

BIOPHILIC ARCHITECTURE

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Aim :

The aim of the research is how to create environmentally friendly, energy-efficient buildings and developments by effectively managing natural resources. The paper concludes the concept and design framework, trying to interpret the way they operate, the differences, similarities and goals.

Objective :

- The scope of biophilic architecture .
- To explore the use of different materials and technologies used in biophilic design to generate different forms and structures.
- The objective of the research is to find the ways to improve our chances of survival by adopting biophilic design .

Hypothesis :

The hypothesis is that does biophilic architecture leads to positive response in terms of human performance and in terms of health as well .

Scope of work :

- To minimizes the negative environmental impact of buildings by efficiency and moderation in the use of materials, energy, and development space.

Limitations :

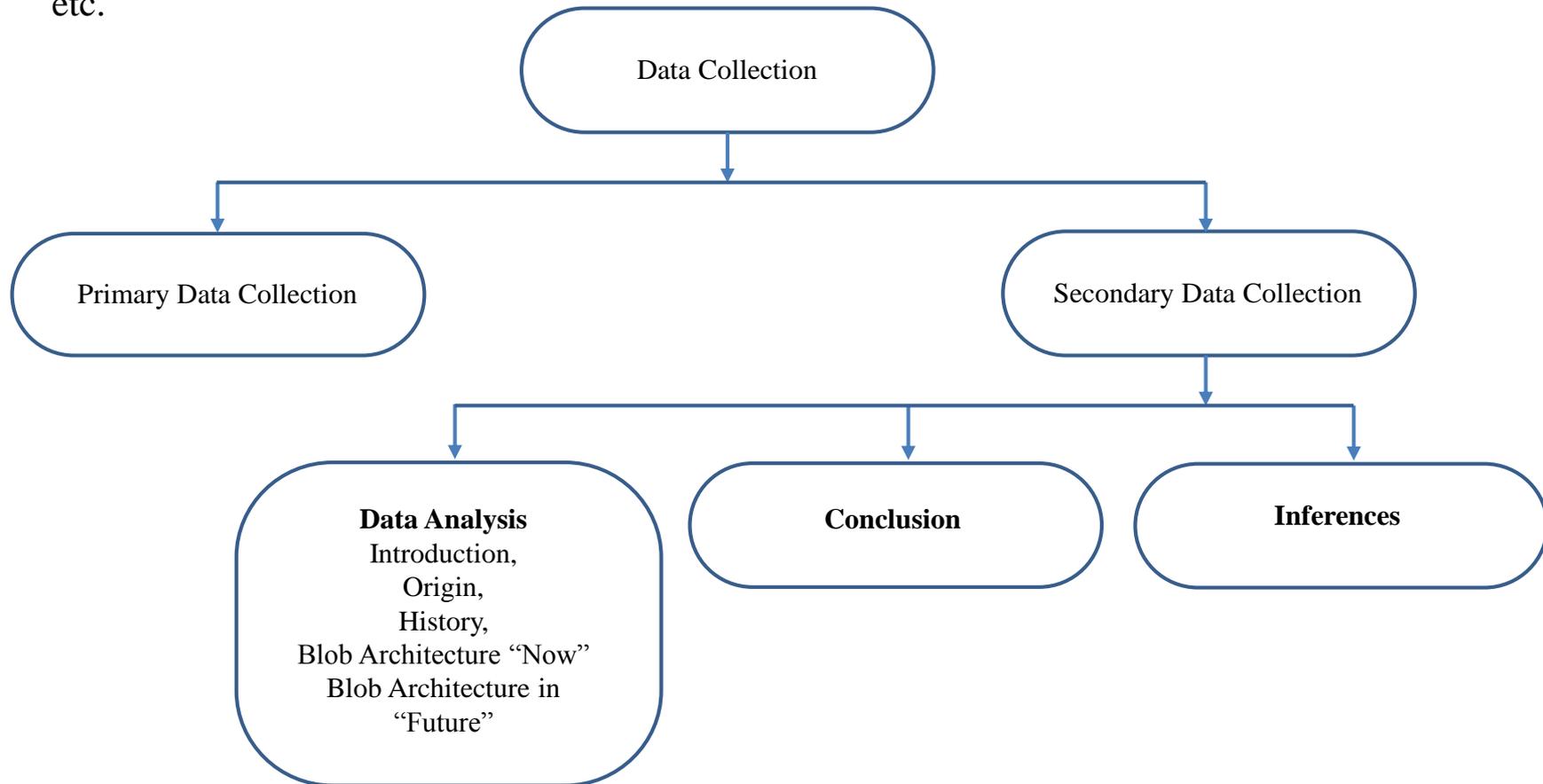
- The study is limited only to the principles of the biophilic architecture .

Abstract :

Recent studies indicate that there is a positive influence of nature and nature integrated built environments on human health and wellness in various physical, physiological and social domains. The need of the eco friendly building design came out from the view that the need of the human comfort is destroying the supporting system of our lives. Through this paper , i want to present the recent strategies that lower the energy consumption of building . The paper also underlines the full overall concept of biopophilia and its principle .Tthe overview of its green components and design attributes and background approach to biophilia on nature .

Methodology

- The methodology here followed is reading research papers, books, journals, newspapers etc.



Introduction :

Bio means “life or living things”, philia means “love”. Biophilia can be translated to Love to life. It was first used by Erich Fromm in 1964 to describe a psychological orientation of being attracted to all that is alive and vital. But the term became popular when Edward Osborne Wilson wrote the book "Biophilia" in 1984. This book proposed the deep affiliations that humans have with nature and that they are rooted in our biology. Unlike phobias and fears that people have of things in the natural world, philiias are the attractions and positive feelings that people have toward certain habitats, activities, and objects in their natural surroundings. (Heerwagen 2009) “The concept of biophilia implies that humans hold a biological need for connection with nature on physical, mental, and social levels and this connection affects our personal wellbeing. productivity. and societal relationships.”

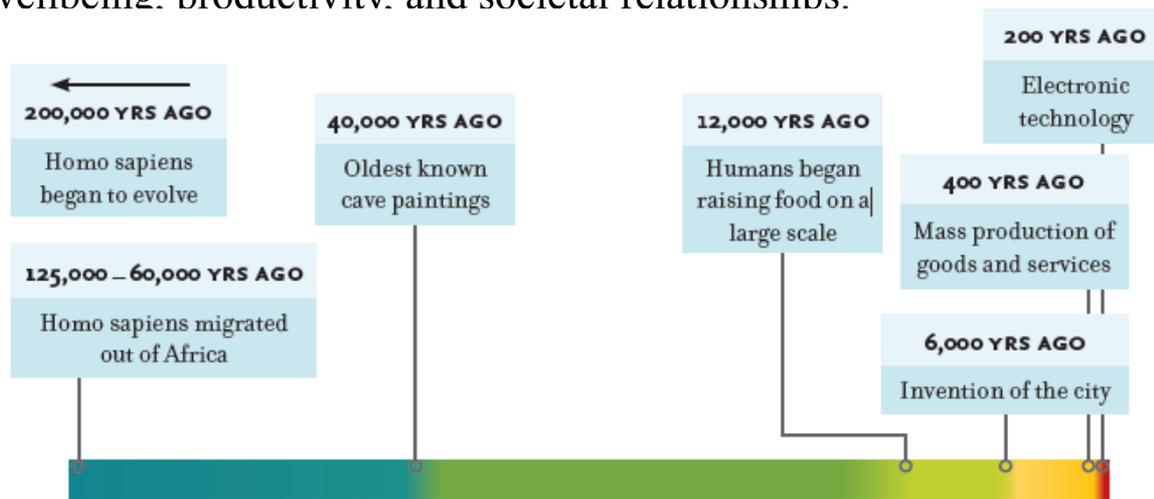


Fig. 1 – Timeline of biophilic architecture

Biophilic Design Standards –

1. **Environmental features** - characteristics and features of the natural environment such as sunlight, fresh air, plants, animals, water, soils, landscapes, natural colors and natural materials such as wood and stone.
2. **Natural shapes and forms** - simulation and mimicking of shapes and forms found in nature. These include botanical and animal forms such as leaves, shells, trees, foliage, ferns, honeycombs, insects, other animal species and body parts.



Fig.2 – Biophilic buildings

- 3 . **Natural patterns and processes** - functions, structures and principles characteristic of the natural world, especially those that have been instrumental in human evolution and development.
- 4 . **Light and space** - spatial and lighting features can evoke the sense of being in a natural setting. These include natural lighting, a feeling of spaciousness and more subtle expressions such as sculptural qualities of light and space and the integration of light, space, and mass.
- 5 . **Place-based –connections** - between buildings and the distinctive geographical, ecological and cultural characteristics of particular places and localities. This can be achieved through incorporating geological and landscape features, the use of local and indigenous materials and connections to particular historic and cultural traditions.
- 6 . **Evolved human relationships to nature** - basic inborn inclinations to affiliate with nature such as the feeling of being in a coherent and legible environment, the sense of prospect and refuge, the simulation of living growth and development, and evoking various biophilic values.

Conclusion :

“The major problems in the world are the result of the difference between how nature works and the way people think .Biophilia and regenerative design both concepts accept that any intervention should be a result from the understanding of the place and culture that is unique in several ways.Biophilia introduce the importance of human health and well-being to be in contact with natural elements . Regenerative concept brings a holistic view, follows the idea that we are nature and we can have a positive impact by co-evolving human and nature needs, conceiving buildings that are part of the ecosystem where they're located.

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