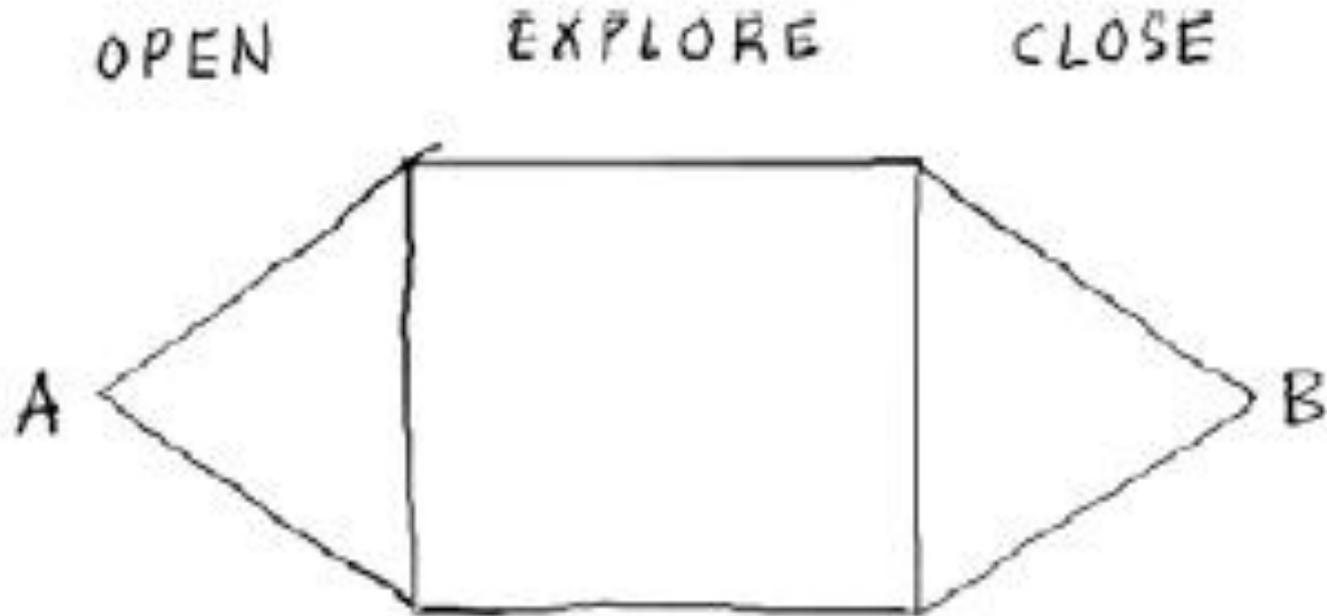


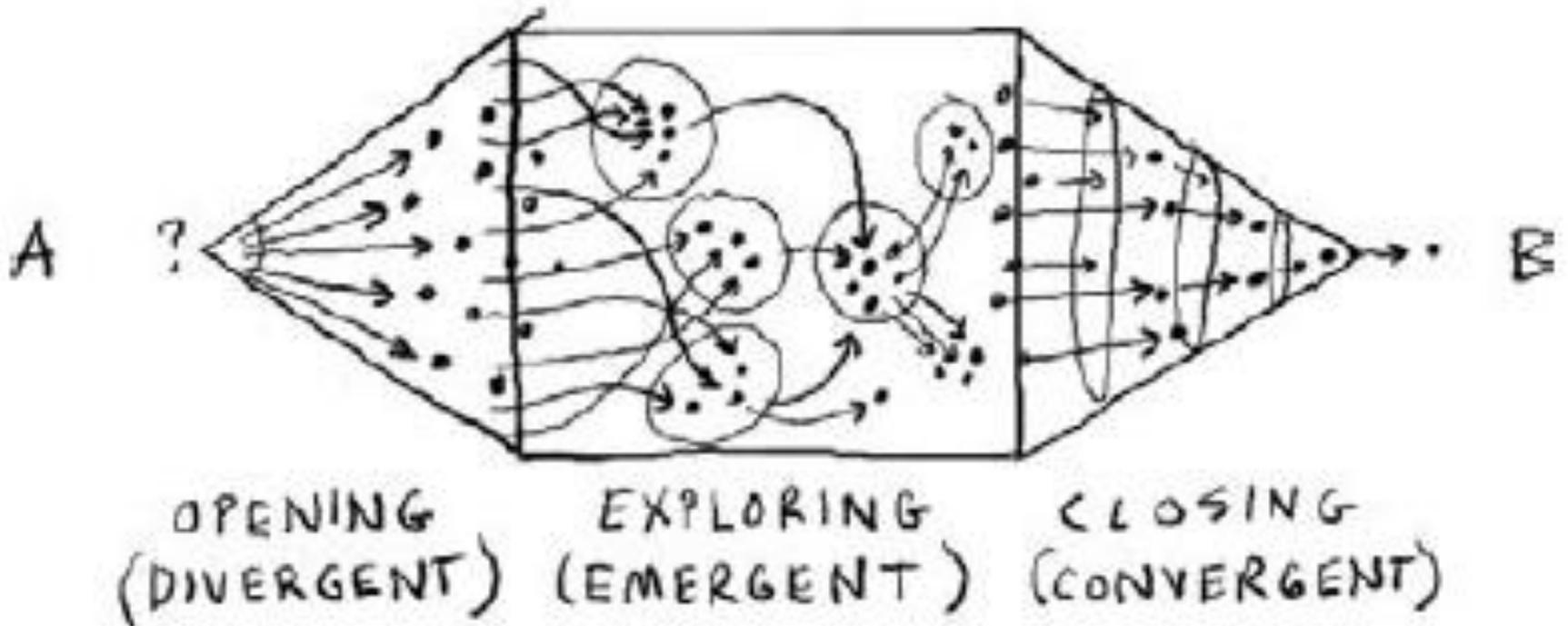
IDEA MANAGEMENT PROCESS



ACT 1
SET THE STAGE
DEVELOP THEMES
IDEAS
INFORMATION

ACT 2
EXAMINE
EXPLORE AND
EXPERIMENT

ACT 3
CONCLUSIONS
DECISIONS
ACTION



VISUAL REFERENCES

Architects use the term “**references**” to identify objects from the natural and artificial world, which inform their designs, for example rocks, trees, musical instruments, media, photographs, paintings, artworks and buildings.

“**References**” are inherently visual.

What is important about these “**references**” is their shape, physical form, functional or behavioral models.

This is what architects extract and employ in their designs.

“**References**” play a key role in supporting the three activities of creative design:

1- COMBINING IDEAS

An often mentioned source of creativity is the combination of ideas, or as Arthur Koestler termed it, “bisociation” (The act of Creation, 1964).

Creative ideas are derived by combining borrowed ideas from other domains with the problem at hand.

Accounts of creative architectural design are replete with borrowing and adapting forms from other buildings as well as from natural and human artifacts.

Margaret Boden suggests in her book (The Creative Mind: Myths and Mechanisms, 1990) that creativity involves "unusual juxtaposition of ideas" (p 30) "produced by reference" (38) solving problems, exploration and evaluation (p 47, 63).

2- VISUAL METAPHOR AND ANALOGY

The use of analogy and metaphor features prominently in many discussions of design methods and processes, e.g. (Heath 1984; Rowe 1987).

"Analogic design," says Broadbent, is the "most potent source of creative ideas in architecture." (Broadbent 1973; p 35).

Architects are visually oriented and are taught to think graphically (McKim 1972; Laseau 1980).

Sometimes it concerns the analogy representing the nature of the building:

Mechanical Analogy:

The building is a machine (Le Corbusier), buildings should express what they are and what they do ... no decorations ... no pretences... but rather direct affirmation of our mechanized contemporary world.

Another mechanical analogy is John Johanson's analogy with electronic circuitry:

Impermanency of the building's spatial and technical parts, accommodating obsolescence of parts, "plug-ins" and "clip-ons," scheduled replacement of service components, dynamically changing outer envelope to suit environmental conditions or periodic requirements.

(Centre Pompidou, Paris," the architecture of possibilities " Richard Rogers)

Biological Analogy:

The building is an organism (Frank Lloyd Wright) and his biological analogy governing the relationship between parts of the building and between the building and its setting. Wright's organic architecture was characterized by:

- Develops from the inside out

- Construction within the nature of materials (glass as glass..)

- Elements of a building are an integral whole (you cannot take a portion off)

- True to time place environment and purpose

Sometimes it concerns the feelings the building elicits/ triggers /initiates in the observer:

Romantic Analogy:

This is also referred to as the romantic analogy. Here, designer uses associations to initiate different emotional responses. The association could be to:

- past,
- context,
- a specific belief system

Utzon's Sydney Opera House illustrates the tenacity with which some designers will cling to major ideas; a new building technique had to be invented, and building codes overcome.

Sometimes the analogy concerns the procedure employed to generate a building:

Mathematical analogy:

The mathematical analogy where numbers and geometry are the basis of design. Buildings designed in accordance with pure forms and primary or symbolic numbers will be in tune with universal order. (the proportion 1:1.618; the “golden section”).

Grammatical analogy:

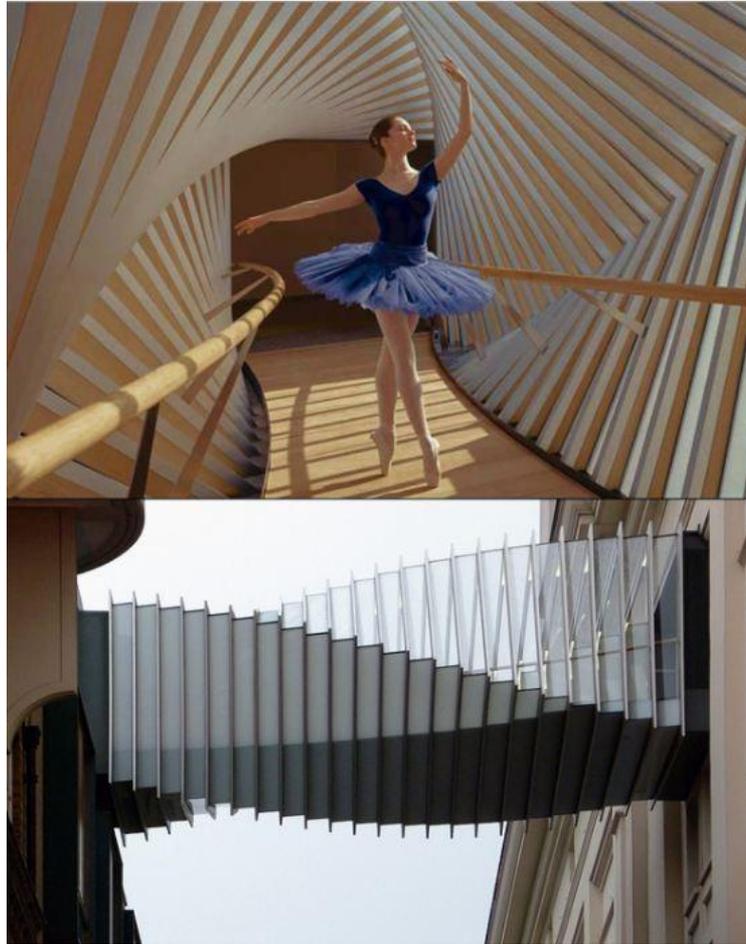
The linguistic or grammatical analogy where architecture is seen as being composed as elements (words) that are ordered according to rules (grammar and syntax) that allow people within a culture to understand and interpret what the building is saying.

3- EXPANDING THE SEARCH SPACE

Newell, Shaw, and Simon (1962) describe creative thinking as a special case of problem solving, to be worked by heuristic search.

John S. Gero (1994) suggests that expanding the space of design possibilities with larger knowledge bases can inspire creativity.

The search space can be expanded both by relaxing constraints on existing parameters and by introducing new search space dimensions, viewing design not as simply search but as exploration (Gross 1987; Logan and Smithers 1993).



Bridge of Aspiration between the Royal Ballet School and the Royal Opera House in Covent Garden, London By Wilkinson Eyre Architects



Frank Gehry and Vlado Milunić, Nationale-Nederlanden Building (Dancing House), (Fred Astaire and Ginger Rogers building), Prague, Czech Republic, 1996