Landscape Architectural Lessons for Mehr Housing Project

The Efficiency of Landscape Architecture; A Strategy to Exit From the Current Situation

(Case Study: Tehransar Mehr Housing)

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Abstract | As the nation’s largest mass housing project of the country, the Mehr Housing Project was initiated using the experience of the mass housing in the Western countries after World War II through modeling cheap and fast-building projects to provide housing for the poor and the middle class in large volumes. This massive volume of buildings at large scale gave rise to emerging urban textures that, despite their physical distinctions, had many similarities in their semantic and spatial dimensions. These new urban textures emerged mainly from the physical conception of the concept of housing and limiting its concept to shelter. As a result, ignoring the social life of the residents as the primary users of space rendered housing lack any sociophysical interaction and coexistence and itself began to cause a great deal of damage.

This study aimed to provide a solution for overcoming the current situation through examining the pathological aspects of Mehr Housing Project and its long experience over a decade and conforming it to the study sample from the perspective of landscape knowledge and its practical measures. A life that tries to promote environmental, social issues through providing the appropriate context for optimal and maximum interaction and reliance on it from the view of landscape knowledge and paying attention to putting on the agenda a quality called urban landscape. This is achieved through taking into account the principle of diversity-plurality in order to reinforce the social spirit of the place and to create spaces for strengthening human communication with the environment and to break the created rigid and uniform structures. This study seeks to answer the question of how to learn from Mehr Housing Project’s ten years of housing experience and what is behind the architecture of this project, focusing on formulating landscape solutions as one of the main options ahead to get out of the current situation and benefit from creating conditions of favorable macro-social housing? An approach that is focused on its conceptual model to address all aspects of the pathological dimensions based on holism.

Keywords | Mehr housing, pathology, social life, identification, collective space.

Introduction | In its literal sense, housing covers a wide range meaning from residence (intermediate dictionary, 1992, s.v. “Maskan”) to the roofed courtyard and where one lives (Farhang-i Farsi ‘Amid, 1981, s.v. “Maskan”); however, its meaning goes beyond the physical dimensions and shelter with the material boundary. Today, housing has moved away from the concept of homogeneity and factors, such as environmental and climatic impacts, durability and resilience of homes and economic activities and their relationship to the economy and to a higher level, the cultural and social contexts of societies and the impact of housing on poverty reduction, social development, and quality of life are also among the important dimensions of housing (Golubchikov...
In addition, the definition of housing which has been presented at the Conference on Human Settlements held in Istanbul, 1996, is as follows: "Proper shelter does not just mean a roof over everyone’s head; proper shelter means comfort, adequate space, physical access and proper security, owner security, structural stability and durability, adequate lighting, ventilation and heating, basic infrastructures such as water supply, health education and waste disposal, good environmental quality, proper sanitation, convenient and accessible place of work and basic facilities. All of these items must be provided based on the people’s affordability" (UN-HABITAT, 2006).

Such an interpretation was implemented in line with government policies in the housing sector in the Fourth Development Plan between the years 2005 and 2009 through the Comprehensive Housing Plan as a supportive housing in order to provide houses for the vulnerable strata of society. With such an interpretation of housing and its integration with low-cost, fast-built housing patterns in post-World War II European and American countries, the Mehr Housing Project emerged as the largest mass housing project aimed at promoting social justice for the low-income strata under clause (d) of Note 6 of the Budget Law in 2007. The main premise of this project is that land value comprises a significant portion of the total cost of housing; thus the cost of housing may be greatly reduced through eliminating or reducing the land value from the cost of housing. Therefore, Mehr Housing Plan is based on long term lease of land for housing construction. (Ashnaei ba tarikhche-ye maskan-e Mehr, 2008).

Social housing

The policy of housing construction and transferring is in the form of leasehold plans or leased housing with a 99-year repayment plan in the category of the social housing plan. The beneficiaries of this type of housing are mainly young couples and low-income and homeless families who cannot afford to buy from the free market (Masoudi Rad, Ebrahimzadeh & Rafieian, 2016). This type of housing has the following conditions:

- Mass production;
- Leasehold plans;
- Governmental participation;
- Construction with the aim of solving a social problem;
- Governmental and banking financial support of social welfare organizations.

Therefore, Mehr housing can be considered as an example of social housing in the planning dimension.

Case study introduction

Tehransar Mehr Housing Project

Tehransar Special Mehr Housing Project, one of the four designated Mehr Special Housing Sites in Tehran, is in addition to Hakimieh-Chitgar and Saadatabad regions aimed and targeted at constructing higher quality housing units than other Mehr housing projects and assignment to the middle-class economic strata of society. The project was initially planned in an area of more than 35 hectares, which was implemented through four major contractors in the form of 2310 residential units at the end of 2011, after solving legal problems and changes made by the consultant. According to the Public Relations of Department of Tehran Province Roads and Urban Development, the officials from the Ministry of Roads and Urban Development the attended in the closing ceremony, the National Land and Housing Organization and the Governor of Tehran in April 2017 after the completion of all operations of residential units, delivery of homestead units and habitation of urban residents as well as construction of commercial units, parks and mosques. The project is based on three districts and subsequently three district centers, each designed to meet the needs of residents. In addition to these three districts, the entire complex acts as a single site in terms of land use and service facilities, integrated with a green wide service-welfare centered on the site.

Pathology of Mehr housing

Despite its structural and physical differences, the Mehr Housing Project has many similarities through homogenization, both structurally and formally as a national project. Therefore, accurate and pathological recognition of this pattern can lead to providing a pattern to improve the quality of life in these complexes in addition to avoiding repeated mistakes in the landscape design of similar projects. Considering the numerous articles and investigating the causes of the failure of Mehr Housing Plan, most drawbacks that have been debated to this project can be summarized and presented in the following categories. The major damages and disadvantages to Mehr housing projects can be categorized into four general physical, social, commercial, climatic-environmental, and urban landscape categories (Fig. 1).

Physical – architectural damages

Physical damages are one of the pathological aspects of the Mehr Housing Project that based on physical architecture, urban planning and urban design and environment, include a wide range from project location to minor architectural aspects.

- Locating

Due to the cheap lands with no land use, most of the Mehr housing projects are located on the outskirts of the metropolitan area away from the urban facilities and utilities. It is important in two ways; first, it requires the residents to spend a great deal of time and money to move from working and education place and so on to the dwelling because of the distance dimension and on the other hand, it has forced residents to meet their needs in neighboring metropolitans due to the lack of adequate recreational and leisure facilities in the place of residence to spend time and have fun. Therefore, instead of spending time in their dwelling, residents prefer to spend time in neighboring metropolitans.
Meeting human needs is a prerequisite for achieving excellence in life. What shapes the habitat is not the activity needs, but the leisure needs as it makes possible the social interaction and communication among individuals emerged in leisure time (Bidabadian & Mahmoudzad, 2015). Perhaps the mere physical focus on housing provision and meeting the basic needs of residents may be the main theoretical policy of the Mehr Housing Plan, a policy whereby residents have access to basic living amenities such as school, hospital, clinics, fire stations, urban utilities and the like. However, this important issue is made possible in very small samples.

Today, lack of necessary infrastructure and superstructure services is one of the main problems of the Mehr housing project after a decade, and the measures taken only aim to meet the minimum needs of the residents and do not create any incentive for residents to reside in their surroundings. The reason for this is to be found in the lack of attention to executive planning in Mehr housing for existing leisure and recreational areas as a context for social interaction, which this, in turn, has led to a decrease of social interactions and consequently a lack of solidarity among residents (Fig. 2).

- **Non-diversity of land uses**
  Another aspect of the physical pathology of the design is the lack of the diversity of land uses and the single-functionality of the complexes whose focus has been on providing minimal housing, apart from other human needs. In Mehr Housing Complexes, diversifying land uses and meeting other human needs as a small-scale model of the city and its relationships, and this has emerged through quantitative urban design principles. The concept of individuality versus the social spirit of the city and the lack of attention to pluralism as an influential component of the city’s landscape results from this single-functional physical perspective, which transforms these complexes into single-functional dormitories that solely respond to the human’s “need for shelter”.

- **Mass-space incompatibility, lack of spatial organization**
  One of the parameters of today’s Mehr housing is our disregard for the spatial organization, as well as our lack of spatial balance between the building masses and the open space be-
tween them. This problem goes as far as no consistent density plan is observed in the lands. On the other hand, the lack of mixed land use and considering a purely service-oriented site in the segment and a specific point on the site, as the sole provider of building needs (from services to socio-cultural welfare), first created the time and financial cost to move residents between the living space and the service area, and on the other hand, it leaves other open spaces out of service area. The most important consequence of this issue is the disproportionate distribution of population density and decreasing security in other areas that devoid of social residents are social onlookers (Fig. 4).

- Quality of architecture and buildings
  Another physical aspect of this project is the observance of architectural principles in the design of the architecture of the units and its quality as well as the quality and performance issues of the buildings. The majority of this design's samples are of relatively good quality in terms of the basic principles of architectural design, although this component is associated with intensity and weakness in the implementation and construction method. But since the main purpose of the project as an example of affordable housing was to reduce the final cost to the consumer, thus much of the Rial Savings dimension has shown itself in the quality of its construction.

Social harms
- Identity crisis and lack of collective memory
  Zandieh and Sameh, citing Kashmiri, believed that identity creates a sense of belonging and dependence among the citizens through the association of collective memories among them and creates a concept of citizenship that goes beyond being resident (Zandieh & Sameh, 2009). A concept whose existential nature is derived from long-term living in the place and relies on individual and collective memories. A man searches for his identity in the environment and this is directly related to the capacities of the environment. The more the environment is filled with personal and collective memories, the more the residents are likely to belong and feel more responsible for it. However, as described, most of the project sites were located on the outskirts of the existing towns and territories. Thus, the absence of the historical-identity context of the region and the formation of new settlements led to many identity conflicts to the extent that these conflicts were extended among the residents and interpersonal relationships. The main reasons can be as follows:
  - Lack of social space for social interaction and acquiring reminiscence;
  - Lack of sense of belonging;
  - Lack of proper vision and perspective;
  - Lack of identity layers and stagnant spaces in the site.
  The set of reasons and the lack of infrastructure needed to spend time in the outdoors does not create an interest and motivation to stay in the living environment and spend time and thus there is no a “collecting memory”. The aforementioned issue adds to the gap between the environment and residents and extends to neighborhood relations.
- Lack of Social heterogeneity among residents
  One of the key indicators of successful urban social life is the socio-cultural homogeneity of the different groups living in a residential community. Although some distinctions are made in the traditional Iranian-Islamic urbanization to the specific districts based on residents' professions or commonalities among residents, these commonalities are gradually replaced by economic classifications in modern cities, according to the modernist perspective. This view was common in new cities for the last several decades, and Mehr housing bureaus are no exception. This social heterogeneity caused the residents to distance themselves from each other; residents whose commonalities were not cultural, religious or ethnic proximity, but purely economic aspects, and this has led to many social problems over time.
- Lack of proper context and the possibility of social interaction
  One of the most important features needed for the emergence of social interaction is to provide a place and a context for social activity. Human activities in the social, cultural and political spheres guarantee the survival of collective living and the sense of citizenship that is manifested and developed through urban spaces (Atashinbar, 2009). When the context is not provided or lacks the capacity to do so, there will be no possi-
bility for residents to interact and get to know each other and consequently, no interactive tension is formed among them. As a result, residents have shown no interest in constructive participation in the living environment and will gradually become indifferent to their surroundings (Fig. 5). These series of harms have made social problems the most significant weaknesses of Mehr housing.

Environmental pathology
• Lack of attention to climatic and environmental conditions
With respect to the overall consistency of the Mehr Housing Projects framework across all samples and the same basic reporting pattern, climate issues are one of the important factors which are neglected at the program level. Lack of attention to the existing climatic diversity in the country and consequently lack of appropriate geographical and climatic-regional characteristics has led to designing and implementing a transcendental pattern across the country. On the one hand, unfortunately, no detailed environmental studies have been prepared or formulated for this project. On the other hand, considering the fact that most industrial land uses are located on the outskirts of cities and because of low land prices and large-scale lands, a good platform has provided for the formation of Mehr housing projects; therefore, this heterogeneous association, deliberately or non-deliberately, caused many environmental problems and its consequences have had an impact on the residents and their living environment (Fig. 6).
• Lack of defining proper green space
What is nowadays defined as green space in Mehr housing projects can be evaluated in two aspects: First, a “proper view and landscape” and an interactive perspective from the inside to the outside and vice versa, as well as a “diversity of suitable plant species”, which have the task of stylizing space and connecting and communicating of the residents and their surrounding environment, which are categorized as qualitative levels of green space. Second, the amount of green space per capita and its provision in inter-building spaces that include a small dimension of green space. In this design, two major drawbacks can be observed and what exists as a green space is practically limited to creating a green border, with minimal planting of the same trees, regardless of the diversity of species and the intrinsic characteristics of each along the passages, which suggests a great gap between the idea and the implementation in the green space (Fig. 7). Green spaces play an essential role in creating social attraction as well as a thriving and dynamic environment based on communal and public life. The existence of these pause spaces can lead to interactive interactions among the residents. However, this important principle was forgotten unfortunately due to the lack of proper planning in this regard and the maximum use of land to locate the largest number of residential units. What is remained in this area is dedicated as communication paths with the priority of vehicles movement, and virtually human-centered spaces, which are a prerequisite for improving the qualitative level of space, have no place in the design program (Fig. 8).

Urban landscape pathology
The urban landscape is the citizen’s perception of the city through its symbols. The dependence of understanding the landscape on the city’s past presence causes different layers to be identified for the landscape (Mansouri, 2010). Mehr Housing newly-built cities lack any historical traces and rejection of human interaction with the environment in the outside without any habitat history. On the other hand, the urban landscape, its concept and its implementing guidelines have never existed in the past of urban development studies. Therefore, the quality of the urban landscape is not created and understood. In fact, there are ordered and sectional programs in the executive part for the urban landscape that the city lacks landscape features. This includes open spaces that have not been developed or maintained or exploited (Sheybanii, 2009).

The two main categories of the current trend that has led to
the emergence of a crisis in the urban landscape of this project can be broadly categorized as follows:
1. Lack of the concept of the urban landscape;
2. Ignoring programmatic and intervention levels of landscape.

What emerges from the pathological examination of the project is that many of these harms are interconnected and intertwined. Each cause is emerged from several disabilities and cannot be separated and examined separately (Fig. 9).

Landscape design strategies and Mehr Housing project

According to the pathological review of the Mehr Housing Plan and the shortcomings described, it seems that the criterion for designing this project was to maximize the use of residential blocks and not optimally utilize the space unit to provide the maximum number of residential units. The qualitative aspects of the residents’ lives, both socially and physically, have been neglected, both in landscape and view, building social relationships and in the possibility of reproducing collective memory. This model had no result but the production of nondescript, shapeless, no territory, insipid, uniform, and lacking a specific spatial organization.

The approach of landscape knowledge to the issue of mass housing projects and the surrounding environment is in line with the holistic and flexible planning, which seeks to an approach to project shaping with a dual-diversity perspective approach to both maximizing space and landscape versus maximizing uniformity instead of one-dimensional and partial focus, integrating different spatial and physical layers, which negates any individuality. Moving away from the current situation depends on the practical actions resulting from the project’s approach to revitalizing and restoring residents’ collective identity and motivating the durability of place in the landscape; therefore, the following measures can be the main landscape approach to exit from the current situation.

Landscape knowledge and landscape approach

Since the landscape is a living and dynamic creature that is influenced by human and his relation to the environment, it evokes memories that have occurred in the context of the environment for a long time, which impacts the relationship between human and the landscape, and subsequently changes the culture and civilization of humans (Mahan & Mansouri, 2017). Therefore, this phenomenon and its resulting approach have the potential to reform the place and improve human relations with the environment by defining a holistic system and presenting practical policies and actions.

1. Creating spatial diversity: spatial diversity and consequently the diversity of social activities is one of the factors influencing the creation of dynamic spaces which maximizes the social interaction of residents, leading to social life as well as promoting cultural level. The other aspect of land use diversity can be the motivational component of traditional and social group participation that results in spatial democracy and the right to choose to be present with the same age and social groups.
2. Creating diverse territories: Systematizing different territories and redefining compatible functions within public spaces provides a flexible framework for the concept of communal space, which describes a single whole, within the realm of space, which has a variety of visual and semantic pauses, and ultimately steps into the benefit of the collective life. These pauses are against the spaces that are solely responsible for communication.

3. Diversity of vision and landscape: Diversification of landscape and space creation through the creation of symbols plays an essential role in delineating the subjective and objective structure of the environment and enhances the sense of identity and belonging in the inhabitants. Urban identity is a capacity whose potential functioning will sustain social life (Teimouri, 2009).

In the next step, the design strategies lead to the practical actions that result from the synthesis and integration of the two examined pathological layers and the project landscape approach. Practical design solutions derived from the overlap of two pathology-landscape approach adoption layers are as follows:

1. Using endemic plants of the region: One of the design measures is the use of native plants and compatible with the regional climate. This is important because plants present an appropriate self-response to the environmental issues in addition to using the memorization dimension as a component of the familiar landscape in the mind of space viewers to reinforce a sense of belonging. The planting plan can be considered in a way that, in addition to adapting to the climate and environment of the region, can also act against the environmental hazards.

2. Utilization of familiar elements: The familiar and memorable elements of objectivity and subjectivity play a role over time so that it can be both an identifiable component in the subjective context and can take a signal function over time and gradually becomes an identity component.

3. Redefining the Iranian garden paradigm: The Iranian Garden is recognized as a familiar paradigm used in Iranian-Islamic landscaping. The use of this archetype in design can pave the way for the presence of different social strata of different age groups both as a design pattern and because of its roots in the Iranian history and culture. Although the paradigm of Iranian garden is a paradigm for park design, it can be taken in to account due to its archetype, and it can be used as Mehr Housing project based on an archetype that has long had an inter-intellectual and common root with all Iranians in residential environments, especially those without any form of identity in its context in order to get a common language among its residents through utilizing it.

4. Redefining the concept of the neighborhood: Guiding a huge population in an area outside the city requires redefining the objective and subjective meanings of the context of the city, a meaning that carries the familiar and identifiable physical and mental messages of the city. These meanings can be the district, alley, and street. One of the measures of landscape design is to redefine the concept of neighborhood and the creation of neighborhood units. Accordingly, a dynamic social community can be created by breaking down the rigid and uniform structures of Mehr housing. Since the neighborhood is originally capable of meeting the physical and semantic needs of the inhabitants, it can generalize the urban spirit through presenting a mental picture of the structure of the city.

5. Defining communal spaces aiming at different age groups: The inhabitants of Mehr housing complexes share a variety of different age living groups in spite of socio-cultural evolution. Accordingly, and by assessing the needs of these groups, it is possible to design open spaces that are compatible with the moods of different age groups and provide public acceptance to use them as a context for social action and to further the potential of these groups.

6. Creating social yards based on the component of Interaction to encourage Residents for durability: Another design measures is to create an appropriate and responsive environment to encourage residents to spend their time together and recreate their collective lives. This collective life contributes to the dynamics of boring places and avoids many social damages. One of the strategies to achieve this is through the creation of social yards. The yards that recover lost residents’ identities through relying on the principle of public engagement and participation, and take steps alongside public oversight to improve residents’ quality of life.

Conclusion
After more than a decade of its life, Mehr housing legacy has problems that affected the quality of residents’ life. Perhaps, it
can assuredly be said that the only approach of the designers and stakeholders of this national project is to summarize the residential blocks of the city, and thus the outcome of the project to date has been to produce lifeless and anti-social spaces. These spaces are devoid of attention to the qualitative dimensions of space such as vision, social relations, identity, and collective memory production, and objective, subjective and socio-physical affective criteria is less considered in. On the other hand, Mehr housing should be accepted as one of the major social housing projects in the country and its existence should not be denied; rather, steps must be taken to improve the condition of the residents. Accordingly, one of the most influential environmental sciences in the design of landscape knowledge space is the principle that the body of city should be revitalized and the social context should be considered in order to get out of the current situation, and it is through the approaches of this knowledge and the actions that it takes that an appropriate response can be found to get out of the status quo. These guidelines and strategies will improve the dignity and quality of life of residents and lead to a dynamic social life relying on the diversity-pluralist approach, both in space and landscape and through maximizing the diversity of spaces, territories, visions and perspectives in the current design that has deprived any sense of individuality (Table 1).

Table 1: Design strategies and guidelines, Source: author.

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