

Biophilic Design Strategies: Four Case-Studies from Northern Europe

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Abstract : The UN's 17 Sustainable Development Goals - specifically the nº 3 and nº 11- urgently call for new architectural design solutions at different design scales to increase human contact with nature in the health and wellbeing promotion of primarily urban communities. The discipline of Interior Design offers an important alternative to large-scale nature-inclusive actions which are not always possible due to space limitations. These circumstances provide an immense opportunity to integrate biophilic design, a complex emerging and under-developed approach that pursues sustainable design strategies for increasing the human-nature connection through the experience of the built environment. Biophilic design explores the diverse ways humans are inherently inclined to affiliate with nature, attach meaning to and derive benefit from the natural world. It represents a biological understanding of architecture which categorization is still in progress. The internationally renowned Danish domestic architecture built in the 1950's and early 1960's - a golden age of Danish modern architecture - left a leading legacy that has greatly influenced the domestic sphere and has further led the world in terms of good design and welfare. This study examines how four existing post-war domestic buildings establish a dialogue with nature and her variations over time. The case-studies unveil both memorable and unique biophilic resources through sophisticated and original design expressions, where transformative processes connect the users to the natural setting and reflect fundamental ways in which they attach meaning to the place. In addition, fascinating analogies in terms of this nature interaction with particular traditional Japanese architecture inform the research. They embody prevailing lessons for our time today. The research methodology is based on a thorough literature review combined with a phenomenological analysis into how these case-studies contribute to the connection between humans and nature, after conducting fieldwork throughout varying seasons to document understanding in nature transformations multi-sensory perception (via sight, touch, sound, smell, time and movement) as a core research strategy. The cases' most outstanding features have been studied attending the following key parameters: 1. Space: 1.1. Relationships (itineraries); 1.2. Measures/scale; 2. Context: Context: Landscape reading in different weather/seasonal conditions; 3. Tectonic: 3.1. Constructive joints, elements assembly; 3.2. Structural order; 4. Materiality: 4.1. Finishes, 4.2. Colors; 4.3. Tactile qualities; 5. Daylight interplay. Departing from an artistic-scientific exploration this groundbreaking study provides sustainable practical design strategies, perspectives, and inspiration to boost humans' contact with nature through the experience of the interior built environment. Some strategies are associated with access to outdoor space or require ample space, while others can thrive in a dense urban context without direct access to the natural environment. The objective is not only to produce knowledge, but to phase in biophilic design in the built environment, expanding its theory and practice into a new dimension. Its long-term vision is to efficiently enhance the health and well-being of urban communities through daily interaction with Nature.

Keywords : sustainability, biophilic design, architectural design, interior design, nature, Danish architecture, Japanese architecture

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