



Modeling the spatial structure with the approach of Sustainable Development Case study: Tabriz, Vali Asr

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Abstract

The ancient cities of Iran as a set of interconnected and integrated based on the principle of continuity space between the main city center, neighborhood centers, major transitions right was based. What were these cities as their spatial-physical characteristics, Elements and spaces of urban planning and architecture, were based on the levels of religious culture on the life of citizens. Tabriz metropolis is not an exception also. Current urban growth and development, primarily in the eastern zone and Rarely western zone caused intensified land speculation and disturbing the between population growth and physical expansion harmony; that the central area as a focus for service and commercial application has become work and activity zone and East and west of the city with hesitancy overcome has become to purely residential zone, Form the core part have been converted of the city. The purpose of this research is applied-developing and review method of the descriptive-analytic. Data gathering has done by documentary (library study) and survey methods. In this study, emphasized the idea of structural and strategic approach to regulation and spatial organization of the Vali Asr Tabriz Town as one of the most important centers of the regional Tabriz city, Attempt has been through the creation and strengthening of new centers and equipped ways and service spaces development in addition to quality of life in this part, that cause be created a spatial balance in the distribution of functions and reduce centralization, congestion and pollution in the city center.





Introduction

In general urbanization in Iran until 1921, but from 1921 to 1961 and fits very calm and distinct and different constructions were created with prior periods. Clothing new growth historic core of quiet and covered the old city known as intermediate tissue. Coincides with weave formation intermediate cities and ambition to seek modernity and modernism of the Pahlavi Government and new cabling and Incorrect Street, in the old city section of the new physical form and cause a change in the yield and weaken the tissues.

After 1961, following the implementation of land reform, new textured tissue away quickly before cities emerged. Rupture of urban spatial structure, disproportionate distribution of land, lack of balance and

Problem Statement

The problems and difficulties is currently facing urban basic, indiscriminate expansion of cities. The lack of recognition and understanding of the spatial structure of cities and the lack of effort in maintaining, and managing them revived the problems; in most cases, the comprehensive plan as urbanism plans can view that in a specific time frame can achieve pre-defined targets; While the city as a live inventory, dynamic and unpredictable, which is influenced by the different external forces and never comply with and on the basis of a map cannot be made well. A structural approach to spatial structure of town organizing requires that a continuous process and in the framework of the strategies and policies of the flexible guidance and control.

The city of Tabriz is also from this rule. Accelerating growth and development in the eastern area of the city, mainly current and

densities per capita urban poor, collapsing structures and environmentally friendly places Most of these challenges. In recent years, the rural population increase, population growth and the continuation of the process of increasing the housing demand and fueling stock play ground in the metropolis of Tabriz caused scattered residential development comes not so coherent in the new development, mainly in the area of the lands East of town. In the meantime, Vali Asr Avenue terms of size, population and history of the city is the largest among all other lands; Therefore, it is the intention of this research to study the process of the formation and the factors and elements of the space structure of the manufacturer, as a component of the city's system, strategies and guidelines in order to organize the space part and regulations.

rarely in Western scholarship, it bolsters the game ground and bash the appropriateness and balance between population growth and physical expansion of the city (the city of the Earth Eater). So that the extent of the growth is imbalanced. And lands owned land speculation and speculators is located. On the other hand, by the breakdown of cooperative lands is done mainly to a user assigned user and residential services with minimal area (in Perth and unusable spaces) and design. Therefore, the spatial domain into a residential structure with noncoherent, merely a lack of welfare services, and neighborhood centers, unstable and undesirable tissue and converts one role and in the meantime to natural and environmental factors and sustainable development, so pay attention. On the whole the present article seeks to respond to the following question:

- Do the requirements of sustainable development in the formation of spatial





structure efficiently and effectively in this part of town has been adhered to?

- In the event that it is not how can we use the criteria and indicators of sustainable development to organize the space structure and regulations this section of the city?

Research literature

The structure or organization of space, today the term is relatively new and the spirit in the literature relating to the city and the urban development of the country that still holds the definition of the unit, fixed and codified. A factor that the term "Space Agency today if the city common and inclusive", assigning an independent chapter of the new comprehensive plan in the program was that the introduction of it in 2002 as the first step in a few studies, the season that began its base

Research Methodology

Overall this research in terms of the objective applied-the development of methods and analytical-descriptive-it. In terms of the method of data collection as well as a library and field-documents and using the local harvest, view and use maps and photos.

Review of existing analytical perspectives on spatial structure of cities, this research into a new category of constructive elements and spatial structure.

Spatial structure of a range as a macro system includes six more child or six different layer system is based on studies in each of these layers, the structure and the properties of its major sections are identified and introduced. Layer and integration of this information can be found the elements of each of these layers that in shaping the structure of space, contributing to the identification of Valiasr ave. The next phase of the analysis, the use

element, the studies were deemed the space agency. The research conducted in this area as "incompatible structure Tehran" in 1997, "the spatial structure of Tehran Metropolis" in 2003 and "the principles of Iran's past and present development and urban sprawl" in 1999 by Ahmad Saeidnia, "the skeleton of Tehran" in three volumes by Maliha Hamidi and his colleagues in 1997, a study entitled "how skeleton pattern and reorganization of the district" by Mohsen Habibi (2003) and the book "urban design art Nouveau town structure" by Mahmoud Tavassoly cited in 2009. In the context of sustainable development can also research entitled "explain the criteria and indicators of sustainability in residential neighborhood" by F. optical and "sustainable residential neighborhood" by Mehdi Azizi in 2006 named.

of the method of analysis of "Swat" (SWOT) to assess the situation and identify the strategic issues.

SWOT method, regular manner the production possibilities and constraints of development on the basis of the understanding of different systems. This method is the possibility to present information classified in four categories of strengths and weaknesses (internal factor) and the opportunities and threats (external factors). Finally the results of the review and analysis of the status quo, the necessary information in order to provide guidelines and strategies for organizing the harvest

Spatial Structure

«Space» collection of machines and provides. When the trait can be attributed to space, according to that body or content in the comments field, you can specify space or territory. For example, the urban space according to the physical body of the city and





in the city. Spatial and temporal space of the volume is a collection of all the activities that humans in the way of mastering nature and performs for their survival (Ashkoory, 2008, 20-21).

Therefore, a network composed of centers, axes and ductile, i.e. associations or add to the main axes of communication activity centers and the main areas (industrial, recreational and accommodation,) in an inner relationship with the city's spatial structure of Spatial organization of the order and on the distribution system of units set in space, in line with the General functions of the set. Adaptation to the physical environment over the space agency, space structure. Spatial structure of physical manifestation of inner and outer relations of space and place a set of unit's components of the physical environment on the platform. A spatial structure, usually the public relations of his space agency levels for various communications systems and horizontal relations reflect the units through the spheres of influence and territories, shows (Ashkoory, 2008, 24-23).

So the order of the elements, the population, activity and symbols and how to communicate it in the framework of specific areas or topics in the field of communication in relation to each other, "spatial structure of environmental system" or "form" of a city. A general analysis of the structures of the five factors of the origin of the system manufacturer:

- 1-natural system of urban areas;
- 2-user system system involving ground operations and activities;
- 3-the system housing the population (the spatial distribution of population and housing);

each order. Of course, any causal cycle in the context of structural means "space" on form process can be shifted (Saidinia, 2003, 92). In fact, spatial structure, the makeup and the Organization as a result of natural processes and phenomena that issue, there is social and economic. So the process of space, a type of mobility and dynamism on the ground level of the show; as a result, while the structure of the spatial arrangement of phenomena in the Earth's surface (shirani, 2007, 233).

4-identifying symbols and concepts of the system (the artifact and natural);

5-way communication and network system. In total can be defined such that the order of placement of the main structural elements and the city and how to communicate with each other under the influence of natural factors, social, economic, functional and ... Spatial structure of the city is called.

Sustainable urban development

So far several definitions for sustainable development is presented. Based on the definition of the World Commission on the environment; a "development that meets the needs of today without losing the ability to meet the needs of the next generation sustainable development is possible. Barton believes that the sustainable development focus on people development and equity for current and future generations "(Barton, 2003).

- Protect and restore natural systems in the city and the area around it.
- Reducing resource consumption and the production of pollution in the city and its region.
- Improve the environmental vulnerability of urban communities.





- Urban economy and strengthen the postrevolution generation.
- Administrative reform and urban governance (Sarraf, 2005).

In total we can say that the stability of such a concept is a conceptual component of four social, economic, environmental and physical into consideration. Sustainable urban development, in other words a form of today's development is the development of comprehensive and continuous power of cities and urban communities of the future guarantees.

Analysis of the study area (Vali Asr Ave, Tabriz)

The northern limit of the lands around the square: -understand (North bypass guards);

-Much of the South: 29th February Blvd. (gateway);

-Eastern limit: the street Department;

The Western limit of the Boulevard-NRI.

Map number 1 position in Vali ASR, the urban plan of the city of Tabriz, the detailed divisions (2012). As can be observed, this dormitory is located in District 1 and 4 neighborhoods include, which are as follows:

In this research for organizing space, structure, it acts as a lever to steer and control the future development of this area is taken into consideration, because relying on the identification and correction of spatial structure i.e. ductile, centers and its main topics can be general and structural change in this zone with the aim of modifying it. In order to that part of the alley space that is General and basic properties of the Vali range to determine the most important and most major activity organized and in shaping

the strategic environment, have the role of Vali Asr.

Review of the present structure and bone alley, be clearly perceived problems. The most important of all, the problems associated with complex structure, formation and a half of the whole unit. The origin of this problem in the first deployment of user and scattered and uneven deficiency or absence of some of the neighborhoods in which residents to meet the needs of the user of the other localities. Also, the main Boulevard, Valiasr Street axes Shahryar, teacher, communications, baranj and Karim Khan this is divided into several separate sections to the alley and in the meantime some of the passages out of the action functional level. The expansion of the city in the eastern side of the range, the necessity of ASR connection as the center of the area doubled. Provided that the scope of the study as a whole in the event of a large system's small town are able to be a proper role in the forefront of the whole city was a coherent internal and structural organization of your estate.

The main elements of the space structure of the manufacturer, the Vali Asr can be in the form of six group includes the historical centers, axes, edges, the symptoms and the entries by category. The main elements are

Vali Asr as the center of an area east of Tabriz in comparison with other towns the significant breadth; hence the importance and a special place in the city.

The Centers

all related to each other and in many cases have been merged together.

Zones

In this layer of the space structure of the studied range the dominant aspect of the





activity, or an existing position and the included it as a functional system as a whole in the form of ductile range evaluated, and how to communicate with each other in the investigated range of Koi. The area of the constituent structure of a different area of the alley space ASR includes residential, commercial, services, green and open.

The major part of the surface area of the residence, you're dedicated to Vali; meanwhile the present range based on the spatial structure of the residential character and its youth hostel

In terms of user services to Vali ASR, in poverty, and people from the provinces with serious deficiencies as. User reviews of past topics Vali Asr alley neighborhoods, this is. On the other hand, the same moderate amount of distribution services. As well as the green zone and open in this range is divided into the following two categories; the first batch are open spaces that are not construction and devoid of vegetation and lack any username. The second batch of parks and green spaces which are strapped in the range of to.

Associations or centers, in addition to being joint and connecting networks to come, at the same time as their social nodes with a diverse population and our catchy as major centers of population center

The center of the space structure of the constituent to Vali ASR roundabout, a large, three-way roundabout, baranj, roundabout, the roundabout and junction homafaran Shariati. This is the gathering place in the center of the activity catchy population and at





the intersection of routes exist and are mainly under the dominance of vehicles and traffic character.

Axes

Axes and communication networks that in addition to the power absorption of the functionality, communication and transfer of information between the human goods and established areas, spatial structure studied played a fundamental role.

Valiasr Boulevard, in addition to being an important element of dormitory space is ASR skeleton, as the strategic axis, this communication links urban axes into the alley and the urban fast access and providing appropriate for this collection.

Other mpg less important compared to the above-mentioned topics in the formation of the spatial structure of the play range. These axes include 24 yards, streets, telecommunication and baranj Parvin etesami have formed the range skeleton.

The edges

The edges are in most cases the linear factor that creates the border between the two parts and two range apart. These elements to form a natural or an artifact to act as a separator and an effective role in shaping mental image to play a resident.

The lack of major structural elements and associated ASR alley due to disconnected and moved along the un spatial in the hierarchical density due to the presence of the most important napzir influence of edge of the alley way this current challenge.

Symptoms

Signs as another important element of spatial structure of the urban spaces that are raised and perceptive guide enhances affiliate, readability, charm and identity of urban spaces, and also to help locate person.

Visual cues in valiasr alley, mental and functional in many public arenas to the eye eats but of sufficient relevance and coherence with the surrounding urban space elements are not entitled either alone in its range of sound effects. These elements are rated a certain activity and content in the form of a certain form at will. According to Vali ASR in the field of poverty, urban spaces, signs and elements of identity, preserve and strengthen physical and functional elements of a few important indicators. Because of these elements, in addition to their Visual impact and create memories and images of the range, in the form of organizing in a network (the main bone) are able to relations between people as well as regulations.

The entries

The concept of space means input interfaces and Communication Bridge between inside and out. The entrance of each space, the first place is that the presence of the General characteristics, it was discovered and the first image of the space it is in the mind of the viewer can be recorded and that the space for the residents of identity.

Situation Analysis Alley Vali ASR: strengths, weaknesses, opportunities and threats (SWOT) and the main issues

In this stage to analyze the structural situation and identify strategic issues and strategy for





future development of this area analysis method "Swat» (SWOT) has been used.

Conclusion

In this section rely on the sum of the contents offered and conducted analysis, logical proposals for regulation of the status quo and guiding future developments of spatial structure of Tabriz, Vali ASR, editor.

These alternatives in the form of goals, strategies and policies and spatial organization of the design options are provided.

Operational policies (guidelines)

Protection of the lands with the existing green space within the scope of the user and avoid destruction and breakdown of it for residential development (P1, P3); (Environmental components and skeletal)

-taking advantage of the Northern range for development of green space and recreation (P1, P4); (environmental components)

The policy directions and the appropriate spaces 3-design and implement optimal and bicycle lobby of green space by taking advantage of existing axis (P2) (physical components)

development of vegetation and linear green space along the streets and choose the species that are resistant to environmental conditions in order to become legible along the route and increase visual quality (P3) (physical and environmental components)

Procurement and development of parks and green spaces and open through employing the Bayer and rugged lands contained inside residential neighborhoods (P4), texture (physical components)

Balanced and balanced policy distribution user 6-s comply with service at all hierarchy levels range (P5) (physical components)

A diverse combination of activity in order to create vitality and dynamism in urban spaces and centers of axes (P6) (physical and economic components)

The policy of collective spaces and create 8boost hangouts and within localities to establish a sense of belonging and social interactions and strengthen the attachment of the inhabitants to the environment (P6) (Community component)

Links between the different parts of the original skeleton by ASR, and sustaining it as skeleton neighborhoods (P6, P11); (physical components) optimal use of Bayer and land a user in order to meet deficiencies and needs services (cultural, religious, educational, therapeutic, sports, etc.) on the scale of the area and the neighborhood (P7) (physical components)

maintaining compliance with the authorized user residential building density of the tissue as the predominant user in response to the need for middle classes while providing needed services (P7, P8); (physical and social components)

Projections have enough open spaces in order to facilitate the relief when the occurrence of accidents (P8); (physical components)

Use the features of a roundabout gridlock set to regional operations center and urban identity reinforced by infantry passing for ASR, Shahryar (P9) (physical and economic components)

Urban design policy body axes and priority fields in its importance (P9) (physical components)





Strengthening and establishing the elements of the sign with the volumetric composition and functional indicators, particularly at the beginning and end of the main axis (P10); (physical components)

Organizing, development policy and equip mosques as the most identifying landmark valiasr alley neighborhoods at all levels (P10); (physical and social components)

Creation of the urban landscape and the result of the appropriate input, especially at the entrance from the Boulevard, valiasr NRI and ASR (P10); three-way (physical components)

Identity politics and create green fields for each of the readability (homafaran, Takhti, and baranj) by a specific element and the proportional to the function and the identity of place (P10); (physical and social components)

Formulation and design criteria for the construction of architectural views in opposition to the construction of new identities (P10); (physical components)

Promoting the level of Shahryar street performance and degree of arterial standard to create the connection and providing quick and convenient to valiasr (P11), dormitory (physical components)

Coordination and communication between the main axis with ASR, neighbor and city areas (P11); (physical components)

Contact the northern and eastern bypass guards in valiasr alley (P11, P12); (physical components)

Driven residential density and build opposition in the form of apartments and complexes (P13); (physical and social

components) Adjustment and stabilization policies

Sky line at the right height relative to the width of the ferryboat and avoid low-height buildings located next to the wide thoroughfares like the Boulevard, valiasr (P14), (physical components)

Setting the pattern of construction enterprise and prevent mass building peers towards each other (P15, P17); (physical components)

Prevent non-productive and business in urban land and housing (P15, P16, P17); (physical and economic components)

Strengthen communication and participation

People and governmental and civil institutions with urban management (P18, P19, P20) (community component).

Suggested spatial organization of Alley Vali ASR Tabriz

The product range of the space agency, the process of recognition of the structural elements and analysis of the transformation and evolution of the sustainability of these elements and the spatial processes will be analyzed because the understanding and analysis of the spatial structure ranges from one side of the main components and identifies the manufacturer and on the other hand can be spatial relationships between these elements in a sustainable, integrated and targeted to the contemporary format.

The status quo and issues thoughtful goals, strategies and the policies proposed for sustainable space agency, alley map based on Vali ASR, the historical centers, axes, etc. Set up and suggested. As you can see, rely on organizing and identity to places, creating a hierarchical element of the sign, and the





development of natural spaces, services and welfare requirements, observe the main networks available that are nearly to be able to change, enhance and create communication topics, organizing and strengthening existing centers and offer new centers of neighborhood-scale, regional and to create the necessary coherence and continuity in texture and structure, Vali ASR

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