

DESIGN METHODS

Second Year - Second Semester
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Types of Design

Asst. Prof. Dr. Faris Ali Mustafa
Department of Architecture, SUE

(Design in Architecture)

(The Architect at work)

- ***All creative* people, all professionals, whatever their fields of activity, have to make decisions.**
- ***Certain techniques* of decision-making may be useful to them all.**

- **Architect generally use four distinct ways of generating three-dimensional forms :**
 - 1. Pragmatic design.**
 - 2. Iconic design.**
 - 3. Analogy design.**
 - 4. Canonic design.**
- **Here we summarizing their :**
 - ✓ **Salient feature.**
 - ✓ **Historic origin.**
 - ✓ **Some of the ways in which they have been used.**
- **The description based on archaeological evidence, and it is open to difference interpretation.**

1. Pragmatic design:

It seems that the first designers were:

- A highly practical view of their task.
- Using whatever materials lay at hands.
- Establishing by trial and error.

- Neolithic man learned to recognize that a certain flint could be used as a scraper, another as chopper, another as an axe and so on:

- ✓ Better scraper, if it was chipped and shaped looking for the suitable stone.



1. Pragmatic design:

- His approach to building seems to have been similar:
 - ✓ Living whenever he could, in the mouth of caves.
 - ✓ Hunting took him far, so he needs place for resting and sleeping, and protecting from:
 - Prowling animals.
 - Wind, rain and snow.
 - ✓ So he looks to build a shelter.
- Material used for this purpose :
 - Small stones.
 - Branch of trees....After that:
 - Bones
 - Tusks
 - Skins

Of mammoths



1. Pragmatic design:

- After that he placed fire in his shelter.
- The mammoth-hunters tent was the first way of achieving three dimensional building.



1. Pragmatic design:

- We still use pragmatic design when we are trying to find the ways in which new materials may be used.
- Particular building forms still repeated in particular culture, for many reasons:
 - ❑ The climate which has to be controlled.
 - ❑ The resource available for controlling.
 - ❑ The houses form in a cold climate is designed as far as possible to conserve heat.
The *igloo* was used by certain "Eskimo" tribes for the winter quarter over (4-5) century.
 - ❑ The houses form in a hot climate is designed as an opened tent.
Arab black *tent*.

1. Pragmatic design:

The *Igloo*



Arab black *tent*



2. Iconic design:

- ❖ This match between a climate to be controlled and the resources available for its control would be sufficient justification in itself for *the repetition of a house-form* once it has proved to work.
- ❖ Other pressures :
 - ✓ The mutual adaptation between house-form and pattern of living.
 - ✓ A craftsman become a master of his craft and these traditional ways will be built deep into his consciousness, and there will be strong pressures for the entire pattern of building to remain constant too.

2. Iconic design:



2. Iconic design:

- The building is built deeply in tribal awareness and because every member of the tribe has a fixed mental image of what a house should be like, we shall call this an Iconic Design.



3. Analogic design:

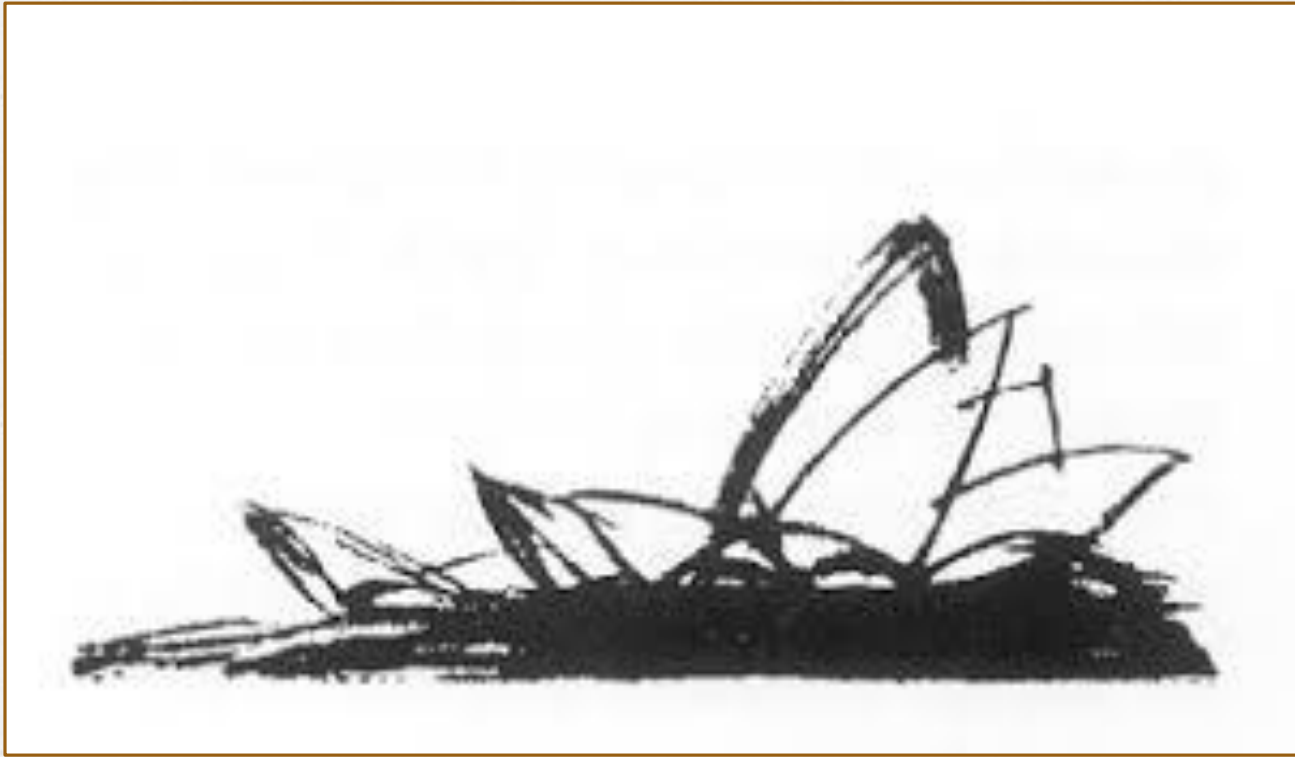
If a child knows that the plural of "bean" is "beans" it is logical for him to assume that the plural of "deer" will be "deers".

- This method of generating new forms seems fundamental to the human mind.
- It's the first application to formal architecture.
- Instead of starting work immediately, handling real material in a **Pragmatic** or **Iconic** manner.
- A designer prepared the drawing first as being serious in his intent.
- The designer may have tried out several curves in a drawn form before choosing one.

3. Analogic design:

- **There are two types of Analogies:**

1- Direct Analogy.



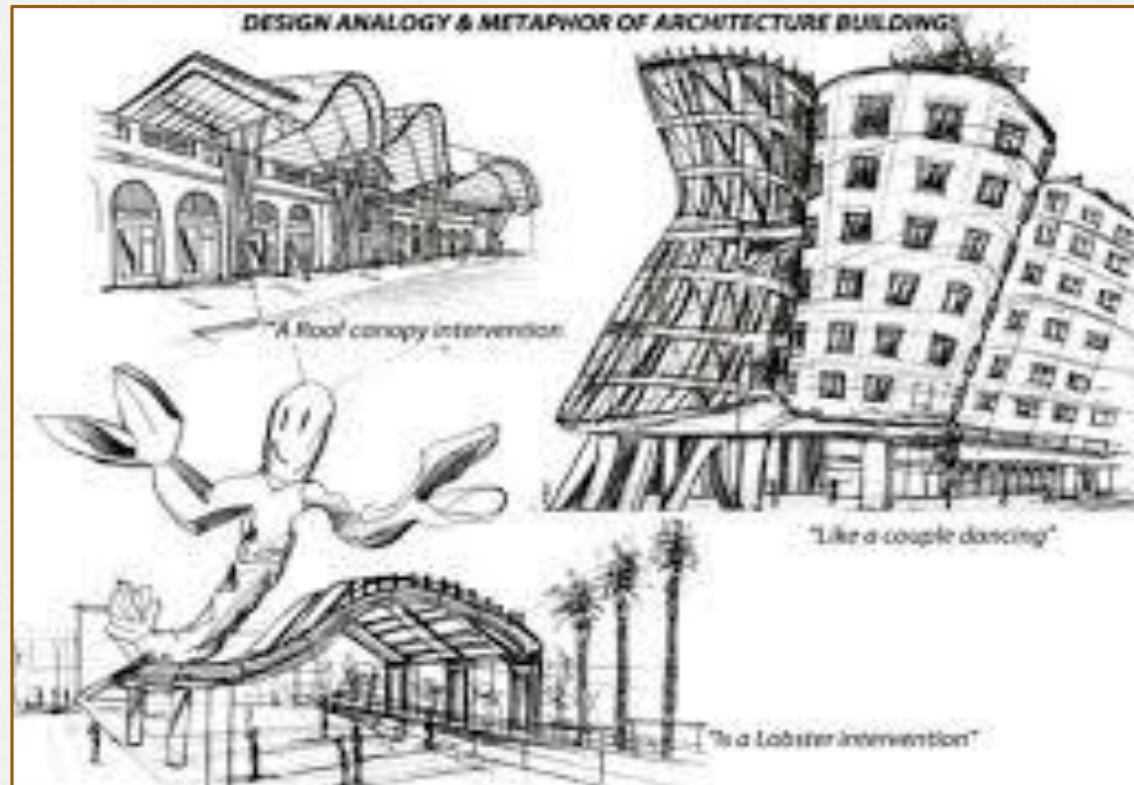
3. Analogic design:

2- Symbolic Analogy.



3. Analogic design:

- Analogic design, with or without the use of design analogues, is still the most effective source of creative ideas in architecture.

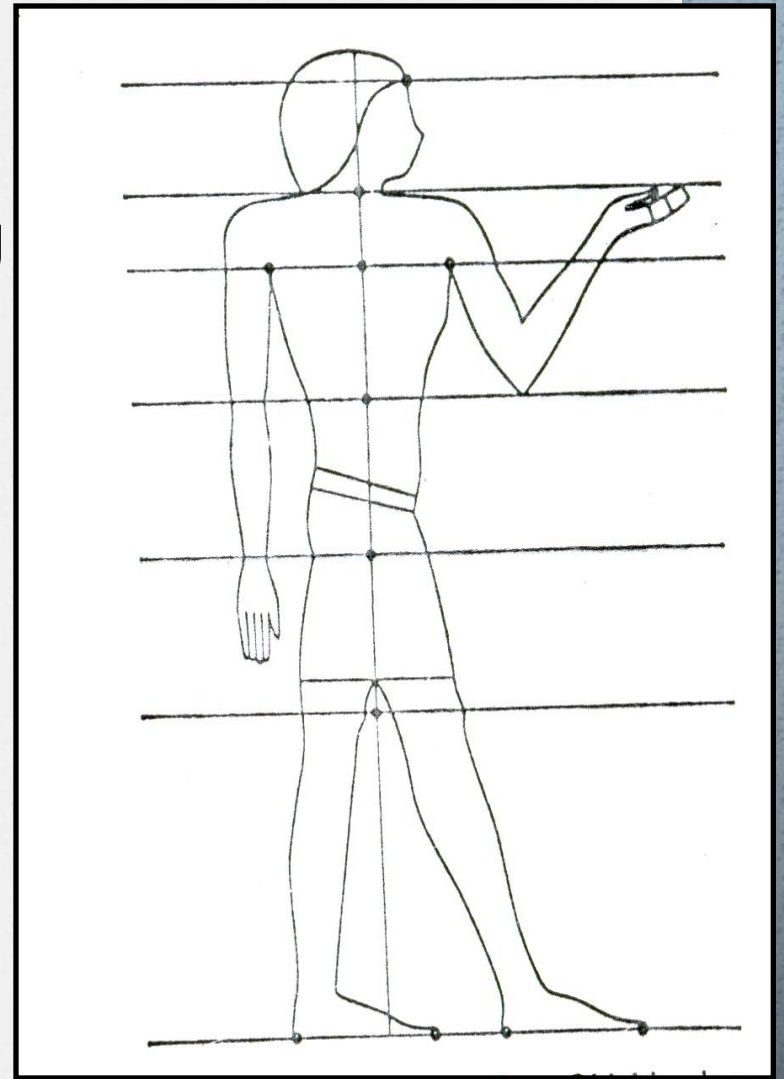


4. Canonic design:

- The designer prepared drawing before he started work on site.
- ✓ The drawing itself acquired a particular fascination/attraction for him.
- ✓ He developed a concern in the pattern of order and regularity which was often expressed in the form of a dominant grid.
- Egyptian artists seem to have used grids for other purpose:
- ✓ Networks of fine lines are visible on many wall paintings and unfinished carvings/sculptures.

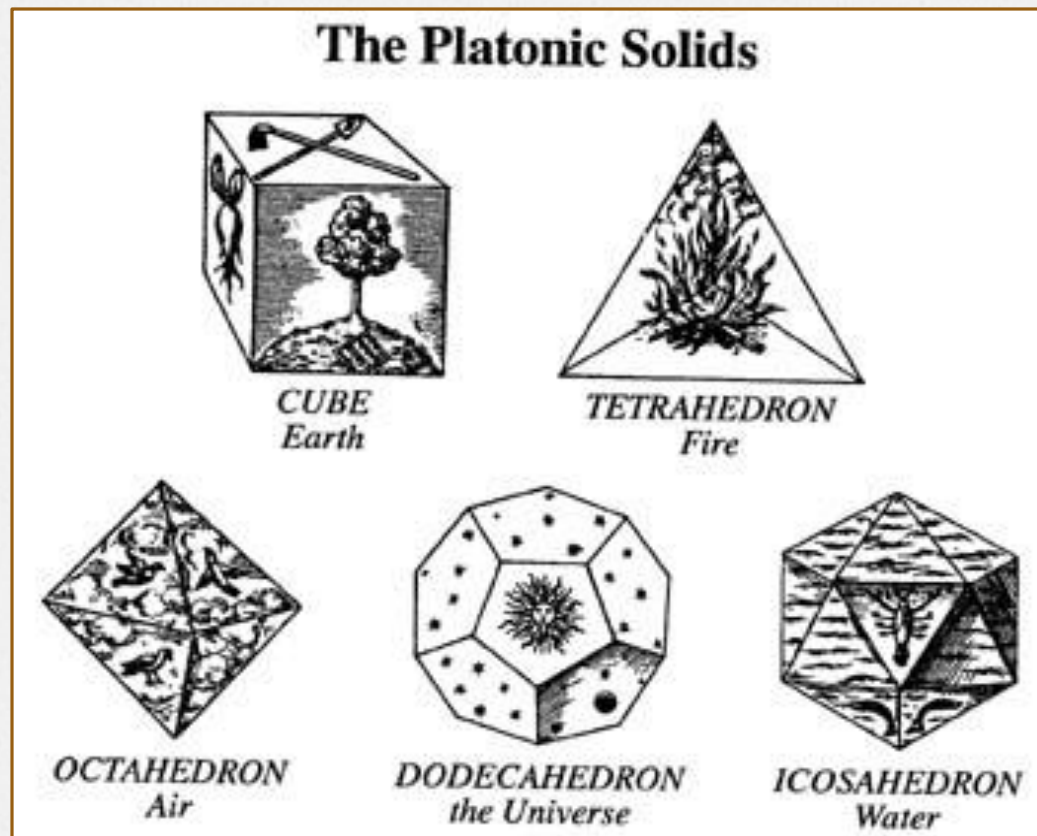
4. Canonic design:

- The grids used in transferring a composition to the wall from an original sketch (canonic grid).



4. Canonic design:

Plato envisaged/imagined a structure for the universe based on the four elements of earth, air, fire, and water, each made from regular geometric solids.

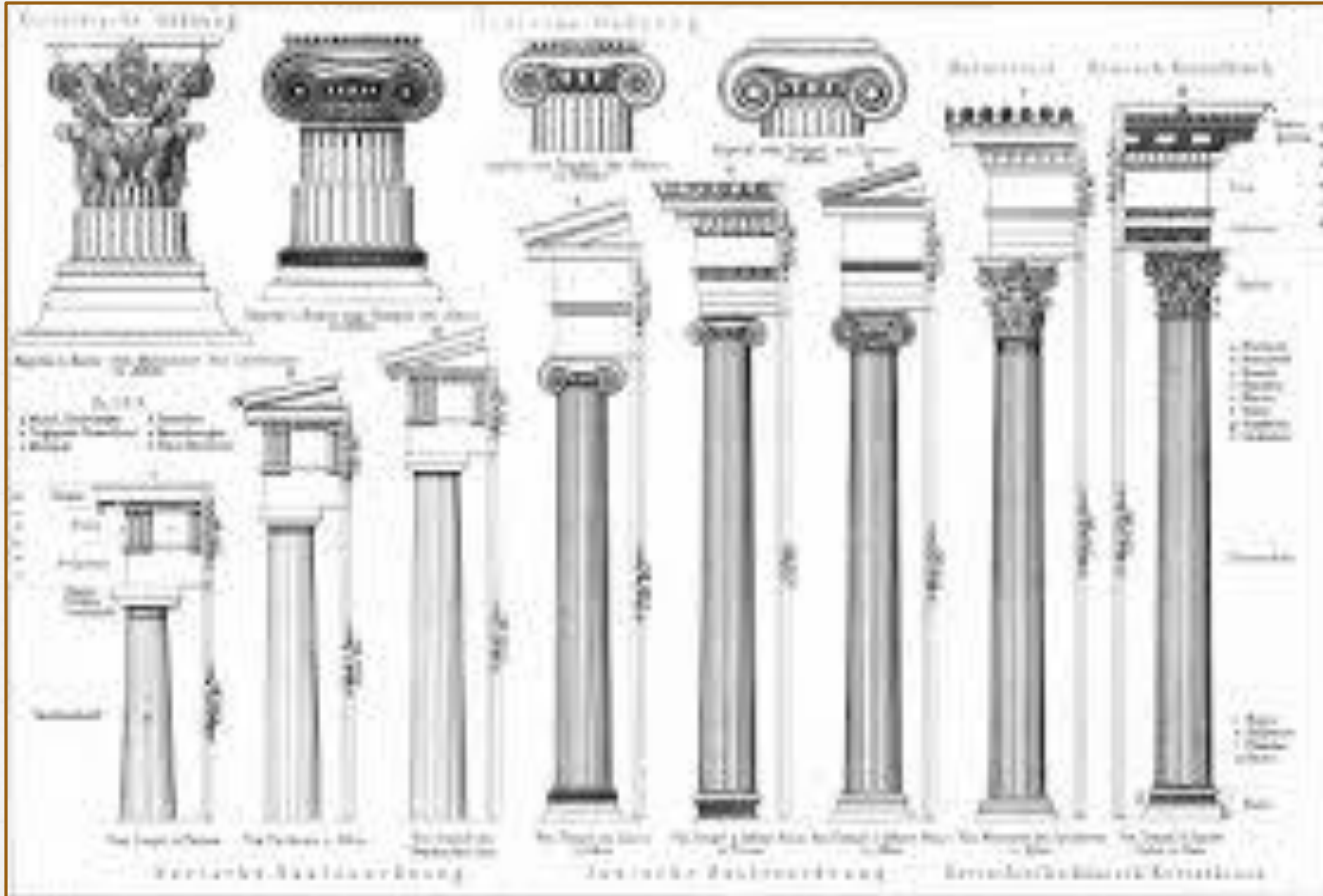


4. Canonic design:

- ***Plato's geometry*** acquired particular importance for architecture during the middle ages when it formed the means whereby the three-dimensional forms of the great cathedral were generated from the plan.
- The enthusiasm/agitation for this approach has certainly not diminished in any way, as has the current interest in:
 - Modular systems
 - Dimensional coordination
 - Building systems

4. Canonic design:

Classical Orders of Architecture



What is the difference between pragmatic, iconic, analogical, and canonic design?

- **Pragmatic design** depends on trial and error, available materials, and climate, for example Mammoth hunter tint.
- **Iconic design** dealing with climate, materials, social interaction, and mental image, for example repetition of houses and units.
- **Analogical design** is the Center of creativity and depends on existing form and nature, for example the stepped pyramid of the temple by Imhotep.
- **Canonic design** depends on proportional system so it provides the designer with many design decisions, for example Parthenon.

