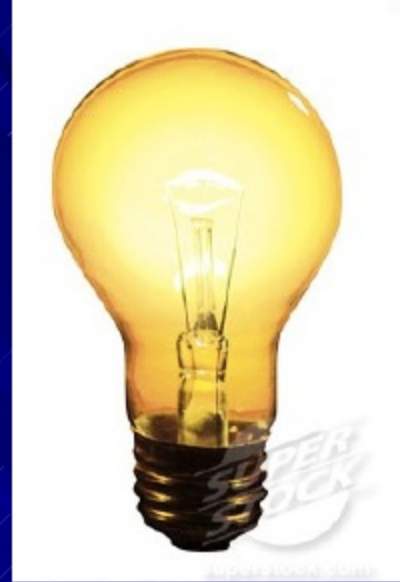# Architectural Design Lectures
Lecture 4
Design Concept

Lectures to
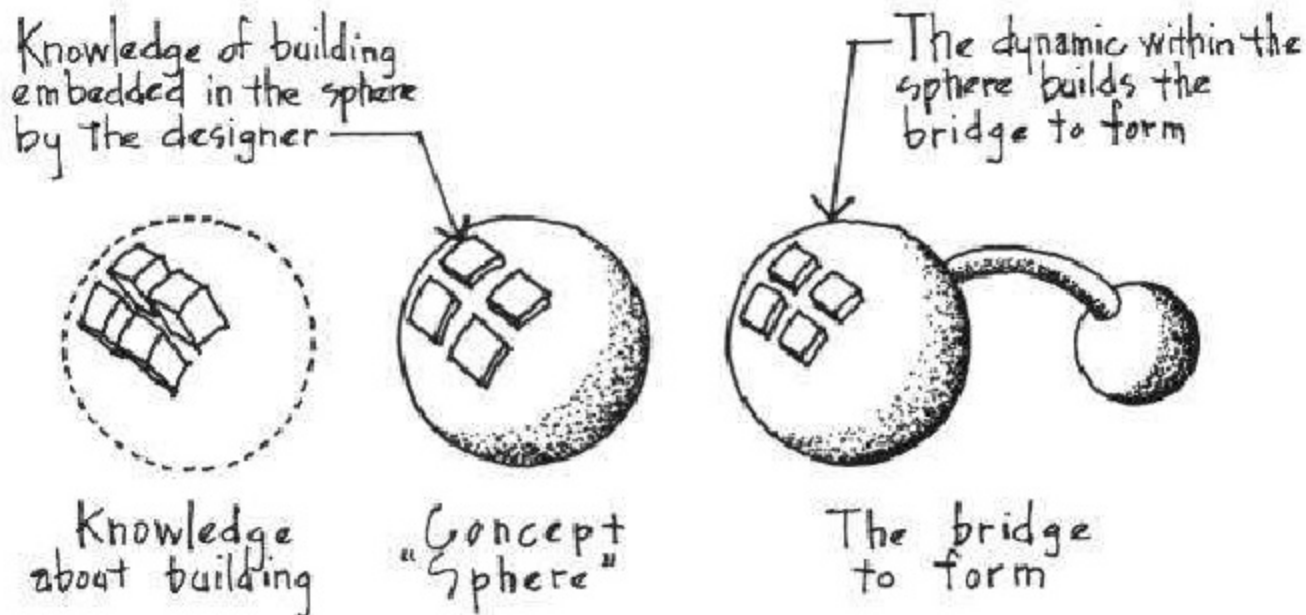Architectural Design 1
October 2009
By: Dr. Yasser Mahgoub

What is a concept?
Why is it important to have a
concept in your design?
How to communicate your
concept?

Definitions of Concept

- Idea
- Theory
- Notion
- *Parti* (French)
- Conception
- Opinion
- Abstraction
- Philosophy
- Belief
- Inspiration

- Image
- View
- Intention
- Plan
- Fancy
- Thought
- Impression
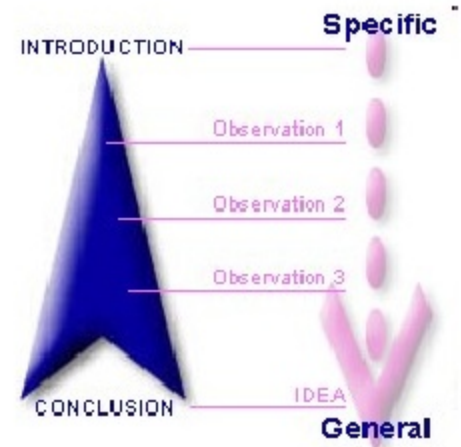- Hypothesis
- Supposition
- ... DESIGN

Introduction

- The design process works with **<u>information</u>** and **<u>ideas</u>** simultaneously on **many levels**.
- Designing is a reciprocal **<u>action</u>** and **<u>reflection</u>**.

Knowledge of building embedded in the sphere by the designer

The dynamic within the sphere builds the bridge to form

Knowledge about building

"Concept Sphere"

The bridge to form

4-6: Concept sphere diagram
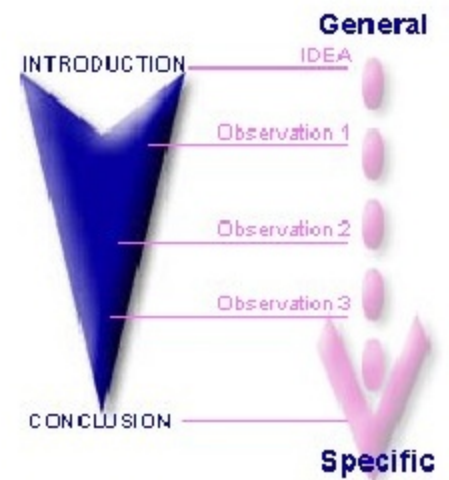
Introduction

- **<u>Inductive reasoning or inductive logic</u>**, is a type of reasoning which involves moving from the specific to the general.

Inductive Reasoning
from Specific to General

- **<u>Deductive reasoning or inductive logic</u>**, is a type of reasoning which involves moving from the general to the specific.
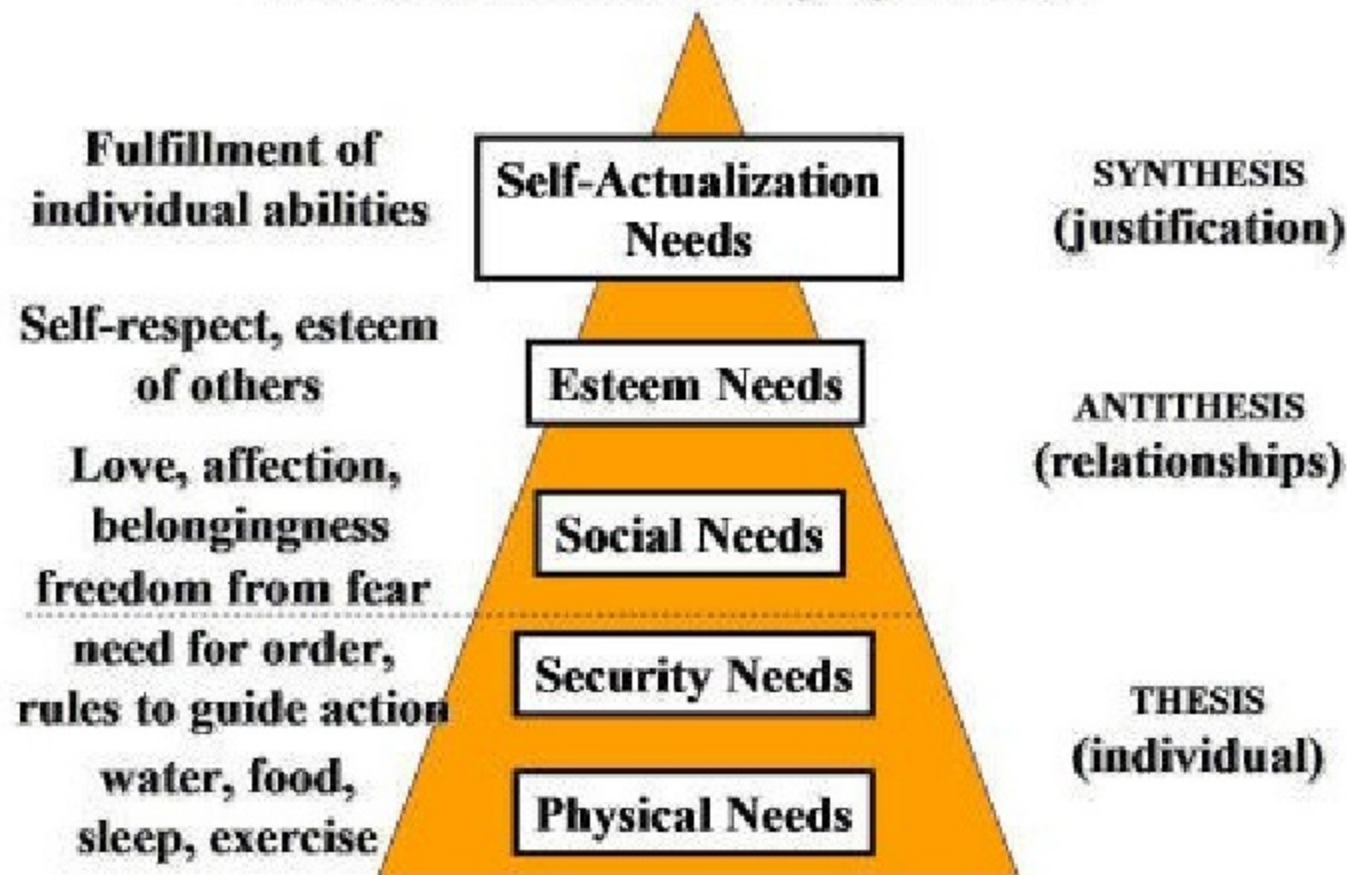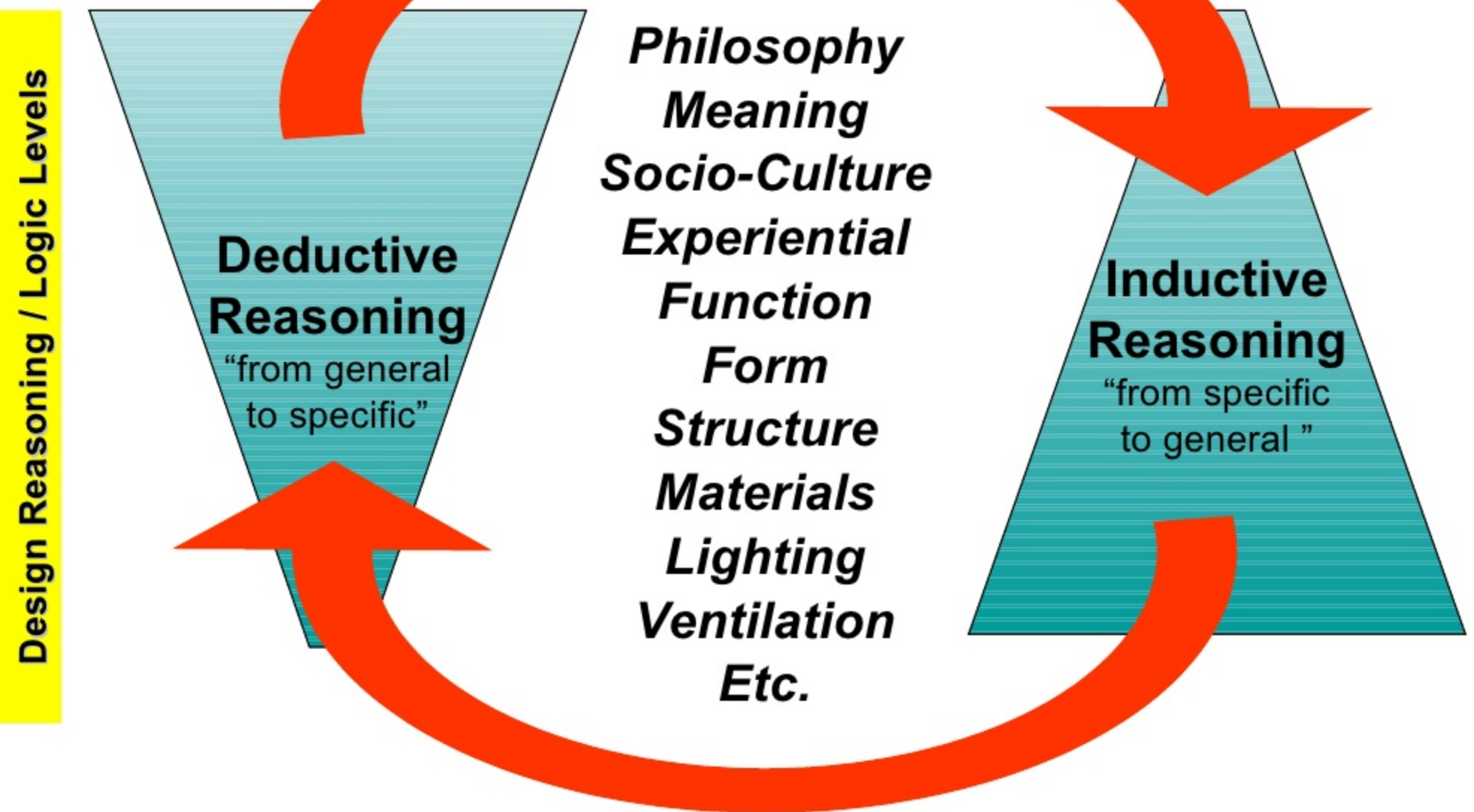

Deductive Reasoning
from General to Specific

Maslow's Hierarchy of Needs

Maslow's Hierarchy of Needs

Fulfillment of individual abilities

Self-Actualization Needs

SYNTHESIS (justification)

Self-respect, esteem of others

Esteem Needs

ANTITHESIS (relationships)

Love, affection, belongingness freedom from fear

Social Needs

need for order, rules to guide action

Security Needs

THESIS (individual)

water, food, sleep, exercise

Physical Needs

Inductive Deductive Reasoning

Design Reasoning / Logic Levels

Deductive Reasoning
"from general to specific"

Inductive Reasoning
"from specific to general"

Philosophy
Meaning
Socio-Culture
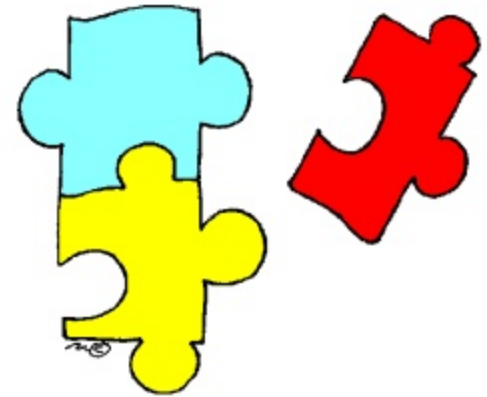Experiential
Function
Form
Structure
Materials
Lighting
Ventilation
Etc.

Introduction

- One assembles the puzzle picture by searching for <u>fits</u>; piece after piece is picked up, tried, and found to be a misfit until, finally, the right piece steps into place.

- The designers mind <u>searches memory</u> to find elements that meet their needs of the given problem.

Introduction

- Creativity comes into play and the efforts to find approaches that will be original, aesthetically satisfying, valid solutions to the problems defined through programming.

- Even experienced and highly skilled designers often find it difficult how this aspect of the design process works.

- They will say that they "think about "the problem until they are "hit by an idea".

Dimensions of Concepts
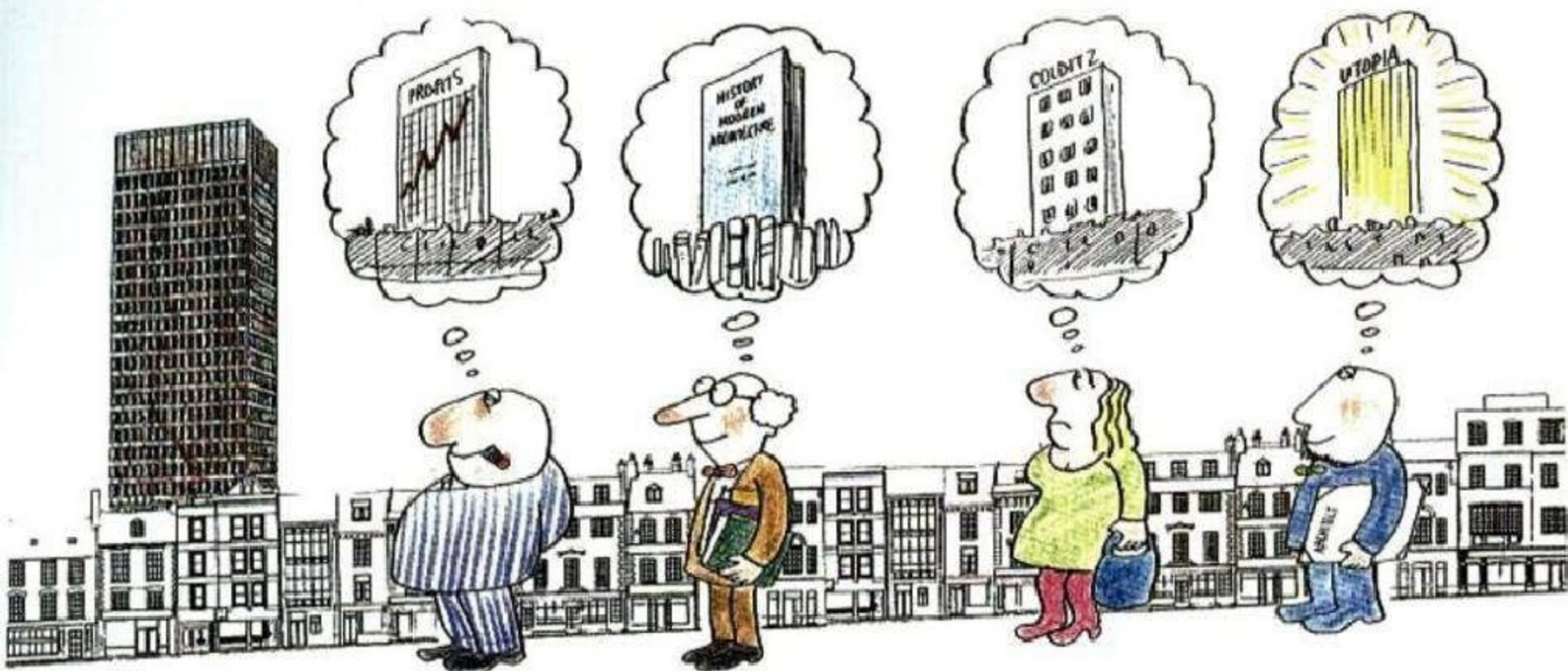
Any building concept should provide:

- Exterior Expression
- Interior Experience
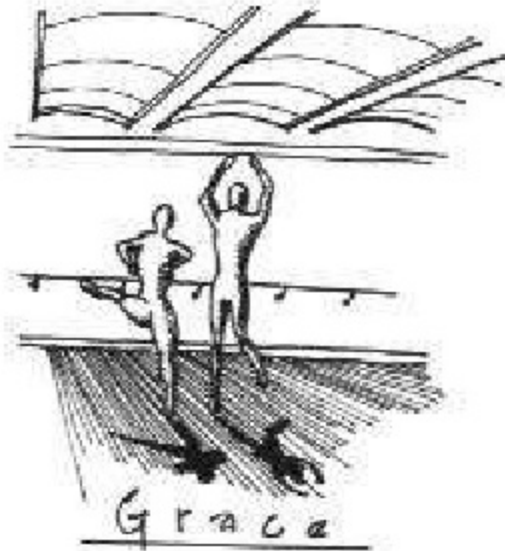
Levels of Expression

The concept should be appeal to both:
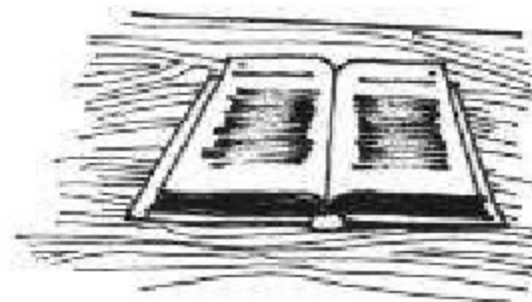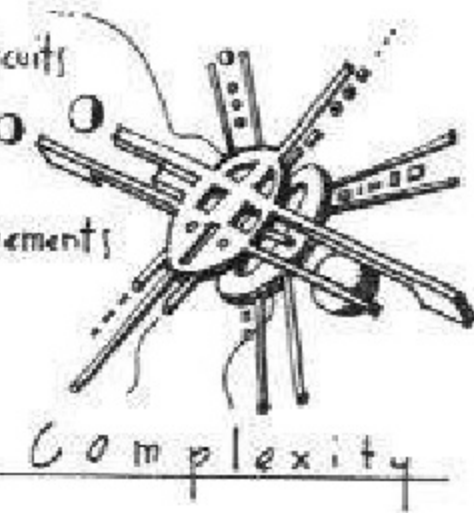- The Normal Layman
- The Professional Specialist

Concepts Translations – Visual and Verbal

Dance
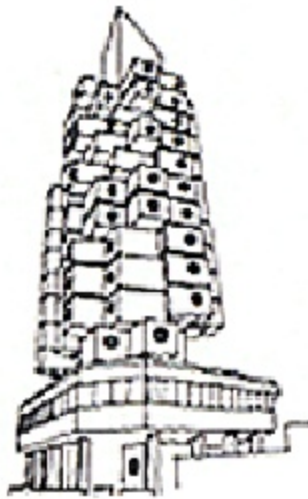Flight
Skill
Fluidity
Focus
Effort

Grace

Symmetry
Nature
Tools
Ratio
Level
Justice

Balance

Integrated Circuits
Politics
Ecosystems
Planetary movements
Fractals
Music

Complexity

Learning
Experience
Craft skills
Communication
Memory
Mastery

Knowledge

4-2: Concept translations-visual and verbal

TOKYO

NAKAGIN TOWER, AFTER THE METAPHOR OF PIGEON STRUCTURE, KISHO KUROKAWA
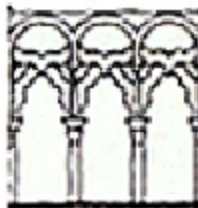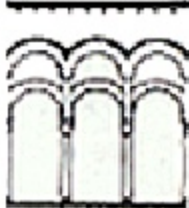
FUJIMINI CLUB IN THE FORM OF "QUESTIONMARK"
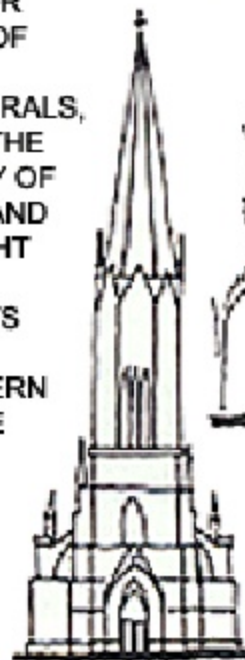
ARATA ISOSAKI

LIBRARY COMPLEX IN FORM OF "TOOTHPASTE"

REPETITIVE HEAVENS:

THE METAPHORIC BASE OF ISLAMIC ARCHITECTURE ORIGINATING IN THE KORAN

INTERIOR SPACE OF GOTHIC CATHEDRALS, AFTER THE QUALITY OF SPACE AND SUNLIGHT IN THE FORESTS OF NORTHERN EUROPE

FOREST

There are three broad categories of metaphor:

- **Intangible:** The metaphorical departure is a concept, idea, human condition, or a particular quality (individuality, tradition, culture, community, etc)

- **Tangible:** The metaphorical departure stems strictly from some visual or material character (a house as a castle, the roof of a temple as the sky, etc)

- **Combined:** In this kind of metaphor the conceptual and the visual overlap (the computer and the beehive, both being boxes of relevant proportions, yet having the qualities of discipline, organization, cooperation).

SELECTED EXAMPLES OF WELL-KNOWN TANGIBLE METAPHORS

SOURCE: ANTONIADES

design concept generation
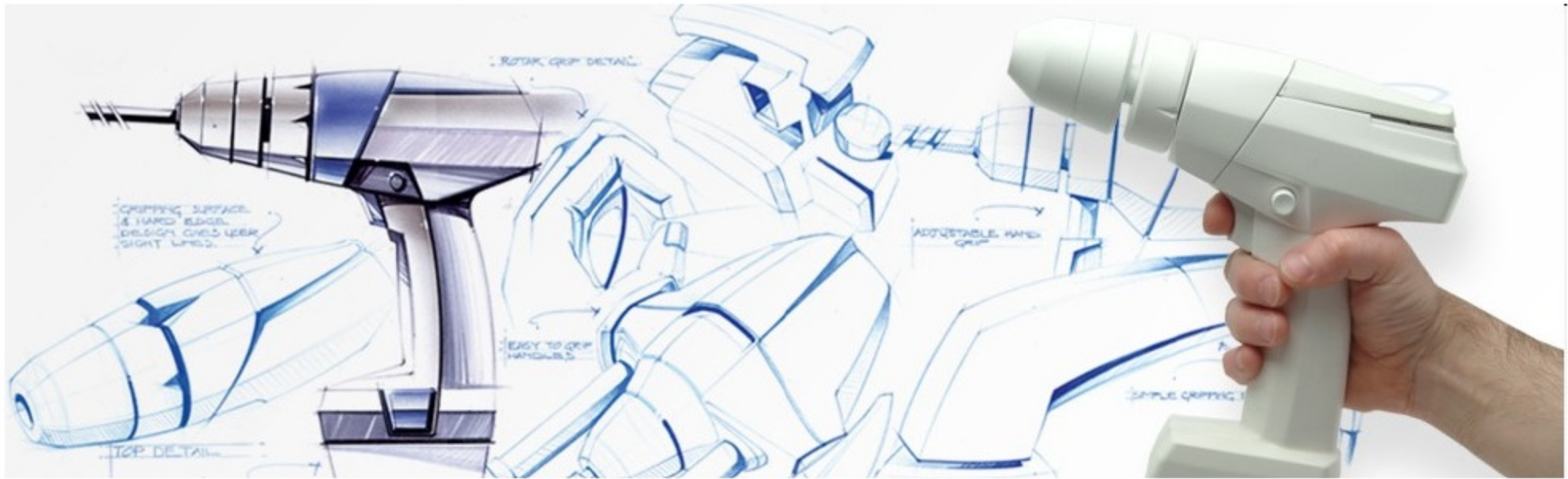
design concept generation

Concepts Criteria Summary

Concept Summary:

1. Symbolism
   - building types and symbolic associations
   - create a listing of symbols for a project
   - choose a number of symbols to inform the design
   - simplicity has value
   - multiple, additive, and/or scalar concepts
2. Sources
   - designer as source
   - client as source
   - site sources: immediate and surrounding vicinity
   - culture should not be overlooked
   - the building type and its attendant history
   - do not forget the user
   - collect and sift
   - employ verbal and nonverbal study
   - use language for organization
   - use sketching for integration
   - concepts are the ideas behind a project
3. Objective to subjective
   - concept assembly begins the trip into creativity
   - concepts may organize space and form
   - concepts may suggest material, vocabulary
   - check conceptual to functional "fit"
4. Changes
   - change is inevitable
   - objective changes may effect concept structure
   - the importance of master principles
   - design is a dynamic environment
   - be prepared and remain flexible

5-11: Concept criteria summary

Concept Summary:

1. Symbolism
-building types and symbolic associations
-create a listing of symbols for a project
-choose a number of symbols to inform the design
-simplicity has value
-multiple, additive, and/or scalar concepts

2. Sources
-designer as source
-client as source
-site sources: immediate and surrounding vicinity
-culture should not be overlooked
-the building type and its attendant history
-do not forget the user
-collect and sift
-employ verbal and nonverbal study
-use language for organization
-use sketching for integration
-concepts are the ideas behind a project

-do not forget the user
-collect and sift
-employ verbal and nonverbal study
-use language for organization
-use sketching for integration
-concepts are the ideas behind a project

3. Objective to subjective

-concept assembly begins the trip into creativity
-concepts may organize space and form
-concepts may suggest material, vocabulary
-check conceptual to functional "fit"

4. Changes

-change is inevitable
-objective changes may effect concept structure
-the importance of master principles
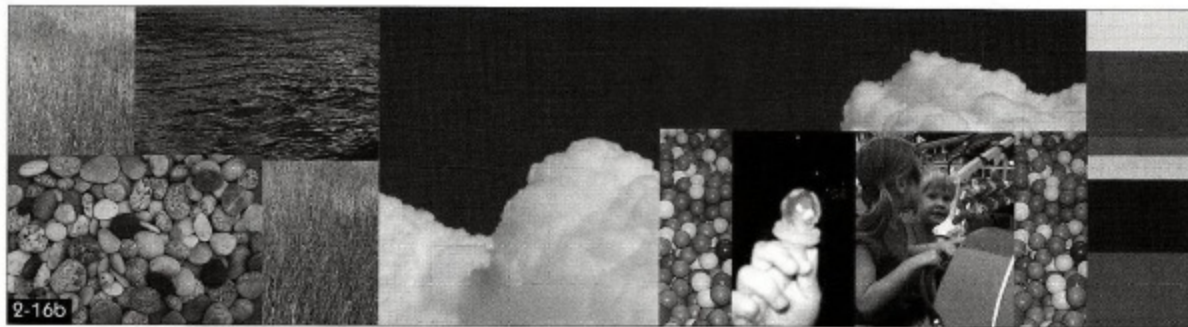-design is a dynamic environment
-be prepared and remain flexible

FIGURE 2-16a
Mood or inspiration board for the sample project, made with a cut-and-paste collage technique.

FIGURE 2-16b
Mood or inspiration board for the sample project, made using Photoshop and color sampling the images to create a potential palette. A color mood board is shown in Figure C-1a on page 53.

Mood or Inspirational Board