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INVESTIGATION ON THE STANDARD FOR HOUSING DESIGN

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ABSTRACT

In this research, the author has carried out the research to investigate the characteristics of the Standard for housing design. As Gausten Bashlar, the French scientist has called the house a place of resting, self recovery and relaxation. It means paying attention to the needs of human beings, but technology caused the human beings become ignorant of the natural resources to some extent and instead of humans, machinery devises have become more significant that one of the most important of them is the lack of considering to territorial and endurance issues and this means forgetting the current generation and also hurting the future generation for reaching to the special needs. This fundamental problem won't be solved unless we design some constructions that are suitable for energy consumption, coordinated with the environment, being located in its proper place. So, in this study has been investigated the existence of enduring house which able to reach the aims of environmental, social, economical in order to provide a better quality of life for the current generation and the future generation.

Keywords: *House Economical Units, Attention to Territory, Housing Design*

INTRODUCTION

The house, despite its size and complexity, became an ideal candidate for experiments in mass production. Plagued by weather delays, varied abilities of and access to skilled labor, conflicting subcontracting schedules, and wasted and inefficient use of materials, the conventionally built home seems to be a perfect product for industrial production. In fact, the evolution of the house can be seen as a study in the increasing use of prefabrication to produce its many parts—components such as wood framing, doors, windows, trusses, walls, trim, and so on. In fact, most of today's production houses are to a certain extent prefabricated ones, even if they are thought of as primarily "stick-built" at the building site. But shifting the location of assembly from the building site to the factory was not just a change of venue but also one of attitudes undermining one of architecture's long-held principles, the uniqueness of structure to site. One of the first process of unitedness of human beings is house that is one of the fundamental needs of human beings and factors such as: population growth, migration, urbanization, family variation, income and so on cause population growth and these factors manifest the need of house. Madi (2007)

The Prints and Photograph Division's twentieth-century architectural drawings are predominantly of historicist house designs because the vast majority of Washington and Washington-area houses are traditional. Not surprisingly the work of the city's premier modernist architect of the late 20th century, Hugh Newell Jacobsen, is fundamentally conservative in its essential tastefulness. Jacobsen's international reputation rests perhaps more on his series of beautiful houses, many in and near Washington, as on his public commissions. He approached each of his residential designs as an individual problem of site conditions, client lifestyle, and appropriate historical precedent; each is an example of consummate artistry where sensitive and sensible design are realized through superb building craftsmanship. Jacobsen's definition of houses as series of interconnected rooms with clear external volumetric expressions--a unit approach which he terms pavilions--also includes historical contextualism, as each is a fresh contemporary expression of an earlier American house type (Kevin, 1988).

One of America's major architects of the first half of the nineteenth century, Robert Mills, lived in Washington from 1830 until his death in 1855, yet no important house in the city can definitely be assigned to him. He is known to have "improved" several lots that he owned, presumably by erecting inexpensive row houses on them for resale. Stylistic evidence suggests that Mills may have designed Matthew St. Clair Clarke's house (1836) facing Lafayette Square. Now St. John's Parish House, it was

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renovated by Thomas (1854) into an Italianate-style mansion. When architectural models changed at mid-century from ancient to Renaissance ones, Walter, one of America's premier Greek revival architects, adopted the most recent of the classical revival styles, the Italianate. Walter, the son of a builder who ended his career as president of the American Institute of Architects, epitomized architects who inventively transformed the classical, medieval, and Renaissance languages into varied modern American idioms (Jeffrey, 1984).

While Jacobsen's work exemplifies a basically sensual approach to contemporary house design, a cerebral strategy is represented in the Library's collections by drawings of educator-architect Cesar Pelli. Tracking the gradual transformation of Pelli's conceptual sketches of suburban house projects exhibited at the Venice Biennale (ADE - UNIT 2370) in 1976, through their intermediate stage as the Long Gallery House design (ADE - UNIT 2373) offered for sale in 1980, to its concrete realization as the Maryland House (ADE - UNIT 2374) erected in 1985-1989 in suburban Montgomery County, is to undertake with the architect a journey of self-conscious historical inquiry. The recent interest among architects and the public at large in architectural history has led many contemporary architects to realize that their own place in history can only be correctly understood if drawings recording their complete design cycle are preserved intact. If published, as in Pelli's case, these drawings participate in the profession's ongoing theoretical-historical dialogue, influencing as well as having been influenced (Mario *et al.*, 1990)

Climate Measures in Buildings

There are two figures below that show Tromp wall in both eastern and western side in order to reduce building energy consumption . Also, by passing pipe installation supply part of required hot water in the building. In figure 1, is shown how function of climate temperatures Tromp wall in two seasons. Pipe installation in spaces adjacent wall Tromp health services to be passed into the wall. Figure (2) is shown increase the comfort of the bioclimatic chart software Akotekt in December and June.

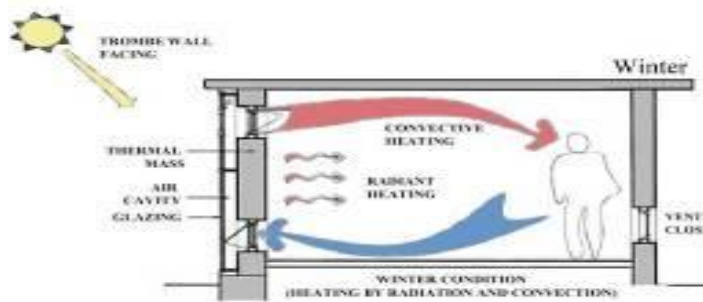


Figure 1: The performance of Tromp wall in winter

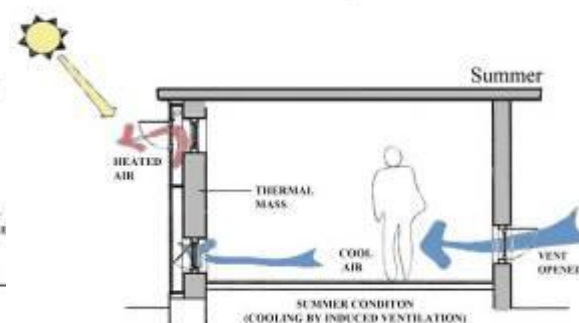


Figure 2: The performance of Tromp wall in summer

As Gausten Bashlar, the French scientist has called the house a place of resting, self recovery and relaxation. And this means paying attention to the needs of human beings, but technology caused the human beings become ignorant of the natural resources to some extent and instead of humans, machinery devises have become more significant that one of the most important of them is the lack of considering to territorial and endurance issues and this means forgetting the current generation and also hurting the future generation for reaching to the special needs.

House Definition

Various definitions can be presented for house that we mention some of them:

Literally house is a place or a location that people inhabit. According to this definition house takes large amounts of space which can be a city (inhabitants of the people of a society) or a room (a place for living one person).

“House is a series of residential place that provide the needs of human beings in the criterion of a person or a family (Watson & Labs, 2010).

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House is a physical thing that saves human beings from natural dangers and animals and provides the physical place for the most parts of daily, monthly or yearly life.

Nasr (2010) mentioned “House is a place which is coordinated with the special standards from body point of view and should be located in place that is easily accessible to career, shops and entertainments and finally it should be secured”.

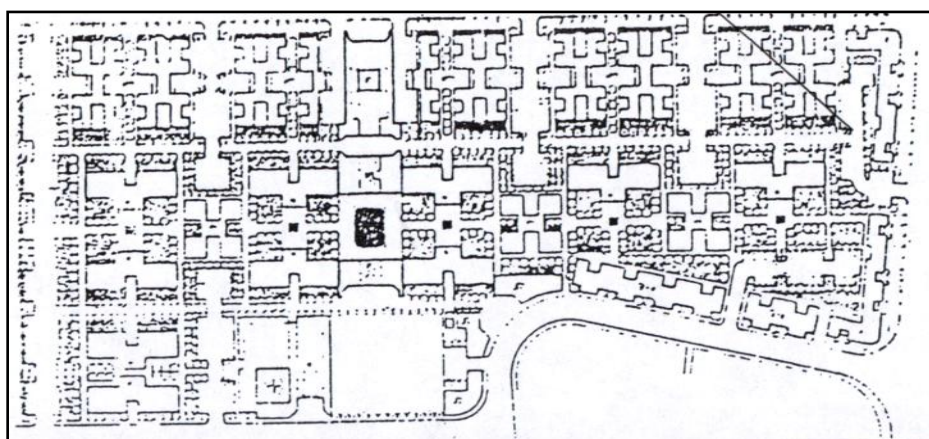
“The definition of a house is a place for keeping from cold, weather variations, and noise and so on”.

“The definition of a house as a nature is providing sunshine, space, warmth and relaxation”.

RESULTS AND DISCUSSION

Principles of House Designing

In order to achieving to suitable spread and also because of some economical problems, in the building’s design three floors has been used and there are private yards, too. As it is clear in figure 3:



The standard criterions in the architecture of residential constructions:

Light from two directions

Every person tends to choose the rooms that are lightened from several directions. Providing the light of the room and existence of windows are fundamental.

Providing light is unpleasant only in one way.

The rooms that receive sunshine that make things less significant.

The room that receives sunshine, the slope of light on the walls and the floor that are eye catching. This means that the part that is far from the window is unpleasantly darker than the part that is close to the window.

Example: the instance of this method is seen the Marselis apartments, each flat is built long and narrow and light is only provided from the behind part which is narrow. As a result the contrast of light and darkness in place around the window is unpleasant.

In the big houses the edges of the constructions should be built in the shape of step and tending to the sides. Locating the large rooms and small ones next to each other is effective.

"The housing issue, is vast and complex and has diverse dimensions. The single was released. Housing as a basic need for shelter as the physical location of each household is counted. The shelter some of the basic needs of the household or individual is provided. Like Sleeping, eating, resting, protection from weather and environmental conditions in the Nature summary »

The Edge of the Construction

Most of the times only the eternal aspect of the construction is considered and people don't think that a construction should be considered from external aspect.

Lack of paying attention to the external aspect of the building causes the construction becomes motionless and leaves the construction alone from social point of view.

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An experienced proof exists that is obvious that the people prefer to stay next to the constructions when these places are built for them and they spend their time there.

The Necessity of Designing the House Standards Issues

If the quantity of construction is not along with the growth of equipment in a certain time, the quality decreases, but it should be considered that quality should not be victim for quantity. The extreme need of house which is the result of population growth and migration makes the local and international managers to produce houses faster and sometimes it causes the quality becomes in the second place.

Also extreme tendency to the reduction of time in doing the projects causes the quality of the constructions decrease dramatically, so the national funds produce some production with cheap quality. In order to prevent loss of these funds and saving the inhabitants, providing sanitary conditions and other things, it is necessary to pay attention to the standards of the house Majdabadi (2009).

Standard Definition

There are lots of definitions of the meaning of standard, but here three definitions is presented as following:

- a) Series of connected criterion that are managed in order to achieve the best arrangements between needs and the profit of the different groups of the people in various processes. The house standards are usually used in certain time, place, economical technology and culture.
- b) The standards play role regarding the normal limitations that exist and what should exist or which are the goals.
- c) In fact the standards are tools for improving the quality of the house or warranting the suitable situations to live.
- d) Kinds of house standard

The standards of house can be grouped into two categories:

- The administrative ideological standards that represent the progresses in the future.
- The real administrative standards that are the results of the experimental managements.

e) The aim of managing the house standards

The aim of managing house standards can be summarized as follows:

- Becoming more useful and providing the most flexibility and freedom for the designers of house in choosing the materials, housing methods and shapes of the house
- Extreme reduction of population
- Destroying the unpleasant sanitary
- Improving the quality of house or warranting the acceptable life conditions for most of the families
- Preventing large national fund loss especially with the families with low incomes in constructing houses with short life.
- Improving the security of the houses against wizards and dangers.

f) The effective factors in managing the house standards

Before discussing about the effective factors of standard management, it is necessary to consider the effective factors of constructing the human houses as following:

- a) Environmental factors, economical and social, location, lifestyle, tradition and dwelling
- b) The technical, constructional, kinds of material and technical calculation

It is clear that in managing the standards two factors should be considered. Considering the mentioned factors, the primary effective factors in managing the standards can be summarized as the following:

- a) economical factors: income, lifestyle, expenses, public facilities in certain time and place, the expenses of production, the power of shopping, existing resources, access to the resources, economical capacity and economical working.
- b) human and social factors: social needs and principles, priorities of habitants, varieties between families, family aspect, private sanctum, managing family, needs and other characters like average lifetime, lifestyle, education and experiencing urban life and social reactions.
- C) Cultural factors: the local models, traditions, methods, materials and designs of local constructions and cultural adaptability

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d) Local factors: weather conditions, temperature, humidity, wind and totally the geographical condition of the location

E) Population: the amount of population in different parts of the town and their dissipatedness, the amount of open and grassy space

f) The analysis of human projects in the house, lifestyle, the existing and used space by the families

g) Sanitary: the ways of garbage depletion and surface waters.

Also two processes should be considered in managing the standards:

- Managing standards for the local problems and special groups
- Managing standard for the whole services that are provided with house and public facilities for personal or social needs.

Also it should be considered that the process of managing the standards guarantee as follows:

- Spreading the public services equally
- Spreading house resources equally
- Public contribution in management and diagnosing facilities and public services

The problems that make managements hard are in the following:

- Local weather variations, materials and the culture of the people
- Different incomes and lifestyle
- National issue

6) The hurts resulted from lack of focus in house standard management

If managing the standards is not done with focus and consideration of local, economical, cultural issues, some problems occur. For example:

The high standards increase the prices of house, so people with low incomes are not able to afford and they are forced to lineal parts, as a result the problem becomes more complicated and it causes people don't contribute in the managements. Also these standards of incomes may cause social distance or make the construction time longer Heidari (2009).

The experience of managing and doing these standards in the developing countries show that the main issues are from current standards, because the special needs of users for services and facilities are not analyzed and managing these standards are not based on this. These kinds of standards don't have the proper connection with effective request. Sometimes the standards are unrealistic based on the existing resources, or it may be that the facilities are provided, but the location for the local people isn't easy or profitable.

In order to reduce the difficulties of management and doing the suitable standards, the followings should be considered:

- a) The standards should be accessible for the most people of the society
- b) The standards should be provided in different aspects and shapes for the needs of the families in the framework of public profit.
- c) The standards should be enough flexible till be able to be done in locations with different characters
- d) The standards should provide profitable guidance for designing house and public facilities and they should be reliable for managing.
- e) The standards should guarantee the constructing and running the constructions with the best relation with the needs of different inhabitants.
- f) In order to easiness and spreading the house resources equally, the minimum and maximum standards should be chosen.
- g) The standards should be managed in way that they provide the necessary variations and slow development.
- h) Managing the standards should not become prior to mental priorities of designers
- i) The standards should not define the absolute meanings and it should define partially and expresses the suitable needs and existing resources.

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j) The standards connected to facilities should be considered in the framework of permanent reform that with the passage of time and accessibility to extra resources and social variations, the progress and reform ability remain.

k) The variations of income, weather, culture and social should be considered.

Also the standards that are the criteria of accepted house and choosing the quantity and quality conditions of the flats that are in contact with the residential flats with the groups of people with low incomes, are important and managing them will help in planning house. Some of the important standards are:

The environmental standards and location finding like the standards of population, open space, the equipment of underground and so on.

The standards related to designing, components separation, the kind of house and groups of incomes

- The standards of privacy and equipment of flats
- The standards of the kind of the materials and the related rules
- The standards of running method
- According to 5.6 rules the constructions having 6 floors are considered from the ground and for the constructions more than 6 floors the light of the rooms should be predicted logically in a way that is acceptable for the architecture assembly.

Conclusion

If managing the standards is not done with focus and consideration of local, economical, cultural issues, some problems occur. For example, The high standards increase the prices of house, so people with low incomes are not able to afford and they are forced to live in slums, as a result the problem becomes more complicated and it causes people don't contribute in the managements. Also these standards of incomes may cause social distance or make the construction time longer.

The experience of managing and doing these standards in the developing countries show that the main issues are from current standards, because the special needs of users for services and facilities are not analyzed and managing these standards are not based on this. These kinds of standards don't have the proper connection with effective request. Sometimes the standards are unrealistic based on the existing resources, or it may be that the facilities are provided, but the location for the local people isn't easy or profitable.

REFERENCES

- Alami M (1998).** King gardens from Safavi period and their relationship with the city. *Journal of Architecture* (42 and 43).
- Boney Masoud A (2009).** Contemporary architecture in Iran (the struggle between tradition and modernity) Tehran, Century Architecture Art Publishing.
- Christopher A (2009).** *Standard Patterns In Architecture*, translated by Farshid Hosseini (standard architecture Press).
- Della Valle P (1991).** *Travelogues*, translated by Shafa (Scientific and Cultural Publications) Tehran.
- Elliot J (2005).** *Introduction on Stable Development in Developing Countries* (Moaseseh publication) Iran.
- Gandelonas M, Pastier J and Pelli C (1990).** *Buildings and Projects, 1965-1990* (New York: Rizzoli) 252-63.
- Heidari SH (2009).** *Energy Planning in Iran* (Tehran publication) First publication.
- Jeffrey A Cohen (1984).** Building a Discipline: Early Institutional Settings for Architectural Education in Philadelphia, 1804-1890. *Journal of the Society of Architectural Historians* **53** 139-183.
- Kevin W Green (1988).** *Hugh Newell Jacobsen, Architect* (Washington: American Institute of Architects Press).
- Madi H (2007).** A review of the design of the intermediate spaces. *Architecture and Culture* (30).
- Majdabadi H (2009).** *Architect Magazine* (56) 19-12.
- Manny M and Pahlevanzadeh L (2004).** *Architecture and Culture* (18 and 19).

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Mohammad Zadeh M (2009). A branch of the bank. *Architect Magazine* (56) 11-10.

Nasr SH (2010). *Religion and the Nature*, translated by Faghfuri MH (Wisdom Publications).

Parsi F (2009). *Bank Architecture of Iran*, *Architect Magazine* (56), August and September 1388 39-28.

Plasma J (2010). *Architecture and Phenomenology Delicate Senses*, translated by Mohammad Reza Shirazi (new publications) events.

Rabie Roodsari M (2002). *Bank in Iran* (Cultural office publication) 2nd publication.

Shahidi S (1994). *The Principles of Designing Official Buildings and Banks* (Shahr publication) (consulter engineer and civilization, Water and energy building).

Watson D and Labs K (2010). *Environmental Design*, translated by Wahid Qobadian and Mohammad Faiz Mahdavi (Tehran University Press).

Wright D (2010). *Alphabet, Sustainable Architecture*, translated by Schally Amini V (the publisher Parham).