TRANSFORMATION IN ARCHITECTURE

Sümer Gürel
Former Professor, Mimar Sinan University,
Istanbul

ABSTRACT

Human society and the physical environment that developed in response has undergone several transformations over the centuries. These transformations from the earliest of man till date can be listed as a continuous chronological chain in the light of historic developments, sociological changes, political attitudes, religious practices, economical and professional norms, etc. The influence of a landmark event/trend in any of these references has contributed its marked impact on the built form of human settlements, that can be easily noticed as one takes a stroll down human history. With the changing times and needs transformations in architectural form and vocabulary took shape. These were also influenced by the climatic variations from region to region. In this paper an attempt has been made to track down the landmark events in history, in different contexts of the world and identify their influences in terms of transformations in architecture or the built environment.

1- INTRODUCTION

"To transform" as a verb has three different meanings in a dictionary[1];

a. To change in outward *shape* or semblance.
b. To change in *structure* or composition; rarely to transmute.
c. To change in *nature*, disposition, heart or the like; convert.

Although it is also employed in several other contexts but only the three relevant explanations have been chosen here. In this paper an attempt is made to illustrate the strong – and inevitable - link between the "transformation of society" and "transformation in architecture" in cause-effect relationship.

Architecture per se is the complete and concrete reflection of the cultural phenomena in a given society, which constitutes the spatial organization for human beings. This happens to be the fundamental difference between "architecture" and other elements of culture like music, literature or the performing arts, which are either abstract (music and literature) or impermanent (performing arts) in nature. That is to say, despite the concrete nature of painting, sculpture or even townscape design – city furniture - one could easily argue that none of those components of cultural phenomena could reflect the characteristics of a society as completely as the "architecture" of the said social environment.

Transformation, is a concept based on "change" as it is very clearly indicated in aforementioned explanations. And "change" is the basic and common feature of societies regardless of their development levels.

TRANSFORMATION IN HISTORY

Human beings can not survive without "change" and they change – that is to say "transform"- their environment according to their needs and desires that generally, originate/emerge in response to their respective ecological context. In other words, unlike other living beings – especially animals - human individuals have, always, adapted – which means transformed - the "environment" instead of being adapted by it, throughout the history. The

---

1 Webster's New Collegiate Dictionary, A Miriam Webster, 1961.;

best example of this adaptation can be traced as a quest for *shelter,* by "homo erectus", earlier in a passive form (caves) and later on in an active form as a "house" construction. This happens to be the first "transformation in architecture" in the history of mankind; leaving a "nature-made" *shelter* – a cave - for a "man-made" *hut.* This point intime can be considered as a revolution in architectural terms. Transformation as a concept can be in "shape", in "structure" or in "nature" possessing "change" as a mutual characteristic. If this is applied to " architecture" and interpreted in semantic terms, the argument about change in architectural theory and practice concerning the form and function emerges clearly. While observing the "change" in form and function, the existence of "structure" as an unavoidable element of any given architectural work should be kept in mind. On this pretect a parallel evolutionany prosess between societal and architectural transformations can be established.

In the "primitive era" human beings hunted animals and collected vegetation for *nutrition.* They used caves for *protection* from both wild creatures as well as ecological hazards. Eventually moving from one region to another –for survival - they learnt to construct shelters with materials available in their respective environment. These were mostly wooden "tent-like" conic form shelters and quite flexible in structural terms. The "plan" of these earliest structures was circular, in many different geographical situations from Latin America to Africa and Asia and so on, reflecting the image of their "god", the *sun.*

With the introduction of "agricultural society" in Asia (that is Mohenjodaro in Pakistan, See Figures 1,6,7) and Mesopotamia (Ur, Uruk and other Sumerian Settlements), respectively 8000 B.C. and 6000 B.C., construction of permanent buildings - especially housing - was initiated in an appropriate structure, form and function for the said era. Thus the, "society" was transformed from a *nomadic* character, to a *settled* character due to the agricultural activity and transformations in architecture also occured accordingly. The impermanent caves, tents and huts were replaced by permanent houses with barns (for live stock) and shops, as well as religious buildings[2]- combined with administrative functions.

The "agricultural society" lasted until the 18th century and was transformed to an "industrial society" with the emergence of the Industrial Revolution (1760) led by UK. However, "agricultural society" having lasted for several millennia, went through various stages in developmental terms. With the commencement of the first formal monotheist religion "Judaism", radical changes in society were observed which were, dictated by the "Ten Commandments" and declared by the prophet, Moses. Originally being a member of Pharaonic Dynasty circle, Moses imposed a number of old Egyptian habits, customs and traditions on the masses of people living in today's geographical boundaries of Palestine and Israel, as well as Jordan and Lebanon.

In architectural domain, the transformation means a "change", for example, from the Pyramids of the pharaohs to the Temple of Solomon in religious terms. This era lasted over two millennia (birth of Moses considered as 2547 B.C.) and Jesus Christ appeared in religious history introducing a new belief, eventually called Christianity, which lasts till today.

The third and the last monotheist religion, namely Islam, emerged in the same vicinity as that of Judaism and Christianity, in 6th Century. From 7th. Century onwards, it started expanding, throughout Asia. Hence, the reflection of such a radical "social change" in the cities of the regions in which Islam had spread appeared in "Architectural Transformation", as mosques cropped up, eventually developing madrasas around them with functions like education, health and social aids and so on (See Figures 2,3,4,5,8).

Today the minarets are the most distinguished elements in Islamic city silhouettes. With the passage of time, starting in Saudi Arabia and neighbouring countries, residential patterns of cities - and towns alike - although keeping the traditional pre-Islamic outlook, went through a

---

[2] Introduction of monotheism has been observed in Sumerian documents

Figure 1: Mohenjo-Daro; view of the stupa from the west.
Source: Jansen, 1991

Figure 2: The Suleymaniye Complex.
Source: Istanbul: Spring 1996,
        Economic and Social History
        Foundation, Turkey.

Figure 3: District of Galata and the Galata Tower.
Source: Istanbul: Spring 1996,
        Economic and Social History
        Foundation, Turkey.

Figure 4: View of Istanbul at the present day.
Source: Istanbul: Spring 1996,
Economic and Social History
Foundation, Turkey.

Figure 5: The historical peninsula,with the Blue Mosque
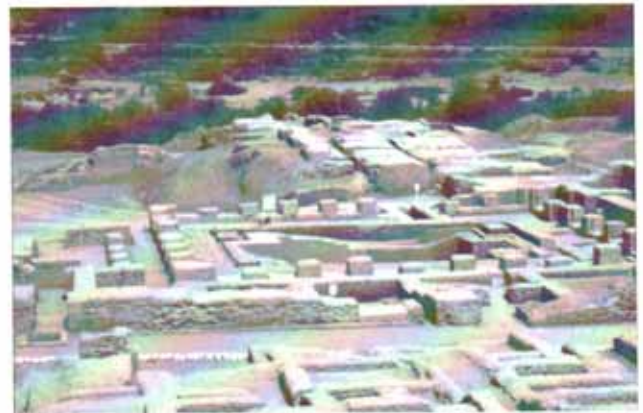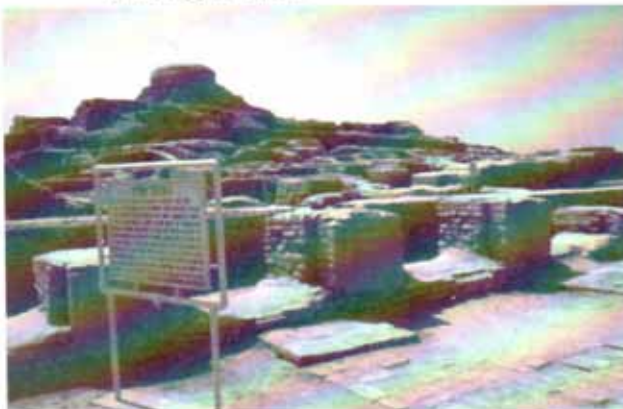and Hagia Sophia.

Figure 6: A model of Moenjodaro.

Figure 7: A view of Mownjodaro.

Figure 8: View of Istanbul.

sort of interpretation in the plans' spatial organizations. due to the harsh ecological conditions. In regions where heat was a major issue houses were built with an "atrium", in order to provide shadow on different sides (E-W-N-S) throughout the day. Besides this water elements, pools, etc. were are also observed as cooling elements of the interiors in houses of most welloff families. In short, all those climatological innovations with the introduction of Islamic rules, have been interpreted as the components of "intimacy of family", so – called 'harem' and 'salam', that is male and female departments of the house. Thus, a typical Arab House, has *semi private*", that is the front garden as entrance, "*private*" that is the interior entrance of the house where strangers / outsiders are received by a male (servant or member of the family) and finally "*fully private*" which means intimate (mahrem) area, consisting of familiy living room, combined with dining and sleeping rooms etc... This is a major 'Transformation in Architecture' throughout the countries in Islamic cities.

Going back to European history, in continuation with the same topic, the very first impact of "institutionalized religion" on spatial organization, that become architectural practice, were the buildings representing the "clergy" like the synagogues, churches, the monasteries, chapels etc. At the same time, the "power structure" of society consisted elements of aristocracy (feudal lords, kings, and later on sheiks, shahs, maharajahs and so on) as well as the clergy, namely the religious authorities who were more influential than the royal courts throughout the Medieval Era. Therefore the major elements of the city image were churches, cathedrals, monasteries, castles, fortresses, palaces and so on.

In he course of ime the the scene third element of *power structure* appeared on this was the "bourgeoisie" class, that, started becoming more and more powerful in Europe, particularly in comercialfields the scene. Their physical presence is marked by the appearence of their grand palace like residences and vast green areas of agricultural and horticultural activities. Due to the feeling of insecurity on part of the Rulers, fortifications became inevitable From the begining of middle ages the outlook of towns and cities changed in nature, and became "fortified" settlements.

Naturally, parallel to social and economical development, buildings representing the economical activities - such as stock exchanges, banks, insurances, auction halls and so on - as well as those for social events, like theatres, fairs, circuses, and clubs, etc. started to be constructed in the heart of the cities in the European continent. In Architectural Transformation, form - function relationship most clearly appears in public buildings and these changes are referred to as "style" in architectural terminology. For instance *styles* like Gothic, Baroque, Rococo and so ons. Although they do not correspond to a radical change in function in some cases – like churches - and only appear in form, yet they are considered to be within the transformation concept. It is difficult to share this opinion since it does not correspond to a reflection of a social change.

On the other hand, the most appropriate *transformation in architecture* can be observed in residential buildings. First of all, people all over the world created their houses without architects until very recently. Naturally there have been architect designed houses / residences in history as well, but they were constructed exclusively for the richest people of the society. With the introduction of industrial revolution, housing for the labour class became a part of political activity; hence handled and supported by the government in the UK, thus designed by architects. Industrial revolution has become a milestone for "Transformation in Architecture", both in "form and the "function" of course producing consequences for "structures" too. For instance, industrial plants, that is to say factories with their chimneys, competing with old church towers and the like in cities' silhouettes.

CONCLUSIONS

An architectural design can be realized with building materials, technology and skilled labour. Hence it depends on environmental conditions (availability of material to a certain extent) social conditions (skilled labour and cultural level) and economical conditions (both for technology and finance of constructions) of the given society. Therefore, while visiting different countries of

developed and developing regions of the world, the *social transformation* (from agricultural to industrial and post-industrial society) being reflected in spatial organization can be clearly observed as "Transformation in Architecture". However, now a days, in a good portion of big cities / metropolises of developing nations, we witness a misleading "architectural formation" which does not reflect or represent the social or the economical situation of the country in question.

In other words, metropolitan cities of the *Third World* (especially those ex-colonies) may look, if not exactly but in simple terms, like the big cities of developed world. Thus, our discourse can be concluded by summing up as fallows:

• To-day "Architectural Transformation", in the Third World countries does not completely reflect the " social transformation" like it does in the case of the developed world. That is to say, metropolitan cities of Third World are experiencing a *duality* both in socio-economical and architectural terms. While one portion of city leads a life style like any big city in developed nations; the other portion of society lives under miserable conditions ; slums and squatters.

• In developed nations, cities in term of "architectural transformation" reflect upon the "social transformation" in the spatial organization.

• During the last two decades, with the introduction of *globalization* based upon liberal economy of the capitalist system, certain aspects of transformation in architecture, have been influenced by mobilization of the capital; simply the money. That is to say, economical activities based on communication / information technology have created a new concept in architectural design, i.e. the so-called "Intelligent building". Although they may not appear in the city image as symbolically as old cathedrals or high chimneys of factories and so on; but as they start increasing in numbers, they may then form "site selection" to their forms in appearance, and start having some impacts on "transformation in architecture" in larger context.

• In conclusion; Archigram's pioneers (Peter Cook and his team) may be referred to as new generations of Nostradamus, by introducing "rocket age" in architectural design already four decades ago. On human part and on my part, too, I prefer to survive in human architectural environment and in less intelligent buildings■

BIBLIOGRAPHY

Webster (1961) New Collegiate Dictionary.

ESHFT (1996) Istanbul; Spring Issue, Economic and Social History Foundation, Turkey, Istanbul.

Jansen et.al. (eds) (1991) Forgotten Cities on The Indus, Mainz: Verlag Philipp Von Zabern.