

A detailed architectural rendering of a modern building. The building features a prominent curved facade with a large, wide staircase leading to an entrance. The facade is composed of vertical panels and large glass windows. The scene is set in an urban environment with other buildings and a street visible in the background.

DESIGN METHODS

Second Year, Second Semester

2022 – 2023

Introduction

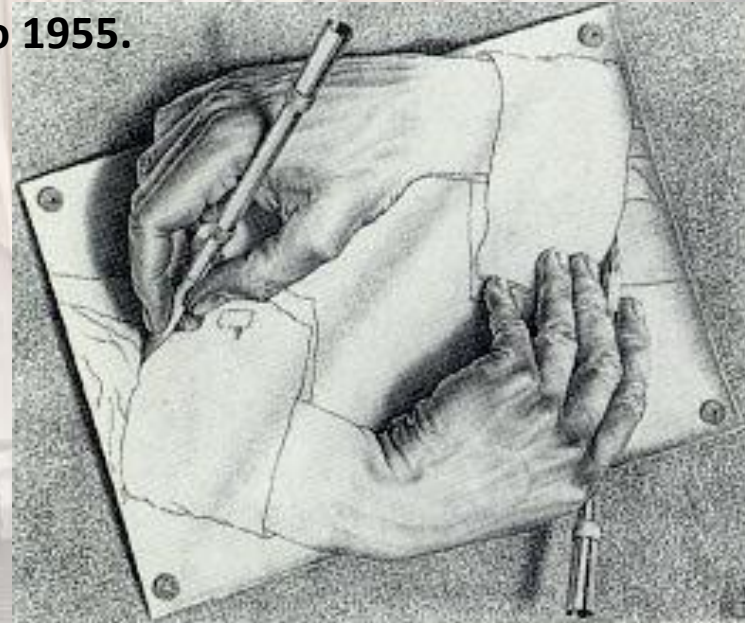
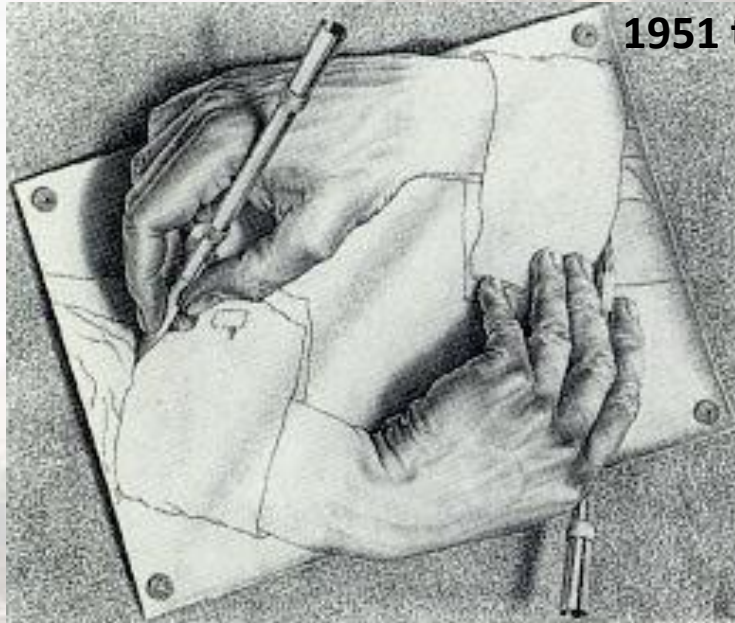
The Origin of Architecture

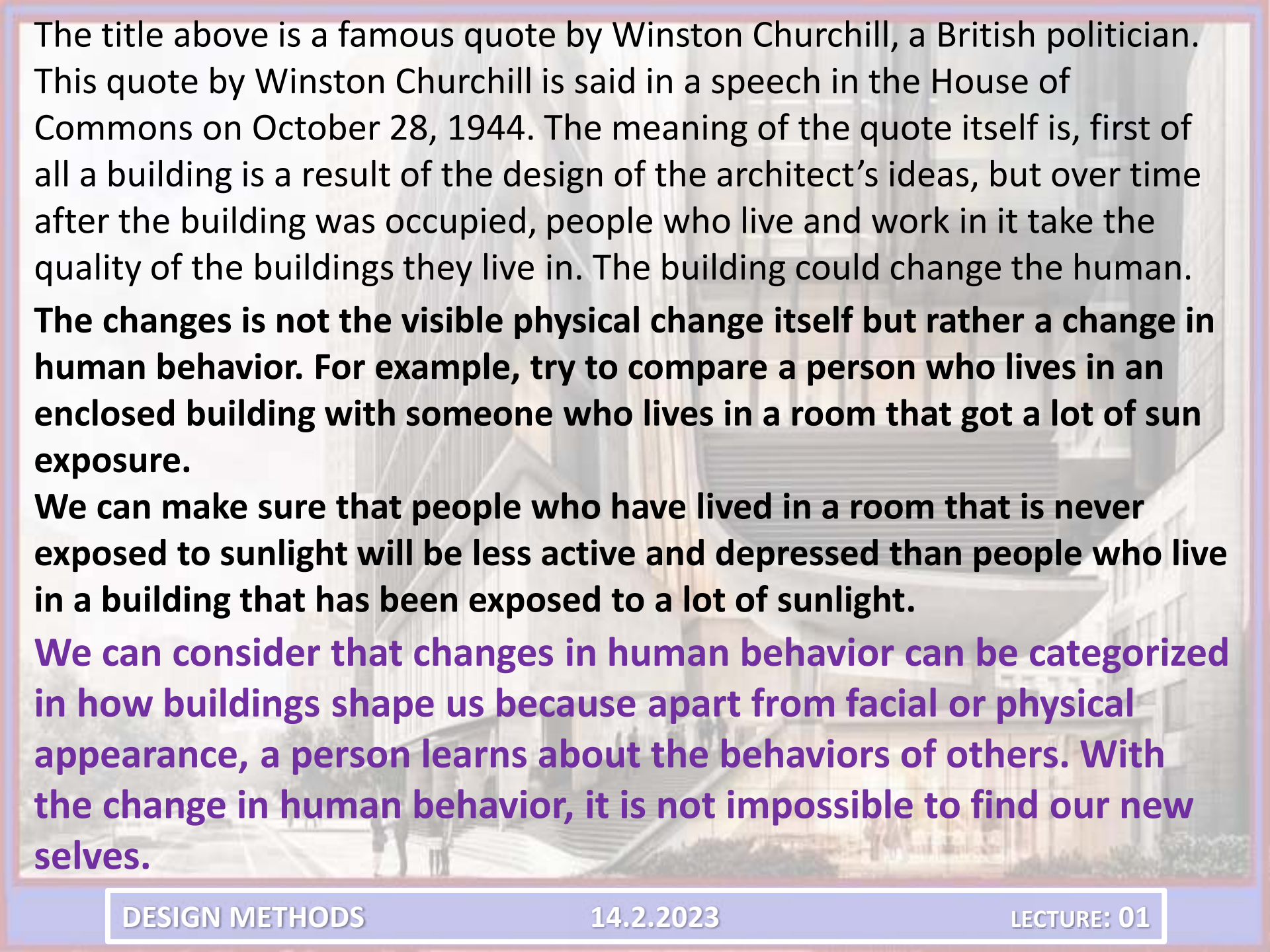
Asst. Prof. Dr. Faris Ali Mustafa

**We shape our buildings, and afterwards
our buildings shape us.
-Winston Churchill**



Prime Minister of the United Kingdom from 1940 to 1945 and again from 1951 to 1955.





The title above is a famous quote by Winston Churchill, a British politician. This quote by Winston Churchill is said in a speech in the House of Commons on October 28, 1944. The meaning of the quote itself is, first of all a building is a result of the design of the architect's ideas, but over time after the building was occupied, people who live and work in it take the quality of the buildings they live in. The building could change the human.

The changes is not the visible physical change itself but rather a change in human behavior. For example, try to compare a person who lives in an enclosed building with someone who lives in a room that got a lot of sun exposure.

We can make sure that people who have lived in a room that is never exposed to sunlight will be less active and depressed than people who live in a building that has been exposed to a lot of sunlight.

We can consider that changes in human behavior can be categorized in how buildings shape us because apart from facial or physical appearance, a person learns about the behaviors of others. With the change in human behavior, it is not impossible to find our new selves.

Origin of Architecture:

- Architecture is one of the *oldest professions* in human history. It appeared with *human beings' need* of shelter to protect themselves from the weather and *danger* outside.
- It first evolved as the outcome of *needs* (like shelter, security, worship etc.) and *means* (like the available building materials and skills).



Primitive Maori shelter, New Zealand

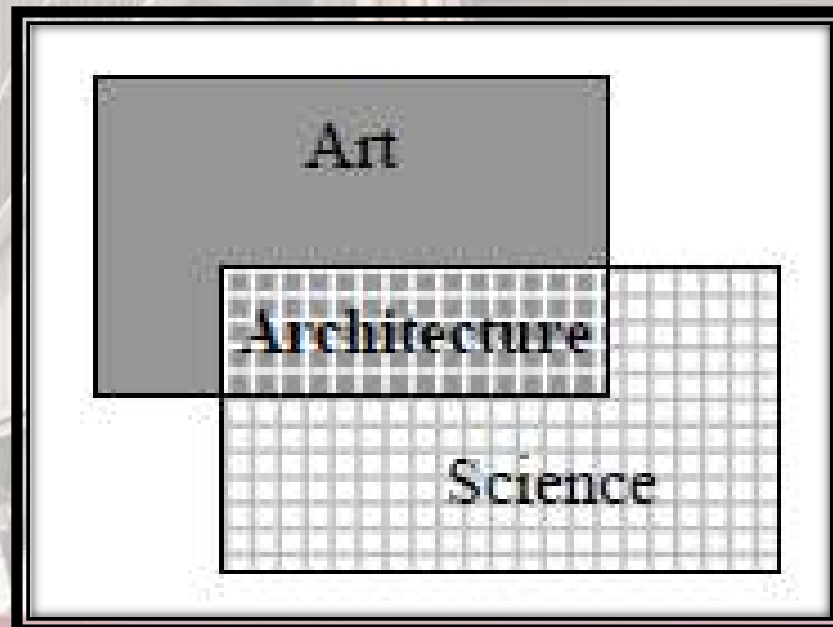
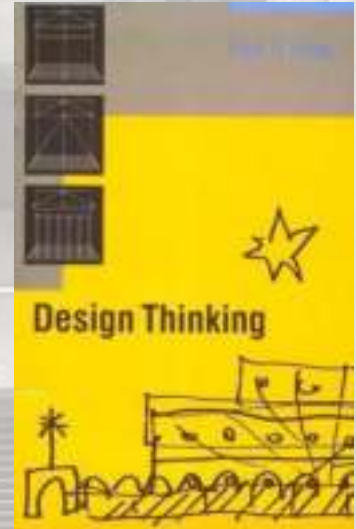


Ohlone Indians, USA

What is Architecture?

Many attempts have been made to define architecture.

For example, Peter G. Rowe (1987) in his book (Design Thinking) points out that architecture is often located in an ambivalent position between the forms of fine arts and technical sciences.



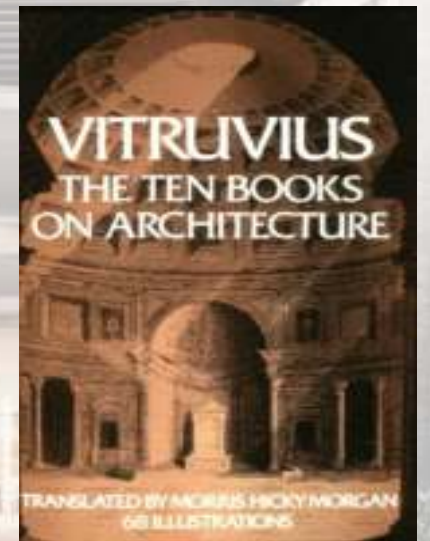
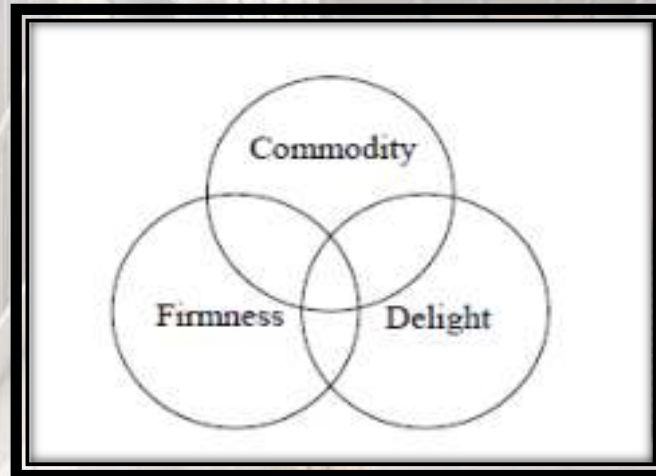
What is Architecture?

According to Vitruvius, architecture is an imitation of nature.

Where birds and bees built their nests, humans built dwellings from natural materials, which provided them with shelter to protect them from environmental hazards.

What is Architecture?

A good definition was provided by the Roman architect **VITRUVIUS** in the 1st century AD in the first of his famous collection “**Ten Books on Architecture**”.



What is Architecture?

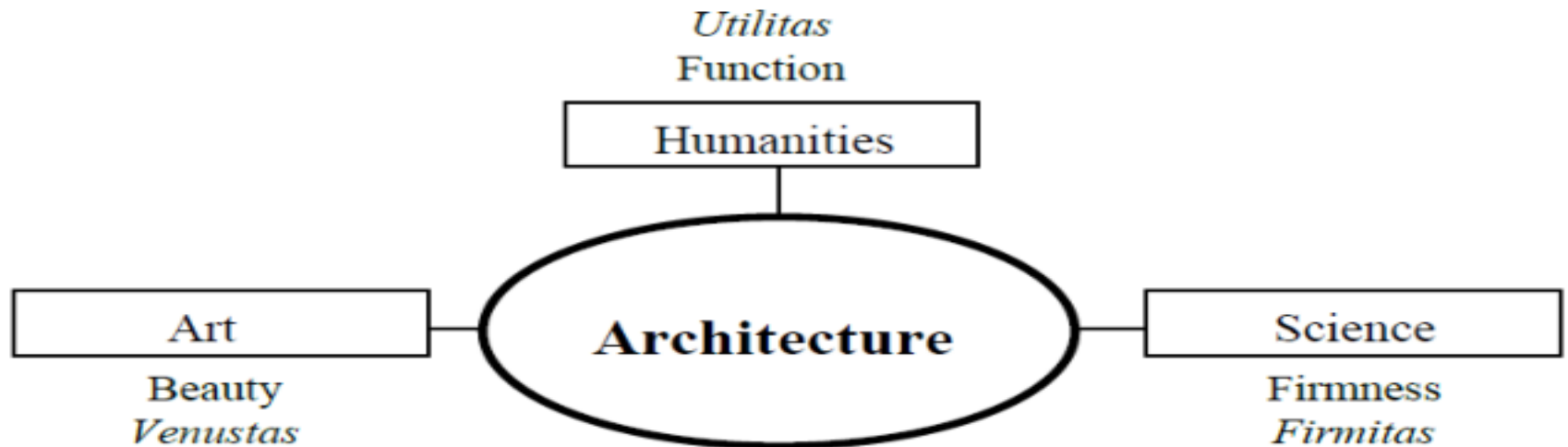
Utilitas ... Firmitas ... Venustas

Commodity ... Firmness ... Delight

Utility ... Solidity ... Beauty

Use ... Construction ... Appearance

Function ... Technology ... Aesthetic



The Difference Between Architecture and Building

Any Building \neq Architecture
Architecture = Design BEFORE Building
Architecture is Designed
Buildings, Spaces and Environments,

According to **Hu**man Needs
Using **Tech**nology and Science
With **Aesth**etic Qualities.

A background architectural rendering of a modern building with a glass facade and a prominent staircase. The building is shown from a low angle, emphasizing its height and the scale of the staircase. The scene is set in an urban environment with other buildings and a street visible in the distance.

Therefore, the critical test of architecture is conducted by the following questions:

1. **Is the building functional?** (Can it be used effectively and easily?)
2. **Is the building firm?** (Is its structure firm enough to carry all the weights it should carry, such as its own weight, its users' weights, and the forces of the wind and the earthquake? And, Are its materials durable enough to withstand many years of use?)
3. **Is the building beautiful?** (Does the building give visual delight to the user and the viewer; is it aesthetic and pleasing?)

Who is the Architect?

The word *Architect* is derived from the Greek word *architekton* meaning master builder.

One who designs buildings and supervises their construction.

Architects are licensed professionals trained in the art and science of building design. They transform needs into concepts and then develop the concepts into images and plans of buildings that can be constructed by others.



The Architecture Profession

- Architecture, as a profession is **the practice of providing a service, which includes many different disciplines while the overall aim of an architect is to design buildings.**
- Architecture can refer to the actual product, **the architecture of a building** or it can refer to the **method** or **style** used to design the building.



The Star-Architects !



Le Corbusier



F. L. Wright



Walter Gropius



Mies Van Der Rohe

Modern Architecture



Robert Venturi



Philip Jonson



Michael Graves



Cesar Pelli

Post-Modern Architecture



Jorn Utzon



Alvar Aalto



Mario Botta



Kenneth Frampton

Critical Regionalism



Tadao Ando



Luis Ramiro Barragán



Álvaro Siza



John Pawson

Minimalism Architecture



Sir Norman Foster



Renzo Piano



Richard Rogers



Jean Nouvel

High-Tech Architecture



D. Libeskind



Frank Gehry



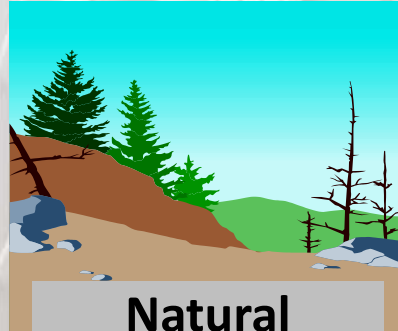
Peter Eisenman



Zaha Hadid

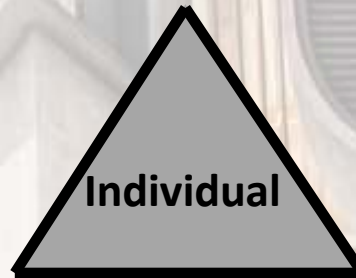
Deconstruction

The Context of Architecture



**Natural
Environment**

**Earth Climate Ecology
Resources**



Individual

**Human
Environment**



**Built
Environment**



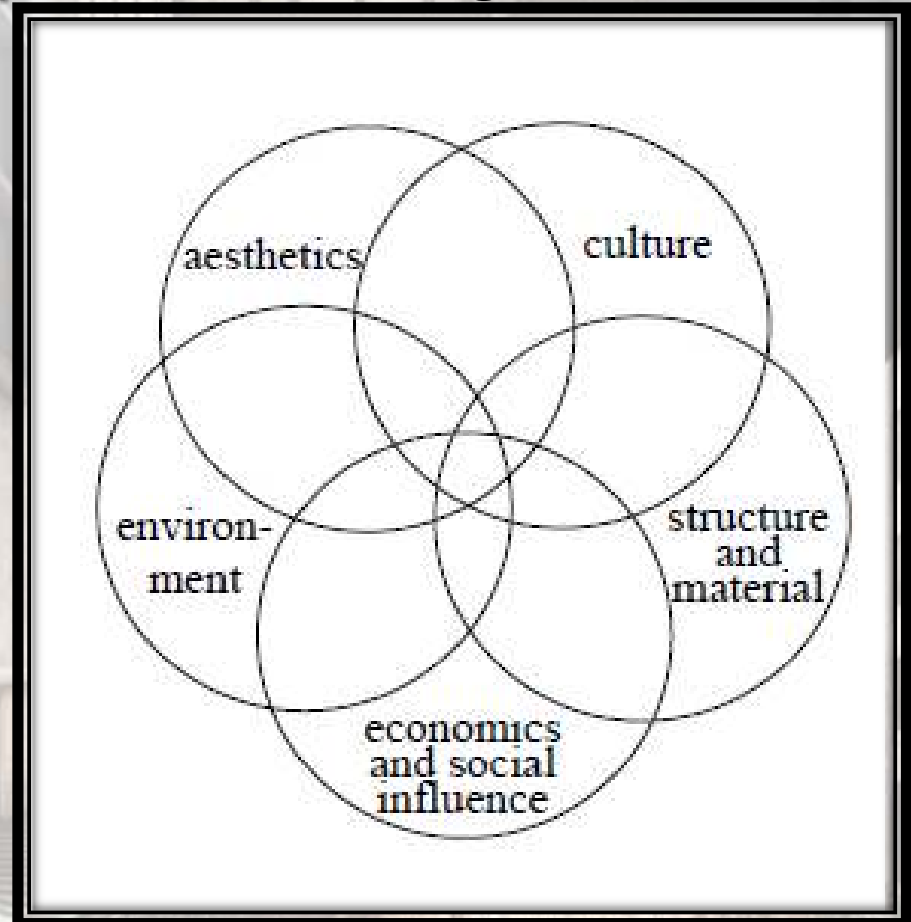
**Cities
Neighborhoods
Buildings
Interior Spaces**

The Education of the Architect:

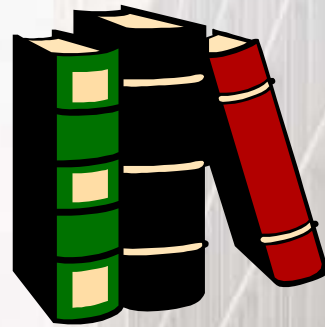
Current curricula of architectural schools and principles of design professions suggest that there are at least ***five important components*** in design:

- ✓ ***Aesthetics.***
- ✓ ***Culture.***
- ✓ ***Environment.***
- ✓ ***Structure and materials.***
- ✓ ***Economics and social influence.***

Designers are expected to consider these components throughout every phase of the ***design process.***



The Education of the Architect:

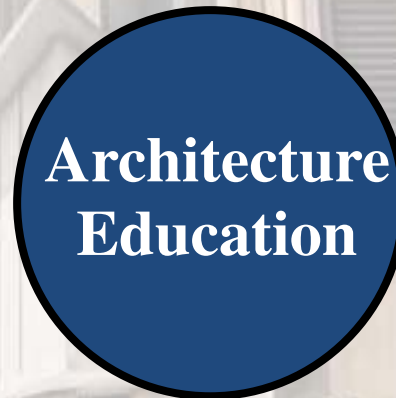


Sociology
Psychology
Anthropology
Humanities



Science & Engineering

Materials
Structure
Electrical
Mechanical
Civil



Architecture
Education



Arts
Painting
Sculpture
Aesthetics

Project Based Learning:

- ***Students*** can see the interdisciplinary nature of these tasks, and see that **each task may have more than one solution.**
- ***Students*** have the freedom to **choose different strategies and approaches**, may become **more involved in the learning process**, and these students will be more likely to approach other problems with **an open mind.**



What do designers need?

- ⌘ **Understand fundamental principles of design.**
- ⌘ **Well-developed aesthetic appreciation – visual literacy.**
- ⌘ **An understanding of the users.**
- ⌘ **Technology skills.**

Design skills?

- ⌘ **Analytical skills - breaking down the problem into components.**
- ⌘ **Synthetic skills - combining separate elements of thought into a whole.**

- ⌘ ***Top-down vs. bottom-up***

(Deductive reasoning vs Inductive reasoning)



- ⌘ **Client not always right.**

Comparison Between Architectural Design in *Practice* and in *Education*

	<i>In Practice</i>	<i>In Education</i>
Client/Owner	Real	Hypothetical
Economics	High priority	Low priority
Constructability	High priority	Low priority
Focus	Product	Process
Building Industry	High priority	Low priority
Licensing	Required	Not required
Codes and Regulations	Applied	Considered
Compensation	Money (\$)	Grade (A)

Natural form Man-made form:

As “Louis Kahn (1901-1974)” says:

“architecture is what nature cannot make”.

“Architecture is something unnatural but not something made up”

Indeed, human beings are one of the few creatures that can build buildings. The structures that some animals build, such as the nests of some **birds, bees or termites** (white ants), are actually similar to our buildings in terms of their structural system.



White ant nest, Africa



Nautilus shell

- **Natural form Man-made form**

Similarly, architecture is the shell of the human race. It is the environment that we build for ourselves. However, unlike the animals, we as human beings “think” while we are making buildings. Our act to build our buildings is a conscious process. This is what differentiates man-made structures from animals’ nests.



Parthenon in Ancient Greece



Taj Mahal in India

Is Design a **Gift** or a **Skill** ?!

