



ORIGINAL ARTICLE

Planning Methods of Housing Design in Old Urban Texture

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ABSTRACT

During the last three decades of the twentieth century, there is a rapid uphold in the policies, attitudes and the design of housing sector. Over the same period, the historic urban areas would have received special attention globally. Accordingly, government institutions, NGOs, engineers, architects, planners, etc. have taken measures in the planning and design of new structures, renovation, repair, restoration and reuse of these areas. This figure does not advocate old residential area's demolition to construct "modern" towers. Rather, they tend to protect these areas and start constructing on these historic barren sites. Comparing housing plans at large scale at two international housing construction exhibitions in Berlin, that is, "Hanza neighborhood" in 1957 with housing design in old urban neighborhoods, central Berlin and along the former East Berlin in 1987, one can easily grasp the change. All in all, the current study stresses on housing design issues and facilities in old urban texture; presents the methods of planning and designing, appropriate use of techniques and housing materials, and its financial and architecture dimensions in addition to the inclusion of Berlin's informative records.

Key Words: housing design, Berlin, planning methods, urban historic texture

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INTRODUCTION

Historical areas of today's vibrant metropolitan cities represent the lost origin and identity rising from the rapid development following the war era. In this regard, the indiscriminate demolition of urban historic sites, part of which was caused by the warfare, took place under the name of "modernity" and based on the concepts and theories of international congress for modern architecture and Athen's Charter [1]. Parts of the historic areas which escaped complete destruction were divided into separate parts through road building. Also, old urban squares which were gathering places for the citizens were taken over by parkings. Therefore, the unity and homogeneity of house building system within organic and balanced texture of historical cities were destroyed [2].

Many of the original inhabitants of these neighborhoods moved to new neighborhoods, in particular modern apartments, and gradually replaced by low-paid people. So, it accelerated house aging due to the lack of house maintenance. In many cases, corruption crime and drug abuse worsened those half-vacant, abandoned houses in these old historic areas.

Since the 1960s, American architect, Robert Venturi, [3] in his book complexity and contradiction in architecture strongly criticized simple views of modern architecture. In 1964, shortly after the vote suspended on the vast modern complex design in Berlin, Wolf J. Siedler [4] in his book entitled "Die Gemordetstade" condemned modern urbanization to "assassination attempt." He made an intelligent comparison between the novel and modern development and then he appealed. Two years later, an Italian architect named Aldo Rossi in Architectural Della Citta (urban architecture) presented theoretical foundations of historical city urban elements and features. Within a decade, critics, architects, planners and other relevant majors had been writing hundreds of books and articles to evaluate and enhance the cultural, historical and traditional sites.

Novel architecture theories and literature along with the implementation of a score of projects in 60s and 70s paved the way for the new art, architecture and urbanization movement which in turn added to the traditional and historic importance of the cities. So, it was accounted for our potential savior in cities one more time. Across different cities around the globe, it started to happen sort of gradual immigration

towards inner city areas and the preference to live in old texture to live in the suburbs among which sustainable development of policy and decision making by governments and private organizations play a big role.

BERLIN EXPERIENCE

In 1979, the famous German architect and urban planner, professor Josef Paul Kleihues became the supervisor of new housing sections at IBA (1984-87) entitled "inner city: a place to live". Kleihues worked on various aspects of urban development such as urbanization, housing and the establishment of public facilities in four specific urban areas in central Berlin. Kleihues in special edition of Japan journal of architecture and urban planning which was about 1987 International building construction exhibition tried to examine all international building construction exhibitions in Berlin in the twentieth century and subsequently examine housing design. Some of his theories include housing development in Berlin with the active and responsible leadership of Martin Wagner in 1920. Great achievements of housing construction during 1924 and 1932 have largely forgotten. Borrowing from the reminiscence, though, one can refer to housing development project at large scale in the 1920s. These projects are a small part of 150000 apartments which were coincided with monetary reform and global economic crisis. They are as follows:

1. Hufeisensiedlung residential neighborhood project which was constructed between 1924 to 1926 included 1027 flats comprising 472 flats for single household homes. Martin Wagner Bruno Taut's design was quite inspired by "city garden movement." At the same time, to a great extent, it followed the housing construction development principle along with both sides of the street.

2. "Waldsiedlung Zehlendorf" residential neighborhood project known as "Uncle Tom's cottage" started in 1926 including 1918 houses of which 810 flats were for single-household homes. It was consisted of two phases from 1929_32 to 1926_28. Bruno Taut showed a lot of interest to present the existing trees.

3. Siemens Stadt housing development project (1929-32) was implemented by Hans Scharaous and Martin Wagner where 1685 flats with the average size of 54 square meters were constructed. In this project, building construction development was implemented in the most liberal form. Its architecture, especially those designed by Scharoum, Gropius and Haring, reflected a completely different interpretation of new objectivity.

4. Weisse Stadt (white city) did have quite a different design. It was not the architecture but the design and geometry of the buildings which made the difference. White city was constructed between 1929 to 1931. But it has just 1255 flats. At the same time, when it is compared to three other projects, it looks quite like a city with a pre-planned design and huge apartment blocks. Although the city has been built upon rules and patterns, it contains almost all the elements of a historic city such street size, corners and building blocks. This project along with other housing projects have been quite effective in the promotion of Berlin urban development culture and set new rules for state housing. In fact, these projects were the real exhibition of building construction in the 1920s.

The Inner City, A Place to Live

Despite the history of architecture and urban development in Berlin, a summary of which was just mentioned to illuminate its trends and features. It is quite obvious that one can not expect the mere "repetition" of international building construction exhibition in 1975 (Hanza neighborhood). Rather; any building construction exhibition must be a place where the experts can exchange their views to take a coherent view and find solutions for various urbanization problems.

Considering these items and the turbulent relationship between inner and other city along with lots of energy and environmental problems overshadowing our knowledge and expectations, it is clear that one can not expect the International Building Construction Exhibition (IBCE) to provide new patterns on "inner city: a place to live".

Berlin IBCE's general objectives can be summarized as following:

1. Renewal of the damaged city

2. Reconstruction of the destroyed city

International building construction area which was supposed to be renewed is a good example of protecting the remained building texture from 19 and early 20 centuries. Professor Hardt Walter Hamer [4] who was in charge of urban renewal group for IBCE employed the notion of "careful urban renewal" to elaborate on his group work which had been done in a socially-committed fashion and state the principles allowing the group to contribute kindly to the renewal of these areas. Of course it must be noted that reconstruction of destroyed cities was not the question of 18 and 19 century method. Rather, it related to a kind of urban reconstruction comprising modern aspects as well.

Carful Urban Renewal

There were an increasingly growing number of political oppositions especially from the destroyed region of Cruitsberg to the general demolition of houses, flats and neighborhoods where people had been living for ages. In mid- 1981, public anger reached to its highest point and subsequently over 80 empty houses in Cruitsberg newly developed regions were occupied. In 1987, Berlin House of Representatives decided to organize IBCEs under mottos like "trade the damaged cities" which was in turn the initial promising signs of thought change.

The primary repercussions of change in urban-renewal policy were reflected with in four renewal programs between 1980-1982. From the total budget for this program which was equal to 85 million marks, a significant portion of which was dedicated to redevelop Cruitsberg regions. More essential action was taken when Berlin announced "12- section principle of urban renewal." Then, housing authorities of the city admitted them as instructions from renewal process and were finally passed by Berlin parliament members in May 1983. Now, these principles form the political basic of careful urban renewal. It refers to a kind of planning which is in close relationship with neighborhood conditions aiming at coordinating individual and collective conditions. Decisions taken on buildings and urban spaces must be in relation to social daily life, getting affordable housing, maintenance and job reforms, school and kindergarten establishment and balanced development of urban structure.

COMPARATIVE ANALYSIS

Undoubtedly, Berlin's IBCE experience between 1984-87 on the urban historic areas renewal and the reconstruction of flats and their due facilities in destroyed historic areas of the city is highly worthwhile and the learned lessons have got worldwide applications [5]. It is obvious, however, that various socio-economic and political viewpoints have been offered by different European countries. By the way, a score of European countries have taken significant measures on urban renewal of historic areas such as Blonya (Italy), Rotterdam (Netherlands), and Stockholm (Sweden). But, Berlin's experience is far more extensive and diverse.

Looking at the world third countries, the situation is far more complex and different. In these countries, demolition of historic urban areas by traders and local officials under "modernization" bears painful conditions. Although it seems essential in certain cases, it has paralyzed historic urban areas when it is done at such a large scale. However, if there would be self-sufficiency and pure faith to the importance of historic urban areas as a huge force to develop housing within inner city and restore the lost identity of the city, there are lots of hope and solutions they can resort to. Then, we need to closely analyze the successful and unsuccessful past experiences in a step by step and comparative procedure.

Confirming the aforementioned discussion and providing methodological principles on the housing design in old urban texture, this study's discussion would be on four main areas:

- *design and planning methods
- * using appropriate building-construction materials and techniques
- * Management and financial aspects
- *architecture

Design and Planning Methods

As far as urban development is concerned, planning theories often lack the common elements such as statistics, mathematics, modeling, forecasting, etc. but, what caused the failure of "modern urbanization and Athen Charter pride" was dismissive with environment, culture and history. This subject is particularly true for the rapid urban development after World War II. Unfortunately, the same urbanization design has been in practice in many parts of the world with the same pattern of "residency and commute." Private vehicles and other unfriendly-environmentally tools are still in use. Yet, the least attention is given to sidewalks, squares and lots of other cultural and historical symbols.

There are differences among European countries dealing with urban planning in general and historic urban areas in particular. This difference is strongly noticeable among the world third countries at times. Therefore, any country, even in some cases any city, must take its own appropriate strategy for planning and renewal of historic urban areas.

One of the most important issues that programmers have consensus on is "planning with the participation of local people" particularly in the historic urban areas. In some developing countries, they ignore people and count them as a drawback in the process of planning due to illiteracy and lack of political maturity. There is some exceptions like illegal immigrants or people living illegally in empty or half-destroyed houses in historic areas, who are neither owners nor tenants. In such cases, the government needs to adopt specific policy to deal with these people or resettles them in another area. In other words, other people living in historic districts deserve to participate in the planning process. In short, we should always bear in mind the following points:

*determining the needs of current residents from reconstructing the existing houses, new residential flats and public facilities

*issuing instruction for social planning based on cultural record, religious beliefs and social habits of current residents.

*providing a place for open debate aiming at local people contribution to different levels of decision taking process

* protecting the existing texture as long as possible

* specifying reconstruction steps and development based on technical and financial abilities

Designing methods which come second to planning method must consider the geometrical form, scale, proportions, volume and symbolic elements of houses, streets, squares and other urban spaces in historic regions among other social and cultural issues. Urban designing projects must be prepared separately before construction stage for any urban historic area(6). Designing projects and patterns must be presented and explained to the current and future residents of these areas. Participants' suggestions must be taken into consideration and accordingly there must be reconsiderations on the projects, if necessary. For further information on architecture designing methods, see this study's last paragraph under "architecture."

Appropriate Use of Materials and Construction Techniques

Regarding the oldest building materials such as stone, brick (clay or refractory) and wood, if used traditionally, there are some points to note:

*stone is expensive, especially if it is brought from another place

*clay is vulnerable to earthquake

*refractory brick needs a lot of work force in massive buildings

*wood preparation is difficult due to the conservation of the environment.

However, these items don't preclude the use of these materials in urban historic regions. Conversely, if these materials are locally available and the expense of working force is not too much high, they are perfectly appropriate for one or two story buildings which are quite common in historic areas. Other construction materials such as concrete, cement blocks, metal, glass and composite materials can also be used to reconstruct urban historic regions provided that a careful study would be carried out on the selection of construction materials such as cost, availability, stability and its appropriateness with historical environments. Thus, the selection of construction materials must correspond with the common and available materials in the historic area though in certain areas, careful creation of some contradictions would help historical sites look more attractive and diverse. In the reconstruction process of destroyed regions, we often need to construct apartments and skyscrapers (so that we can compensate urban facilities). In this regard, architects and urban planners play a significant role in the coordination of high-sky building within historical regions where there are often small houses around.

Selecting appropriate techniques of construction depends on the local knowledge and skill of the constructors. Nevertheless, there must be paid special attention and sustainable training of the technicians and constructors in a score of developing countries. It is believed that technology is a universal and acquisitive issue, though designers and determinants are in charge of difficult decisions regarding the appropriate choice of construction techniques. This means that technician, competent workforce and tools and machines availability must also be taken into account.

Management and Financial Aspects

These elements play a fundamental role in reconstruction and urban renewal in any urban historic areas and there is a void of them in the world third countries. Germany dedicated 85, million marks for four renewal programs between 1980 to1982 and this mission was performed with competent management. These conditions can only be repeated in the industrial countries not in the developing ones which don't have a desirable condition with respect to finance and management. However, implementing serious projects in historical areas in all countries around the globe requires the enhancement of financial and management aspects.

Ten and eleven sections from the list of 12 sections "careful urban renewal" which was passed in Mars 1983 by Berlin's parliament members consider financial aspects as follows:

Section 10: urban renewal requires adequate financial support to make sure its objectives are met.

Section 11: we should exploit all the opportunities for the development of new methods of financial supply.

A good case in which 11 sections has been considered is the experience obtained from Isfahan: in order to get transport system available to historical area of "Jamaleh" regarding the existing urban texture, the government purchased a vast area with a reasonable price so they could widen the street (usually the cost of land in old areas is low). The development project was prepared and started building new streets and it was gradually developed [7]. Finally, the remained parts of the street sides were sold with a high

price. The money made this way provided the capital enough to do renewal in this region. It is worth restating that populous land prices are reasonable, yet they are lower than their counterparts in the market area. So it must not be regarded as hoarding. Rather, it was a financial exploitation with initial investment which was by far lower than the final income. As soon as a similar project is prepared, it can be delivered to investors in the private section. In this case, investment and government role are limited to supervision and monitoring administrative affairs.

FINDINGS

The final developed form of urban historic regions depends on its architecture to be beautiful and attractive, ugly and disgusting or neutral. Thus, architects have got a heavy responsibility in designing urban areas. Berlin paired the most famous German architects, with a group of high profile international architects to participate in the renewal of ruined historical parts of Berlin and subsequently in the IBCE in 1987. Although the outcome was a collection of various styles, largely the postmodern ones, there was a spectacular harmony among the constructed buildings regarding the form, volume and height.

Berlin exhibition is one of the most various and exciting architecture exhibition in the recent years and it was somehow similar to an architecture institution: from Artalsozaki's sensitivity for the selection of colors, materials and forms in the creation of fabulous architecture to "Bonjour Trisresse (hello to sadness) motto which was conversely written on the curved corner of the pink building "Alvaro Size Viera" and exciting architecture design of "Rob Krier" for "Rauch Strasse [Rauch street] and the outstanding contradiction between two adjacent buildings, one of them designed by "Mario Botta" and the other by "Peter Cook" on "Lutzouplatz" square. Although they made the Berlin's historic region and life in the inner part of the city more attractive and pleasant, it is pretty difficult, if not impossible, to get together all the high-profile architects of the world. Berlin's experience, however, demonstrated that if it happens, using creative architects could lead to the enhancement of the local architects and promotion of their culture and experience. Architects must evaluate carefully all the various experiences of reconstructing the buildings and renewal of historic urban sites across the world. Besides, in order to get the essential information on appropriate housing design in the historic texture of the city, they need to study and evaluate traditional methods of housing design and symbolic and historical elements of their own.

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