

## **Analysis of Field Oriented Urban Planning and Architecture with Emphasis on Application of New Technologies in the Era of Globalization**

**Mohamad Ajza Shokouhi**

Assistant Professor Department of Geography  
Ferdowsi University  
Mashhad, Iran

**Mohamad Hadi Javid**

PhD Scholar Department of Geography and Urban Planning  
Ferdowsi University  
Mashhad, Iran

**Fahimeh Yari**

Department of Architecture  
University of Tarbiat modares  
Tehran, Iran

**Seyed Ali Hossien pour (Corresponding author)**

PhD Scholar Department of Geography and Urban Planning  
Ferdowsi University  
Mashhad, Iran

**Maryam Ebrahim pour**

Faculty of Art and Architecture  
Islamic Azad University (Borujerd Branch)  
Lorestan, Iran

### **Abstract**

*City is a production of numerous historical courses and special relationship between the social, cultural, anthropological, geographical and economical aspects and today architecture will be a part of cities history. What is required in continuity of life's passionate and freshness within a city is matching between containers (environment) and be contained (human) in a historical process. Recently, because of several reasons, the adjustment is tied disruption and Kind of heterogeneity is triggered. The aim of this article is providing definitions of the field placement as platform architecture and correct understanding of the philosophy of technology and its application in architectural features appropriate with environment. Results indicate that giving attention to the environment's characters and inspiring by those doesn't negate creativity and new technologies as one of the architectural aspects can adapt themselves with cultural, social and environmental properties and facilitate history's continuity and identity of the city.*

**Key words:** Background, city characters, creativity, impress, unity, totality, continuity.

### **1-Introduction and raising issue**

City is a production of numerous historical courses and special relationship between the social, cultural, anthropological, geographical and economical aspects and today architecture will be a part of cities history, (Qadiri, 2006.12). City is a material generalization which is realized by its resident's opinions or senses. Create mental security is necessary to understand the above totality. What has importance in totality fact are existence of legible video, recognizable patterns of blocks and urban spaces and mental imaging of them, because a biological setting is very important in space's desirability. For accordance, should not be relied alone on elements or performance, but both shape and content should intervene in accordance creation. Therefore, the readability is also defined in associated with activity. Also, discovering the meaning is effective in this accordance. When an environment felt as a selection, it would be favorable. According to the Lynch's opinion, fundamental condition for the continuity and integrity of this collection is that manifestations of each episode are a part of another and a sense of inner coherence of parts is created in each direction and each level and all collection's manifestations be continued in a continuous manner. So coherence between building and city has a key role for making totality.

New structures that reflect the history of art and architecture of each period is a certain dynamism and life sentence of a living city and no construction of new structures in the tissue of urban will lead to stagnation. Each descendent must again define the old symbols of past descendants and express old concepts with her descendant's strings (Shvay, 270, 1996), because the architecture is expression of space so that make a certain experience of space in relation with past and future experiences in visitor (Bacon, 21, 1997). Urban text and areas have its especial scale, size, form, space, materials, architecture and urbanism which provide necessary guidelines about how physical interventions for sensitive designers and communities also apply controls in. Therefore, theoretical and philosophical discussions often centered on how the quality and the occurrence of this issue and how consistency and continuity between the new buildings with structural condition (Ghadiri, 12, 2006).

## **2- Background's architecture and character**

Architecture is a physical and structural language of the city. City is a living organism with a unique culture and past which named "historical background" and a future which in buildings as supposed as strings which joined new cultures with new tissues of the city. Architectural projects should be as part of urban design and so this requires insight into the integration with the urban fabric and how people use urban spaces. The role of architects can be in different scales, thoughtfully design of spaces and public places, create a unique character and best quality of lasting forms in the desired geographic area. Place identity is considered as a former of core architecture. Place in architecture is similar to the means in language. Recognition, individual and collective memory, sharing with others and means acquisition are parts of architectural design process.

Architecture in background is not a little attention and not a radical innovation, but also it is an eloquent and powerful visual relationship with the environment. A single building initially is considered as a part of the whole. Creating spaces and places where give quality to people life is a base of architects work. Every building can and should engage in dialogue and history, beliefs and needs of a particular time and place. Historically, remarking topics in related with new structures in valuable and historical environments are simultaneous with the advent of new technologies and urban development in the nineteenth century. Because apparent contradiction between the traditional cities and concept of urban development seen in this period. Kamyluset, one of the fans of worth monuments and tissues protecting, states that the structure value depends on its environment, the main issue in this theory is spatial relationships between building and surroundings, not the user relationship buildings and their adjacent empty spaces (Ghadiri, 13, 2006).

Field-oriented architecture is not the emphasis on imitation and not hinders innovation and creativity. Its message is need to focus on the physical environment of architecture and shows that this attention can be a positive factor for architecture and also for background. Field-oriented architecture is an attempt to show the ability to create desirable visual environment than large-scale architecture. In opinion of Edmund Bacon, this topic is well-respected in Renaissance architecture and guarantee urban spaces and views success. Visual communications are not mysterious properties which can understand only by professionals, but are simple and basic features. Proportions of windows, position of entrance, decorative elements, style, materials and line heaven are features that are made the compilation of unity or lack of unity and integrity of a street, neighborhood or area. Each place has its own combination of these elements and degrees of freedom to create diversity in design. A building does not need to mimic the exact shape and form of adjacent buildings for matching with the field and strengthen the visual unity of the region, but should have common characteristics and certain basic. Necessarily, designing within the field does not mean uniformity. We should differentiate the visual diversity that creates confusion from diversity which is seen power in it. Turbulence and uniformity are both unpleasant. Surveying background's quality is one of the most important topics in field oriented which is necessary to be addressed (Brolin, 1980: 148-153).

## **3- Totality and context-oriented**

In general definition, we can say, "totality" is a coherent set of components that have been established in tangled interaction or interaction with each other. A totality is something different from algebraic sum of its components. We can not separate totality from joining single components. An artwork never can be made or perceived by a mentality which is not able to visualize integrated structure of a totality (Arnhem, 1974:5). Totality concept is explained by making distinction between totality and setting. Piaget supposed that major difference between totality and a set is components independence from compounds in series and components organizing within establishing mutual relations between them in a totality (Piaget, 1998: 29).

Each totality components follow its rules and totality is defined as a building or system according to these rules. Due to the nature of architecture, it is building and under construction. Of course, in "construction" not only existence of series of components is necessary, but we should have order in setting order. Therefore, "building or construction" is a collection of elements that are set in relation with each other and formed unit totality. A totality has unity which is considered as form's highest value. Despite unity is followed by discipline which is in interaction with complexity. The beauty can be achieved by the relationship between order and complexity and reaching to the balance between order and complexity is necessary in totality (Arnhem, 1974. 12). Unity and integrity of the components is not being constitute together, unity is achieved when the components of a project are designed for a certain target. Thus, in order to properly understand a building and motivate a sense of human aesthetics, its understanding as a whole is essential. The condition of this unity and integration is coordination and communication of all components forming an architectural work like structure, architectural space and so on. In field-oriented architecture, factors that can be unified adjacent buildings are: skyline, distance between buildings, proportion of windows, bumps and troughs façade, doors and other elements, form and the overall shape of structure, entrance of building, materials, structure's tissue, shadow pattern derived from volume and decorate, building's scale, architecture style, landscaping (Brolin, 1980, 148-153).

The view that the product of urban design must comes in as a whole, has always be accepted. In fact, new approaches are pursuing to achieve a physical integrity as a totality. Market in traditional towns shows perfect harmony and integrity between elements like mosques and schools, squares, bath and Caravansary. In these sets what are seen are whole not components and in other words it is totality which leaves final effect not component. In designing and painting, a line or color alone can not incite emotions. In music, if a note be lonely repeated, can arouse emotions but if it would be beautiful in connection with other notes (Tavasoli, 19. 19-17). In old tissues components elimination in total can be seen well. Components such as the courtyard house do not make up tissue, but its tissue which makes up the courtyard house. Beyond the urban elements and components that are placed side by side, there is something else and that is relationship and connection. Despite the complexity of such a collection, it would have a special order which leads to visual unity and peace.

Criterions are not decision makers in creating unify factors but they help to decision makers to pay attention to properties and qualities which are necessary for assessment a design. Importance of each criterion with regard to environmental conditions can change and somewhat it depends on other criteria. In final assessment, the overall effect of projects is evaluated. But the main issue is that designers need to know in any style that they work - whether revolutionary or conservative - the result of their work as a part of more general areas would be assessed.

#### **4- Field-oriented aspects**

Oriented field is common view in urban areas and it considers as a historical event. First, field oriented just noted physical dimensions, but gradually turned to the human dimension and extended its study aspects to social-cultural aspects of community. Field-oriented researchers believe that physical components or characteristics of the city are not under the cover of its internal forces, but are dependent to the surrounding environment. Analysis in this approach and study spaces or buildings are in connection with environmental factors and any change or interference is depends on these factors (stokol, 1987, 15-18).

##### **4-1- Physical field**

In physical field orienting, Components of city style are not evaluated and studied lonely and they are standing in wider environment. A work of architecture is related with larger system and it stands in hierarchy of categories. So field-orienting is a link between architecture and urbanism in the certain field. As we can see in below, collage idea developed field orienting processes. Idea of collage city which is founded by "Kalin Roo" and "Fered Kuter" (leaders of field orienting in America), is a responses for thinking modernism which in buildings in the city are considered as architectural objects and they are designed lonely and differentiated with certain views (Mcleod, 1984, 24). They asked architects and urban planners appeals in this way of thinking and avoid extensive areas of design and instead focus on smaller areas so that they can connect their buildings with field formation and take advantage of all available elements, including the existing urban tissue, I.e., a "collage city" which include opposite poles like spatial relationships in the past and future (Row & kotter, 1978-12). Collage city conceptually is based on cubism and psychologically is based on original formed-gestalt field. Cubists examine features and possible interactions between objects rather than objects characteristics and in this manner they separate space from objects reciprocity.

In their opinion, separate objects are able to link with different physical, visual and psychological tools. Therefore, collage is combination of elements that sought to rebuild a meaningful object by changing the certain objects appearances. Cubist's principles in urban design from piece to piece design create reciprocal relationship between multiple structures of modern cities. Collage is dependent on taste and current contracts of society and can be reserved to popular culture or specific cortical any time and place. Therefore, to design the city does not go on history and tradition, but by inspiring from cubism puts the time in background. According to the Gestalt shape-field principle, model of an object is determined when it is placed against the background. They believe things are dependent on total and humans have allowed the inherent superiority for totality. They complete scene deficiencies in their mind or in reality and mention six condition for it: adjoining, similarity, not complete forms, border line or sides of facade, joint motion and experience. By using their ideas, principles of shape-field theory is gradually formed in urban planning. This theory is based on combination of mass and space. The most pleasant urban spaces have continuity and rhythm which is made by buildings. City is a collection of fields. Each field is a wide area which its properties are defined by organizing the masses and spaces in a coherent and precise patterns and identifiable form-field. Five features of field are: 1. having a center or centers 2. tissue which is included density and warp and woof 3. Clarifying certain types of patterns such as: linear, concentric, and radial, which are defined the spatial relationships between buildings 4. edge that may be mass or space and 5. smaller areas or areas where particular groups of objects or patterns are detectable.

At first assessment was done only by two-dimensional map and had no human features, afterward "Stuart Cohen" and "Tom Schumacher," Colin Row's students, in order to complete the field-oriented approach, added historical, social and cultural dimensions to this theory. Since field oriented is a shape adoption of a field, it consider various natural, historical, psychological, cultural and man-made fields.

#### **4-2- Historical field orienting**

Historians believed that past era has lessons for current urban Planning. If a community has isolated itself from the past, human effort is supposed past as a futile thing. In a word, man does not have a nature, what he has is history. The only difference between human history and natural history is that human history can never be started from scratch. In relation with this topic, Popper says: If we want progress in science must stand on the shoulders of pioneers and continue certain traditions. Essence of society and its development is linked to tradition. As hypothesis is used to discover facts in science, the tradition has a same role for community. Although the tradition is to be criticism and change, but it creates special order and basis for action.

Traditionalism is inspired from city's past image and Believes that new development should have a close relationship with the surrounding environment. Their thinking focus is realized on urban environment that is familiar to people. Patrick Geddes was a main fan of this thinking manner and his approach can be considered as small scale and slow urbanism which is seen less in contemporary urbanism. Against the "anti-historical being" radical modernity and tradition we can name preserved historic conservation movement to preserve the existing urban fabric. Which is began in the sixties in response to urban renewal and reconstruction after the war in Europe. Their target was preservation historical cores of cities in against of unrelenting invasion of modernization. In their opinion, the historical cores of cities do not replace. There are important elements in city plan that show history of city's physical growth. It is necessary to well understand initial dynamics in the evolution of a city. If the physical urban growth is recognized well, it would serve as a link between past and strengthening urban identity. The new trend which was inspired from historic conservation movement for cities designing was modern-traditionalism.

This approach intends to social goals and is considered important the old institutions of the public realm because of benefit and importance of space in public life. Giving value to public space was emphasized in Carrier brother's works. Aldo Rossi is another representative in modern-traditionalism who looks at city structure as a totality and in according with elements relationships. Rossi brings on "analog architecture" which blends creativity and memory together and creates cultural memory by reading the city. He does not directly imitate from historical forms, but has tried to simulate them. Aldo Rossi believes that such historical architecture is hidden in citizens' semi conscious collective memory. In fact, architectural types form the main element of his theory which is immortal over the time and as part of this collective memory, makes the city. In fact, citizens have steadily collective memory and change it during discontinuous manner. Rossi sought to establish a link between architecture with city and visualize a collective architectural.

Collective architecture is a representation of the city. His works are a network of linking between individual psychotherapy to place and his memory to collection. Within relation between building typology and city, Rossi sought to bring peace between the architecture form and the city form.

#### 4-3- Social-cultural context

Researchers in social - cultural context believe that culture creates a set of rules which reflects the built form. With helping culture, i.e. values, beliefs, worldviews and symbolic systems, people give meanings to their environment and transform the space where they become in. the base of space theory is realization the human and cultural characteristics in physical space. When space finds a cultural context, it's named location. In linguistics, architecture is a language that its text is the city and in semantics, the city will be the text should be interpreted. Urbanist to create cohesive communication in the city are linked to somehow simulation and they have likened urban patterns to visual language. In their opinion, the relationship between components of the city or words for making hierarchy form words or whole sentences should be in such a way that makes audience satisfy in terms of production means. Language can not be composed of distributed components. The most important thing that makes sense is not a sign, but the whole expression or composition that has entered in composition of the symptoms. Studies based on individuals who carried out the methodology shows mean is results of the two means: discipline (understanding and forecasting capabilities) and coordination. Howard and Harrison research results in 1980 showed that: 1. location appears (size, color, shape and design) 2.place elements within the urban structure and 3.social, political, ethnic and historical meanings in that place are so effective in environment definition. Rapa port was another person who studied in importance of cultural context in the city. In his opinion, organizing built environment is organizing meaning. Following table shows general approaches which are seen in the cohesion of cities.

**Table1.Different approaches in totality and coherence of urban spaces and cities**

Field oriented	Structure oriented	Aesthetic oriented	Compromise oriented	General orientated	Unity oriented	Approach
<b>Convergence components with mass culture and historical values</b>	Space convergence between the components and the total	Visual positive impact of elements on each other	Orientation components during the formation for ties with the regime	Importance of the entire component as the origin of the formation	Convergence of diverse elements to join the entire	Principles of totality and integrity
<b>Consistent with the physical, historical, social, cultural background</b>	Spatial elements of city and their combination possibilities in a particular range	Coordination and fitness of components	Convergence with processes of nature	Adherence from totality rules	Explore relations in the creation system as a manifestation of the unity	determining factor of totality and coherence
<b>Historical study approach, find and interview for received significant</b>	Historical study approach, find and interview for subjective and objective structure	Historical study approach based on past mining principles	Intuitive approach based on get the process nature	Intuitive approach based on hidden order in creation system	Intuitive approach based on downloaded real unity	Methodology
<b>Create meaningful totality</b>	In a spatial approach, create a contiguous and readable totality	Create a harmonious and adorned totality	Create a compatible totality with nature processes	Create an integrated totality with the disorder found in the influence	Create a totality as a symbol of God's Unity	Totality target

#### 4-4- Architecture species in the background

Depending on what the design goal is to do, until the designer how to create a harmonious effect of the surrounding areas is successful, different moods are created which involve range of compatibility and incompatibility. Following table shows different species of field and non field oriented. As was mentioned in previous discussions, determining compatibility and incompatibility is one of the challenges and basic issues in this discussion. Hence, selective samples may also include disputes or personal taste.

**Table2: different species of architecture in background**

<b>characteristic</b>	<b>Type of architecture in the field</b>
Building designing is in such a manner which is superior from background and its impact is understood across the background field. Instead creates a field for himself. It plays a important role in identity of the city and very likely becomes an icon.	<p><b>Completely field-oriented</b></p> 
Building design is well responsive to the environment. It is combined with the environment without any dissociation, But not to protect but to enhance the field	<p><b>Deeply field-oriented</b></p> 
First consider the building represents much of his attention as a result of good design. But in fact it is another type of field orienting. Certainly it is an icon but because of its respect to background it is appreciable.	<p><b>A state between previous types</b></p> 
Understanding the plan did not find the entrance to the field. This type of buildings is seen awkward they are not able to become an icon and provide a background in the city. An example for this type is modern buildings which are exceeded to neighborhood units and imposed themselves.	<p><b>Completely non-field-oriented</b></p> 
Building has struck out like a wounded finger. But the plan defines the architect as a creative person. Usually it purposely, and is planned. the building lonely has a good sight because its purpose is attract audiences, regardless of background	<p><b>Successful non- field-oriented</b></p> 
In this type, architect try to create architecture according to the background and understanding of the environment but for some reason it does not succeed. Including due to poor design, deficiencies in communication with the	<p><b>Unwanted Non filed-orienting</b></p>

<p>environment, or a combination of both. Usually we see this type when a modern building seeks to reflect a massive historical building.</p>	
<p>Building design reflect environment and neighbors elements well and building combine with the overall composition of the street. This targeting is done by peaceful building measures within their fields.</p>	<p><b>Obedient field orienting</b></p> 
<p>In this type of field-orienting, at first field orienting and building complying from the background may be not seen, but in fact with little evidence from reflecting neighbor environment and matching with physical elements we can see this field orienting.</p>	<p><b>Narrowly field orienting</b></p> 
<p>Building design is in such a manner that is based on the period when it made and also based on the prevailing style of there architecture, and in this way makes it field oriented. Often we call these building field oriented because they state their styles very well and without need to redefining other structures and samples.</p>	<p><b>Sociological style field orienting</b></p> 

## 5- Conclusions

Field-oriented architecture is an attempt to show the ability to create desirable visual environment in large-scale architecture. Its message is need to focus on the effect of physical environment around the architectural work and shows that this consideration can be positive and reinforcing for architectural work and background factor. Field orienting is compatibility with physical, historical and social background. Understand the characteristics of places and use them in the design process in creating the appropriate environment with visual continuity is necessary. In general, in suited designing with context, the amount and order related components of the city over time, and the meanings, values and common goals should be noted.

Application of scientific knowledge in modern cities is one of the tools. Rapid progress of technology and its impact on urban construction was causing changes in the city. Technological determinism and simple integration prevailed as a habitual behavior. Complexity of production in city shows that the technology is not sufficient basis for urban structure. Although micro manufacturing helps to build the city but it is not lonely enough to provide facilities and a variety of different needs.

That what is needed is a public understanding of science and a conscious use of technology, both in understanding and describing the phenomenon of urban and in shaping the future urban. But always in the course of history human has faced with two sources of uncertainty: nature and community. Obtain an estimate of natural forces and harness them to possible and put them in place frameworks for controlling social forces are the most urgent concerns of urban habitats. Technology as one of the main aspects of architecture should gradually grow with architecture, culture, social and economical conditions and is used in architecture with a melting manner.

### **References**

- Aristotle(1998) **The Nicomachean Ethics** , Oxford : Oxford University Press,Book V1,4,1139b31-1140a20,p.141.
- Ashihara,Y(1983),**The aesthetic Townscape**. Trans. Lynne E.Riggs, Cambridge :Mit press.
- Audi .R(1995), **The Cambridge Dictionary of Philosophy** , Cambridge: Cambridge University Press, 1995, p.796.
- Borden.I.& DDunster(1995) **architecture and the sites of history: interpretation of building &cites**. Oxford : Butterworth architecture.
- Bremner,L (1994)" **space &the nation: three texts on aldo rossi"**,society &space , No.12,pp: 287-300
- Brolin, B.C(1980) **architecture in context: Fitting new building with old**. New York: van Nostrand Reinhold.
- Geddes ,p(1968) **cites in Evolution: an introduction to the Town planning Movement and to the study of cities.london**: Emesst Benn Limited .
- Hashemi, Seyed Manaf, Hossienpour, Seyed Ali (2010) **Review and analyze effects of tourist making in rural districts in ultra analysis processing by emphasis on field of tourism industry**, Urban Management quarterly periodical magazine number 26.
- Hashemi, Seyed Manaf, Hossien Pour, Seyed Ali (2011) **translating the book Preventing from crime by House designing**, Tahan Heleh publication
- Hiller, B&hanson(1984) **the social Logic of space** Cambridge : Cambridge university Press.
- Hossien pour, Seyed Ali, Hashemi, Seyed Manaf, Rafeeyan, Mojtaba, (2011) **had written the book of Politics of urban management in different countries (strategic- ultra strategic approach of urban integration)**, Tahan- Haleh publish.
- Hossienpour, Seyed Ali, Shamshir band, Mostafa, (2010) **Analysing ecreasing rocess of urban open environments in process of urben development ( Case study: Tehran metropolice)**, Utopia number 5.
- Hossienpour, Seyed Ali, (2011) Master of Science paper, **Analysis of barriers to make an integrated urban management by emphasis on role of governmental institutes (Case study; Tehran metropolice)**, Tarbiat Modares Tehran
- Hutchinson,D.C,(1995) **Ethics, in Barnes (ed.)The Cambridge Companion to Aristotle** , Cambridge: Cambridge University Press, 1995, p.206.
- Rafeiyan, Mojtaba, Hossienpour, Seyed Ali (2011), **Compiling methodology of economical optimum according to urban strategic programming (Mashad city council)**, The first conference of urban economy, Mashad, Mashad municipality.
- Report " **Scheme of structural review in urban management and financial system of Tehran metropolis**", The joint institute responsible for providing comprehensive and detailed schemes of Tehran city, Iranian management services company, 2006.
- Report of " **Strategic programming of Tehran Islamic city council**" , Tehran Islamic city council and research and cultural institute of Kavosh Noo, 2006.
- Kavosh No cultural and research institute (2006), **Strategic programming of Tehran Islamic city council**, Tehran Islamic city council.
- Madnipoor,Ali(2007), **Designing the City of Reason**, London, Routledge Press.
- Stokots ,D& I.Altman(1987) **handbook of environmental psychology** . New Yourk : John wiley & Sons.
- Waterhouse , A 91978) **Boundareles of the city : The Architecture of Western Urbanism**. Toronto: University Press.
- West Fall, Matiew and Victoria Devila (2010) **Urban Indexes for Managing Cities, Translated by Hemat Morad Ghalandari et al**, Statistics and data engineering of Organization of data and relation technology in Tehran municipality.