

Chapter 2

Architectural Hypothesis

2.1 Introduction

The term architecture (from Greek, *architektonike*) refers to the procedure, career or documentation. According to Merriam-Webster dictionary, architecture is the art or science of building; specifically: the art or practice of designing and building structures and especially habitable ones. Over quite many thousand years, the resources, by which architecture has been improved, have taken some odd turns: symbolism has taken over in a Stonehenge, a pyramid, or a gate that looks like a lion; but still the concept of elegance is itself in all probability modest more than a respectable fantasy. Architecture, in romantic terms of the past, has been described as “frozen music.” such a beautiful, placid image contrasts severely with our present perception of a chaotic, sprawling, built environment. Widespread, polluting, noisy, and ugly, this malignant suffusion of buildings is the visible result of uncontrolled and unintelligent development (Abernathy 1979). Frank Lloyd Wright; wondered whether architecture can be described by the vast collection of the various buildings that have been built to please various taste of humankind. Frankly speaking I don’t think so. One of the most curious notions of architectural theory that was developed by Vitruvius was that the principles of architecture and the laws of the cosmos were somehow identical. Here I would like to quote and translate what Vitruvius said in this connection:

Our ancestors took their models from nature and by imitating them were led on by divine facts 111 machinery is derived from nature and is founded on the teaching and constructions of the revolution of the firmament, the sun, the moon, and the five planets (Morgan 1960).

2.2 Architectural Creation

Wider meaning of the architecture often includes the design of the total built environment, from the macro level of how a building integrates with its

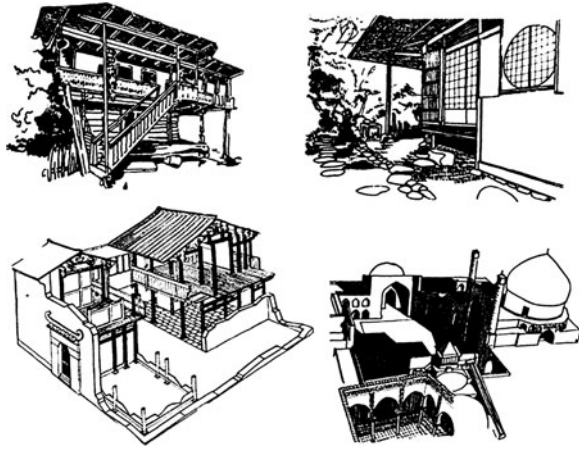
surrounding (landscape) to the micro level of architectural or construction details (Al-musaed 2004). One more concrete description of architecture assumed that architecture is the science and art to design and construct buildings and ensembles of buildings. Science consists in solving its functional and technical buildings. Generally, art in architecture is a special art and more private. By means of the surrounding nature, but it can be combinative, and then architecture is an artificially implanted in a natural environment that must be harmonized both functional as well as aesthetic. The term architecture has both wide and severe meanings. In the widest sense, architecture is everything built or constructed or dug out for human occupation or utilize. A more restricted definition would emphasize the artistic and aesthetic aspects of construction. A third and still more limited, definition would say that architecture is what the architects are specially trained to do or make (Crouch and Johnson 2001).

This imparts a sense of legitimacy and conviction to the appearance, a sense that has been neither required nor demonstrated in much postmodern architecture, with its justification of form and decoration on other grounds of coding and meaning. But in the same way that the creations of modernism are sometimes criticized for functions that come into view to have been invented to justify the aesthetics, there are doubtless cases where the aspiration is to make form with towers or shades has driven the decision to accept corresponding environmental devices, rather than subordinate versa (Terry et al. 2003). In marketing vision, architectural product being creations of the human work, a time-consuming good, as any other manufacture it has not only to be produced but also to get the user's disposal. Moreover architectural space is a gap delimited by fullness. Initially, the human required for a gap to make his shelter in a form of grotto, and then to build his privacy by covered the hole of the ground to be a climatic skin surface. The climatic skin surface has progressed in time and transformed to a complex shell spatial and then a blank—full architecture. The space is not seen as material, but is felt only after the ranges of walls and floors, where the space should be enclosed, covered, and lighted proportionate. The role of architect is to pattern and organza the form within limits of one or more activities. In some traditional cultures, the gap had an interest symbol in habitat creation concept. To recall, very briefly, some of those concerns known, to exploit the architectural gap.

The gap in traditional Chinese architecture was specifically defined plots of land on the perimeter, which built simple dwellings with non-divided interior space, a sort of other small courtyards and covered with easy closed walls. Human beings have been given particular attention in Chinese thoughts. Where human, sky, and Earth are the vital geniuses of the universe. Traditional Chinese philosophies interpret the human condition in which human may be able to match the qualities of sky and Earth in his own spirit (Jurov 1986) (Fig. 2.1).

Another vernacular space that has a significant gap is Arab courtyard, which was designed as a closed form with relatively concentrated shape in a form of square, polygonal or rectangular. The courtyard had a symbol of existence, maybe even survival, for forming the vital shadow requires for warm climates. Shading can also creates by yard and other architectural elements such as gates, galleries, or

Fig. 2.1 Deferent forms of architectural spaces and volumes (source: Jurov (1986))



loggia, etc., which represents the buffer space that protects the cool air from the rooms.

The Japanese space was free and limited. Dwellings were built in succession pavilion, using the central part of the connection between the court and they do not make other construction, but the natural landscape with garden was free. At this point, the emptiness, the garden is arranged specifically to look free. Built gap inside buildings shall be issued by the furniture, which is hidden in the walls with a high skill is designing construction details. We have windows, walls or easily sliding amounts in full, so the gap inside space covered dwelling to make confused with the exterior, with the garden to another by interposing a space porch light. European space was so important in universal culture, as in the vernacular space from China, Japan, and Arab. Habitat elements were built in the course of open spaces as points corresponding to the forms. The concepts of intermediate spaces were associated with nature. European private spaces are involved not only in nature, which was linked to the peasant's existence, but also in social life, communication between private and common spaces.

The Shell tiny gaps were designed to allow access and put in value by spay illumination, because, as said, it should be well lit to be used for architectural feel valences. A gap in strip form is the window for the penetration of light and natural ventilation in the form of doors to enable rights to move between inside and outside or between several interior. Windows and doors are goals with limited effects assets, without which the space would not work (Dumbianu 1984).

2.3 Human Settlement and Architectural Phenomenon

Human settlements means the totality of the human community—whether city, town or village—with all the (no need to put the here) social, material,

organizational, spiritual, and cultural elements that sustain it. The fabric of human settlements consists of physical elements and services to which these elements provide the material support (VDHS 1979). Resettlement perceive themselves as a new kind of entity that reflects a forward-looking component and a system based on barley and something new may be further promoted through its own client.

- What is architecture?
- How can architectural element born?

An individual, a group of individuals, society, felt a need in the consciousness. Where (R) is a require state which runs through an entire procedural device to a constructed object (C). The object enters the application process (A) employment and results of the activities and human behavior. Straight necessity subject and use the three courts are fundamental generators of a phenomenon in itself, an anthropological invariant.

A dispositional state, constitutively fund holothymic, generates and dispositional orientation of consciousness that search to create a model of an analog and indivisible entity. Based on interest, movement and behavior are established instead of a namely proprieties: knowledge will put up by taking in evidence all homogeneous spaces punts. States lead to orders dispositional situations for organized places. It is the phenomenon of living anthropologists, interface between architectural phenomenon and human life phenomenon.

In inhabited structure occurs architecture by factual form of design and execution. A large number of events happen in the inhabited phenomenon, an excellent interpretation of styles that is an interpretation of inhabited phenomenology; interesting architecture phenomenon here with a precise objective is design activity. Each human being is characterized by a certain mental order.

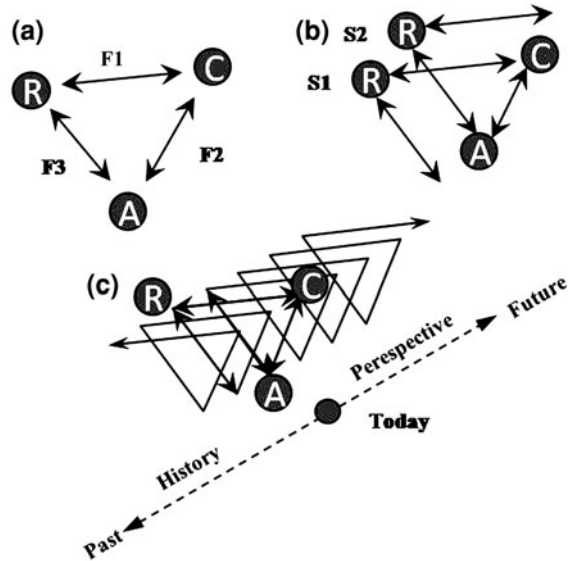
Order and mentally extract of common personality traits. We will precede to the dissolution of personality in creative hypostases reveals significant in view of the specified and the human being order a mental architects. The architectural phenomenon is composed of three worlds easily defined. There are three modes with three teams, which help to understand the connection between the future and the past:

- *Requirement state* (R). The society develops in a social exchange sphere, after a deep analysis of possibilities and requirement a specific constructive form.
- *Constructive form* (C). It works in appropriate of architectural element, compared to the current stage of technology and aesthetic understanding.
- *Application process* (A). Architectural element takes in use; therefore we can follow the rapport between people (individual/group) and architectural element facility or surrounding objects.

Collaboration between the three live-up phenomena can follow three processes:

- F1. Is a relation between (R) and (C), with action of projection and performance.
- F2. Is a relation between (C) and (A), with action of using and put in marketing.
- F3. Is a relation between (A) and (R), with action of environmental transformation from S1 (present state) to S2 (future state) (Fig. 2.2).

Fig. 2.2 **a** The subordinate relation system. **b** Environmental transformations process. **c** Diachronic perspective



Understanding of the complex phenomenon of shelter aims to extend throughout a diachronic perspective (Dumbianu 1984).

Architecture is not an isolate phenomenon; it is in strict correlation with the human life manner. Between the two initiates contained and comprehensive, will occurred events that happen out of ordinary perception. To understand them we need to name a dissected analyzes.

2.4 Semiotics and Representation in Architecture

One of the main architectural creations is the architect competent that consists of the knowledge of his own phenomenon and the rules of his thinking and the capability of his figures sensitivity. This area is composed of the relationship among:

- Eyes (perceptive act).
- Intelligence (mental operations).
- Significance (process semiotics).

2.4.1 Space Perception

Perceptive act is considered a complex process that happens in the following four simultaneous actions:

- Objective—descriptive action
The action is with a statistics field expression.
- Reverse projection action
Psychological characteristics have an effect over watching field, where empathic expression is a resulting of this action.
- Characterized action
Has a structural expression, rhythmic over viewing field.
- Associative action
This action has a place between the image and significance through an imaginative expression.

The figural dates from the perceptive act are transferred simultaneously to the conceptual act and affective domain. The interference of these three domains (perceptive, conceptual, and affective) creates the thinking phenomenon and figural sensitivity. In reality, the transformations in perceptive act prevail globally in all types of geometries. The relation between the conceptual space and intuitive space tends to provide design development as a closest manner to use the exercise in environmental living (Al-musaed 2004) (Fig. 2.3).

Transferring of figural info perceptive in conceptual domain has the following equivalence result (Table 2.1).

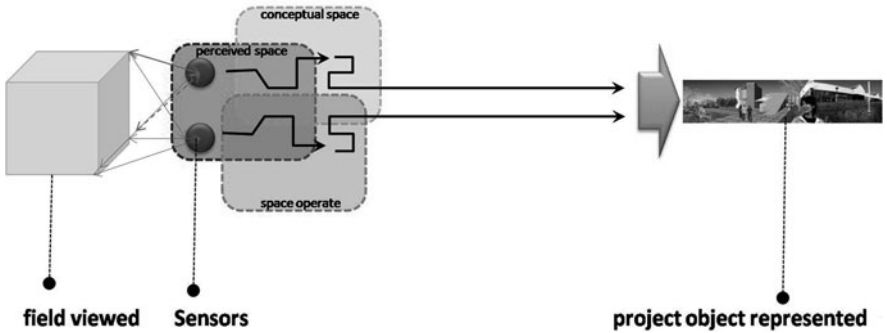


Fig. 2.3 Perception and representation of architectural spaces

Table 2.1 The equivalent result of the figural conceptual domain

Perceptive act	Geometry types	Transfer types
Objective—descriptive act	Euclidian geometry	Translation rotation reflection—expansion
Empathic act	Purify and projective geometry	Polar projection
Structuring act	Topology geometry	Continuous deformation
Associative act	Assemblies geometry	Correspondents association

2.5 Architecture, Form, and Perception

Architectural geometry aims to survey the visual structures, contained in geometric figures and their behavior in various transformations. At the same time, it put in evidence the significance struggle of visual structures, by means of reference to substantial matters, energy, and information.

For example:

For a square investigate.

2.5.1 Static Approach

The static figure approach put in evidence two basic structures which are derived from the square—contour, perimeter, the separator space interior—exterior and square—surface, tempt, continuity. Throughout these, two image the eye acting on:

- Square—contour (visual operation of gathering and connection of nodal points).
- Square—surface (visual operation divides in fields).

From the obvious visual operations result.

2.5.1.1 Bearing Structures

Bearing structures of figures (volume) that expresses the formal articulation by means of central—stellar images (V1–V2–V3/V4) (Dumbianu 1984). Nodal connection points in tridimensional space (Fig. 2.4).

Fig. 2.4 Bearing structure

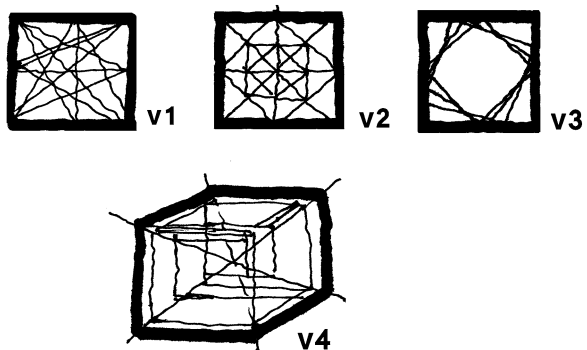
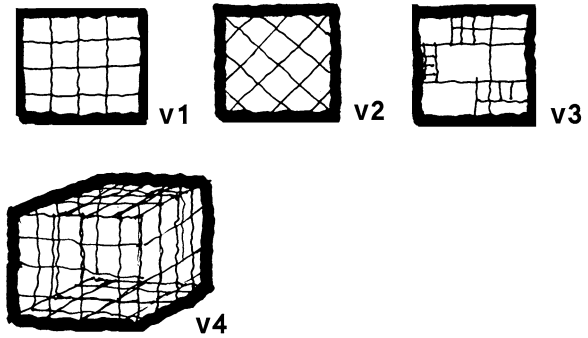


Fig. 2.5 Modular structure



2.5.1.2 Modular Structure

Modular structure of figures (volume) that expresses the substantial continuity of the field through networking image joints (V1–V2–V3/V4) (Fig. 2.5).

2.5.2 Dynamic Approach

The dynamic form approach can be presented in two senses.

2.5.2.1 Formative Vision

The formative vision can be expressed by means of visual fixation of the item (point, line, angle, etc.) and the constituent program of moving.

For example:

The movement of a point on alternative directions horizontal–vertical and in equal units of time ($t1 = t2 = t3 = t4$) (Fig. 2.6).

Otherwise the formative vision can be expressed by means of transmission of a vertical line on horizontal direction, upon an equal path to its height (Fig. 2.7).

Fig. 2.6 The movement of a point

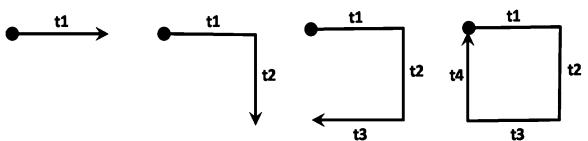


Fig. 2.7 Transmission a vertical line on horizontal direction

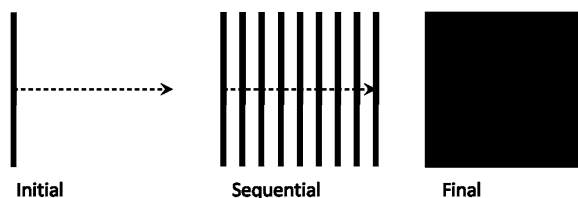
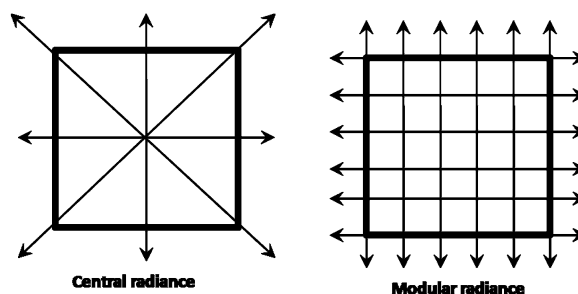


Fig. 2.8 Radiant vision types



2.5.2.2 Radiant Vision

All routes of ordering of the figural exterior space, adjacent ordinary, express radiant vision. The radiating structure can be generated by bearing or modular structures. Those provide specific directions form order (Fig. 2.8).

Bearing and modular structures, correlate directly by their substantial and energetic content simultaneously with buildings structures. For example, domes, ceilings, floors, treatment parietal, etc. Formative and radiant visions take out in evidence the programmable character of the space, and informational–figural relation that takes place in the space.

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