in one small space, even those close to, and loving, one another, led to excessive concentration. E.T. Hall, after R. Calhoun, referred to this phenomenon in *“The Hidden Dimension”* as a behavioral swamp, describing experiments in rats, carried out in the 1950s, which led to a conclusion that too many people per square meter cause them to experience an increase in stress levels.

## The deficit of space

It is no coincidence that this year’s Pritzker Prize was awarded to Anne Lacaton and Jean-Philippe Vassal, founders of the Lacaton & Vassal office, designers of very modest buildings, inconspicuous yet very thoughtful and serving the well-being of their users. Their designs are characterized by extraordinary flexibility of space, understood as extensibility, physical instability. Latapie House (Floirac, France) of 1993 and La Tour Bois le Prêtre of 2011 are examples of successful revitalizations where the usable space was enlarged with the addition of glazed balconies and loggias. Another such building is Grand Parc in Bordeaux, after the metamorphosis of which the social housing space almost doubled.

In Poland, in the second decade of the 21st century, on average, there were about 28 square metres per person while the average in Europe was close to 40. According to Eurostat, in 2018, the overcrowding troubled approximately 40% of homes in Poland (2018 data).<sup>7</sup> Such conditions are not conducive to mental health.

7

According to Eurostat, the definition of a overcrowded housing sets out the following conditions: one room for each couple, each single adult, two children under 12, two children of the same sex aged 12-17, one child aged 12-17 who cannot live with a child of the same sex.



## The need for contact with nature

The forced isolation and the ban on leaving the place of residence, except when necessary, imposed in Poland for two months was aggravated by the closure of green areas – parks, squares, but also forests and beaches. This situation has highlighted the importance of contact with nature in life, especially for inhabitants of large cities. The innate passion for life and all its forms was attributed to man as an immanent trait, called “biophilia” (as the opposite of “necrophilia”) in the late 1960s and early 1970s by Erich Fromm. The taking the subject from a sociobiological perspective allowed the German philosopher to call this trait based on the physiological, anatomical and neurological predispositions of man. This thought was propagated and expanded by American biologist Edward O. Wilson<sup>8</sup> who looked for its genetic grounds. S.R. Kellert is the most contemporary proponent of biophilia but B. Modrzewski and A. Szkolut<sup>9</sup> point out evidence of the presence of biophilia in human life throughout the history of our existence. Their work is an in-depth study based on extensive literature on the subject. It is interesting to see in the table fourteen patterns of biophilia identified by Terrapin Bright Green, which Polish scientists translate into the language of architecture.<sup>10</sup>



Figure 1. Photo Joanna Łapińska

8 E.O. Wilson published “*Biophilia*” in the 1980s.

9 In the article: “*Biofilia – teoria i praktyka projektowa*”.

10 The characteristics of the patterns have been expanded in the “*Biofilia*” article placed on the website of Global Compact Network Poland, the Polish branch of the United Nations Global Compact.

## The three groups of biophilia patterns

The patterns are divided into three groups due to their different nature. The first group contains specific sensory elements of nature that can be placed in space. The second group contains features of nature elements, such as their construction and quality. The third group concerns quality of natural space, it contains situations encountered in nature. Biophilia is currently the leading trend in thinking about space in the world. It is practically a responsibility to include these patterns in projects,<sup>11</sup> which will have a positive impact on quality of the space in which the user is or will be forced to stay for a long time. Interestingly, many of the assumptions that have recently been named and classified in the group of 14 points have been used for a long time in Japanese aesthetics, which will be shown below.

	Pattern	Japanese aesthetics feature	Impact on man in pandemic times
Group I Elements of nature that affect the senses	1. Visual contact with nature	Proximity to nature as the basic principle of the existence of space  Zen gardens, experiencing natural transformations, ikebana, <i>shakkei</i> , internalization of the exterior	Soothing effect on the psyche, vision  Substitute for inaccessible green areas  Apparent expansion of space
	2. Other than visual contact with nature		
	3. Non-rhythmic stimulation of the senses	Outdoor passages between rooms	Healthy air – friendly climate  Escape from stagnation
	4. Thermal variability and air flow		
	5. Presence of water	The sliding walls ( <i>shōji</i> ), the understanding of the shadow ( <i>kage</i> ), the	Soothing effect on the psyche
	6. Dynamic and diffused light		
	7. Inclusion of natural systems		

11 We are talking about two building certification schemes: WELL Building Standard and Fitwel Certification System.

Group II  Features of elements of nature	8. Biomorphic forms and patterns	Irregularity and simplicity, <i>wabi, sabi</i> .	Soothing effect on the psyche
	9. Natural materials		
	10. Complexity and order		
Group III  Quality of natural space	11. Perspective	The passion for darkness, the open space of the house, <i>engawa</i> .	Stimulation of the senses, integration of users
	12. Shelter		
	13. Mystery		
	14. Threat		

Table 1: Biophilia patterns, analogous features of Japanese aesthetics and their impact on the user of space in pandemic times

### The contact with nature

The first of the patterns of biophilia concern the sensory<sup>12</sup> contact with nature, not necessarily visual, also auditory.



Figure 2. Photo Joanna Łapińska

12 I use the term “sensual” here for all the senses.



They are translated into the language of architecture as green walls or plants in pots<sup>13</sup> seemingly randomly arranged in the designs of Ryūe Nishizawa's houses; a window into the world, a patio, but also a simulation of nature in the form of an artificial view or sounds played (forest noise, water). In Japan, the proximity of nature seems to be the basic principle of the existence of space (Zen gardens, the common experience of natural transformations – cherry blossoming, ikebana), not only in terms of interiors, but even urban planning. In Tokyo, there are points, each with its own name, from which you can admire Mount Fuji. *Shiomi-zaka* is a term meaning “slope from which you can admire the sea”.<sup>14</sup> *Shakkei*, in turn, is a design strategy that means “borrowing scenery from outside the garden”.<sup>15</sup> According to this principle, the city of Edo was designed: with a view of Mount Fuji, Mount Tsukuba and the sea. In architecture (interiors) the introduction of nature into the interior through a large glazing has a long history, dating back to the glass houses of Mies van der Rohe and Philip Johnson. From the end of the last century comes the *Water / Glass House* of Kengo Kuma, which is distinguished by the quality of its environment. Placed on the sheet of water, the edge of which apparently recedes in the ocean, the house is a complete environment in which boundaries between the interior and the outside, between the water and the house, have been blurred. Such interior also appears on the top floor of the headquarters of Z58 in Shanghai, a Japanese design, where water has also been introduced to the atrium (the entrance hall), sheltered from the main street by a “blind” made from plants in mirrored pots. Another example of the approach to space as containing both the interior and the exterior is *House N* (2008) *House N* (2008) by Sou Fujimoto, in which the façades of the building surround the space on the boundary of the garden and the patio, inside which is placed the thermally sealed, though glazed, block of the apartment. These are perhaps utopian projects from the point of view of many users of Polish apartments where the view of trees, and not the window of a neighbor, is already a luxury. However, they have at least an educational function: a positive impact on the perception of space and, consequently, on the experience of it. The inclusion in the living space of the outside, or artificial nature in the form of well-placed potted plants, green walls and, in extreme cases, borrowed images, sounds or smells, has a soothing effect on users, a positive influence on their sight and psyche, can be a substitute for an inaccessible park, and also enlarges the space visually: the house reaches where the sight does.

13 Research in British and Dutch offices has shown that space users with live plants work 15% more efficiently than their peers in spaces devoid of plants.

14 “*Estetyka japońska. Antologia.*”, ed. K. Wilkoszewska, Universitas, Kraków 2008, p. 229

15 *Ibid.*

## The variability

Subsequent patterns of biophilia refer to movement, variability of images and stimuli, but also air flow and temperature variation.



Figure 3. Photo Joanna Łapińska

Currently, with the help of technology, it is possible to control the temperature and humidity in the interior, as well as introduce moving elements of façades, for example, adapting to the position of the sun. Older buildings provided this variability due to technical imperfections. Leaky windows allowed for natural ventilation, in cold winters the windows filled with icy images, and uneven glass with blemishes sometimes distorted the view. By comparison, in traditional Japanese houses thermal insulation was not important and passages in the open air between rooms were not surprising, so this variability of air and view was unforced. In a modern apartment, instability can be introduced both indirectly, through previous patterns, that is, a view of nature, and through the use of moving and perforated elements of interior design (e.g. moving partitions, panels or blinds). It is a method that allows us to escape stagnation through the experiencing of the variability of the world.

## The use of the forces of nature

The last biophilia patterns of the first group concern the use of water, light and the forces of nature.



Figure 4. Photo Joanna Łapińska

Interior architecture combines with landscape architecture, organizing space with walls, bodies of water and the differentiation of light: the introduction of a daily cycle of changes in, or zoning of, the intensity and color of light. The paper-glued Japanese sliding walls (*shōji*) uniquely transmit light, allowing the daily rhythm of light to penetrate rooms. They are characterized by the softness and warmth of Japanese paper which “behaves as if it embraced and absorbed light just like the fluffy surface of the first snow”.<sup>16</sup> In turn, thanks to natural crevices, “frail, twinkling light, flashing here and there, once it flows on the mats in pale blurred streaks, once it is poured with luminous spots in the likeness of water taken in a pond, it again embroiders patterned embroidery, as if adorning the night with a painting of powdered gold”.<sup>17</sup> It is a completely different understanding of lighting than the western one, oriented to its function: scattered, directional, focused. Also different is the notion of shadow (*kage*) which has several meanings in the Eastern culture.<sup>18</sup> This approach is evident in the experimental *Même* house designed by Kengo Kuma: “wrapped” in a light-transmitting membrane that allows for

16 “*Estetyka japońska. Estetyka życia i piękno umierania.*”, ed. K. Wilkoszewska, Universitas, Kraków 2009, p. 83

17 *Ibid.*, p. 87

18 Shadow is a flashing or non-refracted light, dimly radiating light from the sun, moon, or lamp (old Japanese); “an indeterminate and dissuasive shape in the circle of radiation, like an image in water or in a mirror but, at the same time, an image imagined or remembered by a person”; but also an unlit place or one where light barely reaches; outline of shapes in the dark, e.g. mountains. More in “*Estetyka japońska. Estetyka życia i piękno umierania.*”, *op. cit.*, p. 14.

soft transitions between dawn, day and dusk. The effect of soft light has also been achieved in the Yeti office building in Liszki (near Kraków), designed by Group\_A, the façade of which is built from cellular polycarbonate panels. An extremely modern and unique project on a global scale, corresponding to these patterns, is the Hansen house in Szumin. The interior design and applied colors correspond to the variability of daily use and differentiation of light. White spots and lines reflect even a small amount of natural light, allowing you to move safely during the long hours of Polish dusk and dawn.

### Features of natural forms

The second group of biophilia patterns introduces features of natural forms into the interior, such as the principle of construction (irregularity, biomorphism, fractals) and materials (stone and wood changing in time). Irregularity, simplicity and impermanency characterize Japanese aesthetics. Consent to the slow ageing of materials is included in it. The categories of *wabi* and *sabi* confirm the conviction of representatives of Eastern culture of the importance of destruction which gives value to objects. The formation of space according to nature is also characteristic of architects of the East. Contemporary developments include “liquid” SANAA’s designs about which I wrote in my previous article,<sup>19</sup> Kengo Kuma’s projects,<sup>20</sup> such as the Lucien Pellat-Finet boutique, the interior of which is covered with a wooden honeycomb structure, and the two extremely different designs by Sou Fujimoto inspired by the anatomy of the tree: the apartment building in Montpellier L’arbre Blanc and House H, the single-family house in Tokyo, about which the architect writes:

To live in a multi-storey dwelling in a dense metropolis like Tokyo is somehow similar to living in a large tree. Within a large tree, there exists few large branches, of which endows numerous qualities: pleasant places to sit, sleep, and present places for discourse<sup>21</sup>.

19 “Found in the landscape – the beginning”, in *inAW Journal – Multidisciplinary Academic Magazine*, 2020, vol. 1, N° 1

20 J. Łapińska: “The colors of the ephemeral world”, [in:] “Color. Culture. Science.”, ed. M. Godyń, B. Groborz, A. Kwiatkowska-Lubańska – Jan Matejko Academy of Fine Arts in Kraków, 2018

21 “Living in a multi-story building in a dense metropolis like Tokyo is, in a sense, like living on a large tree. Within a large tree there are several large branches that provide: pleasant places to sit, sleep and discuss” – transl. by J. Łapińska; [https://www.archdaily.com/188814/house-h-sou-fujimoto?ad\\_medium=widget&ad\\_name=recommendation](https://www.archdaily.com/188814/house-h-sou-fujimoto?ad_medium=widget&ad_name=recommendation).





Figure 5. Photo Joanna Łapińska

Irregularities, impermanency and other features of natural forms bring peace of mind to the users and calm to the interior, which is invaluable in the tense situation surrounding the pandemic.

### **Spatial configurations**

The last four biophilia patterns of the third group concern specific spatial configurations immanent to natural environment. Being in the forest, we see different perspectives: from the immediate surroundings to the sky through the branches, we feel a threat while, finding shelter, we discover mysteries of nature. An architectural space should also be like that: diverse, non-obvious, evoking emotions.

To my feeling, the set of immanent features in nature and desirable in architecture, identified by Terrapin Bright Green, lacks the ownership of an indefinite space with no specific features, ready for use it in a variety of applications. The flexibility of space – the openness of the meadow, the possibilities of the tree – is supported by designers and manufacturers of interior fittings, including Vitra. The multi-functional space was tested by, among others, Sou Fujimoto in the *Final Wooden House* installation: a structure with designated planes and minimal functionality.





Figure 6. Photo Joanna Łapińska

Living space designed as not fully defined, with designated necessary zones (kitchen and bathroom determined by the plumbing) can provide a full-size base for the whole family. It resolves the problem of the lack of space for extra activity, it can be used in turns by different family members, does not allow boredom and does not allow the isolation of an individual.

The designs of these Japanese and European architects are original, individual and, at the same time, adapted to modern conditions. The space in them is diverse, both in terms of utility and senses (sight), flexible, combines the interior and the outside, and has designated places inside. It responds to biophilia patterns and contains important features of the contemporary space with a potential to counteract the effects of seclusion.

### **Personal configurations**

Formal changes may not be sufficient for single or isolated persons. Being separated from the community is incompatible with the nature of a person who needs interaction to grow and live in mental health. Housing that separates people from the environment, which has already been proven, is an unfavorable solution, especially in the present situation. It seems necessary not only to change the design itself but also to revolutionize the whole thinking about habitation, including, among other things, openness to the world (nature and people). In the old days, such qualities were given by multigenerational houses, where contact was maintained but not through a forced relationship of only

two people. A more contemporary approach is to design space for a collectivity, a group of friends, people who have something in common. The space they use is less traditional but allows for greater independence, where intimacy and social life are combined by separating private areas (bedroom, dressing room, bathroom) and semi-private ones (home office, resting place) from the common space (kitchen, dining room, living room). This form of sharing of the living environment includes single people, enabling them to be a part of the society even in the time of the pandemic.

## Conclusion

The biophilia patterns described above, in conjunction with the characteristics of Japanese aesthetics, form the basis for the claim that the relationship between man and nature is a basic need, regardless of place and time. Thus, the design of interiors, especially residential ones, has to take into account the merits of nature.

Quality of the space in which a person resides is one of the most important factors influencing their well-being. A well-designed space can positively affect not only mood but also work efficiency, attitude to others or even physical condition. On the other hand, a wrong design (inconsistent, not meeting the needs and character of the user) has a destructive effect on all of the above mentioned areas. In this work I focused on the architecture of residential interiors because they have become centers of our lives in the last year. I believe that changes in the contemporary thinking about the structure of the house or apartment, consisting in the shifting of highlight from homogeneous spaces, i.e. fully open or segregated rooms (cells), to a more diverse and flexible tissue also containing semi-open and enclosed spaces, shared and fully private, the use of biophilia principles by combining the interior with the exterior and direct references to the natural world will become a positive stimulus for a new, better, quality of life.

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Research task DS-PB 516: Found in the landscape – inconspicuous / coveted – imagined spaces. Project leader: dr Joanna Łapińska

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