

The Principles of Housing Typology in Renewal of Deteriorated Fabrics

(Case study: Tehran-Iran)

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Abstract: In recent years, in order to provide housing for the low-income population, different policies have been adopted in Iran. Yet, no attempts have been made to formulate the adequate housing typology for this population, so far. In recent years, with the promotion of discussions concerning the renewal of deteriorated urban fabrics, the necessity of formulating adequate housing typology for this population has become apparent. This is because these types of renewals often entail the demolishing of existing timeworn houses and constructing of new ones.

The present essay tries to find an effective way for the construction of adequate houses for the habitants of these fabrics through examining the key factors in formulation of housing typology in deteriorated fabrics, and also through studying of two example cases in Tehran.

Key words: Deteriorated urban areas, Urban fabric, Housing Typology

1. INTRODUCTION

One of the most basic elements of human rights is the right to adequate housing. All international covenants have stressed the right to enjoying adequate housing. According to the declaration of the United Nations Committee on Economic, Social and Cultural Rights, the right to housing means the enjoyment of the right to live somewhere in security and peace with ensuring of human dignity for all persons. Therefore, the components of adequate housing can be counted as follows:

- Legal security of tenure
- Availability of services and infrastructural facilities of the residence

- Conformity of new houses to the inhabitants financial power
- Accessibility to housing for the poor population of society
- Adequate place in healthy environment
- Conformity to the cultural needs of the needy population

No actions have been taken in Iran, so far, in order to formulate adequate housing typology for the low-income and the inhabitants of deteriorated urban fabrics. Therefore, in this essay the deteriorated fabrics of Tehran and housing characteristics of these fabrics are examined, and some principles in adequate housing typology will be stated.

A. The Concept of Deterioration and Deteriorated urban areas

The concept of urban deterioration can be considered as a decline in the social, economic and physical fabric of the city. If the life of a region in a city declines in any ways, it will be lead to its deterioration. This affects its physical fabric and also the economic and social activities in it. The physical, social and economic deterioration, in a reciprocal relation, intensify one another and therefore result in the decline of the urban life. Urban deterioration generally, is known as: old, unstable buildings, narrow passages, with low-income residents having social problems.

Yet in most of the specialized references, deterioration has a much deeper meaning. It includes areas in the legal boundaries of the cities where lack of control over social, economic, and cultural conditions, not only make them susceptible to the natural disasters but also gives them an improper economic, environmental and social quality. Due to underprivileged residents of these areas, there is not the possibility of self-renovation of the fabrics and moreover the private investors have no motivation do invest in these areas. (Tehran Renovation Organization, 2006)

With incorporating the specialized and general meaning of the deterioration, it can be concluded that when the physical, social and economic fabrics in cities become dysfunctional, they would be in the way of deterioration.



The social condition of Tehran deteriorated areas

Deteriorated areas in Tehran have different features as follow:

Population

- High population density
- Irregular population dispersal
- High illiteracy percentage

Social

- Original residents abandoning the region
- Non-native (immigrants) and underprivileged residence
- High percentage of the residents being tenants
- Prevalence of addiction and behavioral anomalies and juvenile delinquencies

- Insecurity for the residents especially women and children
- Maze-like, unsafe passages and insecure indefensible places

Economic

- The cheap prices of the land in comparison to the other parts of the city
- Poor underprivileged residents
- High unemployment rate
- The residents' inability to renovate their houses
- Lack of motivation for the investors to invest in these areas

Physical -Functional

- The instability of the buildings against earthquake due to old age and using inefficient materials
- Narrow passages and therefore inaccessibility for cars
- Density of the fabric which causes narrow passages and makes it difficult for emergency access
- Lack of interrelation in the passages
- Not separating the passage for pedestrians and vehicles
- Improper landuses in residential areas (workshops, troublesome industries, etc.)
- Not meeting today's needs
- Lack of urban services



The physical conditions of the deteriorated urban areas

- Lack of entertaining, cultural and sport facilities



- Abandoned and inactive business units
- Inappropriate image of the city

Environmental

- Polluting uses (workshops, industries and...)
- Lack of proper sewage system
- Lack of green spaces

B. Characteristics of Housing in Tehran Deteriorated Fabrics

The existing houses in Tehran deteriorated fabrics, like other Iranian cities, possess particular characteristics. The following can be counted among the most important of these characteristics:

	
<p>The instable buildings</p>	<p>1 or 2 story buildings</p>

- Instability of Structures: Many of the existing structures in these fabrics are instable because they are too old, have been constructed with poor quality materials and do not meet the constructions regulations. Considering the fact that Tehran is an earthquake-prone city, the existence of these structures is a great threat to the city.
- Very Few Stories: Many of the structures in these fabrics are 1 or 2 storey houses. This is the result of the inhabitants' lifestyle, and the old materials and methods of construction.

- Communal Housing: The inhabitants of these types of housing are often lessees and come from the poor class of society. Due to their weak financial situation, these families are unable to live in independent houses, and they have to live communally. The physical condition of these housings is extremely old, besides they lack the essential facilities of residing, too.
- Workshops and Storerooms within Housing: This problem is often seen in the deteriorated fabrics of city center. The existence of workshops or storerooms in residential buildings reduces the quality of life, and causes social and environmental problems.
- Small Housing: This characteristic is often seen in Tehran deteriorated fabrics, which is a major problem considering the population of these big families.



2. METHODOLOGY

A. The principles of the housing typology design in the deteriorated fabrics

Since housing in deteriorated urban fabrics can be discussed from different aspects, each of these aspects and their effects on formulation of housing typology will be discussed.

- *Economical Aspect*

One of the most important principles in formulation of housing typology in deteriorated urban fabrics is the economical aspect. Since these housings are designed for the middle and weak class of society, they must meet their financial

power. Therefore, elements like construction method, materials, infrastructure, architecture design, and so on, must be in a way that the final expenditure of housing meet the economical level of inhabitants.

On the other hand, though the existing houses in these fabrics are often 1 or 2 storey buildings, they are no more economical, nowadays, due to the high price of land. Therefore, the number of stories needs to be added reasonably in order to employ the land to its best.

- *Managing Aspect*

As mentioned before, due to the high price of land in big cities, it is no more economical to construct buildings with only few stories. Apartment residence in country, which came into existence because of the housing need, and urban lands limitation, added to our urban vocabulary such expressions as “apartment residency culture,” “apartment management” and so on. Scientific societies and responsible organizations have had considerable activities in studying, designing and performing housing projects. But, unfortunately, these activities only continued to the completion of the projects, and no actions have been taken in the utilization management field. Whereas, not only is the utilization step as important as the previous steps, but it is a supplementary to them. Disregarding this issue causes undesirable consequences in different economical, legal, social and cultural aspects, that some of them are as follows:

- Decline in useful lifetime of buildings because of improper maintenance
- Incompatibility and irresponsibility of inhabitants
- Tension between inhabitants
- Tendency to possess individual housing units and avoid living in apartments, which result in horizontal expansion of cities.

In general, the following factors play an effective role in degree of agreement or disagreement between inhabitants of apartments and housing complexes:

- Inhabitants' past record of urban residency
- Inhabitants' cultural and economical level
- Number of units in a building or a housing complex

Among these factors, only the number of units can be defined by the architect. Therefore, it must be defined in a way that facilitates the proper managing of the apartment or the housing complex.

- *Social Aspect*

Concerning the ethnology of the inhabitants of apartments and housing complexes, neighboring of families with different, and sometimes opposing, cultural and social tastes and characteristics, can cause various problems.

On the other hand, existence of so many families in one building reduces the inhabitants' relations with each other, and so reduces their participation in controlling common spaces. Therefore, the mutual effect of physical and social factors on each other cannot be disregarded.

Among the most important social issues in apartments and housing complexes are "security" and "crime," which are linked, directly, to the architecture of buildings. Comparing tall and small (up to 4 stories) building complexes shows that in tall building complexes there are more crimes and less security. Whereas, in small building complexes, it is easier to control common spaces, and the possibility of committing crimes is lower. According to the mentioned points, it is possible to define the appropriate number units in each storey, and also the number of stories in each building. Besides, in order to prevent crimes, construction of unprotected spaces must be avoided in building complexes.

- *Architecture and Urbanization Aspect*

Architecture design is the result of economical, social, and managerial factors. In architecture design, particularly in deteriorated fabrics where inhabitants have special social, cultural, and economical characteristics, these factors must taken into consideration:

- Designing housings according to the lifestyle of inhabitants
- Designing housings according to the families economical situation
- Employing traditional housing patterns in designing new housings, where possible
- Paying attention to the safety measures considering earthquake, fire, and the possibility of giving assistance when accidents happen

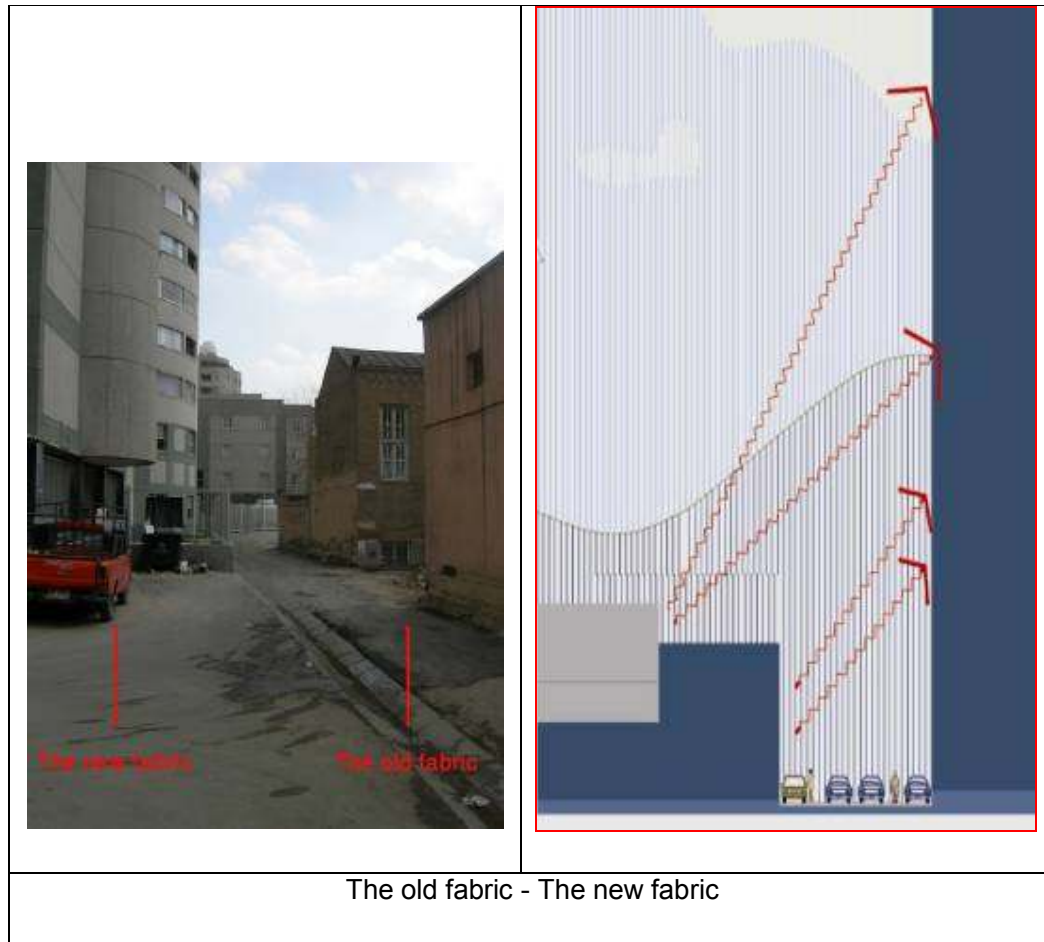
- Paying attention to aesthetics in designing interior and exterior spaces

As for urbanization aspect, factors like location of structure, composition of mass and space, structure height, and facing materials play determinative roles in the quality of space, and look of the city.

B. Case studies

- **Navab Project:** This project, which can be considered as the biggest urban renovation project in Tehran, was conducted following the same policy and due to ignoring the public participation resulted in population displacement. The initial goal of this project was to construct a highway to connect North of Tehran to the South of the city. To do so, many of the houses were destructed and the residents had to immigrate to the other parts of the city or even the suburban areas. To compensate the destruction of residential buildings and also returning some parts of the capital which had been spent on the project, in other phases of the project the decision to build high-rise residential and business buildings on the two sides of the highway was made .Constructed housings have no common grounds with old housings, and are in complete conflict with them. Characteristics of the new housings can be counted as follows:

	
<p>Navab highway and the new buildings</p>	<p>The defensible spaces</p>



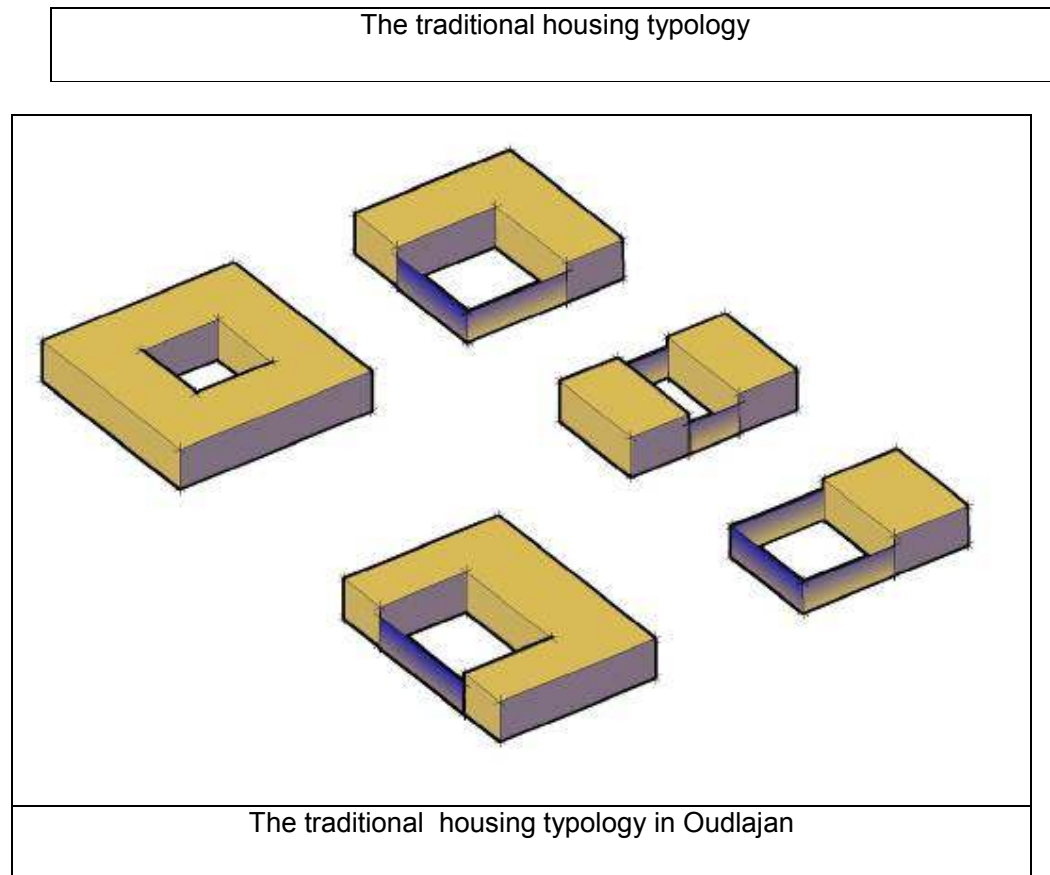
- Tall buildings in place of old 1 or 2 storey houses
- Existence of unprotected and unsafe spaces
- Lack of green space to meet inhabitants' need
- Air and sound pollution as the result of being in the vicinity of expressways
- Too many housing units in each block
- Absence of an efficient management
- New housings are in no accordance with cultural, social, and economical characteristics of the original inhabitants of the fabric

As a result of these problems, the old inhabitants of the fabric did not return to the constructed housings, and emigrated to other parts of city, and even to the suburbs. In their place, in new housings settled low-income emigrants and families with different, and in some cases opposing, cultural and social characteristics. This resulted to many social problems in this district.

Navab project is, presently, under severe criticism in professional, and even nonprofessional, circles as an unsuccessful urban project.

- **Oudlajan Project:** considering the discussed factors, and the Navab experience, the project in Oudlajan region was designed differently from Navab project. The main goal in Oudlajan region planning was to maintain the original inhabitants of the fabric, prevent them from emigrating, and to attract new population, too. Before start of designing, cultural, social, and economical characteristics of inhabitants, and also, different types of traditional housings was studied. The effects of these studies in the designing of new housings are as follows:
 - Construction of new housings with various sizes according to the economical level of inhabitants.
 - Employing traditional types in designing new housings
 - Paying attention to deprivation
 - Considering spaces according to the inhabitants' needs and interests like yard, green space, and so on.
 - Considering the standards of housing designing

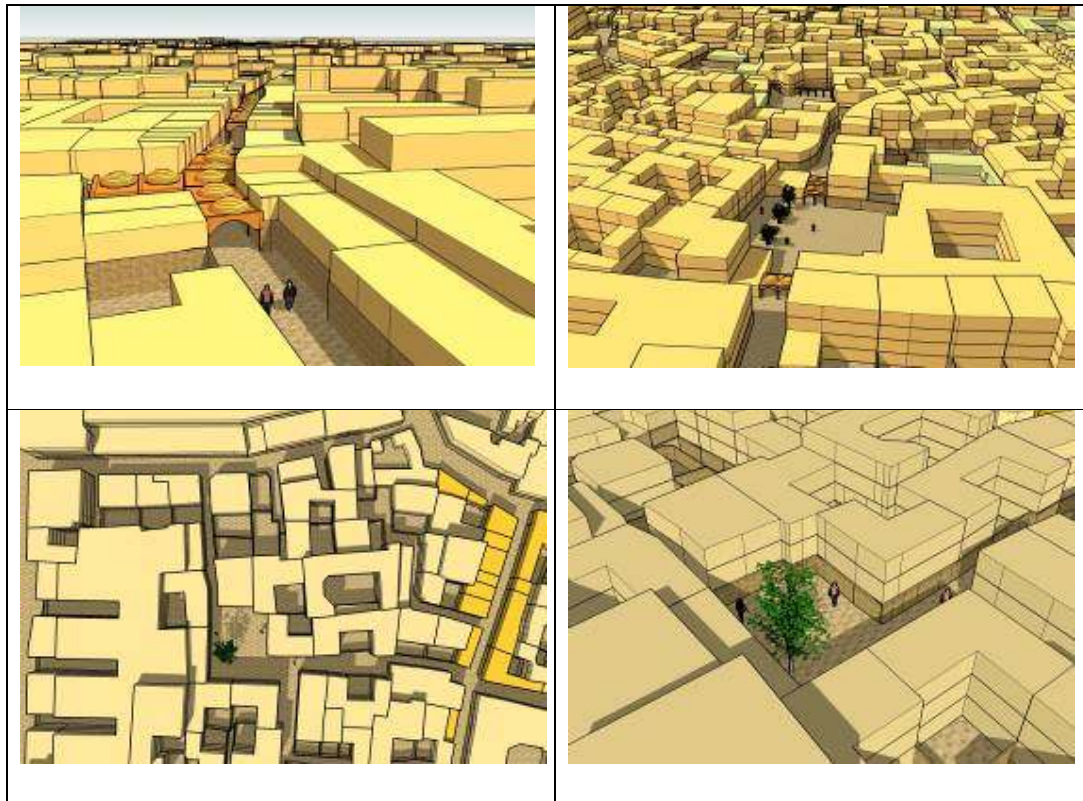




In general, traditional types of housing in this region can be classified in this way:

Since these types have been formed according to the cultural and social characteristics of inhabitants, their interests, and even the characteristics of the region, the designing of new housings has tried to employ these factors, as far as possible.

At the present time, designing stages of Oudlajan region has ended, and soon its construction will be started. Hence, we are waiting to see the results of this project, and to see if this method is really successful in designing of new housings.



The proposed plan for Oudlajan

3. Conclusion

Due to the fact that in designing housing for deteriorated urban fabrics low class population of the society is involved, it requires particular attention. Housing issue cannot be studied only through physical aspect. There are many other factors involved in the formulation of housing typology. Among them are economical, managerial, social, architectural and urbanization aspects which are all, to some extent, effective in the formulation of housing typology.

Economical aspect through considering economical situation of inhabitants, price of land in deteriorated fabrics, construction expenditure and so on, finds a very important role.

Another aspect, which is linked directly with the social aspect, and needs a lot of attention in these fabrics, is building management.

And in order to provide the inhabitants with comfort and peace, the architecture and urbanization aspect, which also affects the city look, must be taken into consideration as an important element.

Consequently, to formulate adequate housing typology for all levels of society, and the low-income population in particular, considering all these aspects is indispensable.

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