Worn-Out Texture of Birjand City (Problems and Solutions)

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ABSTRACT

Rapid urbanization changes and the change of new construction use, high rising in recent years made the main core of cities encountered with management, economic, physical , utilities and urban equipment and other urban facilities and worn out textures are formed. All these factors provide wear out of central texture and after wear out, many destructions are observed following the releasing of the main core of city as worn-out texture is the result of unduly development of cities. Also, transportation problems, traffic, urban management system, migration, insecurity, lack of participation, ownership, urban management system, land price fall, much wear-out, infrastructures, superstructures, urbanization facilities, prevention of accumulation, separation, widening, inability for investment are all barriers to worn-out texture development. This study attempts to receive required information as descriptive and analytical based on interview, observation and library sources. Also, we can achieve clear solution, empirical and physical methods.

1. INTRODUCTION

There is no doubt that the city is a historical phenomenon and such phenomenon can not be separated from its past. Considering local features is necessary in spatial-physical development. Considerable part of city history and culture is manifested in its physical aspects and it indicates the beliefs, values, arts, technical power and socio-economic and political structure of the past generations [1]. Old textures with urban spaces and elements as passage, markets, Abanbar, mosques, caravansary networks beside physical features have cultural, social and historical values [2]. By the entrance of capitalism system to Iran, great changes are occurred in the physical aspects of cities. The changes in production methods, urban transportation system, household dimensions can create crisis in physical structural of cities. With the physical development of cities and structural changes in an Iranian city due to the advent of car and new technology of physical system and previous performance of Iranian city and past urban divisions and township system, the following items are appeared:

➢ Creating new order in performance divisions of city
➢ Full elimination of township system in historical period s[3]

Based on the estimation of the authorities of housing and urbanization ministry in more than 100 Iranian cities, there are about 50000 urban Rusty textures [4]. The government can only provide about 11.2% of renovation credit of these Rusty textures and the rest should be provided by participation of citizens. One of the major goals of government of urban Rusty textures is providing housing [5]. As improvement and renovation of biological spaces don't include only physical structures of city, historical and old textures, they also include improvement and urban renovation, improvement of social, economic, political, administrative and cultural structure of city and new and informal textures and briefly problematic urban textures and specific measurements should be made in various geographical regions based on various environmental features [6].

Birjand town with about 1074 hectare historical texture is one of the cities encountered with wearing-out issue clearly. The city structure is the result of combination of two various structure forms: Organic and checkered textures. By checkered network, organic texture has some changes in terms of texture efficiency. In regular and checkered sections, the main passages are active in terms of performance but in organic texture, the old regions are isolated.

2- Study method

The present study is applied and descriptive-analytic and historical. This study is based on library and field studies. In the first stage, the theoretical basics of study are collected by library data and then the solutions are identified by interview.

3- Theoretical basics

The movement of renovation of urban centers dates back to more than 150 years. This movement started with the activity of Haussmann for Paris renovation in 1850s [7] and by Le Corbusier scheme as radiant city in 1850 after the Second World War, Le Corbusier scheme was supported by global governments and as rapid and easy response to 1920 demands sacrificing the old part of Paris via replacing great buildings entered a new stage [8]. This was called renovation and he was selected as the real pioneer of modern urbanization [9]. In most of the plans implemented in Rusty textures, four fields are considered as 1- availability, 2-Attraction, 3-Facilites and rules, 4-Practical measurements [10].

Normally, wearing-out is not restricted to physical aspects and it indicates the conditions threatening the life in various dimensions. It seems that continuance of this trend in Rusty textures is a dangerous earthquake targeting future

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generation. These conditions include some items as high crime, social problems, poverty, lack of suitable physical infrastructures and vulnerability to earthquake and the lack of suitable relief in critical times and other items [11].

Table 1- The wearing-out of urban space and intervention type [7]

Scale	Duration	Type of activity	Wearing out type	Wearing out amount	No
Sub-township and allay	Short-term 0-5 years	Improvement	Activity	Relative wearing out	1
Township	Mid-term 0-15 years	Renovation	Physical aspects	Relative wearing out	2
City or a part of city	Long-term 0-25 years	Reconstruction	Activity and physical aspects	Full wearing out	3

Some zones of city with urban problems and spatial centralization with economic, social, physical, environmental and mental aspects are called wearing out textures or urban wearing out areas. These textures are encountered with reduction or disturbance of physical and functional qualities [12].

3-1 Organizing
The term organizing is good application of existing facilities besides keeping urban texture. In urban organizing at township or region scale, it is attempted to remove problematic items of existing texture with the lowest costs and destruction. In organizing, we can control and guide and develop the items. At first, by recognizing the issues, problems, required facilities based on the time needs are presented. Spatial organizing for inefficient and rusty textures means arranging these textures to provide suitable environment for people as these urban spaces can meet the current needs and activities of society and no problem is created in providing life of people. The term organizing is comprehensive including all measurements of improvement, renovation and reconstruction and repair [13].

3-2 Renovation
Renovation is rebuilding the urban spaces and buildings by which rusty, destruction and stagnation signs are eliminated. Renovation is equal to rebuilding and new space. Thus, renovation is revitalization of building or space with emphasis on the change of space or urban complex [13]. Renovation is re-building the existing townships based on controlled plan with elimination of slum areas and unsuitable buildings [14]. Renovation is performed when urban space is a set of suitable and contemporary function but relative spatial-physical wearing-out reduces return and efficiency. Renovation is the set of actions that besides protecting building or old urban space can modernize relevant spatial organization and its optimal output can be achieved [15]. In urban renovation, the aim is not reconstruction of city buildings from physical-building aspects, renovation of social-cultural atmosphere based on new relations for employed and residents of historical cities is the major goal [16].

3-3 Reconstruction
It means constructing a building again. Reconstruction is performed when full wearing-out is performed in building or urban space [6].

4-Rusty texture
Texture is a linked area formed by different morphologies in urban life in city or its margin in linking with city. This range can be formed of buildings, complexes, ways, spaces, utilities and urban equipment or a combination of them. Wearing out of a structure is inefficiency and reduced efficiency of a texture to the efficiency of other urban textures. Wearing out of texture and its internal elements is created by old age or the lack of technical supervision and development on formation of texture [17]. Also, it is urban textures with various elements provide reduction of qualitative values of human environment (from physical, performance, environmental, economic and social aspects) and by reduction of residential values, renovation of texture is stopped and migration of resident population is increased [18]. Wearing out is one of the most important issues of urban space leading to lack of organizing, imbalance and inconsistency. Wearing out is a factor eliminating the collective memories, reduction of urban life and routine urban life can be formed. This factor by reduction of life of work and with speedy trend can move to the end point of work. Wearing out is divided into two types:

Relative wearing-out: It affects one of important urban space elements, physical aspects or activity and it leads to relative wearing-out of urban space.

Full wearing out: It affects both elements of urban space, physical aspects and activity and it leads to full wearing out of space. Thus, wearing out affects "physical aspects" or "activity" or "physical aspects and activity" together. We can form the equations defining different types of wearing out. One of group of equations is as follows.

First equation: Form (healthy physical form)+ activity (relative wearing out)=Relative wearing out of space
Second equation: Form (relative rusty physical form)+ activity (healthy)=Relative wearing out of space
Third equation: Form (rusty physical form)+ activity (rusty)= full wearing out of space

By this classification, we can investigate the wearing out degree of urban space. In first equation, relative wearing out includes the activity that despite healthy physical aspects can lead to relative wearing out of urban space. In this equation, if urban activity is released of wearing-out, we can approach the equation to its main form, activity of urban space. Without change, the body (physical aspects) revitalizes the life space. Thus, we can discuss about sustainability of spatial organization of city. Sustainability is performed gradually and continually in urban activities. This action by eliminating or reducing wearing-out in activity can prevent body wearing out and space wearing out. The sustainability is included in a set of improvement measurements [19].

4-1 Wearing out dimensions of urban textures

Wearing out is inefficiency and reduced efficiency of a texture compared to the efficiency of other urban textures. Wearing out of texture and its internal elements is created by its old age or lack of technical supervision and development on the formation of the texture [20].

Wearing out have many dimensions as linked with each other but the most important wearing out dimensions include:

- Physical-structure wearing out: The wearing out arising from the loss of physical quality or texture and include various factors of this type of wearing out as lack of maintaining building or unsuitable maintenance of space.
- Functional wearing out: This type of wearing out is occurred when texture is not suitable for the function designed for it.
- Relative or economic wearing out: In most cases, wearing out is not an absolute concept and it has relative concept regarding other buildings and areas. Thus, when people can afford to pay but they invest outside of historical texture, relative or economic wearing out is raised and its reason is that investment cost in historical township is higher than other areas and it is less attractive for investment [21]. Thus, to avoid wearing-out in each type, stability is increased by repair in urban space and by increasing stability, urban space age is increase and its durability can be increased [22].

4-2 The process of rusty texture formation

Any historical texture in city is called rusty texture but each rusty texture is not historical texture. Thus, inclusion range of historical texture is higher than rusty texture and historical texture can include rusty texture [23]. Thus, old urban and rural textures of a country show Iranian culture and civilization, some documents of history, tangible manifestations of identity and the experience of our ancestors. These textures include architecture and urbanization values and national identity, indicating ethnical memories and works belonging to all present and future generations as not replaced [24].

4-3 Urban rusty textures according to ministry of housing and urbanization

According to ratification of meeting on June 6, 2005 of high council of urbanization and architecture of Iran regarding urban rusty textures, it is approved by the members of high council of urbanization and architecture. This ratification with instruction of identification and intervention in rusty textures is written for facilitation of the recognition of urban rusty textures and regulations of intervention conditions in the cities encountered with this phenomenon. The extension of rusty textures in most cities of country and the importance of simultaneous application requires that all counselors of participating institutions or intervening systems use similar technical literature consistent with global literature and to avoid parallel actions and wastage of resources with absorbing the participation of all keywords and integrated intervention structure and link of effective forces in this ratification can be defined.

This ratification can formulate four main factors and these factors include:

➢ Texture type
➢ Intervention type
➢ Intervention legal reference
➢ Legal intervention documents

It is worth to mention that wearing out features is mentioned in details in instruction book of identification and intervention in rusty textures [19].

5-Various attitudes to old textures and urban renovation and improvement

5-1 Conservative theory: The followers of this theory believe that we should prevent any intervention in the existing condition as possible.

5-2 Radical theory: The followers of this attitude for intervention in old textures of cities prescribe the changes of old textures by protecting cultural valuable works and destruction and renovation tare raised as the only proposed solutions.

5-3 Reasoning theory: Ghods believed that natural environment studies are of great importance in urban planning, namely improvement and renovation [6].

6-Review of literature

- Leila Yusefi (2008) states that environmental factors, physical development of city and migration of residents changed these two townships [25].
- Mohammad Mohammadzade Dahaneshur (2010) believes that rusty texture around holy Shrine of Imam Reza (pbuh) has many problems like other rusty textures. In present study, 85% of textures are the areas requiring renovation and improvement [26].
- Nabavi and Yusefi (2013) believe that rusty texture is one of the most important challenges of Iran metropolises. Living in these textures has many challenges for residents. To achieve the solution for these shortcomings, needs a sociological view to rusty texture. The present study attempts to evaluate the relationship between physical and social wearing out, place sense and texture wearing out, the impact of rusty texture on social disorders, the models of absorbing the participation of owners in reconstruction of rusty textures and resistance of owners to renovation and repair of textures, the relationship between rusty texture and environmental pollutions, visual problems of rusty texture and the impact of this type of texture on city view and finally legal problems in renovation of rusty texture. In field evaluation with 7 residents of rusty texture of Abkuh Mashhad, a deep interview is performed. The results show the environmental problems, visual confusion and severity of abnormalities and disorder compared to the past. Belonging to place or place senses among the residents of these textures is very high. Place sense namely among old residents can lead to ignoring the problems of this texture.

Based on the results, we can say distrust among the residents of these textures and municipality are the main barriers of residents participation in renovation of these textures and texture residents evaluate municipality performance in pricing the land of this texture as unfair [27].

- Heidari and Zamani (2014) state that rusty textures are those formed in long-term and these textures had logical performance and with many values along the sustainable development in the past but now, it is involved in present era technology due to wearing-out and it has some problems from structural and performance aspects and can not meet the needs of their residents. Thus, for renovation of rusty texture and ecological use of different energies namely sustainable energy for sustainable development, we need the design of green building. For renovation of urban rusty textures to reduce energy consumption and environment protection, we should use relevant technologies. The present study aimed to renovate rusty texture of Darab city for sustainable development. This study is descriptive-analytic and is investigated by library, document and field studies. The results show that due to the lack of considering of authorities and planners of rusty texture of city during some periods, many buildings are deserted and by construction of green buildings, besides protection of environment, much clean energy is stored and helps the revitalization of texture and durability of population of this section of urban texture with emphasis on sustainable development [28].

- Saberifar (2009) in the results of the study stated that rural-urban migrations, weakness of affordability of residents with the inability of authorities in organizing this condition formed many abnormalities as many families suffer from poverty and deprivation. Most of them don't have health, recreational facilities. Indeed, the slum area has turned Birjand city into an unsafe area and if this problem is not solved, many challenges are formed [29].

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7-Studied area

Birjand town is located in Southern Khorsan province in Iran. This town is bounded from north to Qayenat town, from east to Darmian and Sarbishe towns, from south to Nahbandan town and Kerman province and from west to Sarayan and Tabas towns. In 2011, urban population had more than 194,405 population and rural population was more than 70,977 and total population of Birjand town was more than 265,382 [30]. Figure 1 indicates the geographical location of Birjand town:

Figure 1- The map of Birjand geographical location

Physical texture of Birjand city is composed of three different regions: Northern, central section with old texture and southern section of Birjand city. Physical extension of Birjand is at first to south and then it occupied all southern agricultural fields without any barrier. With the city extension to south, the city is developed to north gradually. Birjand city development is mostly to east and less to west. Figure 2 shows the separation of map based on textures.
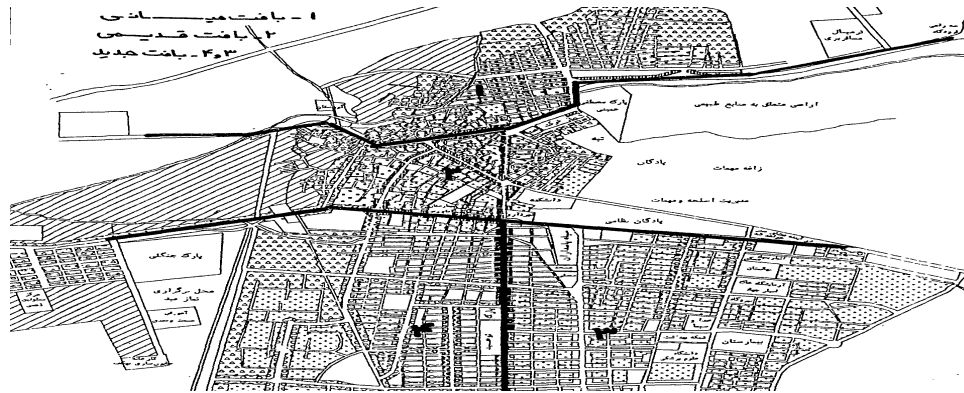
Figure 2- Separation of textures of Birjand city

8- Problems texture of Birjand

8-1- The problem of urban and legal management: The investigations show that specific organizations are dominant in worn-out texture and for the inquiry for construction or partial and total changes, we can refer to these organizations: Municipalities- covered regions, Housing and urbanization ministry, Charity foundation, Housing foundation of Islamic revolution, Cultural heritage and tourism organization**,** Parks and green space organization**,** Water and urban wastewater office**,** Electricity center- relevant offices and distribution, Each of the organizations applies their specific rules and they are effective to finish the work.

8-2- Social problem: The population composition of these textures is as most of initial residents leave the space and move to new townships due to physical problems and wear-out of infrastructures and distribution networks of urban facilities or some problems. Thus, residents in slum areas live in these areas due to the low price of land and houses. Sometimes, population distribution is as in a house 1000m, an old man or woman or a couple live. Drugs smuggling due to the quiet areas in these townships, hooligans live in these areas and start their illegal jobs.

8-3-Access problem: Worn-out texture has narrow streets and walking is done hardly or sometimes, no car enters in these areas and these houses have access problem.

8-4-The problem of traffic and air pollution: worn-out texture is the layers in front of market and in some areas, worn-out texture are involved with the main core of city as market and hard traffic is in this texture in initial and end hours of day and traffic jam occurs in these areas and motorcycle is used here. As relative density of vehicles is high, the vehicles move slowly or they are blocked and air pollution is also observed. The lack of religious gathering to collect people due to heterogonous form of people in worn-out texture as from each family migrate from specific city and main residents leave their houses and this lack of homogenous form leads to lack of unity among people and no gathering is possible and this gathering is forgotten due to the worn-out texture and they should be renovated**.**

8-5- Physical problem: In worn-out texture, there are many old and destructed houses made by worn-out materials and the appearance of worn-out township is not regular, streets, allays, squares and urban spaces are also worn-out and urban services are weak in these areas and none of these services are performed. In some areas of worn-out texture, if there is any construction, we observe the limitation of execution of buildings with one story or two stories. combinational form of historical spaces of tourist, cultural heritage and residential**.** If we walk in these allays or streets, we can observe highways and old houses and these spaces have specific rules and these spaces are encountered with mutual effect and for each of these areas, specific enquiry should be obtained and it is possible these enquiries lead to execution problems. For example, the houses around historical or cultural heritage areas observe height 7/20m and we should observed materials types.

8-6- Ownership problem: The worn-out texture of houses is with different sizes and some houses are 100m, 1000m or 2000m and this heterogeneous form and ????????? or big houses lead to different parts in urban furniture and rising and falling of streets different from common areas. In worn-out areas, a length coverage crossed different houses and historical and cultural heritage places and the first part is called residential and the margin of allay is called cultural heritage and the owner was obliged to give up the house as he cannot perform any constructional operation.

8-7- Economic problem: Generally, those living in this texture have low income and they cannot afford their routine costs and in the interviews, it is shown that even some of the owners or residents pay their water urban services, electricity, gas, telephone and urban wastewater to ????.Some people believed that these costs are pied by our children and low income and low saving cause that these people have no impact on their surrounding environment.

8-8- Problem of rules: The rules of this texture are decided by different offices and each office decides in terms of capability for this texture but we don't observe any decision making authorities in this texture and our rules in terms of place, space, quality and quantity are old. For example, the rules of
1- Commission article 12 of urban land law based on ratification on Oct 3, 1983 and the rule of changing the name of housing ministry to housing and urbanization ministry approved on July 30, 2014 with the aim of guiding the investors of private sector to investment in worn-out and central textures of city, in a bill, any land separation for housing construction to people , cooperative companies or organizations, state and private institutions in border and protective areas of cities are banned for ten years and its ratification is refrained.

2- Municipality based on articles 1, 23 of urban civil renovation law approved on NOV 28, 1968 and section 2 of rules of avoiding the increase of cities area approved on NOV 1, 1999 of high council of urbanization and Iranian architecture to improve quality and living conditions in urban worn-out townships, additional local plans can be provided and by observing urbanization principles, these townships can be renovated and re-constructed.

3- Municipality with the collaboration of housing and urbanization organization based on article 23 of renovation and urban civil law approved on NOV 28, 1968 and section 3 of the regulations of avoiding the cities area approved on NOV 1, 1999 of high council of urbanization and architecture for organized guidance of increasing gross density based on the potential of urban worn-out textures, high rising can be on priority based on township priorities and economic and social justifications

7-Municipaliteis by referring to article 22 of renovation and urban civil law approved on NOV 28, 1968 and article 111 of municipalities' law can provide investment of private sector to execute the projects in urban worn-out textures[31].

10- Conclusion

Based on the raised issues, physical and performance structure of urban worn-out textures are affected continually by a set of environmental, cultural, economic and social factors and the changes of these factors are affected by strategic mechanisms and urban policy and as it is mentioned as "urban rules and law" can lead to the formation of these textures with different structure and the effect of these factors on each other can form identity, structure, view and structure of these textures. We shouldn't ignore the different effects on formation of worn-out textures and each of them are affected by the set of factors as uncontrollably the have negative effects on wear-out and inefficiency of texture. Good performance of renovation and improvement projects on worn-out textures requires the exact recognition of problems in each of relevant fields by which suitable methods can be used to control the unsuitable effects in environmental and performance space of these textures and its consistency with current life needs of residents. Awareness of expectations and concerns of texture residents, limitations and barriers of urban managers, shortcomings, inefficiency and complexities of legal system, structural, performance and management weaknesses of this field with its exact critics in specialized and scientific fields can put suitable solutions to fulfill the desires and concerns and in next steps, by providing the plans and instructions and its ratification in legal references, suitable perspective can be applied for facilitation of effective interventions in worn-out textures and as this country is in seismic area, some concerns are made for authorities.

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