diploma 2020

FROM NATURE TO ARCHITECTURE : BIOPHILIC DESIGN STRATEGIES FOR INDOOR AND OUTDOOR SPACES

Sponsors
National Cultural Fund of Hungary
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Nature has became a place to seek for, especially for humans who are living in the cities. Working in the multi-storey buildings, looking through windows to the concrete walls, going to holidays just to get closer to nature is a common way of living for many people. Moreover Increasing number of human population forced architecture to be fast and monotype. Dense cities were being constructed to fullfill the need of human beings for a shelter. Because the focus of the designers was sheltering; human need for nature and living organisms was neglected. In order to describe this need of human beings to nature, the term 'biophilia' was introduced by psychologist Erich Fromm. It was later popularized by American biologist Edward Osborne Wilson who describes the term in his book as "the connections that human beings subconsciously seek with the rest of life". He proposes that biophilia is an innate tendency of all human beings and love of nature is rooted deeply in our biology. Briefly ''Biophilia'' is the biological connection of humans with nature. It helps to explain why they are attracted to nature which boost their positivity and creativity and decreases stress level. The purpose of architectural design is to create spaces where people can have better quality of living. Thus, this study investigates the placement of biophilic design in human well-being; moreover it is role within integration of indoor and outdoor spaces. At this point biophilic design is a concept which helps people to understand and aims to solve the conflics of built environment and nature.

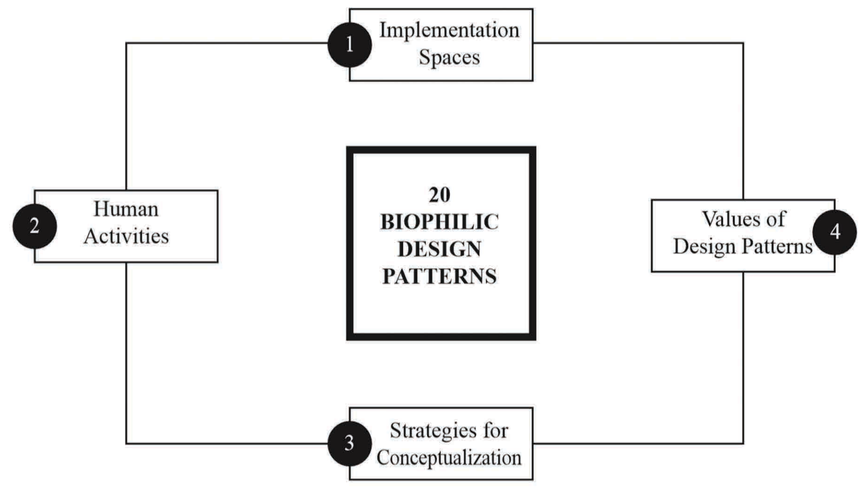
There have been various studies by researches to understand human connection with nature in many aspects. This study investigates and explores this connection through existing literature data collection and fieldwork survey. It aims to observe human actions in natural and built environment refered to the collected research data. Thus, it defines the disconnection of architecture and nature at urban scale. After the human connection with nature is clarified, this study introduces a new biophilic design approach which is often refered to the literature review. This new approach is a systematic guideline for the design process of biophilic spaces. The system aims to create a path in order to solve integration problems of indoor and outdoor spaces. Therefore focus of this study is on the 20 biophilic design patterns which are the bond between human beings and nature. These patterns explain the reasons why humans feel attracted to nature. Understanding the roots of this bond helps this study to suggest effective solutions for the aimed integration. In order to understand this integration, this study additionally examines the case studies which are designed with biophilic design considerations. After reviewing the existing biophilic design solutions through case studies, it tests the applicability of the system on an architectural site that is not integrated enough with its surrounding outdoor environment.This sample study is a living case where is Budai Campus of Szent István University in Budapest, Hungary.

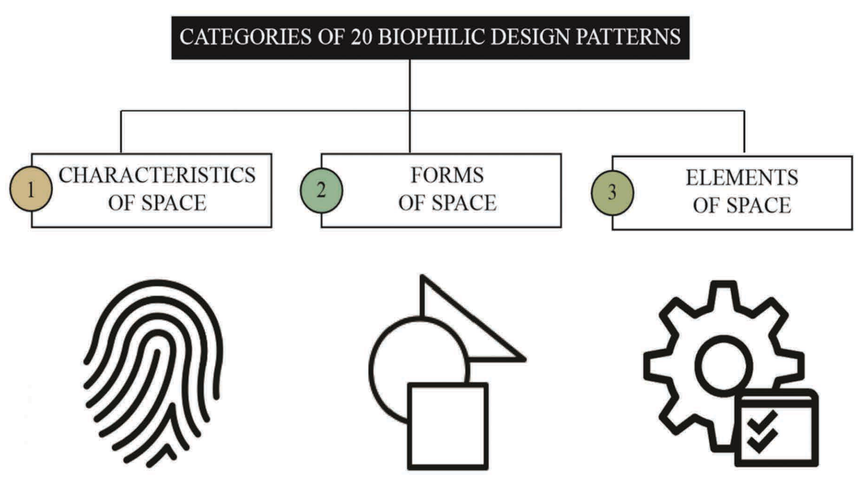
Okwui Okpokwasili, http://frenchculture.org

Color palette of forest, https://pinterest.com

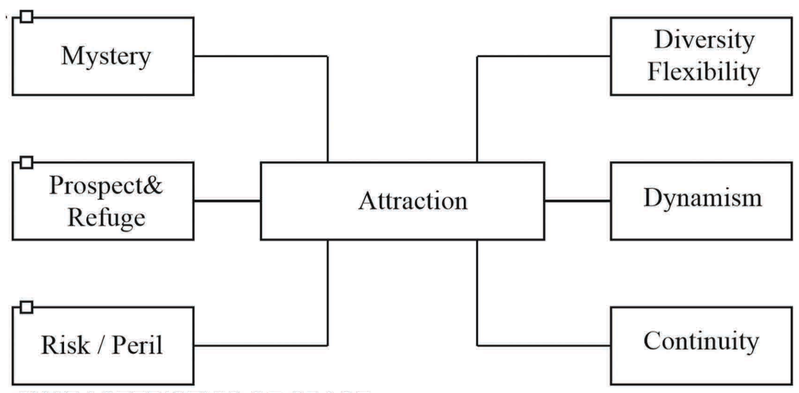
Leaf House, www.visualarq.com

Interior Courtyard, https://cdn.trendir.com

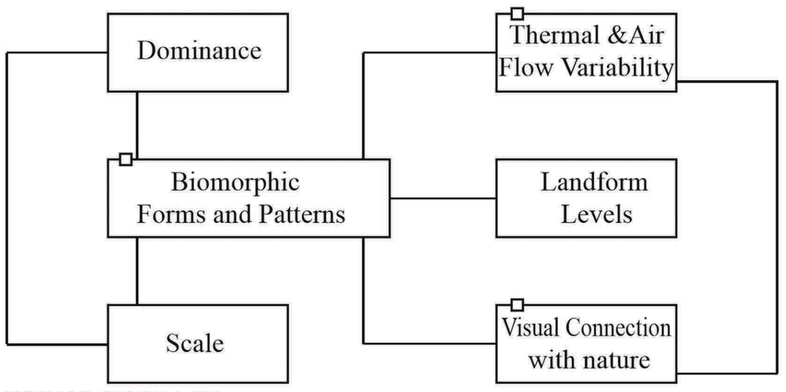




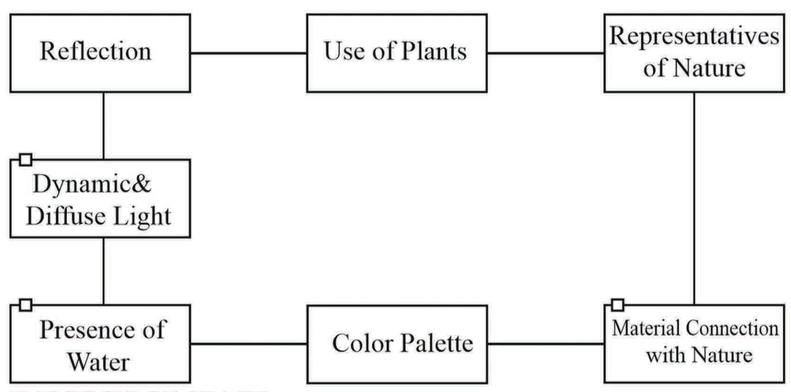
These patterns have been inspired from Terrapin Bright Green.



CHARACTERISTICS OF SPACE

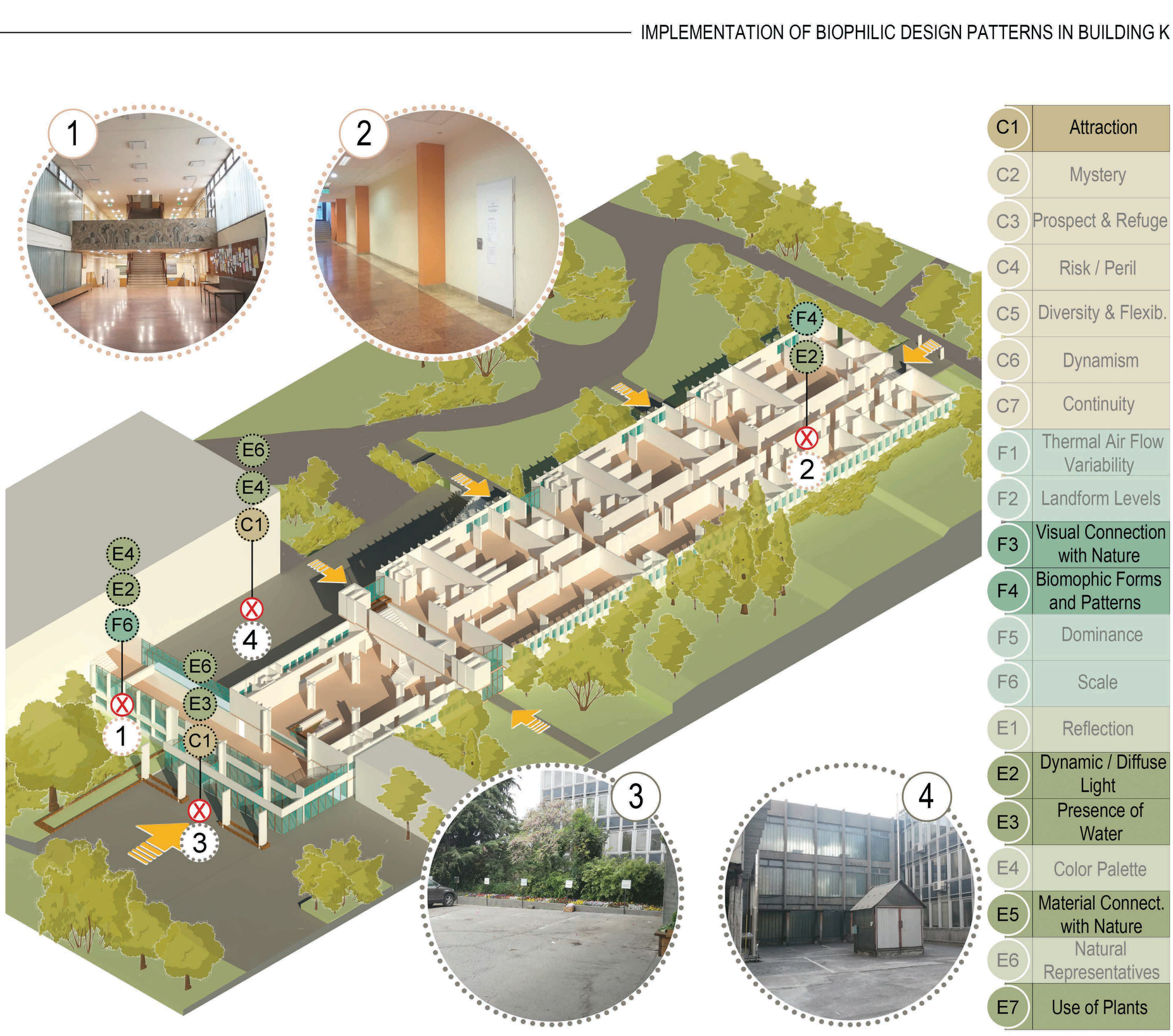


FORMS OF SPACE



ELEMENTS OF SPACE

IMPLEMENTATION OF BIOPHILIC DESIGN PATTERNS IN BUILDING K



C1	Attraction
C2	Mystery
C3	Prospect & Refuge
C4	Risk / Peril
C5	Diversity & Flexib.
C6	Dynamism
C7	Continuity
F1	Thermal Air Flow Variability
F2	Landform Levels
F3	Visual Connection with Nature
F4	Biomophic Forms and Patterns
F5	Dominance
F6	Scale
E1	Reflection
E2	Dynamic / Diffuse Light
E3	Presence of Water
E4	Color Palette
E5	Material Connect. with Nature
E6	Natural Representatives
E7	Use of Plants

DEPARTMENT OF GARDEN AND OPEN SPACE DESIGN

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