Introduction to Theory and History of Architecture

SBEA 1513

Organic Architecture & Form Follow Function

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Organic Architecture

- A theory established by Frank Lloyd Wright
- The idea of organic architecture is when environment is considered as part of design.
- Taking the site context, local material, landscape, climate, human needs as a priority in design process and decision making.
- Building 'grow' on site.
- Building merge and unite with surrounding
- Building should complement the context

Objectives

Organic Architecture not only addresses environment concern but also expresses individuality.

•Each building is related to variables like
a.Man
b.Site
c.Time

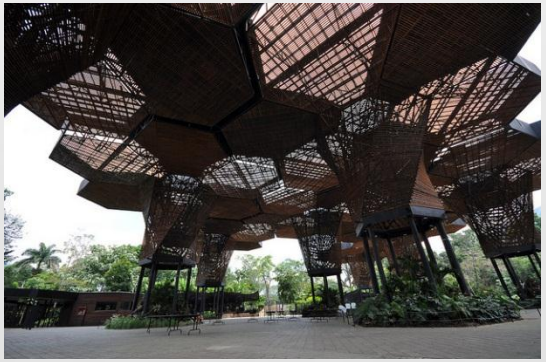
•The belief that a building should appear to grow easily from its site.

•Choosing one dominant form of a building and integrating that form throughout.

•Opening up spaces.

•Providing a place for natural foliage.

Earth House
https://en.wikipedia.org/wiki/Earth_house - /media/File:Dietikon_-_L%C3%A4ttenstrasse_Erdhaus_Peter_Vetsch_IMG_6126.JPG

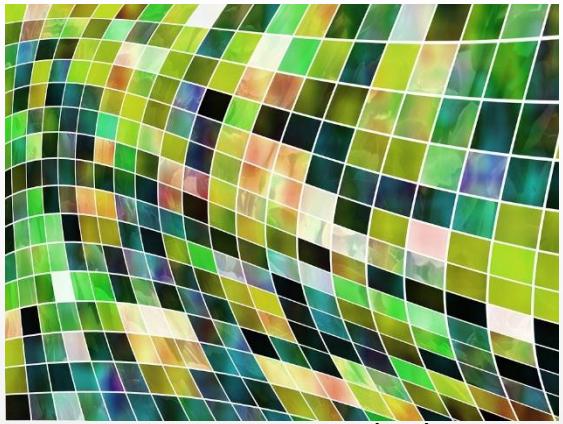


Orchidarium - Medellin Botanical Garden

https://www.flickr.com/photos/jlascar/5086027025

•Using natural colors : “Go into the woods and field for color schemes”.

https://pixabay.com/en/green-range-color-palette-color-68839/



https://www.flickr.com/photos/alanvernon/4894118745

Natural colors resembling natural elements

•Revealing the nature of materials.

CONCRETE is fluid

https://commons.wikimedia.org/wiki/File:Concrete_texture.jpg

WOOD is sturdy and flexible

https://pixabay.com/en/wood-color-texture-green-wooden-846258/

GLASS is transparent and allows light to filter in.

https://commons.wikimedia.org/wiki/File:Broken_glass.jpg

http://donnamarie113.deviantart.com/art/Sunny-Peach-Bricks-299157836

https://www.pexels.com/photo/paving-stones-with-moss-6083/

Bricks and stones

•BRICK AND STONE are solid.

Allowing materials to perform as their nature.

•Organic Architecture utilizes strong , rational GEOMETRY to create a building that can be understood as single entity.

•Buildings should be in continuity in structure, space and form.

Guggenheim Museum

https://www.flickr.com/photos/132084522@N05/17207156426

Advantages

•Introducing nature through trees and open spaces doesn't only look nice but also gives you wellness benefits.

•There is growing lack of interaction between man and nature which has created a void, Organic Architecture with free flowing and curvilinear organic forms fills this void enhancing the city aesthetically with spirit of marvel. It also minimize the destruction of forestry, etc.

•It creates a eco-friendly buildings which provide improved indoor air quality , optimal comfort ,proper ventilation and health.

•It eliminates possible causes of SBS (Sick Building Syndrome).

•Organic buildings are more economic as they increase the asset value and profits by giving higher employee satisfaction.

Form Follows Function

- Louis Sullivan's phrase "form (ever) follows function" became a battle-cry of Modernist architects after the 1930s. The credo was taken to imply that decorative elements, which architects call "ornament," were superfluous in modern buildings.

- When we say the that the form follows function we say that the purpose defines the look and shape of the object and that's efficiency.

- However, there are several other architects who shaped this theory into what it is today. They are:
  - Louis sullivan (aesthetic)
  - Le corbusier (machine)
  - Mies Van Der Rohe (Structuralism)

Louis Sullivan emphasized on how the form of the building is being dictate by the function of the spaces and form of the building.

- The underlying idea behind this philosophy is “efficiency”. Efficiency in materials, space planning and ornamentation provides a way to minimize the cost of construction and increase the profit margin.
- The idea of efficiency suddenly became central to the high rise architecture because of modular construction that greatly supports repetition.
- All of the new ideas in efficiency were shown in Sullivan’s first masterpiece- The Wainwright building in St. Louis.

The Wainwright Building (1890)

https://en.wikipedia.org/wiki/Prudential_%28Guaranty%29_Building -/media/File:Prudential_Building_2013-09-08_12-21-41.jpg

Le Corbusier on the hand emphasized on the idea of design as a machine.

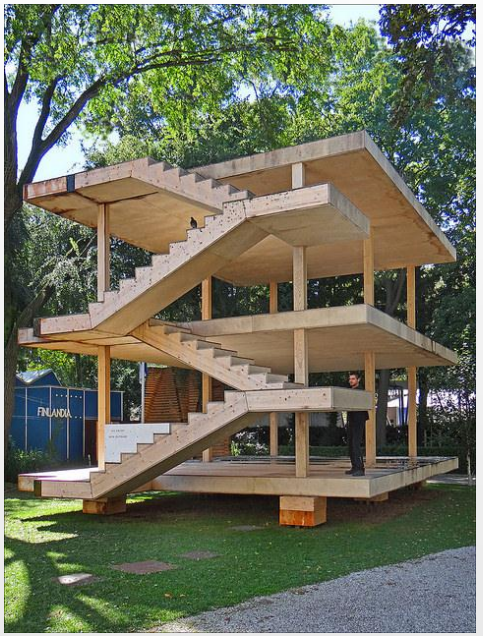
•He believed that all parts and functions of the building should be exposed without having to decorate.

•His designs are based on the human needs and the suitability of the building towards the occupants.

•His famous quotes: ” The house is a machine for living”..

•The simplistic, streamlined result born out of innovative engineering techniques and modular design had influenced Corbusier’s spatial planning and minimalistic aesthetic.

•His alms were to maximize the interpenetration of inner and outer space and create plans of the utmost freedom and flexibility.



Skeleton of a house to be mass-produced of inexpensive, standardized materials

https://www.flickr.com/photos/dalbera/14938729273

Agreeing with Le Corbusier, Ludwig Mies Van der Rohe emphasized on structural elements of a building. He suggested that all the structures of a building should be revealed and exposed to provide a more universal space that enables freedom of space.

- He strove toward an architecture with a minimal framework of structural order balanced against the implied freedom of free-flowing open space.
- He called his buildings "skin and bones" architecture.
- He sought a rational approach that would guide the creative process of architectural design, but he was always concerned with expressing the spirit of the modern era.
- He is often associated with his quotation of the aphorisms, "less is more" and ” God is in the details”.

Exposed spaces of Barcelona pavilion

By Ashley Pomeroy at English Wikipedia, CC BY 3.0, https://commons.wikimedia.org/w/index.php?curid=12138750

Form follows function in objects

A design or a style or a shape of an object follows the function of the object.

For an example, a chair's shape is designed according to the exact purpose of its existence. If the chair is built for people to have a quick nap, the chairs shape must be long enough to make the people feel comfortable and cosy.

If an object has to perform a certain function, its design must support that function to the fullest extent possible.

http://www.publicdomainpictures.net/view-image.php?image=3236&picture=wooden-chair

By ninahale - http://www.flickr.com/photos/94693506@N00/4629306210/sizes/o/in/photostream/, CC BY 2.0, https://commons.wikimedia.org/w/index.php?curid=14952074

Different functions different forms

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