What is Architecture?

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Chapter Two What is Architecture?

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What is architecture? If we ask ten people, we get ten different answers based on the demographic disparity like education, culture, chronological age, the profession of a person; the personality might also contribute a few more different responses. The answers generally derive from the subjective experience, neural networks and brain function, worldview which are influenced by gender, geo-cultural background, socio-economic status, developmental stage and many more.

The word Architecture in English is not an original English word rather a borrowed word from French. Etymologically, the Greek *arkhitekton*, which is a combination of two words, *arkhi* and *tekton (master* and *builder)* seems to be the root word of architecture. This Greek root inspired the Latin *architectus* with the same meaning. From these, a similar French word *architecte* (one who plans and executes the construction of a building) evolved. The word architecture derived further in French and adapted in English. Originally, the word was used in the context of the construction of buildings; however, today, it is used broadly in many fields, including the field of computers, as software architecture. Architecture, in this book purely talks about building houses and living spaces.

Architecture is defined by Webster's dictionary as an art or science of building or construction, or, the art and practice of designing and building structures, especially habitable ones. This simple definition explains some of the basic attributes of architecture. However, defining architecture simply as an art or science of building is inadequate; also, describing architecture from the point of human habitation, raises another question, what if the structure is not habitable, say, for example, a monument, a memorial; do they not still fall into the category of architecture? There is another definition by Webster's that states, architecture is the formation or construction resulting from or as if from a conscious act. Of course, buildings are planned structures and therefore they are consciously constructed. However, when an architect designs or plans certain elements, it could arise from pure imagination or unconscious motives too. Although architects consciously construct buildings, there is a common belief among artists and other creative people to attribute their ingenious masterpieces to some flashes of thoughts, originating from nowhere, (not knowing the exact cause of origin), that inspired them to make it a reality, that they are not being fully conscious of the act. Architecture is generally viewed in a broader way, not restricted to the construction of buildings. It includes many more factors and aspects that are related to construction, structure or object, or collective structures like urban designs and landscape architecture. This description views at

architecture as a purposive manipulation and modification of shapes, forms and spaces in a given environment. Therefore, not only the construction is highlighted as architecture, the surrounding environment in which it stands also gets emphasized. A simple, yet slightly abstract definition every student of architecture would recall is the one made by French architect Le Corbusier¹ architecture is the masterly, correct, and magnificent play of forms under the light.

Let us define architecture this way: Architecture is the art and science of designing as well as building space, structure and surroundings with aesthetic features to accomplish some specific purpose that gives a sense of excitement to the viewers. This definition brings out a few fundamental facts from a multidisciplinary way. First, it is an art because an architect who creates is primarily an artist with a natural talent and aptitude for architecture, expresses the creative ability in the artefact. Secondly, it is a science of designing and building space, structure or building. This process involves a combination of disciplines. It involves Math, Physics and the other related sciences and scientific methodologies. Thirdly, a structure or a building is not regarded as an architecture if it does not pursue the processes of proper planning, diligent designing, make use of matching materials, display delicate decorations and above all, erected in an enticing environment. Fourthly, the structure should achieve its goal, that is, serve the purpose for which it is built. This involves proper space management and functional utility. Finally, the constructed structure should have an aesthetic appeal to the senses to generate extra excitement. All these involve a complex process; a good amount of cognition, research and, planning on myriad levels. Thus, architecture points to the plan, process, pattern, and product. It is because architecture reveals not only a character or style of a particular construction but also tells the tale of the architect who designs and the stakeholder who commissions.

The first-century Roman architect Marcus Vitruvius Pollio² who talks about the characteristics of architect and architecture in his voluminous Book *De Architectura* is noteworthy.

The architect should be equipped with knowledge of many branches of study and varied kinds of learning, for it is by his judgement that all work done by the other arts is put to test. This knowledge is the child of practice and theory. Practice is the continuous and regular exercise of employment where manual work is done with any necessary material according to the design of a drawing. Theory, on the other hand, is the ability to demonstrate and explain the productions of dexterity on the principles of proportion.

Vitruvius who lived some two thousand years ago talked about three concepts that bring out some important elements of architecture is still valid today.

- i) Firmitas, the design, materials and the durability of a structure.
- ii) *Utilitas*, the purpose and function of the structure. It should serve the intended purpose for which it is constructed.
- iii) *Venustas* is the aesthetic nature of the construction that gives a unique position in the minds of the audience who view it; that which makes a structure notably set apart from other constructions.

People do not admire some insignificant constructed blocks and structures as architecture. It should go beyond the space, functionality, and utility; integrated with unique, creative, innovative artistic appeal; good enough to stimulate the brain. Only then it is labelled and admired as a piece of architecture. Consider the Pyramids of Giza in Egypt which were built around 2560 BCE. People all over the world flock to see it and to admire it. How many would say it is an artistic beauty that appeals to the eyes? Usually, people admire the pyramids for their massive built size, shape and durability. On the contrary, the Parthenon in Athens has aesthetically pleasing, geometrically proportioned decorative Doric columns; the Gothic Cathedrals of Europe has the marvellous pointed arches, the ribbed vaults, and ornamented stained glass windows; the great Dravidian

¹Charles-Édouard Jeanneret, known as Le Corbusier (1887-1965) was a Swiss-born French architect and urban planner, one of the pioneers of modern architecture in the 20th century. His style of architecture is based on the concept of the principles of modern living with cars, planes, and ships and therefore his concept of a house is a machine for living in, that summarises his approach to design. Many of his architectural works around the globe were named World Heritage sites by UNESCO (United Nations Educational, Scientific and Cultural Organization). Chandigarh city in India and the iconic buildings in this modern city were designed by him.

²Marcus Vitruvius Pollio (c. 90-20 BCE) was a Roman architect, author of *De Architectura*, a treatise on ancient architecture which has been regarded as the first book on the topic. His mathematical calculations and the calculated proportion of body was the inspiration of the Leonardo da Vinci's *L' Uomo Vitruviano* or *The Vitruvian Man* (1490) drawing.

temples³ of Pallava or Chola dynasty in South India, known for their pillared halls and massive sculptured towers, are all admired for their artwork and the aesthetic allure. Take the case of Kinkaku-Ji Golden Pavilion in Kyoto, Japan⁴; it is not only the elegant structure that soothes the eyes of the viewers but also the surrounding natural environment that adds added attractiveness to the architecture.

An architecture starts in the human brain, in the cerebral cortex as a concept, either in the client or in the architect. This initial spark or concept that focus on any components of a building (when conveyed to the architect or understood by the architect) helps the architect to work further with other essentials that are needed to design a functional space. In the initial stage of designing, taking into consideration the requirements and the conceived style, based on the available space and economic resources of the client or the shareholders, the architect prepares a tentative sketch of the structure. Still, the architecture is in the initial stage of design which is open for review, discussion and modification. From this schematic design and thought reviews, the client and architect finalize the concept and start to work on the project. In this way, a project which is in a pre-processing stage is also an integral part of an architecture. Therefore, it is not only the end product but also the process and the covertly preliminary activities (psychological and cognitive) also are equally important and play a vital role in the architecture. It moves both vertically and horizontally from a concept, into a plan and processed further into execution and end product. From several cognitive functions like imagination, idea, and concept, the construction is created. Therefore, architecture is both the process and the result. It begins from a bundle of cognitive mental processes and ends in a physical product.

The word architecture can refer to any human structure both ancient and modern. The unique characteristics give unique reference to such structures in human history, defining the period in history, culture, lifestyle, and cognition fo the people. Thus, architecture becomes a reflection of the culture of a specific people, time and history, also an indicator of the level of evolution and human progression. From the ancient and prehistoric monuments to modern-day marker symbols, all tell the tale of a particular time in history communicates a continuing message to the future. Every piece of architecture, therefore, from the ordinary bridges on the road to private and public state-owned constructions, all tell the tale of a linked history to the future generation.

Poetically, architecture is a passion, vocation, and mission. It is a passion for people who pursue the profession to produce prominent, profound premises. An architect who heeds his call can certainly create classic constructions. When aptitude for architecture is identified, it inevitably leads to a mission in life. Such architects build compositions deemed to be elegant, functionally gracious, highly inspiring, joyous to the senses. If no such passion is involved in the profession and, no inner call is identified to make it a vocation, no mission is envisioned, the professional output lay waste, all dressed up and nowhere to go. Such a passion, vocation and a mission is an expression of the inborn potency and aptitude that cannot be acquired by study alone.

The personal, individual preferences are the key defining factors in a specific space to give meaning to every construction. Personal preferences project the inner psyche: where to have the dining area (adjacent to the kitchen or separate, easily assessable to family members and visitors or is it an exclusive private space of the family members), what kind of visitors expected to visit the house, and what kind of friends would arrive regularly, is the visitor's area completely unconnected from the rest of the internal spaces or, visitors can easily mingle with the family area, is the bathroom area an important place of functionality or just an occasional place of cleaning etc... etc. These and similar details that reveal the inner psyche of the inmates are crucial considerations that eventually expose the exceptional exclusiveness that provides a personal touch and a sense of satisfaction for those who live there, visit the place and or admire it by sight. In short, architecture aspirants should incorporate these elements and need to be trained and educated in these preferential particulars by understanding the psyche besides technical expertise, artistic allures and social sensitivity. Therefore, the main focus of this book is to encourage the students of architecture and the architectural aspirants to understand human psychology and the inner dynamics of the human mind, mainly, the unconscious that motivates many of

³Dravidian architecture is primarily a temple architecture developed in South India, patronised by the Cholas, the Pandyas, the Pallavas, and the Vijayanagara kings. The architectural style consists of pyramid-shaped *gopurams* (towers) that consist of statues of deities, epics, mythology, warriors, dancers and or dance forms. Angkor Wat in Cambodia and Prambanan in Indonesia were built based on the early Dravidian Architecture.

⁴Kinkaku-Ji means Temple of the Golden Pavilion, officially known as Rokuon-Ji or Deer Garden Temple is a Zen Buddhist temple in Kyoto, Japan and UNESCO world heritage site with a history dating back to the 14th century. Although the present building is rebuilt in 1955, after arson, the architecture is complemented with breathtaking surroundings consisting of a lake and Japanese style garden, that makes it unique and most visited site in Japan.

human likes and dislikes, desires and cravings for meaningful architecture. Even though the theoretical knowledge of engineering, geometry, mathematics, basic physics, ergonomics, arts, aesthetics and some form of geography is closely linked to the field of architecture and, architects are knowledgeable in these branches, a significant field of study often neglected is psychology, the psyche, unconscious mechanisms that underlie the basic dynamics of every conscious mind of the individuals who are the primary beneficiary or the stakeholders in the utility of those built spaces, an integral part of any habitable place or house is ignored or bypassed. As big monuments and landmark structures depict the cultural aspirations of the society, projecting from the view of an architect or the proposing community, individual houses reflect the inner psyche of an individual who wishes to live in it. Therefore, architecture is a multidisciplinary field, and, a multi or interdisciplinary approach is very essential for architects who engage in designing and building houses and living spaces. As conceived by Goldstein and popularised by Abraham Maslow, an architect who is a self-actualised personality⁵ creates architecture as a passion, vocation, mission and as life fulfilment. Therefore, not all those who study architecture are architects and, not all that is created by architects are architecture.



⁵Self-actualization concept was first introduced by Kurt Goldstein, a German psychiatrist, in the early 20th century, later popularised by the American psychologist Abraham Maslow. Starting from basic survival need, Maslow talks about various higher levels of needs in humans, culminating in self-actualisation. Identifying personal potentials and developing it into a passion is the right way to move on to higher levels of needs. If not, a person will be stagnated at a lower level of need and remain an unfulfilled personality. His pyramid model of the hierarchy of human needs is a universally accepted theory.