Evaluation of the Humanities Research Paradigms based on Analysis of Human – Environment Interaction

Reza Sameh*

Assistant Professor, Faculty of Architecture and Urban Development, Imam Khomeini International University (IKIU), Qazvin, Iran

Abstract

As claimed by many behavioral scientists, designing should be based on the knowledge of interaction between human and environment. Environmental quality is also created in the context in which humans interact with their environment. To achieve such quality, designers should develop appropriate models for explaining this relationship, and this requires an understanding of human nature and the environment. Criticisms on the Modern Movement have shown that architects have often used incomplete and simplistic models in this regard, while most of design ideas are based on the definitions of human and environment and the interaction between them.

However, the most important question that is raised is that how understanding of human nature and the environment and their interaction, which depends on foundations of different views, can affect the pursuit of quality in designing?

Therefore, the present paper, in addition to introduction and comparison of common paradigms in humanities as the and methodological foundation of human sciences, aims to deal with the relationship of human and the environment from the perspective of objectivist, relativist, and critical paradigms in order to identify the characteristics and differences in their views on the analysis of the quality of this interaction. This is the most important step that paves the way for understanding the qualitative foundations of the environment and human life quality and also the quality of interaction between them.

Keywords: Human-Environment Interaction; Paradigm; Objectivist Paradigm; Relativist Paradigm; Critical Paradigm

1. Introduction

Unprecedented growth of human knowledge and changes in human social life caused by modernization has played a decisive role in dramatic developments of the last century. However, modernization has been associated with some mistakes in its views in many cases and despite much efforts made by thinkers in post-modern eras, this view still have negative effects on understanding human nature and quality of environment. On the one hand, due to major changes in the foundations of science, it was thought that the key to the settlement of problems is in the hands of humanities scholars; the scientists that was supposed to have sufficient knowledge about human motivations and needs. However, this supposition was far from reality, because humanities had departed from the real environment in terms of the mainstream prevailing the research (Razjouyan, 1996, p. 37). In the wake of these developments, non-compliance of scientific findings with environmental facts caused dissatisfaction of many scholars and led to a serious revision of attitudes and methodologies of humanities. From here onward, environmental sciences (Architecture and Urban Development) and humanities were both involved in the same issue that they were not able to find an answer alone. This belief led to a coalition in the 1950s and a new area of knowledge called "behavioral sciences" was introduced which aimed to study human behavior in the target environment (Proshansky, 1976).

As claimed by many behavioral scientists, designing should be based on the knowledge of interaction between human and environment. In addition, environmental quality is also created in the context in which humans interact with their environment (Rapoport, 2012, pp. 16-26). To achieve such quality, designers should develop appropriate models for explaining this relationship, and this requires an understanding of human nature and the environment.

Criticisms on the Modern Movement have shown that architects have often used incomplete and simplistic models in this regard (Stringer, 1980; Gans, 1968; Lipman, 1974), while most of design ideas are based on the definitions of human and environment and the interaction between them. Thus, flaws in the underlying models of most architecture theories have led to false and simplistic impressions of the quality of relationship between human and environment (Lang, 2014, pp. 9-12).

In a general revision, the present paper aims to first deal with the nature of human and environment in the common paradigms in humanities research, as the cognitive foundation of behavioral sciences, and then outline and introduce a model of the possible human-environment interactions from the perspective of each of these paradigms. This is the most important step that paves the way for understanding the qualitative foundations of the environment and human life quality and also the quality of interaction of between them.

*Corresponding Author Email: Rsameh@arc.ikiu.ac.ir

2. Methodology

Generally, the present research is a comparative analysis. Since a comparative study is defined as to know an issue or phenomenon in the light of comparison (Gharamaleki, 2001, p. 294), the aims of comparison is to understand a phenomenon or viewpoint and comparison is a tool and method for obtaining such recognition. However, here understanding the factual "stands" is desired and not the "cases". Since the context for criticism is more provided in comparison, the present papers aims to first introduce the stands of the main paradigms in humanities and then expose the result to the readers' judgment through providing a comparative framework. In addition, since the features of an issue or phenomenon should be firstly described and explained before trying to understand it, comparative method of this paper can be explained as follows: gaining recognition and understanding through explanation of the factual stands, commonalities, and differences of humanities research paradigms with a comparative approach.

3. A review of the concept of "paradigm"

The word "paradigm" was used for the first time in the English language in the fifteenth century as to mean "pattern". According to Thomas Kuhn, the founder of scientific studies based on the paradigm pattern, any discipline and knowledge takes shape in the context of a paradigm. Paradigm is a framework which determines a scientist's attitude towards the world and also characterizes the techniques and rules in the process of knowledge production (Kuhn, 2012, p. 36). Hence, it is a paradigm that answers to the questions such as what is the structure of a scientific issue and what are the possible answers and solutions to this issue.

The nature of paradigm is such that we cannot provide a precise definition for it, but it is possible to describe some of the significant components which constitute it (Chalmers, 2011, pp. 107-109). In Kuhn's opinion, scattered and various activities which are done before establishment of a new science finally come together in a common and generally accepted paradigm. Kuhn believes that paradigm is a scientific achievement that finds popularity and provides model for resolving the problems and issues over in specific period (Kuhn, 2012, p. VIII). Therefore, paradigm consists of general assumptions, rules and techniques, and their application that are used by scientists. A paradigm is valid as long as it does not face a failure in responding to new issues and problems. If a paradigm fails to do so, a paradigmatic revolution will occur. Therefore, scientific revolutions arrange a procedure incomparable with previous procedures (Sim, 2000, p. 13).

Nowadays, paradigm is defined as a system of fundamental beliefs and understandings in the worldview that directs the scientists and researchers towards a fundamental way in ontological and epistemological areas. In this sense, paradigms deal with fundamental principles based on believing in them. Therefore, there is no way for approving and proving their ultimate truthfulness (Lincoln & Guba, 1985; Hesse-Biber & Leavy, 2004).

However, paradigms are the main basis for the formation of different approaches based on tested principles which interpret the world's realities in relation to the results of scientific research and they can be the basis for other studies as long as they are valid. Hence, understanding the existing and important complexities in the real world is only achievable through paradigms (Patton, 1990, p. 37). Thus, it can be concluded that a scientific paradigm provides an intellectual system for scholars which involves basic assumptions, fundamental questions, and research measures (Neumann, 1997, p. 62). However, incommensurability of paradigms due to the difference in assumptions should not frustrate understanding their stands about a common thread, but the purpose is that the attitude of a paradigm cannot be investigated within another paradigm and based on its assumptions.

Since a paradigm specifies the authorized research criteria in any science that it is observing and guiding, any knowledge on the basis of the pre-adopted assumptions follows the process defined by the paradigm in order to enter the field of research. Therefore, scientific methodology is developed based on these assumptions, and then knowledge production process is put into operation by implementing the methodology, because methodology is also a model influenced by and consistent with the logical model of paradigm which enjoys the theoretical principles of a given science and its duty is conducting the research quality in the context of a particular paradigm.

4. Triple paradigms in the humanities

In the humanities, the point that is emphasized in explanation of the concept of paradigm is that realities in the world are identified as an intellectual model with reliance on paradigm and each of paradigms have their own attitude towards human, universe, and quality of human existence and activities in the universe (Iman, 2011, p. 46). Accordingly, paradigm indicates a worldview which provides the believers with details about the nature of the world, different and sometimes conflicting definitions of human, the human's position in the universe, and the range of possible relations between human and the universe. In fact, paradigm is a general organizing framework, both in theory and research, which involves fundamental assumptions about man and the environment, assessment models, and methods of achieving the answers (Mohammadpour, 2001, pp. 32-33).

In Sarantakos's idea, paradigms, as intellectual structures, determine the framework, procedure, and direction of scientific research. In the description and classification of intellectual views, he points to three types of paradigms

that underlie scientific methodologies in the humanities. These three perspectives or paradigms include positivistic, interpretive, and critical paradigms (Sarantakos, 1993, p. 33).

Many methodologists have proposed this classification of paradigms with different titles. For example, in the book "Research Methods in Architecture", these paradigms, as shown in Fig. 1, have been translated as positivism/post-positivism, naturalistic, emancipatory. Although, other terms such as "interpretive" or "structuralism" have been mentioned for "naturalism". However, the principle of separation based on paradigmatic principles and the point that each paradigm groups consists of a number of search systems that are common in some assumptions, are of great importance. The advantage of the proposed model is in the point that it does not impose a special order or a limited framework on the researcher (Groat & Wang, 2002, pp. 32).
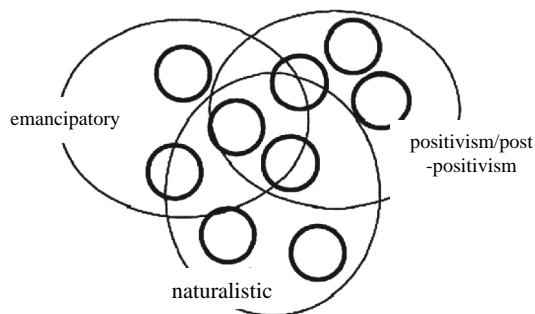

Fig. 1. Triple paradigms group (Source: Groat & Wang, 2002, p. 31)

The framework that the present paper relies on is related to the dominant paradigm of humanities which have been accepted by scholars in the 1960s and 1970s. In this framework, we also observe the same triple paradigms grouping that, in correspondence with their counterparts, refer to more general concepts and consider the previous paradigm titles as internal approaches. These three types of paradigms are as follows:

4.1. Objectivist Paradigms

Objectivist paradigms are widely used in scientific research and are divided into sub-branches such as "empiricism", "naturalism", and "behaviorism". In this group of paradigms, application of natural sciences has led to humanities research plans based on "quantitative methods" (Wells, 1978 & Bailey, 2007). In objectivist paradigms, scientific research is considered as an organized collection of methods that seeks to combine "syllogism" with precise experimental observation of facts in order to discover and verify "causal laws" for predicting the general patterns (Neumann, 1997, p. 63).

"Positivism", as the main approach in this paradigm, defines the objective and observable fact, organized out of

human consciousness and run by unchanging natural laws, in a way that can be understood by the senses. In this way, researchers will be able to recognize the reality through experience and describe them similarly. Equal recognition of reality is caused by the same understanding of it by human. Hence, an understanding that relies on "causality" will be helpful in recognition and prediction of events.

Positivists believe that only the logic of natural sciences is valid in differentiation between scientific and unscientific understandings and state that religious teachings and personal experience are not scientific, because they are irregular, irrational, and full of prejudice. Thus, the central point is the use of "scientific method based on observation" (Zuriff, 1985).

The resulting scientific cognition is aimed at "causal explanation" of phenomena. Unlike positivism, according to which only outer objectivity and reality can be recognized and achievable, post-positivism approach only gives some degree of probability to such recognition and assumes objectivity as a legitimate purpose which cannot be fully identified. In addition, this approach believes that experimental models used in natural sciences are not sufficient for research on human (Groat & Wang, 2013, p. 32). As a result, this approach adjusts applied studies with quasi-experimental methods. However, as post-positivism approach deals with objective reality and still adheres to scientific methods, it is classified as objectivist paradigms.

4.2. Relativist Paradigms

Relativist paradigms, originally rooted in "romanticism", with a "qualitative" and "inductive" strategies, aim to study how ordinary people lead their life and get their things done (Marshall & Rossman, 1992). The central principles of such paradigms are based on relationship, interpretation, and understanding everyday life. These paradigms, which are somehow linked to "hermeneutics", have expanded in artistic fields and have been introduced as a systemic analysis of meaningful action through direct and detailed observation of people's behavior in natural conditions in order to understand and interpret that how people create their own environment and give meaning to it (Neumann, 1997, p. 68).

Based on this group of paradigms, reality is not out and independent of human, but it goes on in human's mind and consciousness. Therefore, there is no predetermined fact that researchers discover. In addition, the life which is created through meaningful interaction of human, is also relied on the meaning system of individuals in the environment. Accordingly, life comes to existence as people experience it and the true identity of environment depends on people's definition of.

Relativists believe that understanding and "structural explanation" of people's everyday life and also correct understanding of the environment which is run based on folk wisdom are necessary for scientific recognition.

Reality is also created through interaction between people and is interpreted by them. Therefore, reality is a subjective phenomenon not an objective one which can be understood from people's point of view (Hughes, 1990, pp. 89-114). As a branch of relativist paradigms, "interpretive" approach, which is somehow associated to theoretical discussions of scholars who believed in differentiation between humanities and natural sciences, while emphasizing the meaningful or goal-directed action, deals with communication which reflects people's attitude towards meaning creation and their reasons and motivations (Blaikie, 2012, p. 32).

4.3. Critical Paradigms

Critical paradigms were developed with aim of making use of the advantages and strengths of relativist and objectivist paradigms and resolving their negative points. As the basis of approaches such as "dialectical materialism", "class analysis", and "feminism", critical paradigms try to combine general and legal regulations. Critical paradigms believe that science follows a critical process in research which goes beyond the surface to achieve the real infrastructure. In this way, human is encouraged to interpret the condition in order to create a better environment for him/her. Critical thinkers, following criticizing and evaluating the realities, resort to philosophical concepts such as freedom, truth, equality, and justice for fundamental developments (Blaikie, 2007). Some believe that the objective of sciences in critical paradigms is to explain the environmental order in a way that it can be moved to another position. To accomplish this, the role of scholars in focusing on crises and analyzing as false consciousness is very important, because critical paradigms assume folk wisdom as some sort of false consciousness, based on which people act against their real interests that have been defined in objective reality.

Folk wisdom is based on the appearance of reality which is artificial and deceptive, while reality is hidden behind it and is studied by researchers as it determines human behavior. Moreover, the planned direct observation is not sufficient, neither, because it is not specified that what should be observed. Hence, a recognition that is able to go from surface to the depth by using theory is considered a scientific one. Generally, critical paradigms, through "critical explanation", aim to plan and expand the understanding and consciousness that moves from surface to the depth of reality in order to increase correct awareness and recognition of people, especially weak individuals, in order to pave the way for changing the status quo in the environment.

5. Human and environment and their interaction from the perspective of triple paradigms

Since environmental designing has found a scientific nature, the issue of human-environment relationship and especially its quality has always been raised in scientific fields related to architecture and design. Therefore, recognition of humans and their living environment features and, more importantly, the quality of the interaction between these two phenomena has been seriously taken into account by researchers (Eynifar, 2008, p. 127). With the advancement of human knowledge and quality of life in the twentieth century, on the one hand, and following the use of widespread context of humanities such as social sciences and psychology in environmental studies, on the other hand, under the shadow of juxtaposition and interaction of environmental sciences and humanities, an interdisciplinary science called "behavioral sciences" or "environmental psychology" was developed which deals with the general theories of designing within a paradigm or theoretical framework based on correct understanding of human in the living environment. This paved the way for designers to deal with human-environment relationship methodologically. Therefore, architecture was also linked to the realm of modern humanities.

From the perspective of behavioral sciences, there are many assumptions about the impact of environmental features on human behavior. Confirmed by many environmental psychologists, most variables related to human and environment are correlated to each other two by two, as excellence of one causes the excellence of another (Jones, 1962, pp. 104-105). Once in correspondence with each other, these variables organize a hierarchy of communications that indicates a system of cause and effect.

Since designing should be based on the knowledge of interaction between human and environment (Rapoport, 2012, p. 16), the importance of addressing the quality of human-environment interaction becomes more significant and this is highly dependent on understanding of human and environment nature in different views. In addition, the relationship between human and environment is favorably established when common points are found between them in meanings. In the meantime, these commonalities can be considered in one side of this relationship, that is to say, studying the humans including identifying the human subjectivity and subjective meanings, culture, habits, beliefs, etc. But since the other side of this relationship is the environment, identifying the environmental features, its quality, and the factors affecting its quality is also necessary. The lack of correct and realistic understanding of the quality of human-environmental interaction can lead to environmental determinism, on the one hand, and designer-centrism and tyranny, on the other hand (Pakzad & Bozorg, 2012, p. 48). However, after introducing the common paradigms in the humanities as cognitive foundation of behavioral sciences, this part of the present paper will deal with human-environment relationship from the perspective of each of the introduced paradigms in order to identify their features in analyzing and evaluating the quality of this relationship.

5.1. Human-Environment interaction in objectivist paradigm

In objectivist paradigm, human is naturally introduced a profit-driven and reasonable creature who behaves under the influence of external factors, in a way that the same causes have similar effects on humans. Since human behavior is influenced by external forces, environmental objective events are studied based on causal laws. Considering the "authenticity of the environment", objectivist paradigms aim to define human under the influence of environment and general laws. The authority and will of man have no place in human behavior analysis based on these paradigms and everything provided based on human's authority and will is considered to have an unscientific identity. However, this does not mean that humans are dominated by absolute determinism. Since the environment is full of features to human behavior (Lang, 2014, p. 114), causal rules with the feature of being incidental determine human behaviors. Based on these rules, behaviors of most people occurring in various situations are explained and also the possibility of predicting the behaviors will be provided. In addition, human recognition based on observation of his/her behaviors and what happens in outer reality will become feasible.

Thus, from the perspective of objectivist paradigms, human behaviors occur in the life process based on the possible causal relationship laid in the environment. The general law of environment, which is affected by the causal relationship and is completely objective, empirical, and observable, has dominated human and their life. Environmental triggers affect humans as underlying variables and determine their all attitudes and tendencies. Thus, human construction is influenced by the environment and humans design their surrounding environment by relying on environmental laws that are discovered through scientific methods. Fig. 2 shows the human-environment relationship from the perspective of objectivist paradigms.
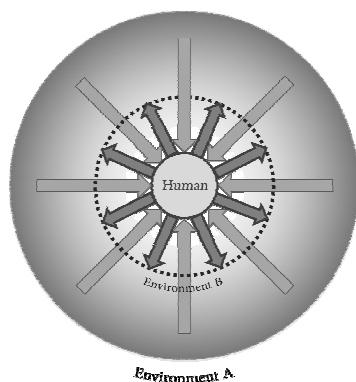

Fig. 2. The human-environment interaction from the perspective of objectivist paradigm (Source: author)

According to this figure, the human-environment interaction, influenced by the general law of Environment A, occurs independent of human and on the basis of the causal relationship, based on which, human designs the specific environment of B. Despite the environmental determinism which influences human life, this interaction can adjust the absolute and rigid laws such as separation and division to the benefit of humans. To explain human behavior in objectivist paradigms, the environment is referred to. Therefore, human, in the context of the primary environment, is the creature of their own environment from inside. Since environmental variables are detected through scientific modeling, discovery of general laws based on systematic processes somehow evokes the originality of rationality, humans try to discover the law by relying on their rationality.

As human live with two talents of "knowledge" and "ability", according to these paradigms, creativity is allowed the opportunity to be active under the influence of rationality. As a result, human authority and will, which is influenced by the creativity based on their ability, do not have the necessary independence and determinism of general or environmental laws to deal with human creativity management. All human constructions are valid as long as they are consistent with the general law. It should be noted that discovery of this general law which is based on knowledge-centered rationality is done by scientists and researchers (Iman, 2008, p. 35). That's why human phenomena are explained by causal laws. The objectivist view of this paradigm that promotes the adherence of man to the environment is related to lack of attention to human creativity. Hence, any out-of-rule reform is considered as a deviation.

5.2. Human-environment interaction in relativist paradigm

Unlike objectivist paradigm, relativist paradigm gives a great importance to human freedom, experience, and knowledge. However, it does not mean that the environment has no impact on human. In addition to defending authority against determinism, this paradigm believes that knowledge has a greater impact on human behavior compared to environmental factors (Lang, 2014, p. 114). Accordingly, human ability in creating a situation instead of being restricted to determined conditions is supported by this paradigm.

In relativism, it is believed that a flexible system of shared meanings is created by man in the human environment, based on which humans interpret their experiences and ultimately express their stand about the environment. Thus, the environment and life in it are both created by human. Therefore, in this paradigm, "originality of human" is emphasized instead of "originality of environment", and that's why humanistic approaches are based on this paradigm. Based on the definition of human on relativist paradigm, human dominates their

surrounding environment. According to this paradigm, human make the environment and nay human construction is meaningful and does not follow the predetermined laws. Environmental experience cannot have a fundamental impact on human life as long as it is not interpreted in the human meanings system. Therefore, the human ability to understand and interpret the environment is very important for human constructions. General rules, standardization, and globalization have no place in this paradigm and what is important and essential is a set of certain rules with a cultural approach.

In this paradigm, human is the creator of their own environment from outside and is in an active contact with it. In analyzing the relationship between human and the environment based on this paradigm, as shown in Fig. 3, human tries to experience Environment A where they are living in. This experience can dynamically influence human life when it is interpreted by the human meanings system. This interpretation gives a value to the experience and triggers human to use his/her life which leads to human constructions in Environment B. Since, according to this paradigm, human strives to create an environment instead of being in a ready environment, any environment is meaningful to its constructors.
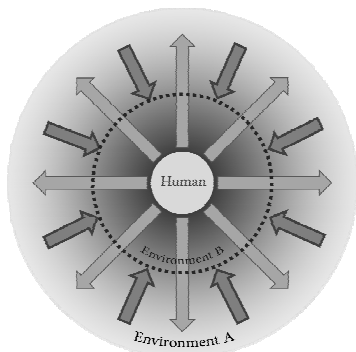

Fig. 3: The human-environment interaction from the perspective of relativist paradigm (Source: author)

Instead of focusing on the context of environment to explain human behavior, interpretive approach in this paradigm is based on culture and human environment. Although positivist approach respects rationality and knowledge by focusing on causal relationships in the environment, interpretive approach to human originality and their construction is based on human creativity and ability (Iman, 2008, p. 36). Thus, rationally, which seeks to methodologically discover the rule prevailing the human life, gives way to creativity as the inherent talent and ability of all humans and their defense power against environmental constraints. Unlike rationality that has high tendency to fixation, containment, and purposeful continuity, creativity is seeking changes and developments. These changes and developments are not

controlled and managed by general laws, so they are relative and find meaning only in specific circumstances. In this approach, with the power of building meaning and interpretation, human creates reality. According to this approach, human behavior, which is determined subjectively on a certain environmental and cultural context, and knowledge and cognition of self, which is formed together under the influence of subjective communications and through interactions with others, are basically created in an environmental structure.

5.3. Human-environment interaction in critical paradigm

Critical paradigm believes that humans have a high ability of creativity. Humans, even under the environmental determinism, justify their performance based on the conditions in which beliefs and ideas are formed with deception or false consciousness and its result is disability of humans in correct understanding of realities.

Therefore, in describing the nature of human, this paradigm criticizes any approach that ignores the human will and takes it as an object subjugated to the surrounding conditions. Criticism believes that the result of such an approach is passivity and alienation of humans from themselves and their creative force that despite enjoying hidden abilities and a superior creativity power for making changes and adaptability to conditions, are in dilemma between determinism and authority, cannot do anything against the prevailing environmental conditions, and their activities have no significant impact on environmental structures. Whereas, human activities mutually affect these structures and humans should be considered as creative and effective beings in the course of life that, despite creativity, following the changes, adaptation to conditions, are also talented in misunderstanding that would lead to their perplexity. Although the environment provide many capabilities to human behaviors, all these capabilities and features may be not understood and used by humans (Lang, 2014, p. 117). Therefore, competency of humans is very important in conversion of a "potential environment" into an "effective environment".

From the perspective of critical paradigm it is possible for humans who are living in restricted environmental conditions to get rid of such situation. Understanding the environmental laws and capabilities empowers humans to change the status quo desirably. Therefore, this paradigm does not seek to discover the fixed rules of human behavior. However, constraints resulting from infrastructures affect human behavior, but human can change the existing laws by understanding the law governing the environment. Fig. 4 depicts the relationship between human and environment from the perspective of critical paradigm.
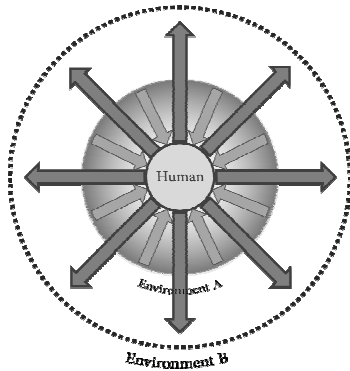
Fig. 4: The human-environment interaction from the perspective of critical paradigm (Source: author)

This figure implies a dialectical relationship between human and environment in which human can reach empowerment and emancipation through changing the existing conditions of the environment. Accordingly, the process of empowering and emancipating the humans occurs through their actions that are based on true knowledge. Environment A, in which domination of environment over human and disabling conditions for human prevail, is converted into Environment B by making changes, in which we can witness empowered human who are ready to convert Environment B into the next environment. The fruit of these transformations and developments is human excellence and promotion of human living environment.

According to critical paradigm, although human uses creativity to make purposeful changes and developments, he make changes under the influence of rules that have developed based on their own interests. Therefore, in this paradigm, with the originality of rationality and use of human creativity, we also witness some sort of determinism and dependence of human action on external environment. Therefore, like objectivist paradigm, environmental structure determines the type of human actions, with the difference that this structure faces fundamental changes based on the mechanisms laid in the environment and by a dialectic management (Iman, 2008, p. 38). The use of human creativity for purposeful developments also somehow evokes cultural activation in which creative actions result in fundamental changes in the environment and we will witness formation of new identities for human.

6. Analysis, and evaluation of paradigms

After studying the triple paradigms, it is obvious that each of the paradigms is able to provide a suitable framework for a research and a good study with useful theoretical and applied results can be achieved through all these paradigms. However, it must be borne in mind that compliance with any of these paradigms as the cognitive system of a study does not guarantee the study final quality because each of them have their own defects and problems (Groat & Wang, 2002, p. 34). Any researcher may prefer a certain paradigmatic system for his/her research, and then he/she will be evaluated within the same paradigm. Table 1 presents a comparison of three studied paradigms in terms of general stands.

Table 1

Comparison and evaluation of the triple paradigms of humanities in analysis of human-environment relationship

Paradigm	Nature of human	Nature of environment	Human-environment interaction
Objectivist	A passive and forced being with originality of rationality	The predetermined context by the general laws	Emphasis on objectivity of environment and adherence of human to (passive approach)
Relativist	A capable and autonomous being with the originality of creativity	Man-made environment with certain meaningful laws	Emphasis on human subjectivity and rejection of environmental laws by them (active approach)
Critical	A free being who seeks to change the rationality and creativity dialectic	Effective environment with latent capabilities	Emphasis on the relationship and targeted change of environment by human (an approach for actualization)

(Source: author)

Objectivist paradigm, with a strong focus on the environment, actually pursues originality of rationality. The objectivist view of this paradigm is related to lack of attention to human creativity. Hence, any out-of-rule reform is considered as a deviation and adherence of human to the environment is assumed as the guarantor of balance in life. Great changes have no place in this

paradigm and guidance of human is fully controlled by the outer environment which is based on causal relationship. This indicates determinism and some sort of "dogmatism".

Strongly focused on human authority and originality of their creativity, relativist paradigm negates the general laws governing the environment. From the perspective of this paradigm, all things are relative and certain rules should be accepted, which somehow leads to strengthening of "anarchism" in human environment.

Emphasizing on the determinism prevailing the environment, critical paradigm recognizes the originality of general law in the environment. However, since these laws are behind the apparent situation, it requires a true understanding and knowledge. Therefore, this paradigm also seriously takes human to be involved in environmental developments. In this paradigm, creativity is recognized but it is not considered independent and human is dependent on the external environment. Thus, any human construction will be out-licensed and the relationship between rationality and creativity is defined in a dialectic framework which results in "pragmatism".

Objectivist paradigm is criticized seriously by critical paradigm because of being reductionist, undemocratic, and inhuman. Positivism is disabled in consideration of meanings in people's mind and their emotional and perceptual capacities, so it provide an inhuman definition of environmental context. On the other hand, relativist paradigm has been criticized because of being subjective and relative. For instance, in interpretive approach, all public comments and views are considered equal, while the views of some classes of people are more important for making changes and developments. According to critical paradigm, relativist paradigm is passive in taking the responsibility to empower human in order to make changes in their environment and proposes no appropriate and correct solution for human emancipation and improvement of living conditions.

By emphasizing the transformational and emancipatory values, critical paradigm defines humans as they can make targeted changes in the environment. According to this approach, instead of a causal (objectivist) or mutual (relativist) relationship, human is in a dialectic relationship with the environment and law is defined at the service of human in line with improvement of living conditions and denial of domination. Although the role of human in excellence has been accepted in critical paradigm, determinism caused by acceptance of a certain type of development which is consistent with previously accepted processes cannot be ignored.

7. Conclusion

Since any analysis and explanation in designing research is influenced by its cognitive system, assuming that humanities teachings provide cognitive bases and fundamental assumptions of such research, the main pillars of such sciences should be seriously taken into account. Nowadays, cognitive systems in modern humanities are based on a paradigmatic model including different types of paradigms, the most important of which are objectivist, relativist, and critical. Therefore, it is necessary to understand the nature and quality of each of them. Any research requires a strong primary structure and if the knowledge of a discipline is based on strong epistemological foundations, it will grow and get generalized. We should also know that paradigms, as the cognitive systems of research, include assumptions that are rooted in fundamental beliefs about the nature of universe, human, and the position and quality of relationship between human and universe. Table 2 shows the difference in these assumption from the perspective of triple paradigms of humanities.

Table 2
Comparison of the human and environment and the quality of relationship between them from the perspective of triple paradigms of humanities (Reference: author)

Paradigm	Approach	Human-environment interaction	The ratio of Environment A and environment B
Objectivist	Environment-centered and fatalistic	The environment makes human	Emphasis on human rationality and wisdom in exploring the capabilities of the environment
Relativist	Human-centered and libertarian	Human makes the environment	Emphasis on human creativity and ability in converting the environment capabilities into possibilities
Critical	Interactive and probabilistic	Human goes beyond the previous environment and makes their own environment	Emphasis on human rationality and creativity in promotion of environment

(Source: author)

Hence, in man-made environment research (such as architecture and urban development) on the quality of human-environment interaction, this becomes more important, because components of research in this field include the concepts of human and the environment which the range of their relationships is different based on the assumptions of each paradigm. It is obvious that this difference leads to changes in questions and hypotheses and thereby the method and recognition concluded from the research results. Three general categories of fundamental assumptions, including ontological, epistemological, and methodological assumption, should be evaluated in analysis of the efficiency and usefulness of each paradigm on a given subject. Table 3 shows these differences from the perspective of triple paradigms of humanities.

Table 3

Comparison of research assumptions in the cognitive system based on triple paradigms of humanities

Critical	Relativist	Objectivist	Paradigm	
Probabilistic Neo-realistic	Libertarian Idealistic	Fatalistic Realistic	**Stands and approaches** **Ontology**	
Environment as multiple subjective realities	Environment as the uniform reality in multiple interpretation	Environment as a knowable objective reality	Understanding the nature of human and the environment	**Fundamental assumptions**
Objective/subjective recognition	Subjective recognition	Objective recognition		
Interactive link between objectivity of human and subjectivity of the environment	Interpretation of environmental findings by human	The importance of objectivity of environment and viewing environment without human orientation	**Epistemology** Understanding the relationship between human and environment	
A combination of quantitative/qualitative methods	Qualitative methods of Inductive inference	Quantitative methods of deductive reasoning	**Methodology** Method of research on human-environment interaction	
Critical explanation	Structural explanation	Causal explanation		

(Source: author)

Objectivist paradigm, with a fatalistic approach in explaining the human-environment relationship, follows "realistic" ontology according to which environment is viewed as a specific, uniform, and knowable subjective reality. In the meantime, humans observe the environmental realities without any orientation and discover and reveal their capabilities. Explanation of reality in this paradigm is the result of causal analysis with quantitative methods and its purpose is merely "improving the quality of the environment".

Relativist paradigm, with a libertarian, follows an idealist "ontology" in explaining human-environment relationship, based on which the uniform environment as multiple structures is identifiable for different individuals. In this regard, environmental findings are interpreted by human and their capabilities are converted into opportunities. Explanation of reality in this paradigm is the result of structural analysis with qualitative methods and its aim is "enhancing the human understanding of the quality of environment".

Critical paradigm has a probabilistic approach and follows a neo-realistic ontology in explaining the nature of human and environment. According to this approach, environment is knowable as multiple subjective realities and human try to understand the environment in an interactive link to it. Explanation of reality is done by a critical approach and a combination of quantitative and qualitative methods and the objective of research in this paradigm is to "develop the scope of human-environment relationships in order to create environmental quality and enhance the quality of human life".

References

1) Alipour, M., Hassani, S. H. R., 2011. Jurisprudential paradigm of religious knowledge; Qom, Institute of Seminary and University Research (in Persian).

2) Chalmers, A., 2011. The Nature of Science: An Introduction to philosophical scientology schools, translated by Zibakalam, S., Tehran, SAMT Publication.

3) Blaikie, N., 2012. Paradigms of research in humanities, translated by Hassani, S. H. R., Tehran, Institute of Seminary and University Research.

4) Eynifar, A. R., 2008. Evolution of human and environment theories and their role in development of basic knowledge of architecture, Journal of Andishenameh, Tehran, Center for the Study and Research of Planning and Architecture, Ministry of Housing and Urban Development.

5) Groat, L., Wang, D., 2013. Research Methods in Architecture; translated by Eynifar. A. R., Tehran University Press.

6) Iman, M. T., 2008. Paradigmatic assessment of human as an essential element in the design of the divine paradigm, Journal of Humanities Methodology, vol. 14, no. 54, pp. 25-46.

7) Iman, M. T., 2011. Paradigmatic foundations of qualitative and quantitative research methods in the humanities. Tehran, Institute of Seminary and University Research (in Persian).

8) Lang, J., 2014. Creation of the theory of architecture; translated by Eynifar. A. R., Tehran University Press.

9) Mohammadpour, A., 2011. Method in method: about making knowledge in humanities, Tehran, Publication of Sociologists (in Persian)

10) Motallebi, G., 2001. Environmental Psychology: a new knowledge in the service of architecture and urban design, Journal of Fine Arts, Tehran University.

11) Pakzad, J., Bozorg, H., 2012. Alphabet of environmental psychology for designers; Tehran, Armanshahr Publication (in Persian).

12) Rapoport, A., 2012. Culture, architecture and design; translated by Barzegar, M. and Yousefnia, M., Sari, Shalfin Publication.

13) Razjouyan, M., 1996. An overview of coalition between architecture and behavioral sciences in the last half-century, Soffe Journal, no. 23, Shahid Beheshti University Press.

14) Sim, S. and Buryn, V., 2003. Critical theory; translated by Yazdanjoo, P., Tehran, Shirazeh Research and Publication.