

The Concept of Authenticity in Restoration Analysis of Monitoring and Restoration in the Authenticity Preservation of Cultural Heritage

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Abstract

It has been acknowledged that non-physical forms have a prominent role in the creating and maintenance of architectural heritage; therefore, it is vital to recognize these forms. Today, much attention has been focused on architectural topics such as sustainable architecture and utilizing passive energy. This has resulted in extensive developments in that field. However, the importance of concepts and values with crucial roles in representing the authenticity of a heritage should also be a matter of concern. Investigating these concepts could reveal a great deal about the vital role of non-physical form aspects of originality. Moreover, regarding the values, the subject of authenticity is the main emphasis of the global community in maintenance and restoration of historical places that can be interpreted according to different times, locations, conditions, and specifications. In order to achieve this goal, Athens Charter in 1931 started an international movement to prepare the required international documents. Subsequently, the International Center for Study, Care, and Restoration of Cultural Assets was founded by UNESCO. Later, in a statement that became known as Venice Charter, the Second International Congress of Architects and Specialists of Historic Buildings in 1964 determined the required solutions for restoration of historic monuments and sites. Nara Document on Authenticity (1994) introduced a widely accepted concept of the authenticity to the community of architects. The diversity and locality of values in the other charters with spiritual, cultural, social, economic, aesthetic, historical or scientific nature have also been considered (Bora 1996; St. Antonio 1996, the Charter of the architectural heritage of Europe Congress of Amsterdam 1975). On one hand, the former documents investigate the role of monitoring and controlling, and the preservation of cultural heritage's treatment on the other hand. Some criteria are introduced in this study for both

monitoring and the restoration of cultural heritage. Then, by separating qualitative and quantitative variables and weighting the criteria, the impacts of these two factors are examined for further discussion of the results.

Keywords

Authenticity, Cultural Heritage, Values, Monitoring, Control, Treatment

1. Introduction

Regarding the values, authenticity is emphasized by global communities as one of the strategic categories and evaluation of preservation and restoration activities of historical sites. Authenticity is justifiable based on location and time, conditions and characteristics of different works. *Authenticity* was introduced in various charters of architecture such as the introduction of the Charter of Venice (1964), and the charter paid special attention to historical authenticity. However, authenticity was discussed in another document (1994 Nara Document publication) as a new concept in the preservation and restoration objectives and methods. Another statement discussing authenticity (statement of St. Antonio) emphasized on the process of preservation and management of cultural heritage and sustainable development. The concept of authenticity has attracted the attention of global communities since the late twentieth century, concerning buildings and historical monuments.

Experts in various fields tend to discuss about *authenticity*, since it is an interdisciplinary subject. The literature review concerning authenticity reveals that writers consider various aspects of it. However, the conducted surveys have so far failed to define the authenticity, properly. Absence of quantitative definition can enrich the studies or maintaining historical monuments and cultural heritage. According to many of the experts, authenticity can be studied only by the qualitative approach. Nevertheless, the quantitative data are sought in this study. What has been taken into consideration so far is the historical authenticity based on the physical judgment dealt with in international recommendations and charters. Although maintaining the original documentation is very important, the relation between creation of a work and the cultural context for recognizing the work is considered as the basis for the authenticity, since architecture is the result of collective works.

Two main topics are discussed in this study, which are: *Monitoring and controlling*, as well as *treatment on the preservation* of the authenticity of the building and cultural heritage. Each of these two topics includes some main indices. The outlined questions in this respect are as follows:

1) How is the effectiveness of *monitoring and control* on one hand, and *treatment on preserving* the authenticity of the building and cultural heritage, on the other hand?

2) Due to the fact that body of work is exposed to continuous erosion and transformation concerning climatic and functional conditions, what indicators can be defined for the authenticity of building and cultural heritage?

Some indicators are defined for each of the independent variables (monitoring and control) and dependent variables (treatment). Then, we shall prove the hypothesis by separating qualitative and quantitative indicators, and ultimately defining qualitative indicators and weighting the quantitative indicators.

2. Literature Review

By considering authenticity aspects: Theoretical basis, History and Theoretical Framework.

2.1. Theoretical Basis

2.1.1. Authenticity from the View of Material Integrity

As the most tangible part of its appearance, constructional materials of a historical landmark are first historical evidence to the contemporary humans. In fact, the direct presence and immediate understanding of the materials transform them to the safest and most consistent historical evidences, to realize the truth of the work without any further interpretations. On the other hand, the direct physical connection of humans, as the creators of materials, gives a glorious reputation to the work that subconsciously leads in creating a sense of belonging to contemporary man, providing an intuitive understanding of truth (Hojjat, 2001: p. 85, and Rahimzadeh, 2010: p. 257).

2.1.2. Surface as a Criterion of Authenticity

Designing an artifact in its most general concept is a way of visualizing thoughts and aspirations of the creators in the material form. This visualization, which covers a wide range of selection such as building materials, choice of appearance, adjusting the proportions and sizes, and finally combining all these features in a single product, gives a unique nature to the work, which is transformed by partial and small changes that damages the authenticity of the work. Therefore, preservation of the design authenticity indicates attempts in preserving all the details and finally their ratios with each other. When a historical building is not manipulated or repaired, its historical value will be increased.

2.1.3. Authenticity in Traditional Communities

The theory of Mulla Sadra's authenticity indicates that imagination of a fixed thought for a work is the only specific product of human mind functioning. He proposes "existence" as an objective fact and truth, extrinsically. In philosophy and ontology, authenticity means real and objective against delusive, imaginary, and crediting aspects. Authentic, in dictionaries and in common sense is something which is good, noble and honorable.

2.1.4. Definition and Terminology of Authenticity

In English, authenticity is used in conservation and restoration, as Oxford dic-

tionary has derived it from the Latin word *authentic*, ancient French word *authentique*, and Greek *eotikos* (McIntosh, 1976). This is a term that means “perfect match”, “unimpeachable status”, “reliable”, “real”, “unique” and “original and pure creative example”. Hence, this term means the quality of an object in accordance with its claimed quality. It is also used to describe the creative work against duplication.

“Asl” [original], in Persian language means root and origin, and idiomatically, it means a person’s ethnic and family origin that has root of individual major features and behavioral factors. Authenticity means having a root or decency basis; however, in the field protection and restoration, authenticity is considered as the truth of any object in connection with cultural, historical and natural context.

However, the point inferred from the terminology is that authenticity pays attention to the truth and importance of the work, i.e. it is highly regarded in the process of recognition and protection of cultural heritage; thus, authenticity is directly associated with values, while it is a value on its own, and it expresses the truth, importance and credibility of the work. It is a way to ensure about the true values associated with work and the attributed characteristics. Therefore, as the basic concepts, cultural values are realized by measuring and assessing the situation and understanding the different aspects of authenticity. However, this understanding depends on the creator of the work. Different interpretations and other aspects in the diverse cultural contexts show that understanding authenticity is not easy, and a rule or general framework cannot be considered for it. At the same time, every point of it should be considered and all of its aspects should be taken into account. Thus, we will first study the main aspects of authenticity and current challenges in this area, which are led in effective and identification methods in repairing and restoration of a work or construction.

2.2. History

Authenticity in Different Resolutions

1) Congress in Rome

International Congresses of Modern Architecture (CIAM) was established in 1928 to 1933. The fourth congress was held in a cruise ship between Athens and Marseille in 1933. The Rome Congress is a periodic part of CIAM, which was held in Rome in 1972. Its important goal was to improve a physical and historical improvement of space, and consists of two principles as follows.

- a) Protection of the organs and main elements of the city
- b) Protection of the dignity and identity of the city

The intervention areas in it included the whole city, the land-uses and modernization; the intervention follows the protective-decorative technic; and the required methods of execution include reconstruction practices and renovation (Rajabi & Mozafari, 2011: p. 86).

2) Nara Document (1994)

The required conference was held in Japan by UNESCO, ICOMOS and ICCROM; its purpose was giving authenticating and identity to the cultural, native, and national heritage, in contrast to some points including globalization and homogenization. The main principles for the “Nara” Document include:

- a) Paying attention to the original values and identity
- b) Maintenance and preservations in order to highlight the collective memories of people
- c) Recognizing the diverse groups and cultures, as well as the heritage of each community that belongs to everyone.

The intervention was directed in the cities and villages; its method of execution is renovation and restoration; its method of intervention was local-subjective, and its uses follow updating practices.

3) St. Antonio (1996) Statement

This statement was signed between the American countries and Texas by UNESCO, emphasizing on tourism, sustainable development, opposition to the movement of people, and historic urban contexts. Its purpose was to care about “authenticity” in the process of protection and management of cultural heritage and sustainable development, simultaneous authentication and monitoring, paying attention to the authenticity of the surrounding areas, as well as understanding and communicating the rich spiritual - history values. It aimed for the required reformations and modernizations.

2.3. Theoretical Framework

Two main topics are discussed in this study to provide a theoretical framework for maintaining the authenticity of different works and constructions. *Monitoring and control* as well as *treatment* can be effective in preserving the authenticity of the building and cultural heritage. Each of these two topics covers four main indices. Indicators for *monitoring and control* are defined by *material aspects* (aggression to views), *visible horizontal lines of buildings or open spaces*, *air and noise pollution* and *the economic, social, and cultural dimensions*. Four considered indicators for *treatment* include *constructive form and material*, *sense of belonging*, *the capability of the architect*, *preserving local arts and attracting public participation*.

3. Reviewing Two Different Views about Authenticity in the Nara Document and the Charter of Venice

- Scholars in Asian countries and other traditional societies have considered Venice charter to be “Europe-oriented”, lacking the capability to judge about protective measures in their countries.
- Observing these criteria is contradicted with the process of maintenance of large number historical buildings which have a dynamic presence in the traditional ethnic groups.

- According to the Nara Document, “Authenticity” and “the trueness of work” are equal.
- Authenticity based on loyalty is a complex issue which is in contrast with the material integrity, depending on the subjective arbitration.
- Instead of the structural integrity due to a theoretical inclination, the Nara Document and relativism crisis provide diverse location and time-based interpretations.
- Reviewing various criteria used for the authenticity of constructions shows concentration of each of them on a limited number of characters.

4. Authenticity Indicators

Authenticity is a feature of the cultural heritage, and therefore, understanding it is considered a historical matter. This should not be exclusive for a unique aspect, and it should be based on a critical judgment of the whole complex. The point that is mainly considered is the historical authenticity based on physical judgment of the work, which is dealt in international recommendations and charters. Although preserving the original document is very important, the relationship between the creations and cultural context is of great importance for understanding the impact authenticity since architecture is the result of collective works (Bolkhari Qehi, 2015: pp. 189-204).

Facts about the works and constructions at the time and also during the creation, and when they are known to be evaluated should be transparent, to its possible extent, regarding to the fact that the body of work is exposed to erosion and successive transformations, in terms of climatic and applicable conditions. The other aspects of the authenticity, i.e. traditions, cultural values and historical, social and other environmental systems ensure the survival of historical constructions. Interventions of the next generations can lead in higher enrichment of the work, while it may reduce the authenticity of the construction. Therefore, the authenticity can be found in the following three fields:

- 1) Historicity and substance
- 2) Creativity and continuity of tradition
- 3) Values and cultural diversity and environmental systems

Authenticity indicators

Historicity and substance

Creativity and continuity of tradition

Creativity and continuity of tradition

4.1. Historicity and Substance

This classification of authenticity points out to the material aspect of authenticity, which refers to various issues such as materials, technology, periods, and physical and historical development, as well as other items relating to material.

4.2. Creativity and Continuity of Tradition

Creative process occurs in a historical period and with a certain theme. Regarding the time and location circumstances of the creator(s), this process relies on the imaginations and understandings. The available things are easier to be identified and whatever is beyond these values needs more time to be understood by the community; however, new understandings are required for future generations and using extrinsic features gain imitating aspects, and the past imitation leads to mockeries rather than gaining values, which is in contrast to the authenticity. This is the way that generations learn to understand the values. In this respect, we experience two main issues, i.e. change and continuity, of which a logical interaction should be gradually formed between them.

An important point in continuing the tradition is imitating the past experiences, which is quite different with that of today. Imitation or duplication in the past was considered as a part of the production process (Falamaki, 2004: p. 52). Many of the norms of aesthetic techniques were used by earlier experts. These techniques transferred from different generations were considered secrets of learning, providing innovation in the course of time. Therefore, there used to be a creative interpretation of various concepts even in seemingly similar techniques. This point, which could be frequently seen in architecture and other arts, led to developments and eminence of a method or framework. Even in the final stage, a wider context was created for creativity and diversity, which is quite different from imitation (copying) that is used today.

Thus, traditional and cultural backgrounds in using historical methods are considered as the part of authenticity for the restoration and repairing activities. In societies where this tradition has been lost in them, the use of templates as well as other cultural backgrounds makes the construction far from its reality and authenticity (Talebian, 2003: pp. 562-574). The point in authenticity to be considered is the different dimensions related to human actions and art productions, such that the art works should be regarded as living creatures, in which time has happened for them continuously. Therefore, observing all the characteristics of cultural and artistic features of a construction over time and in different periods of its life reveals that the construction has gone through various situations.

4.3. Values and Cultural Diversity and Environmental Systems

Another indicator of authenticity aspect is the cultural diversity and environmental system. It is emphasized in the Nara Document that the cultural diversities and their heritage are indispensable sources of spiritual and intellectual enrichment for the whole humanity. Diverse values and abstract concepts created by different cultures and the re-interpretation by generations with continuities and changes indicates the fact that it has special authenticity in connection with peripheral systems, including environmental behaviors, structures and natural geographical, cultural structures, infrastructure, and

human handmade humans that have evolved over generations and provide unique features that create the motif for the emergence of some of the considered concepts and systems.

This aspect of authenticity indicates the natural structures such as plant coverage and especially the intangible aspects of culture, such as language and other cultural structures, in dealing with the constructions including pilgrimage nomadic routes and certain places such as holy places and other important and dynamic system such as the water supply system.

5. Indicators for Preserving the Authenticity of Cultural Heritage

“Historical values” is a general set of values deposited by the creation of a work, which result apart from the historical continuity of it in the creation process. Preserving the specific quality of authenticity can be assessed from two definite aspects. The first aspect is received in four main forms, i.e. “materials”, “plan”, “relationship with the physical substrate”, and “skills”; the second aspect is in the form of historical values resulting from the manufacturing process. (Authenticity in the Executive Guide to the World Heritage Convention is known with four different factors, i.e. design, materials, skills and subject).

Hence, the evaluation of “integrity of the work” indicates the evaluation of four factors “materials, design, relationship with the bed and skills”. The quality of reparations and modernization in the construction and amount of damage due changing it from the time of considering the construction as a “Cultural Heritage” are among the determining factors for the rate of “integrity” of the four mentioned factors.

5.1. Historical Values Resulting from the Construction Process and the Design of the Work

These values are resulted from the construction process of the building and therefore, they are associated with factors and elements subjected to this process. In this regard, the work is evaluated by reviewing human thoughts and demands in the form of an artificial work (Talebian, 2010: pp. 365-373). Evaluating “the quality of ideas” and “quality of constructions” are two main strategies in this assessment and reveals the aspects of its historical values:

5.1.1. The Quality of Idea the Work

The assessment of forming the work, in fact, means the perception and evaluation of the ideas and aspirations beyond the material body. In this sense, whatever the desires and needs causing the authentic work conforms with the basic human ideas and requirements, the idea of forming the work is more authentic, more correct, and richer. It can be seen from this general and abstract interpretations that the diagnosis of measuring the conformities with the wishes and needs is a very difficult task, since the authenticity and richness of human aspirations are not precise, as if they are defined relative to the worldviews of human

beings. In other words, the quality is absolutely intuitive that is not reckoned by regulating certain factors. However, some of the specifications and characteristics can be help through partial and limited approaches. We can recognize the aspects of authenticity and richness of the underlying ideas in cultural heritage. We followed the “tradition” of the most important features on the richness and originality of the idea of the work, since tradition is the inherent product of desires and deep-rooted needs. In fact, the survival and continuity of traditions can be the main indication of their rightfulness and richness.

5.1.2. The Quality of the Work Design

Assessment of the quality of a construction design is known as quality of demands and needs of man in the position of the creator of the work, and in fact, it indicates the perception and evaluation of the utilized knowledge and skills in the construction process, measuring the proportion of the aims and human requirements with the constructed work. Assessment of the quality of the work design in both scales is pursued in the “zone of work and its constituent elements” and “basis involving the works and the mutual relations with each other”.

5.2. Nonrenewable Historical Values

In this article, the authenticity and reality of a historical construction is not limited only to the primary hard stage, and in fact it is the result of all features that the work gradually received in the course of the history via the set of circumstances and developments. In this sense, all the developments occurring in the course of work history are considered as a part of the reality and regarded as “authentic”. Thus, the “authenticity of historical building” is not reduced to the deposited features at the time of its creation, involving all the transformations which took place during the course of its history known as “cultural heritage”. However, by the time it occurs, and due to the changing relations of man with the work and consequently the role of humans in connection with the work, from a pure user to the one who protects the work, outside the normal course of life, any transformation in the work is as a human production, which distorts the original nature. Thus, it can be concluded that any transformation after consideration of human artifacts as a “cultural heritage” is regarded as a “disturbance”. The evaluation of the rate of “disturbance” is one of the necessities of preserving the authenticity of the work, guaranteeing the verification of the historical implications. The combination of these effective factors results in the following points:

5.2.1. Non-Disturbance of the Materials

Authenticity of a construction is the most precious aspect of it, which is directly related to the intrinsic values, and is not renewable whatsoever, since materials of a historical building have differences in their nature with the construction materials, getting the notion only in relation with past human beings and the

time that is of irreversible quality. In fact, materials of a historical construction have something beyond stone and wood, etc., having deep expressive sense in itself, which makes it unique and depends on the nature and historical value. Therefore, since any damages and replacing materials vanish such values, preserving the authenticity is possible only with careful and sympathetic preservation. Moreover, as much as the work is not manipulated for the assessment of the capabilities of the construction, the work can have greater richness and historical values.

5.2.2. Non-Disturbance (Integrity) of the Design

Preserving the authenticity of design means dedication in keeping all the non-renewable details, how to deploy these details and their relationship with each other. Moreover, as much as the work is not manipulated for the assessment of the capabilities of the construction, the work will encounter greater richness and historical values.

5.2.3. Non-Disturbance (Integrity) of the Construction Relations with Its Physical Substrate

The relationship with the physical substrate implies the interaction of building with its surrounding environment. Understanding the truth of interaction between the construction with the physical substrate and its authenticity lies in the range of scrutinizing identification of the surrounding environment. Thus, as much as the work is not manipulated in assessing the capabilities of the construction, the work shall have greater richness and historical values.

5.2.4. Non-Disturbance of the Skills

Like other physical features, a construction is unique and inimitable due to its non-renewability. Moreover, as much as the work is not manipulated or repaired in assessing the capabilities of the construction, the work shall have greater richness and historical values.

6. Categorizing the Authenticity Indicators in the Reconstruction and Restoration of Cultural Heritage, According to the Research Hypothesis

One of the issues that often arise in the subject of authenticity in cultural heritage is justifying and explaining the scope of reconstruction. The certain point is that the reconstructions without having sufficient evidence and historical documentation would be questionable in terms of authenticity, especially when it affects visuals and technically complex implementation of the work (Samadi, 2003: p. 60). Venice Charter has emphasized only minor cases and with credible evidences. According to the indicators of authenticity, two categories of indexes can be discussed to maintain the authenticity of the work. These indicators can be discussed for the treatment and monitoring restoration of cultural heritage protection of the authenticity:

Indicators for monitoring and control:

- 1) Material body of work (its emergence in the material world)
- 2) Protecting the privacy of building and no aggression to other landscapes
- 3) Cultural values and diversity and environmental systems
- 4) Values and cultural diversities and environmental systems

Indicators for treatment and restoration of building:

- 1) Integrity and non-disturbance of the producing forms and substances
- 2) Sense of belonging of the contemporary humans to the historical constructions
- 3) Ability of architect
- 4) Preservation of native arts
- 5) Attracting public participation
- 6) Maintaining architectural traditions

To prove this hypothesis (the impact of indicators in preserving the authenticity of heritage), they were divided into two categories, i.e. qualitative and quantitative groups. Qualitative indicators are operationally defined. Qualitative indicators include values and cultural diversity and environmental systems, the sense of belonging of the contemporary humans to the work, the ability of architect, preservation of native arts, attracting public participation, and maintaining architectural tradition

Quantitative indicators:

1) “The number of structural elements preserved as original and their area in terms of square centimeters” is used instead of the qualitative index of “maintaining the physical body”, which includes:

- a) The number of preserved structural elements, such as columns, arches, ceilings, etc.
- b) The area of the preserved walls and load-bearing walls
- c) Non-load-bearing preserved walls area
- d) The area of preserved array area such as sirloin, tiling, and “mogharnas (decorated with paintings)” and ordered tiling, carving, and brick works, etc.
- e) Area and the number of doors and windows and the preserved skylight
- f) Dimensions and number of constructed elements such as stairs, flooring, dock, and waterfront, and...

2) Instead of the qualitative index of “no aggression to the other landscapes”, we use the number, location, area and distance of the privacy detrimental physical and visual elements building” that include:

- a) The number of local elements that can be seen with the area and degree of viewing in sky line.
- b) The number, location, and dimensions of physically damaging elements that damage the construction, such as the number and dimensions of the excavations, roads and traffic in the hours or minutes, and also the mentioned route of the construction limits from the road, urban facilities like drainage pipes, electricity supply and gas and water supply networks, telecommunication lines etc. by mentioning the number, location and the distance from the building also

the rate of the damage to the building.

3) “The rate of air pollution relative to PSI or pollutant standards index” based on the following indices and calculation of the effects on the physical body is used instead of the indicator “air pollution”.

a) “Determination of noise pollution in terms of decibels” is considered for the distance of hundred meters.

4) Instead of “public participation”, we use the number, amount, and the type of public assistance to maintain the construction.

Descriptor	PSI
Good	0 - 50
Moderate	51 - 100
Unhealthy	101 - 200
Quite unhealthy	201 - 300
Hazardous	301 - 400
Quite dangerous	More than 400

Qualitative	Quantitative
Values and cultural diversity and environmental systems	The number of structural preserved elements in terms of square centimeters
The sense belonging of the contemporary humans to the work	The number, location, area and distance of elements physical and visual privacy of building
The ability of architect	percentage of air pollution in PSI and determination of noise pollution in decibels until a hundred meters radius
Preservation of native arts	The number, amount and type of public aid attracting to maintain the building
Maintaining the traditions of the architect of the construction	

7. Weighting of the Indicators

A questionnaire with five-point Likert spectrum scale was administered to analyze the data, to convert the qualitative responses to quantitative ones:

- 1) Frequency response for each option is determined in each index.
- 2) Frequency of each option is multiplied by its weight.
- 3) The results of multiplications are added together.
- 4) The resulting number is divided by the number of respondents, the rate of which is considered as the terms of weighted average of the index.

The process for the ten indicators (measures) was conducted through a questionnaire. After calculating the score for each indicator, the amount of the utility will be specified. It allows researchers to determine the amount of utility. To determine the utility of each three-part index, a three-part spectrum was used according to the 5-point scale questionnaire with three scales including favorable, relatively favorable, and unfavorable.

Index	The number of respondents	The frequency options					The total weight of the index	Weighted average of index	Quality Index	weight percent of indicators
		1	2	3	4	5				
1) Non-disturbance of the substance	6	0	0	0	5	1	25	4.16	favorable	69%
2) Sense of belonging for contemporary man to monument	6	0	0	1	4	1	21	3.5	Relatively favorable	58%
3) Ability of architect, constructive effect		0	0	2	2	2	32	5.33	favorable	88%
4) Architectural constructive tradition		0	0	2	2	2	32	5.33	favorable	88%
5) Maintain Indigenous arts	6	0	0	0	4	2	28	4.66	favorable	77%
6) Public participation		1	3	2	0	0	13	2.16	Relatively favorable	36%
7) Physical aspects of work	6	0	1	0	4	1	21	3.5	Relatively favorable	58%
8) Protect the privacy of building and non-aggression other perspectives	6	1	0	2	2	1	16	2.66	Relatively favorable	44%
9) Air and Noise Pollution	6	0	1	0	4	1	7	1.16	Undesirable	19%
10) Values and cultural diversity and environmental systems	6	0	0	2	3	1	21	3.5	Relatively favorable	58%

7.1. Operational Definition of Intervention

- Economic, social, and cultural dimensions:
 - Emphasis on enough required attention to rapid deformation and/or growing cities, natural landscapes, and heritage routes
 - Highlighting the need for official recognition, supporting, and proper development of the heritage
 - Reduced threat of deformation against perfection of authenticity and values
- Sense of belonging:
 - Make a distinction between new and old sections
 - In such a way that the human spirit still remains, creating the “sense of belonging” to the contemporary human.
- The ability of architect:
 - Minimum physical intervention in the construction due to the ability of producing architect of the work

Quantitative Definition of Intervention

Intervention in Arabic language is interference in entering someone's work and interferes in the affairs of others. These words have a negative connotation that is somehow associated with entering in what sense is unjustified; the unjustified aspect is because the intervention has transformed the natural trend of the phenomenon (positive or negative), diverting it from the usual route.

This word is also used to protect specialized position. Open sense of involvement is along with the changes in the construction, “so that any changes in the current situation of the construction is interpreted as the intervention” and “any changes or modifications, repair and maintenance of historic environments are called intervention” (COTAC, 2009).

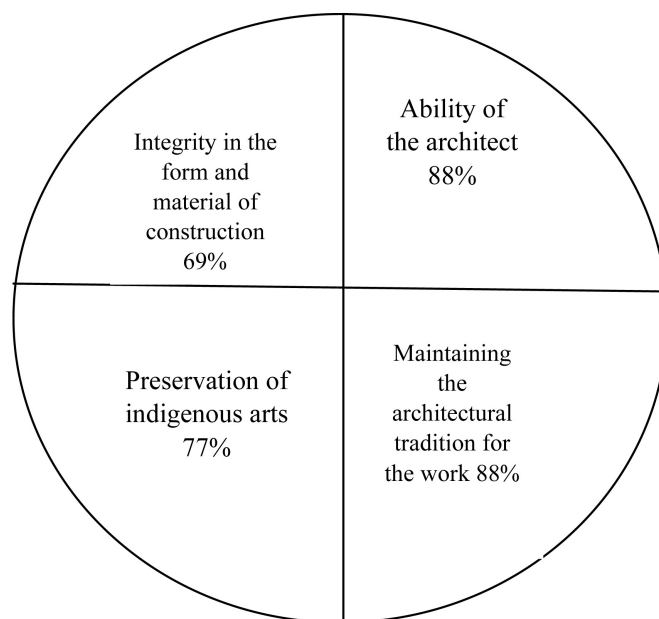
Therefore, the clear intervention in the protection field of historical constructions indicates entering in the natural process of work life and performs actions for the required modifications to them. However, in the new protection culture “intervention indicates any activity which causes disruption, invasion or changes in the work” (ICOMOS, New Zealand, 1993-2010).

7.2. The Operational Definition of Variables Based on the Weighting of the Indexes

According to the above definitions, authenticity in constructions is “integrity in the constructing form and substance of the work, the ability of architect, keeping tradition, and preserving the indigenous arts and public participation in maintaining the authenticity of cultural heritage, as the most important measures.

8. Summary

Relying on the previous chapters, it is tried in the present article to consider the preliminary questions for the conclusions. Effectiveness of the control and supervising variables from one side, and preserving the construction authenticity and cultural heritage are done by ten main indices. By surveys conducted in this research to conclude the two factors of monitoring and controlling as well as the treatment factor, the required effects are directly formed for preserving the authenticity of cultural heritage. It can be said that by using the judgment of experts applying a Likert spectrum in the questionnaire, the quantitative indicators are analyzed and the rates of weights have been calculated. The percentage of highest weight (88%) belonging to two indicators was for the capability of the architect and the maintaining traditions. Then, the other two indexes of 77% and 69%, respectively, are for the preservation of indigenous arts and integrity in the form and substance, which are favorable for the indicators of the constructing



effects. From remaining six indicators, only 19% indicators with weight percent (The min. amount of weight percent) are the undesirable element indicators, i.e. the least amount of impact on preserving the authenticity of influence. Five indicators of the sense of belonging, physical aspects of work, protecting the privacy of building, values and cultural diversity, and public participation are relatively favorable indicators, and the percentage of their weight varies between 36 - 58.

It can be said that based on the control and monitoring and treatment and restoration of buildings, the most important factors for preserving the authenticity of cultural heritage factors are continuity and preserving the architectural traditions of constructing body of the work, maintaining the form, material and design work, and ultimately preserving the indigenous arts and values of each region and their public participations.

9. Conclusion

The following issues are taken in to account in this article:

The effect of variables for *monitoring and control* on one hand, and on the other hand, *treatment* on preserving the authenticity of building and cultural heritage conducted through ten main indexes. In this research, in order to find the traces of the two independent and dependent variables presented in ten indicators and by separation process of quantitative and qualitative indicators, we also provided an operational definition for quality indicators and weighting of the quantitative indicators. This research aimed to answer the question regarding the actual influences on variables preserving the authenticity of constructions. According to the indices for each of the independent variables (control) and dependent (treatment), we separated qualitative and quantitative indicators, and finally, the required hypothesis is proved through defining the qualitative and weighting indicators and considering the quantitative indicators. The research was conducted through a questionnaire and score of each index was determined. After calculating the score for each indicator, we specified the amount of the utility of it. It allows researchers to determine the rate of utility by selecting the stronger indicators. To determine the amount of utility, a three-part spectrum was used with five-point scale, of which the favorable, relatively favorable and unfavorable conditions were considered.

In terms of climatic conditions and located functions, the body of work exposed erosion and dynamics of transformation. Hence, the authenticity of a construction and cultural heritage can preserve their dignity and discover the reality of the work at the time of creation, and the required criteria can be evaluated during the life of work and when the work or construction has found its identity. Accordingly, in this research, the authenticity of indexes could be found in the following three fields:

- 1) Historicity and substance
- 2) Creativity and continuity of tradition
- 3) Values and cultural diversity and environmental systems

Other aspects of the authenticity are the means traditions, cultural and social values and other environmental and historical systems that ensure the sustainability of the work in the length of time.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- Bolkhari Qehi, H. (2015). Art and Identity. In *Articles Collections of Theoretical Principles of Art* (pp. 189-204). Tehran: Institute of Islamic Culture and Art.
- Falamaki, M. M. (2004). *Rehabilitation of the Historic Buildings and Cities* (5th ed.). Tehran: Tehran University Press.
- Hojjat, M. (2001). *Iran's Cultural Heritage, Policies for an Islamic Country*. Tehran: Cultural Heritage Organization.
- ICOMOS New Zealand (New Zealand National Committee of International Council on Monuments and Sites) (1993). *Charter for Conservation of Places of Cultural Heritage Value*.
- ICOMOS New Zealand (New Zealand National Committee of International Council on Monuments and Sites) (2010). *Charter for Conservation of Places of Cultural Heritage Value*.
- McIntosh (1976). *Oxford Dictionary of Current English*. Oxford: Clarendon Press.
- Rahimzadeh, M. et al. (2010). Position of Understand Values Inherent of the Monument in the Process of Revival. In *Proceedings of the First Conference of Cognition and the Introduction of Advantages and Capacity Resuscitation* (pp. 241-272). Tehran: Cultural Heritage Organization.
- Rajabi, M., & Mozafari, A. (2011). *Theoretical Foundations of Restoration of Historic Monuments and Sites*. Tehran: Art Jamal Publications.
- Samadi, Y. (2003). *Cultural Heritage in International Law*. Tehran: Publications and Cultural Production.
- Talebian, M. H. (2003). On the Authenticity of Chogha Zanbil Mud-Brick World Heritage Site. In *9th International Conference on the Study and Conservation of Earthen Architecture* (pp. 562-574). Tehran: ICHO.
- Talebian, M. H. (2010). An Effective Role the Authenticity in Recognizing and Quality to the Process of Restoration and Rehabilitation. In *Articles Collections of First Conference on Awareness of and Introducing the Advantages and Capacities for Rehabilitation* (pp. 365-373). Tehran: Cultural Heritage Organization.
- Understanding Conservation, COTAC (2009). <http://www.understandingconservation.org>