Analysis of the Contextual Architecture and its Effect on the Structure of the Residential places in Dardasht Neighborhood of Isfahan

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Abstract
Knowing the environment and architecture is only possible through understanding the human beings' activities in their surrounding world, and the goal of architecture can be considered as creation of human notion within the skeletal form. It is necessary to look at the building alongside its "context" and surrounding places and to rebuild a building the surrounding places should not be overlooked so that it would not result in a plan which is paradoxical and in coordination with its context from the stand point of function, proportions, material, etc. Contextual architecture is neither an emphasis on imitation nor a barrier on the road of innovation and creativity. Its message is the necessity for observing the skeletal environment around a part of architecture and it indicates that this observation can be a positive reinforcing factor for both the architectural work and the context. This study aims at distinguishing the features of contextual architecture, knowing and analyzing the characteristics of the residential place of the Dardasht, neighborhood of the city of Isfahan, and also accommodating it with the architecture of the present age. The method of this study is description-analytic and data collecting is done through data bank, field analysis, document studies, interviews and observation. The study results indicate that the textural architecture is a constant basis in the architecture of the present age, especially in neighborhoods with old places that the studied example is one of the examples from this category.

Keywords: contextual architecture, structure, neighborhood, Isfahan.

Introduction
Most of the present buildings have traditional and non-modern spaces that belong to different eras. In general, creating coordination between modern architecture with a modern context is always easier than creating coordination between modern architecture with non-modern contexts. It should be noted that this does not mean that the present buildings that disregard their non-modern context are not necessarily beautiful but this basically shows the self-centered and antisocial nature of the modern movement (Amir Yarahmadi, 2002).

Looking at the land as an effective factor in the field of the formation of architectural and urban planning works is not a new phenomenon or approach but an ancient one that over time have been neglected and gradually forgotten (Masoud Beygaze Shahraki, 2012).

Contextual architecture is an attempt to show the ability to create the desired visual environment in a scale larger than that of architecture. Here, artist architecture through creating a new work in the present urban environment can play a determining role in attention to this domain (Yarahmadi, 2009).

Background of study
Talking about subjects that look familiar is sometimes more difficult than new unfamiliar subjects. A new subject can be discussed without the anxiety of the existing thinking methods, but talking about a subject that has been discussed about it over and over by the public, without observing its expansive fields and probably dispersed approaches that are in very different direction is both necessary and difficult.
It is not out of place to state that the charisma of contextual architecture is more of a subject for debate because of the reasons that are sought for outside of it or are rooted in a space out of it and this matter, both in Iran and in other countries that work on architecture is fulfilled.

Talking about the contextual architecture, as it was mentioned, is a recent debate. It may not be more than half of a century that we have reached notable products through writings on this issue and we can discuss on its complications and characteristics based on the findings and the notions about it that are provided for the public.

Contextual architecture, defined in any language and culture, is based upon and rooted in architecture in the close and far past, but it is not necessary to put this root as the condition for this rule. In other words, contextual architecture is not something we could not create today, and neither is it something that others have made long before us and there is no possibility to recreate it. Alongside the analysis of this ambiguity, it is tried to present the general basis and principles of this approach.

**Research Method**

In order to get access to the standards and basics of the design in contextual architecture, in a way that it could be able to provide the desirable conditions for designing new constructions in the historical context of the Dardasht neighborhood in Isfahan and be responsive to some of the needs of the residents and the area and also in order to reach tools and methods that would guide and guarantee the project, it is necessary to know the related laws and rules. Then, knowing and analyzing other examples that have done the same activity can immune the project from repeating the errors and clarify the points the project strives for them. As a result, the main method in this study is descriptive-analytic.

**Contextualism in Architecture**

Looking at the building with its "context" and surrounding places is necessary and in order to rebuild a building the surrounding places should not be disregarded so that the presented plan would not be paradoxical in terms of function, form, proportions, material, etc (Paakzaad, 2007).

The relation between a building and the environment can be formed in three ways including congruence, contradiction and confrontation. A congruence relation is in a way that what is constructed will accept the environment from the standpoints of form, technique and the type of "language". "Contradiction" means that what is constructed deliberately secludes itself from the environment and presents itself as another entity and concept. The third possibility is "confrontation" which means that what is constructed is not only separated from the environment but also confronts it (Gruter, 1996). Contextualism is one of the totalizing approaches in urban planning that looks at the context as a historical event. With this approach, the parts of the city's form are not evaluated on themselves but in a much more expansive context of the artificial environment. Therefore, contextualism is a bond between architecture and urban planning in a certain context and context is a place that can connect architecture with urban planning. Construction in the present context means to interweave the new and the old in a way that it would be able to create a lively desired whole (Toulaei, 2007). As contextualism is the adaptation of form with context, different types of natural, historical, psycho-cultural and man-made contexts are considered and as the safe guarding and constancy of past's form order is its basis for creating form, even the ideals are predatory to the preexistent conditions or traditions (Toulaei, 2007).

**Contextualism in Domestic Architecture**

Contextual architecture is neither a concentration on imitation nor a barrier to innovation and creativity. Its message is about the necessity for observing the skeletal environment surrounding the
architectural work and it shows that this observation can be a positive reinforcing factor for both the architectural work and the context. Contextual architecture is an attempt to show the ability to create the desired visual environment in a scale larger than that of architecture. Here, artist architecture, through creating a new work in the present urban environment, can play a determining role in attention to this domain. This increased the architect's responsibility toward the urban environment around him or her. This is a concept that Edmund Bacon emphasizes upon in his book entitled "Designing Cities" as "the second person principle", a principle that is heeded in domestic architecture and have guaranteed the success of the spaces and urban views of this era (Brolin, 2004).

What is important here is the attention that should be given to the point that buildings can, alongside keeping their structural and innovative independence from the neighboring buildings, be in a peaceful cohabitation. The attempt for this peaceful cohabitation is a step toward the acceptance of others in both the physical frame and the social propagation of the creator of the physical form.

The Grammar of the Contextual Architecture in Historical place

Below, some of the most important and genuine principles, basis, rules and standards of construction in historical places are presented (Masoud Beygzaade Shahraki, 2013).

- Space organization and access hierarchy: The designing should be done completely domestic and contextual and responds the new functional and work needs in a skeletal structure that is in coordination with the present architecture in the historical context. But in this case, it should not lead to a kind of extremist approach, inflexibility, inopportune intolerance and petrification about the life style in that context, but the concentration is on keeping the originalities and values and also responding the necessities of today's life. In other words, one of the goals of safe guarding the place is to keep and reinforce the social and cultural systems and the honorable behaviors that are existent in it which the fulfillment of a part of this goal without a doubt depends on safe guarding the pattern and life style in the context.

- Skyline, compression and height: In the scale of the unit, added to the general necessities of the surrounding place in terms of height, compression and the number of floors and also the issued regarding the skyline, observing the necessary standards in comparison with the neighboring units is also a matter to be considered in the designing plan. It means that sometimes the ultimate allowed limit for the height of the building in the middle may be less than the general subscribed limit for the local place due to the interests of the neighboring units and in order to avoid superiority to them. Also sometimes, in order to create a turning point and concentrate on the uniform skyline of a pathway, the possibility for a height that is higher than the other bodies in the definition of the entrance or some of the elements of the architecture in the new building may be considered. Otherwise, the height limits, the number of the floors and the amount of compression will be based on the general regulation of construction in that texture.

- Feature related to the form of the building: A considerable part of the formal features of the buildings is often shown in the form of the cover of the ceilings, roofs, exterior bodies and also in the composition of architectural masses and elements. The utilization of a mixture of general building forms and shapes in coordination with the surrounding place pattern will be very desirable and is advised to the point that it will not lead to an extreme trend for remaking history or a fantastic imitation.

- Combination of full and empty: One of the most important factors that have a determining role in the solidarity and plating for the constancy in the place in the middle parts is the consideration of the full and empty combination of the units. If the mass combination pattern (full parts) and space (empty parts) was changed in the new buildings, especially if this change was
multiplied in a vast range in the place, it would evolve the general form of the place and could lead to the deconstruction of the solidarity and unity of the texture.

- Building material and systems: Without any exaggeration, it should be said that building and structural material and systems are some of the most important challenges that historical places, related organization and experts face. It may also be stated that the factor that has an important share in the constancy of places and their solidarity and unity is the fact that they use coordinated material in the construction of different buildings with different functions in the place. Aside from the type of the structure and the carrier and structural elements and material of the building, the ultimate material of the exteriors are surely chosen and executed in full coordination with the original and domestic patterns of the local place.

- Image making elements: In new construction, the advice is to use original courtyard building patterns and the way the connection to nature is made in the culture of original and rooted architecture and urban planning culture of that region and locale. But of course, the creativity of geometrics and the qualities that enjoy freshness and creativity and at the same time, the line of constancy and coordination with ancient domestic patterns which are kept in them is not only advisable but also can be very desired and pleasant.

**The Architecture Role in Contextual Designing**

On the way to reaching contextual designing in architecture, there are some problems that are almost unsolvable. One of the most prominent problems is the architect himself. Young architects are always thought from the beginning how to design buildings that stand out from their environment and context so that their work would be recognized as designed buildings. This issue is the goal and concept of creativity in the present age. In this way, the architect can also gain the needed credit and prestige because if the building was not completely prominent who would notice that it is a designed building. Few of the professional distinguished people in this profession use contextual architecture, while it seems as if new buildings are holding flags that would define their character.

The way people think today makes us hold no credit for the designers whose buildings are well merged with their surrounding environment.

Our present definition of artistic genuinely and thought in the accommodating new and old architecture is non-combinable like the two elements of water and oil. For instance, if we want to respect the identity of an architecture and design a new building so coordinated with it that they could not be easily distinguishable, this idea will contradict with the approach that creativity is the most basic standard for the evaluation of an artist's ability. Now if a very good building was bonded with its context it would be thought that its architect was not very innovative. He or she would be looked upon rather as an imitator who has no idea from him or herself (Brolin, 2004).

Today's professional education and practice of architecture have led to this limited closed definition of personal creativity and emphasize the innovation that should be in every architect. Most architects are not genius but probably dutiful designers have mediocre talents. One or two architects in each generation are exceptional people, but at the present time, it is implicated to all as if they should act in a way as if they are among these geniuses, when it is better to encourage them to design rational buildings so that the sense of a visual constancy in the environment will be created. As a result, most of the today's architects feel that if they did not design a work that is not exceptional, neither in terms of form nor idea, their work does not have a value.

It is said that the limitations of designing does not let the real innovation to grow. On the other hand, it is believed that a really creative piece of work has the ability to face the limitations.
Only those who do not believe in their talent and have little ideas in them will be concerned by the limitations.

The responsibility of an architect is notably different from other artists, paintings are exhibited in museums and people decide to watch them but an architect unwillingly affects people's day to day lives. For instance, it can be stated that the simple solution for the conflict between domestic designing and the necessity for personal expression will be to look upon "the architectural creativity expression" as a building that together with other points, should be well in coordination with its context and also put less stress on more raw types of creativity -from genuinely to innovation- and focus more on subtilizing the ranges of beauty of a visual context, either modern or traditional.

Today, there are architects who are willing to bond their designs with contextual architecture but they face a major issue. The problem is not caused by lack of technique or being unfamiliar with the visual characteristics of other styles, because they are relatively easy to learn. The problem is similar to the inner conflict of the writers, a psychological barrier that is rooted in our present definition of creativity (Brolin, 2004).

Definition of Neighborhood

A neighborhood, similar to a leaf, has a system of nervesures that keeps the neighborhood together and intertwined and gives life to the whole. This vessel, like composition both in rows and claw, is mistakenly called complicated, mish mash or maze-like by some. This system is not right-cornered or same-centered, but the network of its alleys is an attempt to imitate nature and is not far from the vessel-like system of leaves and the human beings' neurological system. Markets, local mosques, shrines and bath houses are until today in the same line with the original building or the basic leaf in moving networks (Ardalan, Bakhtyar, 2001).

Traditional and residential areas of the cities of the Islamic world such as Iran are consisted of neighborhoods with special structures. In Islamic countries, the Islamic city can be known as a series of even coordinated areas and neighborhoods. People who lived in these areas have kept their identity, religion and ethnicity. The segregation between these areas or the set of the neighborhoods in the Islamic city is very strong. They are usually consisted of a few neighborhoods whose residents live together with the same language, religion, profession, family and origins. Individuals in their neighborhoods have close relationships, constant connection, unity, faith and beliefs. The most interesting feature of neighborhoods in the traditional cities of Iran refers to their lack of segregation among social classes. Rich people are not grouped in exclusive groups apart from the poor and in most cases, the rich and the poor live in the same neighborhood and they sometimes even were neighbors. There are various reasons for this matter and the most important was the holy religion of Islam that encourages the cohabitation of the rich and the poor.

The simplest definition of a neighborhood can be stated as this: neighborhoods are the living places for different ethnic, racial, religious and professional groups. The term is taken from Arabic which means area and alley and a part from the different parts of the city, village, country, house or place where people live (Shafaqi, 2002).

A neighborhood is a part of a village that is segregated from other parts. Qaffari encyclopedia defines neighborhood as the district, alley and road (a quarter of everything that is divided into four parts). This definition is also found in European languages as in English "quarter", the French "quartier" and in German "viertel" mean one fourth. The creation and coinage of one fourth as neighborhoods has a historical root which is derived from the general form and structure of the cities. Very old and ancient cities were generally divided into four residential areas by a road network or general path. In the past, the districts were determined by their religious regulations and
today because of the change in the classes of the social and economic prestige in the cities, the old regulations are almost erased. Based on another definition of neighborhood it can be said that a neighborhood is a part of the city whose residents are able to satisfy their day to day needs in it. In general, the neighborhood can be known as a small part of the city or village whose residents share some of their social, economic, political, ethnic, religious or professional or even urban or rural origins (Shafaqi, 2002).

**Parts of Neighborhood**

 Neighborhoods in Iran, especially in Isfahan, in their place and structure, have a special geographic unity. Alleys, passages, neighborhood centers and public facilities have joined hands and given existence to neighborhoods. Each one of these parts has its own characteristics with a special significance in terms of the cities' traditional texture. Elements, centers and spaces like markets, mosques, public baths, and public drinking fountains and in traditional and big neighborhoods, caravanserais, traditional gymnasiaums and squares were created to fulfill the needs of the residents in each neighborhood.

The parts of the neighborhoods are residential houses, alleys, cul-de-sacs and public facilities like shrines, sport places and cafes. These elements are usually dispersed in the city in an even way (Shafaqi, 2002).

**Change and Evolution in Isfahan Neighborhoods**

In Isfahan of the Safavi era, the traditional neighborhoods which covers an area of about 1833 acres, about 13.15% of the present city and in scientific sources is known as the historical area of the city of Isfahan.

![Figure 1. A map of the city of Isfahan in Safaviye era (source: Reform and Reconstruction Organization of the City of Isfahan)](image-url)

![Figure 2. The neighborhoods of the city of Isfahan (source: Reform and Reconstruction Organization of the City of Isfahan)](image-url)
The urban structure in this area is consisted of two parts of the area's spine which is the urban networks and the residential area of the city that has a special geographic significance in this study. The residential networks are a constant and chained series in which elements and urban sets along with residential neighborhoods have a close relationship and cover the main networks of the city. In Isfahan, the main networks of the city are the markets which act as the spines of the city and the city of Isfahan is formed based on them in a way that all the urban networks are derived from it. The networks derived from the market that are the main and old passage ways provide the organic connections between the market and the city's neighborhoods.

In other words, it can be said that the old neighborhoods of Isfahan are located around the market and the side networks of the city and they organize the structure of the service centers in the neighborhood. Old neighborhoods are in fact mementos of the traditional lives of the residents of this city. With the new urban expansion in the past 75 years and the establishment of new roads, old neighborhoods were dispersed and their traditional functions were challenged. Also, the new roads have taken a part of the function away from the city's main bazaar and therefore, have created a new structure of service networks all across the area that works as new urban networks in the city (Shafaqi, 2002).

**Case Study: Dardasht Neighborhood of Isfahan**

The Dardasht neighborhood of Isfahan is considered as one of the historical neighborhoods of Isfahan whose primary core was formed during the Saljouqi era and was completed in the Safaviye era. This neighborhood is located in district 3 of Isfahan and in the north eastern side of the city. For a very long time this neighborhood which was connected through passages to the congregational mosque had skeletal connection to Atiq square and until before the first Pahlavi's roads and the first part of its main market was considered a part of the end of the Isfahan bazar. The network of urban spaces in this neighborhood includes a number of urban straits in the neighboring buildings and important places across the neighborhood and the connecting roads between them. One of these straits is the Shahshahaan strait which is located in front of Shahshahaan mosque. The space of the Imam gate, two minarets of Dardasht and important places including the congregational mosque in connection with the old (Atiq) square, the gate of the palace and the gate of Imam and important connective and central paths like the Dardasht marketplace and Haaj Mohammad Jaafar market, Darb Zanjir street, Dardasht's Domenaar marketplace and Alaame Majlisi market which is the continuum to Isfahan's bazar, the Imam's gate street, Shahshahaan street, the connective road of Imam's gate and Dardasht marketplace are all based on Dardasht's Domenaar and the Dardasht marketplace and the congregational mosque.

![Figure 3. Dardasht marketplace (source: author)](source: author)

As you can see in the picture, the formation of this network in the form of consecutive spaces (a combination of stable and animate spaces) indicates that each of its parts as a space or a forming element of the series were designed as an independent and complete space with skeletal connections between them.
characteristics and unique visual qualities that were also connected with other spaces. Among the reasons for improving the identity and quality of the structure of Iran's historical neighborhoods, observation of the way spaces are combined together and also the details of the designing in creating connections between these spaces and forming a unified series in the form of a network of urban spaces can be mentioned.

**Analysis of the place of Dardasht Neighborhood in Isfahan**

Isfahan is one of the historical cities in which the old places hold valuable architectural work. Therefore, attention to this matter and solving the problems of these places can save them from destruction and help for their flourishing and wellbeing. Dardasht neighborhood is one of the oldest neighborhoods of Isfahan and is close to the congregational mosque, the bazar and the old square which are the primary cores of the city of Isfahan. This neighborhood is the location for some valuable historical buildings in different eras that have special architectural and urban planning values and among them, the most important are Atiq mosque, Ali mosque, Bakht Aqa dome, two minarets, valuable houses, etc. The Dardasht neighborhood in past eras, especially the Dialame and Saljouqis was among the important centers of the city of Isfahan.

**Figure 4. A map of the Dardasht neighborhood of Isfahan in 1956 (source: Reform and Reconstruction Organization of the City of Isfahan)**

But today, because of the problems in this historical neighborhood, the need for a scheduled proposal in this part is becoming more and more obvious. Today's architecture problems like the lack of proper neighboring, the frazzle of the walls, the bad quality of the residential places, the mixture of passage ways for vehicles with that of the passersby, improper floorings for the passage ways, etc.

If we take a look at the architecture and city planning of the past and their attempt to build their living environment in coordination with their culture, art and needs, we not only will be wanting to keep these works from negligence, but we will try to provide the conditions for the continuum of living, and the well-being of the residents of old neighborhoods by being inspired by the culture, thought and methods of our antecedents and modernizing them.

In the present age, in contrast with the close relationships between the residents of a neighborhood in the past, people have separated from each another and social relations have become weaker and people tends to separate their private lives from their public lives. Therefore, we need to find the factors that are effective in the improvement of relations and reinforcing social relations and consider them in designing residential complexes. Historical places have great capabilities for
creating spaces that are in coordination with the needs of human beings based on cultural and traditional values. The presence of people as a factor for creating a lively atmosphere and giving life to the neighborhood have led to the increase in social activities and public domain is formed in a skeletal space and of course with this presence, giving back the social identity of the neighborhood, increasing the sense of belonging in the residents, social security, etc. will follow.

It is hoped that organizing and designing spaces that are original and desirable in the place, considering their place along with satisfying the needs of modern day men will keep their culture, costumes and traditions and will lead to the constancy of life in the place and the improvement in the social life of the neighborhood.

Figure 5. Bakht Aqa dome in Dardasht neighborhood of Isfahan (source: author)

Figure 6. Public water drinking fountain in the Dardasht neighborhood of Isfahan (source: author)

New Constructions in Historical places
The history of architecture and city building in our country shows that for various reasons, in most cases, the ancient places and historical sites in a city were constructed on a rational connection and bond; however, in some cases they may be the product of different eras. Few architects in Iran's traditional architecture can be found that have created a new work in the neighborhood of another work without understanding and knowing the space in the work of the previous architect. There has
never been a work that have contradicted the works and complexes of the past and it has always been tried to work in the direction of creating connection and bond (Falamaki, 1971, from Parviz Varjand's article).

It should be noted that a city is like a live organ and based on the ruling regulations on each live organ, the city will also continue to exist through the birth and creation of new buildings (Qadiri, 2006). Disagreement with new buildings is in fact like putting a stop to the city's life and directing it to the path of steadiness (Qadiri, 2006). But at the same time, it is important to observe the fact that as much as the awareness about the historical legacies to be higher, the safe guarding of historical works will be done more and more (Qadiri, 2006).

New constructions in historical sites should be limited to filling empty spaces with new buildings in the urban place. These buildings should have artistic constancy and be in coordination with the highest standards and the scales and features of the world heritage site where they are constructed in (Filden & Euclito, 2002). Contemporary architecture can be done in historical place in a way that it would merge with past buildings, in the general sense of the word; a merging that would lead to solidarity and unity. Utilizing the traditional architecture alphabet for creating contemporary architecture is one of the most efficient methods that can be suggested in this domain.

**Figure 7. Eroded place in the Dardasht neighborhood of Isfahan (source: author)**

**Figure 8. Eroded place in the Dardasht neighborhood of Isfahan (source: author)**

**Conclusion**

Although contextual architecture has experienced evolving phenomena during history, it has been able to keep its special identity. Since it is considered as a creditable identity for the people of a country, it is as an indication of the costumes, spirits and feelings, thoughts and convictions, taste and art. In a word, knowing the domestic architecture of a region is like knowing that society. In the formation of context architecture, some of the social and economic relations are reflected with natural environment and clever cultural symbols, in a way that at the same time the simplicity and
the decorations are obvious in it. Context architecture, defined in any language and culture, alongside its observation of roots, tendencies, region, culture, tradition, etc. is clear from any restrictions of certain styles and forms. In other words, context architecture is not something that we could not create today or something that others have created before. According to the subjects discussed in this study, the Dardasht neighborhood still has the features of contextualism and through the conducted studies, architecture's features in the contextual designing can be reinforced and shaped into a modern design and also with regard to the characteristics of context architect and with the observation of the studied historical place, the designing of a residential place in this area should be done with the consideration of the following goals:

- Keeping the domestic houses in each area
- Combining the valuable historical sites with new sites in order to create residential places
- Observation of the directions of the places and trying for creating a coordination between residential spaces with them
- Creating identity for spaces, helping for the formation of the sense of the place in the residents and creating a proper mental image for them
- Avoiding the construction of new buildings with uncoordinated material in the neighborhood, especially around valuable buildings
- Paying attention to the social and service needs of the residents of the Dardasht neighborhood place

References