THE EVOLUTION OF THE TENDENCIES OF CONTEMPORARY ARCHITECTURE OF IRAN IN CONFRONTING WITH THE GLOBALIZATION PHENOMENON AND THE EMERGENCE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

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ABSTRACT
The emergence of globalization phenomenon, computer, communications and information technology has introduced changes in cultural-social, economic-political fields that the most important of them is cultural, meaning and identity crisis. The globalization phenomenon by breaking the artificial boundaries and capturing the world has caused the integration of semantic disciplines and it has eliminated parts of these semantic disciplines and finally has added semantics that are the products of the globalization and modernism and these identifiable disciplines have been led to uniformity with similar samples around the world, while the historical, cultural, religious, economic, social and environmental fields are the factors that have been very effective in shaping the identity of the architectural works of Iran, but Iranian contemporary architecture has formed in the context that is continuously affected with the development of new technologies, globalization and modernism and has been separated from its past and history and it does not indicate the identity of their inhabitants and it moves towards a superficial imitation of the Western architecture without theoretical awareness and the subtle recognition of the concepts of global tendencies and as the first step for creating the appropriate body is the recognition of the situation that we confront with, in this paper as a descriptive and analytic research we will describe the tendencies of contemporary architecture of Iran in confronting with the globalization phenomenon and communications and information technology.

Keywords: Globalization, Iranian Contemporary Architecture, Information and Communications Technology

INTRODUCTION
In the current era, all the societies have been changed by industrialization and globalization. These changes in various aspects such as cultural, scientifical, technological, economical and political include effects such as universal economy, communications revolution, bio-environmental issues, local cultural recreation, globalization of science and technology, changing of life and individual identities that affect people's lives in the last century (Castells, 2001). The entrance of technology to a society introduces social, cultural, economical, political challenges that the most important of them is cultural and identity crisis As compared to elements such as land, race, ethnicity and so on, culture is one of the most important elements in identity formation.

Nowadays, physical boundaries are fading and people are becoming closer to each other and these have caused the creation of a universal identity with cultural subscriptions (Golmohammadi, 2002). Also, in Iran diversity, pluralism, eclecticism and multiplicity of the ideas are the basic characteristics of the contemporary architecture in the past decades. Tendency towards the universalism attitude in architecture is accompanied by separation from the past and history. Mostly, Iranian Architects imitate without understanding the philosophical concepts of the global trends and for the absence of the coherent notion the Iranian architects apply different styles and their personal tastes which has led to increase of the eclectic architecture.

In this approach paying attention to the past is not important and coordination with the universal architecture and individualism is significant (Mahmoudi, 2008) and computer technology and media provide the basis of this approach.
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MATERIALS AND METHODS
This research which is theoretical and have descriptive and analytic method tries to identify the tendencies of Iranian contemporary architecture in confronting with the globalization and the emergence of Information and Communications Technology by compiling the library documents, works analysis and recognition of the challenges.

Definition of Globalization
Some believe that globalization is about 400 years old and it has formed with the appearance of modernism and the beginning of the modernism. Some authors believe that modernism has several characteristics and one of them is universalism and this is an irreversible process. Modernism was a movement that began in the West and got universal. Although, at first many disagreement were accomplished against the modernism by traditionalists but at last modernism won.

For modernism, many specifications have been quoted that one of them is like a revolution, make everything upside down and as it is universal so it sweeps all the world. Globalization helps the person to exit from the introspective mood and move towards an extroverted identity.

John Tomlinson remind this point that new technology, transportation and communications development, not only have made the distance contact possible but also they have formed cultural-political union and correlation. These unions have formed because of super national political and cultural similarities and although now they are in the initial stages, but probably they will become coherent and in superior levels, these evolutions lead to weaken place and culture relation and also weaken native and local cultures depended on one place and specific geography. Phenomenon of loss of cohesion between place and culture named as deteriorialization (Sabeghi, 2005). In overall, it can be motioned about the «Globalization» that the meaning of globalization is based on the changes that have formed new framework instead of the pervious systems and structures that its messages have found universal vision (Nasr, 2001).

Iranian Contemporary Architecture, Globalization and Communications and Information Technology
The current condition of society of Iran is in such a way that confusion between globalization and local attitudes is the main challenge (Mahmoudi, 2008). Contemporary Iran in spite of its great and glorious culture and civilization, on one hand, it intends to resist on its old beliefs and traditions and on the other hand there are universal events, news and innovations. Therefore, everyday its onnections with its old history is weakening and concerns about the future (Jahanbagloo, 2006).

Historically, the contemporary architecture of Iran can be divided to four eras: 1- Qajar era, 2- The first pahlavi era, 3- The second pahlavi era, 4- The era after the Islamic revolution of Iran that these four eras involve various architectural tendencies from attention to Iranian traditional architecture to high-tech architecture and other tendencies.

Qajar and the Imitation of the Western Architecture
The first acquaintance and obvious influences of Iranin from the western innovations and developments was in the nineteenth century and during the Qajar period and through diplomatic trips by government authorities, commercial travels, literatures translation and Iranian immigration to the west and led to form a kind of eclectic architecture. Some of the buildings that constructed according to the imitation of the Western architecture in Gajor era can be included as: «Shamsolemareh mansion» which built by the order of Naserealdin shah and by imitating the tall buildings that he had seen in the West and also «Tekye Dolat Mansion» which according to a quotation, is an imitation from Royal Albert Hall building and «khaybah mansion» in Golestan palace which is the adaptation of «Dolmabahce Palace »in Istanbul (Figure 1-5).

In Qajar era, architects relied on the second hand documents such as postcards and paintings and the absence of formal instruction and unawareness of the principles of the Western academic architecture, indulgence in use of novel things, implementation of ornamentations types of western and traditional styles which sometimes are without sense and vulgar and less attention to analogy and sizes according to the former ages that led to eclectic and imitative forms.
Reza shah gained authority in 1920 and in order to get his ambition, modern Iran, attentioned all the modernism aspects. He constructed roads and wide streets so, the traditional contexture of many cities in this period changed and it was the beginning of formation of the modern cities in Iran which included negative and positive points. In the second pahlavi era and Mohammad Reza shah era can state that West was not the stranger.

In this era, foreigner architects like, Andre Godard, Maxime Siroux, Nikolai Markov and Roland Marcel Dubrulle played significant roles in designing the important architectural works. We can refer to Ancient Iran museum (National Museum of Iran) (Figure 6), designed by the French architect «André Godard» which is the adaptation from Taq-e-Kasra and Iranian architecture (Figure 7).

Nikolai Markov also adapted from ancient Iranian and Islamic- traditional architectural elements for designing the post office building, Alborz high school (Figure 8) and Anooshirvan Dadgar high school buildings (Figure 9).
Also Karim Taherzadeh Behzad’s projects such as railroad station and Ferdowsi tomb in Tus are the imitation from tomb of Cyrus (Figure 10, 11) and Vartan Hovanesian was influenced in his projects such as Darband hotel, railroad station inn and Tehran girlish art school by Art Nouveau style and the modern architecture.

Mohsen Foroughi utilized ancient Iranian architectural symbols in his projects such as Isfahan and Tabriz, shiraz and Tehran Meli bank and he also utilized traditional materials like tile and he stated that he has applied it because of its beauty, insulation and easy cleaning potential (Figure 12).
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Ali Akbar Saremi believes that the architecture of Iran in 1960s is the synthetic of modern architecture and the traditional architecture of Iran (Saremi, 2004) and also he mentions that this tendency towards the old architecture in Iranian architecture is not merely for this specific period (Saremi, 2006).

Tendency Towards the Historical Styles

As in this age, new awareness was gained in respect to Iranian architectural history, many components and motifs of old styles were imitated by the architects. Of course, for reviewing these architectural works this should be considered that they simply had not attentioned to direct imitation of the old architecture, but their works were a kind of the past revival in a completely modern model.

a. A group of these architects, directly applied Islamic architectural elements of Iran in their buildings. Architects like Kamran Diba in «Tehran Museum Of Contemporary Art» building in 1967 (Figure 13) or Hossein Amanat in «Cultural Heritage Organization center» in 1976(Figure 14) accomplished this important matter by applying old architectural elements directly and motifs such as windcatchers, domes, arcs, ceiling skylights in Iranian bazar and brick -as the main material in Iranian architecture- in the modern generality.

b. Another group of the architects applied qualitative changes in Iranian Islamic architectural motifs and elements and indirectly used these changed elements in their designs. Some of them including Hooshang Seyhoun, for designing the Khayam's Tomb in 1998 (Figure 15) and Ali Sarder Afkhami for designing the Tehran City Theatre in 1967 (Figure 16) made the acquaintance situation by paying attention to Iranian Islamic specific geometry and applying geometrical ornamentations in designing the memorials and with an indirect state.
Adapting from the Historical Forms

This approach is the adaptation from historical forms such as dome, windcatcher, central courtyard, ziggurate and so on. «Rafsanjan sport complex» designed by Hadi Mirmiran is a good example of this group (Figure 17). The architectural concept of the building originated from the typology of Kerman ancient icehouses, some of which still exist in this region. The masterly deployment of this concept has both generated the possibility of full functional efficiency and compatibility with today’s construction methods and a modern program. In this approach, two groups of buildings have been created:

![Figure 17:](image)

a. A group which has applied functional use of the forms of historical architecture in addition to superficial use for instance the form of central courtyard in their projects plays its functional role, too.
b. A group of buildings that the historical architectural elements have merely a formal application such as buildings which have utilized windcatcher in their design but it doesn't have the ventilation application like the design of Naghsh-e Jahan Pars for Iranian academy.

Adaptation of the Elements of the Historical Architecture

In some buildings the elements of historical architecture such as: arc, vault, dome, brickwork and orientations are used especially in the external volume of the building as can be seen in the residential building designed by Kamran Safa Manesh (Figure 18).

![Figure 18: Residential building designed by Kamran Safa Manesh](image)

**Traditionalism**

Some architects have mainly applied available spiritual values of Iranian traditional architecture that here we name them traditionalist architects. These architects were bound much more than the others to maintain traditional architectural patterns and they never did creative actions without consideration as the
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first group. What these Iranian architects have considered, was the religious and sacred aspects of tradition and they have accomplished this matter by applying Spatial patterns of Islamic architecture of Iran and using order, symmetry, repetition and... in their works.

Nader Ardalan is one of the most important architects of this group and one of his most successful works in which the reflex of tradition can be observed is the Iran Center for Management Studies in Tehran (current Imam sadegh university) that was built in 1970-1972 (Figure 19). It is consists of vaulted buildings arranged formally around courtyards. The geometric forms and axial arrangements and the reinterpretation of the “Persian Garden” are revealed in the low concrete structures that sit comfortably in a landscape of gardens and fruit orchards.

![Figure 19: Iran Center for Management Studies in Tehran](image)

As it can be observed in Figure 19, this project integrated the Business School curriculum with a contemporary interpretation of the Persin Garden and the traditional Madrassa Plan in a brick architectural expression and it has relied on Iranian traditional architecture (Ardalan and Bakhtiar, 2002). He has also designed students chambers in such a way that they are not connected to the main court directly, but by regarding the spatial hierarchy principle in Iranian architecture he has designed the hexagon small courts as the intermediatel elements for the connection to the main court. There are cases like this that we categorize him as a traditionalist architect.

Tendency to Native (Local) Architecture

Native architecture in every language and culture, according to the tradition, rooted in the old architecture. If we assume architectural tradition of one land as its people common language in that land then we can assume the native architecture as the different accents of that language (Alpago Novello, 2006).

A kind of architecture has developed by people based on the local culture and to provide their needs.In other words, native architecture applies main patterns available in the historical architecture due to climate, native materials and use them in a local form.

Nader khalili is one of the most important Iranian native architects who has universal fame. His studies finally in 1979 have led to an innovate method that later named as "Geltafan".The word Geltaftan is consist of two parts "Gel" which means soil and weter mixture and "taftan" which means cooking. He explained his schedule at the height of development of modern architecture of international style in Iran, with a romantic tone:"dreams about building a simple house, a house which builds by human and the simple elements of this world: water, wind, soil and fire.A house with soil, adobe and fire. Fire mixes adobes and creates walls like stone" (Khalili, 2004). Thus, all the surfaces of a room include walls, floor and ceiling have been integrated and will have the maximum resistance to natural phenomena such as earthquake.Khalili can be considered as a native architect that by recognizing the native architectural characteristics and native materials not only was intended to revive the traditions of the past, but also he took another step forward.He stands in native architects category with features such as quick and easy creation, applying native materials and familiar and simple appearance creation (Figure 20).

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There are other architects in the second Pahlavi era who could do valuable works in nativism field like Jahangir Darvish. In 1967 he designed BandarAbbas broadcasting building (Figure 21) with imitation of architectural forms of hot and dry region of southern part of Iran. He could recreate a specific accent of Iranian old architecture in a new and innovative combination by designing domical roofs inspired from the tents of native people, applying prevalent archs of local architecture and applying the orange stone to follow dominant color of the hot and dry climate and architecture to coordinate the building with the environment and the native architecture.

The Tendencies of Iranian Contemporary Architecture After the Islamic Revolution
Built buildings in Iran cities after the Islamic revolution have been formed by several main groups and with specific methods and styles and as always a small part of our cities are designed by architects. In other words, it can be said superficial imitation of exhibitions which propagates every day by networks rapidly, whether among people or among experts, sometimes has led to formation of kind of art and architecture that does not have qualitative values and further operates as ephemeral fashions. The tendencies of Iranian architecture after the Islamic revolution can be divided as following.

Adaptation From Historical Architecture
Architects of this group try to revive and promote the Iranian Islamic identity, value and culture by building quite similar to historical architecture. In this method the spatial structure and form of the buildings are quite similar to historical architecture, but the structure of the buildings are metal or concrete and the materials used for the elevation are historical materials like brick, cement and tile. A good example for this tendency is «Khavaran cultural center» in Tehran (Figure 22) (Glance at the contemporary architecture of Iran, 1998).
Tendency Towards the Modern Architecture
In Iran, from the beginning of the pahlavi era, modern architecture became the main tendency of the architecture and different approaches considered that the most significant of them are:
1. This tendency is identifiable regarding modern architectural basis characteristics including sincerity, simplicity and avoidance of ornaments, breaking up the box, brutalism and emphasis on function. Of course most of modern works of Iran architecture also have elements which are contradict with the modern architecture basis principles such as exaggerating in use of glass, colorful glass and colorful various materials. A few number of Iranian works can be located in the group of built buildings with modern architecture basis principles like Milad one thousand bed hospital designed by Iran housing company.
2. Simple integration of modernism in architecture has led to quite elimination of artistic elements and minimum use of mettrials and profit-seeking views of modernism. In this approach only by building simple brick walls and a roof above them and using glass from floor to roof, led to buildings which are slightly similar to modern buildings that has the ability to be located anywhere. These buildings are the desirable samples for the employers especially for commercial buildings for the ease of construction, cheap price of building, Visually appealing facades (the reflection of the environment in the glass facade). Majority of built commercial and administrative buildings in Tehran that are identifiable in modern architecture can be located in this group (Hosseini, 2011).

Tendency Towards Post Modern Architecture
In the decades after the Islamic revolution by introducing the post modern architecture and the availability of common forms, symbols and motifs of this style through publications and images, many designers and manufactures of private and public sectors for making their modern cubes more desirable, greatly used new forms.
Most of the buildings which have been built in Iran regarding to post modern architecture are the imitation of the Western post modern style. It can be pointed that the architectural characteristics of this group include: using of color, rotation of volumes like what can be seen in Armita administrative tower, (designed by Behrouz Ahmadi) (Figure 23) and applying dissimilar symmetry, rotation in the external skin, the use of European post modern architectural forms by applying historical materials like brick.

**Vulgar Postmodern Tendency**

In these buildings, the building appearance is just the imitation of post modern works and the building elevations are covered with different stones with different colors, gray granite stones and vulgar metaphors.

**Eclectic Tendency of Western Postmodern Architecture and Iranian Postmodern Architecture**

A group of architects has been affected by the combination of western postmodern architecture especially neoclassical architecture and Iranian postmodern architecture (for instance the abstraction of Qajor era architecture) and the result was the diverse range of this type of architecture (from creative approaches to mere imitative approaches). They sought to find a common language between the concept of form in neoclassical architecture and Iranian architecture observing symmetry, geometry, proportion, geometrical regular forms in plans and observing three parts divisions (pillar, shaft, crown) (Dehbashi, 2007) and the utilize of architectural decorative elements of both cultures in elevations led to create an eclectic architecture. Western architectural elements include pediments, semicircular windows and colored materials are used in this tendency very much.

**Technological Tendency**

This tendency occurred in the west after the technological development in all fields like housing. However, in Iran this tendency is mostly the artificial presentation of technology that is applied for commercial use of the buildings. In some buildings such as Mellat Cinema Complex, designed by Reza Daneshmir (Figure 24) technology use has placed in more internal layers of the project and it has become closer to the original source of this architectural style. Limited technology facilities in Iran have caused great limitations for the architects of this style.

Some buildings also have regarded biological-environmental principles and sustainable architectural principles. The building of the Government Accountability Office, designed by Mohammad Taghi Hariri can be referred as an example of this category (Figure 25). Spatial plan structure, in many buildings which are identifiable in the technological architecture of Iran is a modern structure and some times even historical and on the external face of the building by the use of metal tubes, truss and displaying the structural system, represent a kind of artificial technological architecture.

**Deconstructivism Tendency**

At the end of this era, during the events of the Western contemporary architecture, philosophical-theoretical approaches were introduced in architecture more than anything. Deconstructivism and its related events started in Iran and appeared in a few architectural books or related essays and in some
architectural projects whether in professional or academic environment but most of them were not built such as the design of Mohammad Reza Jodat in Iranian academy competition which is a successful example of confronting with this style in Iran. Buildings which are built in this style in contemporary architecture of Iran can be divided as following groups:

a. Deconstructivism tendency that deconstructs the whole volume, spatial structure and the building elevation such as Iranian Presidential Center for Innovation and Technology Cooperation designed by Bahram shirdel in 2001 (Figure 26).

b. Representation of characteristics such as diagonal walls in the exterior surface, angular and ambiguity spaces, tendency to degradation and fragmentation like zaferanieh multi functional complex designed by Talaei plan and Daneshmir (Figure 27).

c. Tendency to use formal deconstruction even just in the building facade (Hosseini, 2011)

Tendency to Kitsch Architecture
The possibility of mechanical propagation, on the one hand has caused the production of weak artistic works and on the other hand it has caused the expansion of the range of the consumers and the degradation of the taste of the works and as a consequence, it has caused the production of a tendency that it can be called kitsch tendency. Kitsch architecture is an emotional tendency that its purpose is attracting satisfaction of people and consumers. The most important characteristic of this tendency is marketing-orientation (Taghaboni, 2009). In fact, this tendency uses the most simple and ordinary tastes and mental ideas of people for the works creation and they are based on the characteristics such as duplicity and luxury. In fact, kitsch tendency does not adhere to a specific model and form and it follows the imitation of styles and combining them together without any specific rules and order. This tendency falsely utilizes materials by using similarity of textures or color, for example it uses color similarity of white cement and stone, and tries to indicate cheap materials rather than expensive materials. Most of the buildings which are built in Tehran and naturally in other parts of the country can be located in this architectural tendency.

Computer-Oriented Architecture
Another complex event effects on the contemporary architecture of Iran is applying the computer in the architectural design process. Meta architecture, digital architecture, fractal architecture and virtual architecture are the achievements of computer use in architecture. Architectural software in addition to drawing, three-dimensional modeling and virtual designing plays marked role in the more qualitative procedures such as beauty, functional relations and form (Alimohammadi, 2006). Overall, computer function in architecture can be divide in two groups:

a) Information Technology: It can be used in various fields of design such as: climate, material, sociology and anthropology and culture. Information technology could have given several new aspects to the architecture and it has created new insight and instrument. Architecture encounters a wide range of data to
develop its product daily. Nearly, the wide volume of previous systems could be replaced by the software (Bazr, 2003).

b) Computer Modeling: There are factors which have developed by computer modeling, including interior design, design ideas, mathematical knowledge, structural details and so on (Alimohammadi, 2006).

Computer-oriented architecture has formed by adaptation from the advanced architectural programmes and computer forms. This tendency can be observed in the projects of the third generation of architects and the works of the architecture students of Iran universities. Mostly, Iranian engineering companies and architects utilize computer as an exact drawing tool. In fact, computer is utilized instead of manual draftsman in consultant engineering companies and unlikely can exceed in the future decade. There are various reasons why it is impossible to except this. Since American and European architectural actions and patterns are studied and comprehended by internet and books, it is natural that will lead to repetitive western architectural frames which do not have specific identity and depth and due to the lack of communication of Iranian architects with the western architecture and technology developments we can comprehend somehow this stereotype language and formal copy of the western architecture in the Iranian architecture after the Islamic revolution (Masoud, 2010).

RESULTS AND DISCUSSION
It should be noted that a part from globalization, architecture is a live and generator reality that continually is changing and it will die when it becomes mesmerized by imitation. Therefore, in current condition, we should get ready for confronting with this phenomenon by paying attention to opportunities and threats arising from globalization procedure, and in addition to retaining our identity, with applying the tools derived from global culture, we should try to universalize it by relying on our Islamic-Iranian rich culture because, architecture is the creation product of human powers that determine its container and content. Therefore, architecture is connected to globalization more than any other parts. Current society needs to increase awareness in respect to new technology and its applications and consequences in a real condition (not just theoretically). On the other hand, attention to technology should be accomplished in all the design processes coordinately with place and time condition, Social-behavior patterns and the most important of all, culture to create the original art so then the globalization and new technologies, can be considered as an opportunity not as a threat.

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