

# Identification of Parameters that Contribute to the Genesis of Architectural Styles and Symbolism based on the Interpretations of Modern Theorists Through case Studies

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## ABSTRACT

*Architectural design is the creation of a tangible mass of masonry, containing a meaningful space, collectively called as architecture and takes more than the thoughts and whims of an architect. The research paper discusses about the array of constraints that contribute to the formation of an architectural style and how they should be considered in all probable permutations and combinations for interpreting those architectural styles. Architectural symbolism and style has deep philosophical and meta physical roots. This paper initially discusses about the concept of architectural styles and symbolism, as propounded by different modern theorists. From these theories the prominent factors that contribute in the formation of different architectural styles and develop their independent components and symbologies are enlisted. Further the several elements of design- forces are identified from the prominent works and parameters are identified. These are validated in this paper with some case studies, and prominent works of master architects.*

**Keywords:** *architectural style, symbolism, modern theorists, parameters of design*

## 1. INTRODUCTION

Style, as *Oxford Dictionary* puts it, means: “a design, an appearance”. We also get the meaning “a way of expressing something (in language or art or music etc.) that is characteristic of a particular person or group of people or period” from another reference (*WordWeb 6.3 © Princeton University*). Again in the early 14<sup>th</sup> century, the word “Style” has been derived from ‘stile’, meaning "writing instrument, pen, stylus; piece of written discourse, a narrative, treatise;" also "characteristic rhetorical mode of an author, manner or mode of expression," and "way of life, manner, behavior, conduct," from Old French stile, estile "style, fashion, manner; a stake, pale," from Latin stilus "stake, instrument for writing, manner of writing, mode of expression," perhaps from the same source as stick (v.). Spelling modified incorrectly by influence of Greek stylos "pillar," which probably is not directly related but very much in resonance with architectural understanding.

Architectural design is the creation of a tangible mass of masonry, containing a meaningful space, collectively called as architecture and takes more than the thoughts and whims of an architect. Design and execution of a building not only takes into consideration the humane inputs from the designer as well as the client or the user(s), but it also incorporates the physical attributes of the site, the materials and the surrounding environs. We rarely come across any two buildings that are similar in design and these variegations in the architectonic expression are the effect of the difference in architectural styles.

Architecture can be classified according to its different styles. An architectural style may be defined as an architectonic expression typified by a particular spatial, temporal, socio-economical, situational or even any individual constraint.

Among the common typification of architectural styles, the most frequented one is in the form of geographical delineation of civilizations juxtaposed on time-line of global events. This delineation uses the biggest spatial extent for its purpose, while other classifications use comparatively lesser spatial boundaries or no geographical reference at all.

Development of architectural styles is a continuous process. Interpretation of art and architecture, as commonly understood, is the way of identifying some architectonic object or the methodology of its design through its proper reconnaissance and understanding. Here comes the question of assimilating in our mind those criteria or constraints that affects the architectural styles and needs a proper understanding for their correct identification.

## **2. METHODOLOGY**

Initially the method adopted id to discuss the various concepts propounded by the modern theorists on the aforementioned terms “style” and “symbolism”, Their argument is analysed ,compared and some subjective parameters are identified in reference to which some master works are compared.

The text thus researches about the array of constraints that contribute to the formation of an architectural style and how they should be considered in all probable permutations and combinations for interpreting those architectural styles. The identification and appreciation of art and architectural styles is actually a process where both the subjective and objective levels of understanding require sequential revelation that actually can lead to the overall understanding and correct interpretation the variegated architectural forms and styles.

## **3. DISCUSSION ON MODERN THEORISTS**

A study on the concept of “architectural styles” investigated the philosophical foundations on the process and the product.

According to *Ernt Cassier*, human mind is constituted in such a way as to provide meaning to given input, with human consciousness giving form to whatever given to it. *Kant* discussed the transcendental schemata of human mind which includes the three basic faculties, namely, “reason, intuition and understanding”, which is related to the concept of space and time. Gottfried Semper, the German architect philosophised the origins of Architecture in his famous “The four elements of Architecture” where he explained through the lens of anthropology. The book divides architecture into four distinct elements: the hearth, the roof, the enclosure and the mound. The origins of each element can be found in the traditional crafts of ancient "barbarians": hearth– fire, ceramics; roof – carpentry; enclosure – weaving and mound – stonemasonry.

*Alois Regal* discussed perceptual psychology, while Louis Sullivan emphasized the role of geometry in architecture. *Otto Wagner* impresses the idea that “it is construction that should be glorified in architecture. Wagner also stated that the architecture “composition must clearly reveal the material of construction and technology used.” *Adolf Loos* promoted elimination of ornamentation which was prompted to elimination of waste as to him ornamentation was the physical manifestation of waste of human labour. Adolf Loos propined “each work of art has such strong inner laws, that it can only become manifest in one form”. This concept was supported by Kenneth Frampton as craft slavery and highest achievement of Bourgeois culture.

From these discussions we evolved to two distinct aspects of architectural stylisation. The “objective” and “subjective” aspects.

The objective aspects can be clubbed as:

- Regional Geographical and Climatologically Setup and Specific Site Characteristics;
- Characteristics of Building Materials and Variations in Construction Methodologies;

The subjective aspects can be clubbed as:

- Specific use or utility oriented buildings;
- Socio-Ethnic Influences: and Traditional Inputs: Socio-Economic Influences;
- Influence of Prominent Personalities and Personal Styles of Architects;

### ***Comparative analysis:***

The next step was to take each aspect and compare some important architectural works in the light of the above mentioned parameters.

### ***The Objective parameters:***

- a) *Regional Geographical and Climatological Setup and Specific Site Characteristics:*

Since the first human took refuge from adverse climate in a cave, architecture has depended foremost on the geography and climate of a region. The regional setup, in the wider sense, has not only dictated the availability of building materials, but has also influenced the building form and their mutual juxtaposition in space. Despite severe developments in science and technology, our modern building science still regards this aspect (although not as religiously as our forefathers did), so obvious are its influences.

Thus the hot arid climate of desert has compelled builders to keep openings as low as possible, be it a traditional village hut in Thar Desert or a palace in Jaisalmer or even a mosque designed by Hassan Fathy. The snowy mountain ranges of Himalaya has influenced the designers of Darjeeling in the same way Bavarian Alps has made Corbusier design his first assignments – with sloped / pitched roofs so that the snow slides off.

Every site brings with it at least two aspects that an architect must regard – its physical conditions and its surroundings. While the former is a micro-aspect of the previous section, the latter one brings with it aspects of landscape, urban-scape and those important factors that leads us to need our *urban art commissions* functioning. Needless to say, the organic approach that has lead Frank Lloyd Wright design Fallingwater generated from none other but site conditions only.

b) *Characteristics of Building Materials and Variations in Construction Methodologies:*

Invention of wheel is considered as the dawn of civilization. It is that very event which initialized mass transportation and has marked one of those hairpin bends in the path of history. Before that, uncivilized human took refuge in the caves, in the burrows – the abode provided by God. The invention of wheel brought new possibilities of transporting materials to build their ‘houses’ – materials which were local as well as transported from far-away places.

However, human dictatorship on nature could not go far beyond a certain limit due to the limitations of modes of transport. The communities as well as their rulers were still compelled to use materials, which, in our times would be called local – their hinterlands were small. With the advent of steam engine and motors, the barrier of distance was broken. Materials became globally available. Architectural styles generated from particular material, and were being called after them, e.g., glass building, steel structure, etc rather than being nomenclatures after their location or other aspects. This revolution in material truly made architecture ‘international’.

Industrial Revolution has been a giant leap for mankind – and also for architecture as in any other technical field. It not only helped the development of newer materials like iron, steel or ferro-concrete, but has changed the notion of building construction methodologies drastically. For millennia, architecture was only confined to lofty ceilings supported by huge masses of walls. The

most adventurous builders have experimented with arches or domes. But still, their hands were tied by the limitations of the structural principles they inherited. Nobody could probably have thought of structures 115 m. wide and 45 m. high spanned by lightweight members of steel trusses, with walls truly in-filled with thin sheets of glasses – as had been courageously and boldly executed in the Galerie des Machines of the Great Exhibition of Paris in 1889.

Consequently, architectural styles have been named after structural principles through which they have been fabricated and constructed world-wide – RCC frame structure, tensile structure, geodesic dome, pneumatic structure, kinetic architecture, etc are few of them.

#### **4. THE SUBJECTIVE PARAMETERS**

##### *a) Socio-Ethnic & Socio-Economic Influences and Traditional Inputs:*

A society is an extended association of people having a distinctive cultural and economic organization. Societies have their seed in communes with their own beliefs and habits, which have strongly influenced architecture. This has been documented even in the old scriptures of architecture and has been practiced for ages. The '*atchala*'s of Bengal are prominent examples of social need for congregation of the rural community, as are the town halls of the occidental civilizations. There are numerous examples of ethnic influences in architecture in terms of building types – the '*Haveli*'s of Rajasthan or the '*Baoli*'s of Gujarat are only to name a few.

The word tradition encompasses religion, culture as well as regional influences. Arising out of socio-ethnic needs, some architectural features or types become symbol of a particular tradition. These 'types' are then frequented in designs to express affinity or association to that cultural or religious setting to which it belongs. Traditional influences often becomes so overbearing that these typified elements are deliberately used even if they does not bear any functional justifications any more.

One example may be the '*jharokhas*' from palaces of Rajasthan. They were required when the Indian culture required womenfolk to remain behind the curtains – these trellised windows with long cantilevered projections would then have provided with some respite to those women to establish a distant visual relationship with the outer world. They were then justified as extremely essential elements of the building. Similar instances can be given from the designs of ecclesiastical buildings like churches, mosques and temples all over the world. For example, mosques required '*minars*' on their four corners to accommodate people who would call the others for prayers and are not required in today's age of loudspeakers. But these '*minars*' have become strong traditional design elements of mosques, through which one can identify the building even from a considerable distance.

Society, as we have discussed earlier, is the mass that forms the base of the commune we live in and sustain. Needless to say, the architecture of the mass is generated from the choice of the society, portraying the architectonic language of a country or a region.

Economy is one of the major players of the society that influences the decisions taken by the mass and thus dictates the course of architecture. It not only influences the functions of the building, but also guides the form and shape, which is and always have been related to the materials and methods of construction. Although materials from far-off places have been available for construction for ages, their uses have been restricted only to some privileged buildings. Thus the primary underlining factor for the mass has always been market economy.

Architectural buildings of a particular type, one of the obvious examples being the fort architecture, arise out of the political reasons. Since the ancient civilizations, public buildings, especially for democratic nations, have come up in numbers, the genesis of which can be attributed to nothing but political inclination of a society.

Trade embargoes have always been an important aspect of the economy of a nation. The groups of traders, apart from their business, have been acting as a mobile reporter in ancient times, and have thus helped in influencing the architectural styles of a place. It is indeed noteworthy to mention here that travellers and globe trotters, like have also helped in spreading the traits of their native architectural developments, thus contributing to the architecture of the places they have visited.

*b) Specific use or utility oriented buildings:*

Since antiquity, buildings have been classified according to their use and functions that are performed within. We have residential, commercial, religious, public buildings and many more. The industrial revolution has brought with it the new phenomenon of widespread industrialization and mass production, thus giving birth to newer types like office building, industrial architecture, warehousing and storage buildings, etc. Scientific and sociological researches and awareness developments in the recent times has initiated new building types like intelligent buildings, barrier free universal buildings, etc. On the other hand some regions might have some unique functions that have lead to typical building styles or architectural elements very unique in character, e.g., a tea room in a Japanese garden, or a Ghat for performing religious activities. All these types have their own visual and spatial vocabularies that have contributed in the development of different styles.

*c) Influence of Prominent Personalities and Personal Styles of Architects:*

Study of chronological development of architecture often brings us to certain classifications of styles that are based on the patronage of a particular personality – most often a ruler or a political leader. Thus we have architecture of Constantine era, of Victorian or Elizabethan style,

architectural style classified by the Sultanate, classified by rulers like *Ashoka*, *Akbar*, *Shahjahan*, etc. We even classify particular styles of eminent personalities, e.g., architecture of *Santiniketan* influenced by *Rabindranath Tagore* himself. Political regimes also have their impression in form of architectural styles, as is evident in the “Schinkel-Schuller” style buildings of Fascist Germany.

Last, but not the least, architects themselves forms their own (language) vocabulary by which we identify their design from one another. The Prairie style buildings of Frank Lloyd Wright are clearly different from those designed by Le Corbusier, buildings designed by Ludwig Mies van der Rohe being different from those designed by Norman Foster or Charles Correa or Laurie Baker, etc.

Although we have discussed so far some distinct criteria which are responsible for the development of architectural styles, we must keep in our mind that they are strongly interconnected in form of a matrix an the development process is a continuous one. The overall matrix of the contributing factors responsible for this cannot form a discreet event

## 5. RESULTS AND CONCLUSION

A long journey has been made so far in search of the underlining reasons or contributing factors those characterizes or differentiates between architectural styles. Just as it was discussed that the interpretation-work is a product of both subjective as well as objective analysis, it very clearly follows that interpretation is not free from all ambiguity. Knowledge, observation and true understanding of all the different contributing factors and something more called intuition can lead to an identification of a style that is almost fully unquestionable.

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