

The connection between man nature and architecture philosophy essay



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The main idea is to trace the connection between man, nature and architecture in the history and explore the concept of organic architecture in a symbolic relationship with the modern technology.

I may live there with troubled soul

For I have intervened in nature's secret ways

Again, I may find peace, if design with spirit

Yet not "out do the modesty of nature"

So will I be her partner in the glory of his spring

John. M. Johansen

DATA ANALYSIS:

"What is an eco-system?"

Ecosystems are dynamic interactions between organisms and their environment working together as a functional unit.

"What is an environment?"

An environment is a sum total of all surroundings of a living organism, including natural forces and other living things, which provide conditions for development and growth as well as of danger and damage.

This can also be applied to architecture as buildings can also act as living organisms if they are designed, keeping in mind, the impact of natural forces that lies in the building's surrounding i. e. the building's context and

environment. In this way the buildings could interact with nature and take form according to the natural forces exerted on the buildings by the nature.

An environment is divided in to two particular types which are:

FIG. 1. 1 TYPES OF AN ENVIRONMENT

THE NATURAL UNIT:

The natural unit consists of all the plants and animals and micro organisms (biotic factors) in an area that function together with all the non-living physical (a-biotic) factors of the environment and their movements.

ECOLOGY

FIG. 1. 2 ECOLOGY - BALANCE BETWEEN ORGANISMS AND ENVIRONMENT

FIG. 1. 3 FACTORS AFFECTING ECOLOGY

ECOLOGY

ENVIRONMENTAL FACTORS AFFECTING ECOLOGY:

MAN'S AFFINITY WITH THE NATURAL ENVIRONMENT:

There exists a long aesthetic tradition of letting nature inspire and be represented in human culture through the creation of form. Hence, the relationship of man and the natural environment is rooted in a passion for life, nature, natural form and full of vitality of natural world with its biological forms and processes.

ANCIENT GREEKS AND EGYPTIANS:

Studied natural form and human body and abstracted them as geometry.

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Used basic shapes to derive harmonious proportions for shrines and temples

Langier's theory of the evolution of house from the concept of four trees joins together, and that's where the idea of having columns and roofs etc came from.

EARLY CELTIC ART:

Expressed mystical and an ambiguous world of highly stylized natural abstract forms.

RENAISSANCE AND RATIONALISM:

They studied classical theories of proportions based on human forms.

According to ALBERTI:

“ Building must appear whole like an organism; all steps of learning should be sought from nature.”

“ An ultimate aim of an artist is to imitate nature” ALBERTI

FOR THE PEOPLE AND BY THE PEOPLE:

According to the new architectural principles By Ruskin

“ Architecture should be true, with no hidden structure, no veneers or finishes, and no carvings made by machines, and that beauty in architecture was only possible if inspired by nature.”

FIG. 1. 5 SKETCHES BY RUSKIN

That beauty of form is revealed in organisms which have developed perfectly according to their laws of growth, and so give, in his words ' the appearance of felicitous fulfillment of function.'

Architects of those times like Pugin and Viollet-le-Duc drew inspiration from the Form and Process of Nature.

THE ART AND CRAFT MOVEMENT:

According to MORRIS LAPIDUS;

“ Building should be like an Organism.”

Sweeping curves, theatrically backlit floating ceilings, beanpoles, and the amoeboid shapes that he called ' woggles', cheese holes, and painter's palette shapes.

His curving walls caught the prevailing ocean breezes in the era before central air - conditioning, and the sequence of his interior spaces were the result of careful attention to user experience.

Rejection of 19th century stylistic imitations for a simpler, more abstract approach with natural continuous forms.

ART NOUVEAU:

Inspired by delicacy of living forms such as vines, tendrils, flower stems, buds and insect wings etc.

FIG. 1. 6 EXPRESSIONS OF ART NOUVEAU

Structures resembled vegetative growth, windows appeared as diaphanous membranes etc.

Example: Victor Horta's Hotel Tassels and

Casa Batllo by Antonie Gaudi

FIG. 1. 7 EXAMPLES OF ART NOUVEAU ARCHITECTURE

EXPRESSIONISM:

Streamlined exterior and organically following that defined traditional structural laws.

For example: Einstein Towers by ERICH MENDELSON

FIG. 1. 8 EINSTEIN TOWER

METAPHORS AND MATERIALS:

ANTONIE GAUDI - " The straight lines belong to men and the curve lines belong to GOD."

Gaudi used natural forms and advanced structural systems and used of metaphors and symbols.

ALVAR AALTO:

He used vigorous curved forms and portrayed individual nature of his buildings.

His buildings are designed with their surrounding environment in mind.

Great attention to their practical demand.

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Looked to the more prominent model of the nature and natural forms

He was not anti-technology but believed that technology could be humanized to become the servant of human beings and the promoter of cultural values.

One of his maxims was that architects have an absolutely clear mission: ' to humanize the mechanical forms.'

FIG. 1. 9 AALTO BAKER HOUSE MIT

FROM INNER PERPOSE TO OUTWARD APPEARANCE:

LOUIS SULLIVAN: " Outward appearance resembles inner purpose." A key concept for an Organic design. Ornamentation was a key Factor.

FRANK LLOYD WRIGHT: " A thing growing out of the nature of thing." E. g. Guggenheim Museum

PAULO SOLERI: The organic city

BRUCE GOFF: " Designing is an act of self discovery and that one's personal development." He played with competing natural elements like Earth, Fire, Air, Water etc. E. g. Bavinger House, Oklahoma.

FIG. 1. 10 BAVINGER HOUSE, NORMAN, OKLAHOMA

INTRODUCTION TO THE TERM ' ORGANIC'

ORGANIC: A future vision and a program for a society that developed in a natural symbiotic relationship with its environment; the instrument for that - organic building provides to overcome the social contradictions that progress had inflicted on society.

THE AESTHETIC ORGANIC: Primarily visual and concentrated to particular places or areas. Organic layouts that opposes the geometry of metropolis and produces the change of behavior and moral attitudes of civilians or citizens

THE FUNCTIONAL ORGANIC: Basic premise from how modern biology looked at the process of development of organisms. It is technical, rational and organic. For example Metabolist movement in Japan.

METABOLISM: integration of structural and symbolic solution for mega cities, extending from permanent spine and tree structures.

Architect and planner David Pearson proposed a list of rules towards the design of organic architecture. These rules are known as the Gaia Charter for organic architecture and design. It reads:

“ Let the design:

Be inspired by nature and be sustainable, healthy, conserving, and diverse.

Unfold, like an organism, from the seed within.

Exist in the “ continuous present” and “ begin again and again”.

Follow the flows and be flexible and adaptable.

Satisfy social, physical, and spiritual needs.

“ Grow out of the site” and be unique.

Celebrate the spirit of youth, play and surprise.

Express the rhythm of music and the power of dance.”

The word Organic may refer to a curve, asymmetrical, natural material, individualistic, holistic, and mechanical and so on.

FROM SEED TO PLANTS:

JOHANN WOLFGANG VON GOETHE: concepts of morphology and metamorphosis

“ The fish isn’t fashioned for water nor it adapts itself to water; rather the fish exist in and through water.”

For the fish nothing exists in isolation, it takes its form through interaction with its condition.

RUDOLF STEINER: Austrian thinker

Organic structural thoughts

Never imitated nature

Projection of bodily feelings into buildings forms

GOETHEANUMS: Spiritual philosophy

Illustrations of new styles of arches that unites spirit and matter with a living interaction between parts and whole the crucial link between being the METAMORPHOSIS between the small (seed) and the large (plant) where the new form is prefigured in to the old.

“ Function is derived from nature; life expression (form) comes from human intellect.”

BUILDINGS AS ORGANISMS:

“ Everything which has life lives by something outside itself.”

HANS SCHAROUN: Organic functionalism

Spatial experiences, forms based on careful research into site, functional needs and deeper social meanings.

FIG. 1. 11 HANS SCHAROUN, BERLIN PHILHARMONIE

“ An architectural intervention is an ecological act created from the existing environment; it has an impact on the systems of which it is a part. Adopting a strategy as appropriate to its task, it may resemble, for example, a filament, a parasite, a virus or a vital organ.” HANS. S.

ORGANICISM – ORGANISM:

According to KANT

“ The perception/definition of nature and organism is very subjective and plays freely between universal ideas and subjective feeling.”

GOETHE - the philosophy of evolution:

“ Nature produced an essential form with which it toyed and then in the course of play brought forth the infinite variety of life.”

THE SHIFT FROM CHARACTER TO FUNCTION:

Goethe -

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“ Plants are constituted through the inner law of nature and modified through the law of outer circumstances [e. g. humans and animals]”

Organic structure is no longer about independent variables, but about systems governed by one another and responding to each other in a reciprocal way. Researches indicate that Humans are in nature pre-disposed to have an emotional affinity with nature. This affinity is called BIO-PHILLA. Giorgio Vasari's philosophy is based on the design values of nature. He argued that:

“ The façade should be bi-lateral symmetry equal to that found in human face.”

This was based on the belief that:

Façade was the analogue of the face

Courtyard was the analogue of the body

Staircase was the analogue of the limbs

Organic design which involve the use of natural shapes and forms in buildings and landscapes, directly or indirectly or symbolically extract people's inherent affinity for the natural environment. The three main elements of Organic aesthetics are:

Buildings and products which employ biological form for symbolic purposes

Buildings where the functional program is inspired by biological form

Buildings which appear to the observer to process biological qualities.

CONCLUSIONS:

Architecture driven by nature to improve the lot of humanity-calls for a notion of human growth that brings the organic processes of building and ecology together.

Redefining organic architecture

FIG. 1. 12 ECOLOGY AND ENVIRONMENT HIERARCHY

Therefore the organic being a result of the outer circumstances leading to the discovery of form based on the factors - climate, insolation and geology.

FIG. 1. 13 RELATHIONSHIP OF ECOLOGY AND AN ORGANISM

FIG. 1. 14 ORGANISM AND ENVIRONMENT

Aesthetic element in nature includes - inspiration from all sorts of organisms, as well as numerical laws of chaos theory, fractals and other advances in science and mathematics.

Form is an important part of organic architecture and in every natural form is found its course of evolution through interaction with the natural forces.