

# Cultural Aspects Analyses in Sustainable Architecture

Yaser Rezapour, Armin Jabbarieh, Fatemeh Behfar, Ahadollah Azami, Aidin Shamsalghorayi

**Abstract**—Social ideology, cultural values and principles shaping environment are inferred by environment and structural characteristics of construction site. In other words, this inference manifestation also indicates ideology and culture of its foundation and also applies its principles and values and somehow plays an important role in Cultural Revolution. All human behaviors and artifacts are affected and being influenced by culture. Culture is not abstract concept, it is a spiritual domain that an individual and society grow and develop in it. Social behaviors are affected by environmental comprehension, so the architecture work influences on its audience and it is the environment that fosters social behaviors.

Indeed, sustainable architecture should be considered as background of culture for establishing optimal sustainable culture. Since unidentified architecture roots in cultural non identity and abnormalities, so the society possesses identity characteristics and life and as a consequence, the society and architecture are changed by transformation of life style. This article aims to investigate the interaction of architecture, society, environment and sustainable architecture formation in its cultural basis and analyzes the results approaching behavior and sustainable culture in recent era.

**Keywords**—Culture, Sustainable Architecture, Environment, Development

## I. INTRODUCTION

CONSTRUCTED monument in a site involves social behaviors and cultural thoughts hierarchical before indicating structural and technical scopes that introduces contemporaries' life style. Regardless of defining customs and thoughts relative to concepts and meaning of sustainable architecture (proportions, colors, harmony and renovation with nature in buildings or monuments) and conform materials, building elements and structure of designed complexes application methods with own ideology and personal taste we get familiar with social behaviors and culture effects on our considered monuments by observing them and comprehend their effects. In other words, architecture could reflect thoughts, behaviors, tastes, believes and cultural directions introducing them later [1].

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Architecture could solve the problems justified in daily applications and meet daily needs. It justifies social and human behaviors problems and cultural background due to providing possibilities for designing options and other related factors. Application of past cultural manifestation in the past and modern sustainable architecture is similar to invention of new designs that indicates special value and concept in new artifact structural space (sustainable architecture).

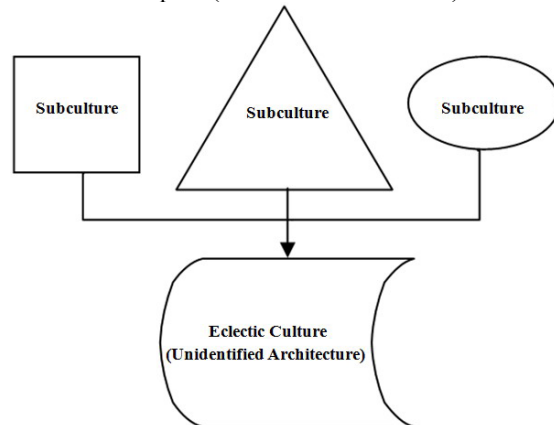


Fig. 1 Non-identified architecture process

This subject has been gained attention of researchers of modern architecture and it has established knowledge that considers spatial elements and it hopes to employ the elements by differentiating and determination of the relationships besides leveling special functions as a sustainable architecture principles and language. Thus important role of society cultural and behavioral transformation in sustainable architecture and related norms are studied.

## II. INFLUENCE OF CULTURE ON ARCHITECTURE

Each society has own culture shaping its architecture and this architecture indicates the society culture. Culture is originated from human interaction and it is a main element of social and individuals identity that imposes historical background to human instable life. Architecture is manifestation of culture that meets the human needs to shelter and artifacts and provides close relationship with culture [2]. As a social phenomenon, architecture is originated from culture and it affects on culture and reflects human thoughts from space and aesthetics view point. So architecture reflects culture and art of a period and it is proportionate with revolutions in related artistic and life scope. Turing points of culture and innovation are the main factors of different architectural schools. So according to direct effect of culture on architecture, cultural transformation leads to changing effective concepts in establishing of architecture undoubtedly, as a result different architectural thoughts are proposed. This trend determines interactions between theoretical and cultural concepts in general and theoretical and architectural spaces in particular.

Every pattern coincided with our needs and culture can replace cultural and architectural issues by flexibility and conversion. Cultural characteristics of each era can be identified by its architecture. when architecture is established under different political, social and cultural conditions of a period, the subjective ideas should be manifested objectively by culture since each society has own culture forming by architecture, so the architecture plays determinant role in this transformation process [3].

### III. EFFECTIVE CULTURAL FACTORS ON FORM AND SHAPING OF ARCHITECTURAL SPACE

Architecture space is incomprehensive without identification of its construction culture. Cultural product indicates its formation after proposing tips, remarks, techniques and innovation. The building form expresses the builder thought and this expression is rooted in architecture and manifests architecture culture. Architecture is a cultural origin of conversion that it does not have constant form. How we appreciate architecture as two separated elements of one phenomenon? So, cultural and technical elements are considered as indicator of architectural culture, groups and societies. In building of a space and even instruments at first, the human being tries to consider tangibles and functional benefits then considers artistic and aesthetic aspects.

Like other arts, the effect of phenomena, national and religious aspects can be observed as sustainable pattern in architecture. Some Iranian designs and patterns like Chaharbagh and Charsoffeh as national civilization and culture phenomena are sustainable. The sustainability does not mean static and lack of dynamicity. Different factors influence on architecture and artistic works as subset of culture. These effects are sometimes vivid and sometimes are unclear like the role of Cross in designing of historical churches and the hierarchical among these spaces as main elements of Iranian mosques entrance and its cultural content and concept that they are hidden from visitors view in first glance[4].

### IV. ARCHITECTURE AS A CONTAINER FOR INSIGHTS AND SUBJECTIVITY DOMINATED ON SOCIETY

Architectural integration and continuity with thought and expression domain –as individual and collective- provides direct relationship between architecture and society. Architecture is a container for explanation, thoughts and subjectivity of the society. It visualizes desires, thoughts, imaginations and cultural indicators of a society [5].

People express their opinions in architecture of their houses and buildings. The buildings carrying messages that their alphabets are explained in language and literature of architecture (it should be noted that our purpose is all classes of society and as consequence the architects are in this society). So, there is no difference among architecture, people, taste and attitudes and the architecture is expression of society present state and image. In this case, each observer comprehends attitude dominated on society by attendance in artifact and human made spaces. This spatial and structural complex is product of all social reactions and interaction dominated on shaping process. Indeed it can be said that built spaces are witness of collective incidents of identity [6].

### V. THE EFFECT OF SOCIETY'S LIFE STYLE ON SUSTAINABLE ARCHITECTURE

The life style of the past and present is different. Thus architecture is changed. The traditional architecture indicates a traditional life and modern architecture indicates modern life and the unidentified architecture reflects unidentified life. Society carries identity characteristics and life style changes society and architecture. People encounter with fuel consumption, ground heat and reduction of energy resources problems and attitude towards change in direction to sustainability is seen [7]. Thus architecture is changed in this direction. Culture and attitude are affected by the reality of ending energy and resources and consequences of natural environment destruction. In general architecture indicates life style of a period, in other words sustainable architecture is originated from sustainable societies.

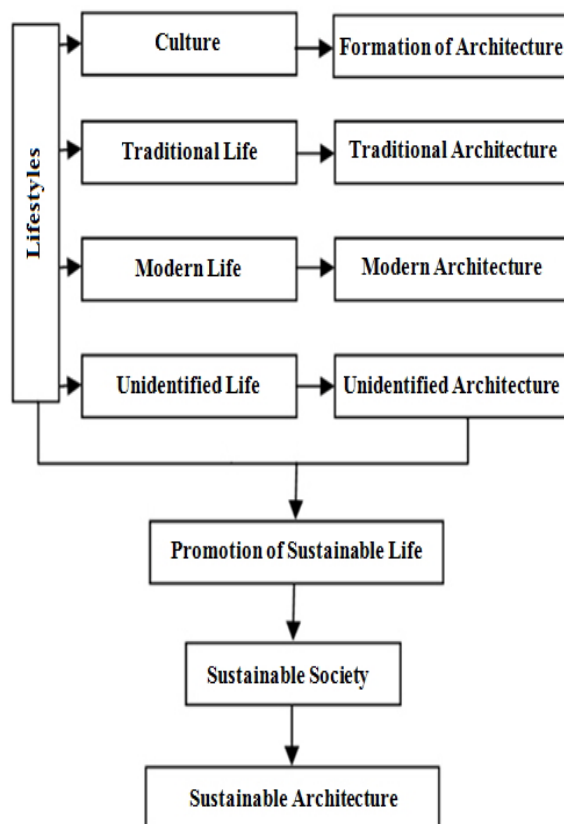


Fig. 2 Formation of sustainable architecture

### VI. EFFECTS OF SOCIAL BEHAVIORS ON ARCHITECTURE

Social behaviors are affected by cultural, political, social, religious and economic aspects. Related to influence of the mentioned aspects on architecture there is an interactional relationship between architecture and social behavior (see figure3). An architectural work of the society is considered as human made environment and it should influence on human behavior. This effect is different in every scope. In an architectural work by idea rooted from functional scope, this idea will effect on social and human behavior and form [8].

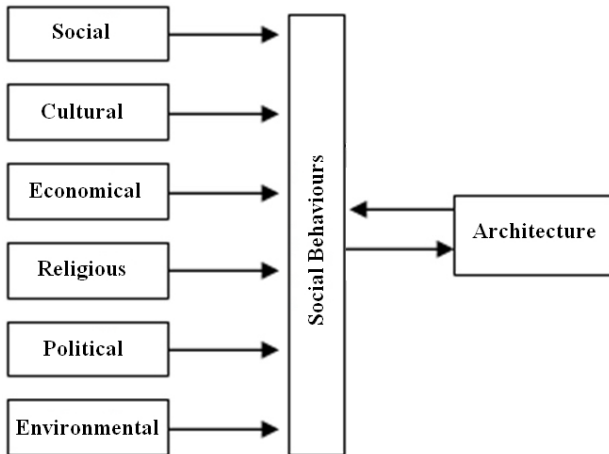


Fig. 3 Effective factors on shaping social behaviors

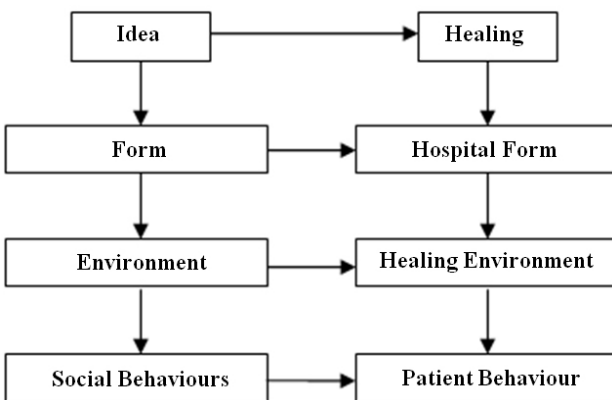


Fig 4 Effects of architecture work on social behavior

## VII. CONCLUSION

Since studied monument is a public building and Architecture follows defined principles. There is a continuous relationship among architecture, culture, behavior patterns and society values. For this reason architectural style reflects art and culture of the periods. Since architecture transformation is proportionate with shift in other areas and it is prerequisite of dynamic architecture to meet new needs in architecture styles based on principles accompanied by past styles and methods, there is a powerful relationship among past architecture styles by difficult boundary amen them. The principles and styles are rooted from culture, traditions and similar behavior patterns of individuals. Architectural styles have been changed according to shift in life styles and culture and meet to needs. It should be noted that a nation is successful when comprehends architectural needs and identifies time and position of its society. It cannot be said that advent of new architecture is based on the same human culture and behavior patterns, new needs and possibilities; it is not based on past culture, needs. Confines have caused break of connection between some manifestations of life with society culture and as a result elimination of traditional architecture but the architecture has been accompanied by time.

Behavior patterns and traditions are established by passing of time based on cultures determinant and nature. Architecture deals with monuments and the monuments are part of culture. Each period demands own new form. Our mission is to shape world in new form by up-to-date meaning. The past knowledge is a burden so the architecture should intervene. It is a goal that has not been considered from beginning of the century. So, behavioral and cultural concepts have been expressed and sustainable architecture promotion and education will promise sustainable social life.

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He developed the original of old and ancient sustainable architectural methods to contemporary functions especially in the field of Sustainable solar architecture, urban design and zero energy buildings. His researches are focused on various topics such as culture, education, water, solar buildings; technical restoration and renovation of historical buildings and sites approaching sustainability and development. He has one invention in solar architecture and has awarded some national and international prizes around the world. He has delivered keynote speeches at national and international conferences on renewable energies and published as an author or co-author over 50 scientific papers in reviewed journals or presented at international conferences. He is awarded UNESCO paper prize at 4<sup>th</sup> IWHA Conference, Paris, France and also awarded second paper prize from 44<sup>th</sup> Int. PLEA conference form SBSE, Milwaukee, Wisconsin, USA in 2005.