

The Adjusting Comparison between Iranian & Japanese Garden with an Approach Ecological Psychology

Zahra Tabatabaei¹, Zahra Abbasi², Mostafa Azarbad¹

¹Department of Art and Architecture, Natanz Branch, Islamic Azad University, Natanz, Iran

²Department of Art and Architecture, Science and Research Branch, Islamic Azad University, Tehran, Iran

Email address:

hera.hestia83@gmail.com (Z. Tabatabaei), Zahra.Archi@yahoo.com (Z. Abbasi), Azarbad.mostafa@yahoo.com (M. Azarbad)

To cite this article:

Zahra Tabatabaei, Zahra Abbasi, Mostafa Azarbad. The Adjusting Comparison between Iranian & Japanese Garden with an Approach Ecological Psychology. *International Journal of Architecture, Arts and Applications*. Vol. 1, No. 1, 2015, pp. 1-8.

doi: 10.11648/j.ijaaa.20150101.11

Abstract: In many cultures especially in Iranian & Japanese culture there is some special coherence between human & nature. Iranian & Japanese garden was one of the main models of garden making in the world and it had a firm union by cultural and climatic properties of people. In this article, by reviewing these two gardens from aspect of ecological cognizance we want to know properties and main elements of these two gardens and how these could influence human and where, s the human place in it. Due to the ecological approach, capability of anything is combination of its physical and environmental characteristic, which is singularly harmonize with creature, s action and feeling system. Macrocosm organized of different palms (and areas) which one apparel and hides another one. And whenever you have to move in the circuit you can cognize it. Both the regions of Iranian and Japanese garden create common perception. In the both of models, there exist evergreen trees, autumn, fruit and flowers with some differences. Also, trees have normal form but in the Iranian garden planting have a geometrical array which is harmonized with available paths and water, whereas in the Japanese garden it is not so. In this project, realized that Iranian garden as the perfect sample, has complete cognitional sequence and human can raise his position in the Iranian garden by more growth and knowledge.

Keywords: Environmental Cognition, Japanese Garden, Iranian Garden, Ecological Psychology

1. Introduction

The nature garden is artificial, the nature raised from human, s mind and made with him and the reaction of culture and human, s imagination to making nature.

Garden is the most common and illustrative worked of art and also is so sacred place.

Gardens are the nation, s cultural and historical symbols, and human was made a connection with the nature by making them.

If you pay attention to the history and fabulous, the Namroud and Shaded, s garden fiction (which illustrate the paradise) it describe the historical way of garden making and it goes to about three thousand years before birth of Christ.

The Iranian and Japanese garden have some apparent similarity & differences but indisputably during the centuries and in the rest of the world there are a lot of simulation of these two manners of garden making which shows the powers of both of them as a basic model in describing the relation between human and nature.

The Iranian garden making create a pure and calm space without any tension and also a musing one. [Ardalan & Bakhtiar,2001, 68] and with Japanese enrichment especially zans garden create a space of calm, thought ,meditation, and have collection of ingreolients, elements and structure in it which can gradually supply the Human's physical and moral demands. [Shahcheraghi 2003:78. Mirfendereski ,2004:10]

Questions and researching way:

In this research we attempt to answer the question below:

1. What are the recognition components of ecological psychology?
2. How do Iranian and Japanese garden influence cognition?

For doing this project the combination of quality and quantity methods are used and the main framework of project is based on analyzing- handing method.

2. Ecological Cognizance of Environment (Nature)

Ecological cognizance is “subjective – objective” process which can earn by making interactive connection by nature. This process has a dynamic nature. The getting illusion is “impressionability” of nature and during the process of cognition; it recreates to emerge the main being of nature.

Cognitional process includes different steps and distinct functions in three phases as: emotional cognition, fictional cognition and intellectual cognition.

Many factors including human and nature in the form of stable and dynamic agents can influence the mechanism of cognitional process. The resultant review of cognition describe four basic index including.

Being processed, impressionability, dynamism, and activation. Cognition similar to essential factor which is forming the connection between human and nature have a sensitive role in learning environmental knowledge. According to this, in every confrontation of a human to nature, a part of environmental properties will be recognized.

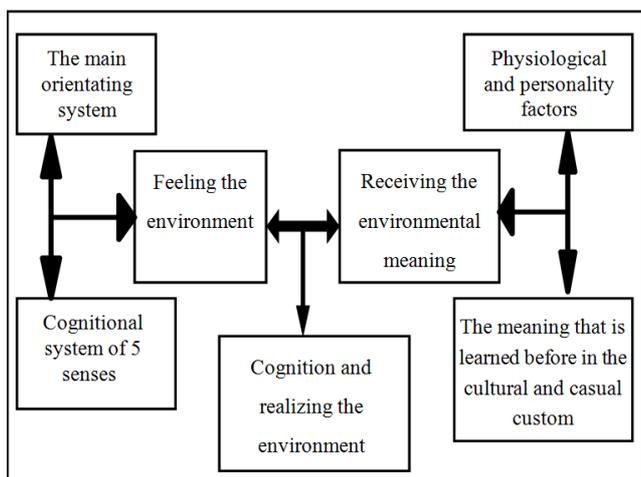


Diagram 1. Cognitional process and realizing the environment (source: author)

The ecological cognizance theory, know the receiving information from the nature by five senses and also the properties of orientating systems and main movement in the nature as an essential base on humans cognitional system. According to the ecological cognitional conception model, whatever that is perceived is learned before in the cultural and social custom.

Beside, annualizing the environment according to the orientating systems and 5 senses cognitional system shows that how emotional enrichment of meaning which was taught and experienced before can generate, which according to the balance theory, if these meaning be gracious the person will have a enjoyable perception and

Appraise the beauty of the environment. These discussions and restricted theories, was used in lonely feeling and reducing stress and also the relationship between semantic systems and outline systems.

Gibson introduces the real sense of experience, but assigns it as a cognitional output instead of “form-active units of cognition.

Environmental information can earn from the cognitional process which is activate by subjective schema and also leading by human’s requirement.

These schemas are almost innate and somehow teachable and make connection between cognition and knowledge.

Gibson was believed that capability of everything is the combination of its physical and environmental properties (the item and its forms) which is singularly proportioned with its acts and nourishes system.

Iranian garden is older than Japanese and is known as a main model that influenced Islamic architecture from India to Spain.

Japanese garden is affected by chines, s garden which is combined with Japanese religion. These gardens are in different shapes, but with the same goal and construction and sometimes they are combining together.

Both of these gardens include main in gradients such as: water, plant, grange and the paths, but usage of these are different. So, in continue we will review these factors in Iranian and Japanese garden.

Chart 1. Reviewed of five senses, cognitional system (Shahcheraghi, 2006).

| The garden ^s framework systems | Water ^s system | Planting system | Building ^s set up system |
|--|-----------------------------|--|--|
| Five sense ^s cognitional system | Eye sight | Water ^s visibility and invisibility / showing the water in linear / surficial/ massive / ridge / and waterfall form. Flooring with stoneforincreasingwater ^s volume reflection and making the picture ^s reflection lighter. And making virtual extent for the visual view | Emphsezeon vertical axis view with planting high trees and making green body/ making colored variety in space by different combination of small of large flowers, plants and also making restriction and catching visual concentration |
| | audibility | Making many types of water ^s voices and sounds / audio reflection / making restriction and catching audio concentration | Atoning birds / the voice of wind between trees |
| | Olfaction and taste feeling | Creating humidity and broadcasting the cold ^s smell | Perfuming space by flowers, plants and fruits and making restriction and catching olfactory concentration |
| | Touch or tactility | Making freshness (wafting in the | Shading / making restriction and |
| | | | Making skeleton restriction by peripheral grange wall as a place for confirmation and beholding the garden / making visual array and polarity / grange colored conflict and swarthy trees / association and visual extension from out inside and visa versa. |
| | | | Influence of audio Motives inside the Grange |
| | | | Influence of smelling motives inside the grange |
| | | | Influence of touching motives |

| The garden's framework systems | Water's system | Planting system | Building's set up system |
|--------------------------------|---|---|--|
| Main orientating system | combination of wind and water's shade) | tendering the air/ catching actual concentration and rub off air dust | inside the granges |
| Straight direction axis | Collating waters system and moving axis/ using water in moving axis | Creating view in moving axis – shading on moving axis – ready passes by shady trees | Having an active goal / immediacy discovery / making straight visual axis between building's portal and building granges |

2.1. Water's System

One of the Iranian garden's main features is intention to showing water. Usually the water was so little and important. The Iranian garden's main feature which is the result of Iran's warm dimate, is the water and type of its movement. Garden's place and its geometry are almost influenced by water.

In Japanese garden, water seems, like part of natural environment and curved, disordered raceways create calmative presence.

Base of these raceways, which convey water from water fall to pools, is covered by large and small circular rocks.

Lake or pool is one of the most important parts of Japanese garden. In most of the big gardens, they make woody or rocky bridge on the raceways and lakes.

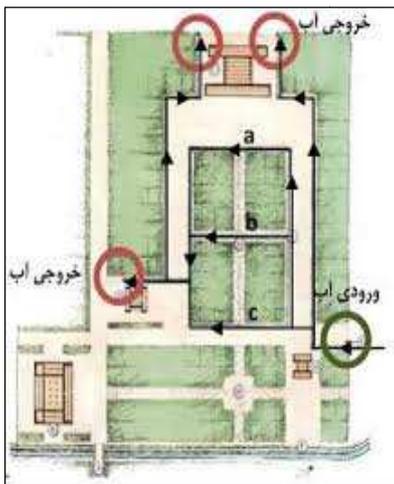
In Japanese garden making, the water causes the garden vertical growth and parker use water due to its noise.

divided the garden into 4 parts and each part covered by plants named parkway. In each part of garden, was planted the trees with different usage.

"Some trees like cypress, pine, elemi and etc were for shading. Also the flowers had a main role in gardens, but it wasn't used all of those.

Various type of flowers, like rose or damask rose for making rose water, euphorbia and xanthenes for planting near trees and chalk for blossoming in all seasons during the year was more used.

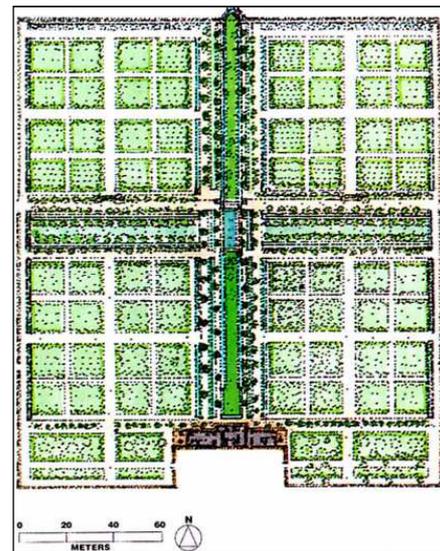
Seasonal flower was also used in front of the grange and part of the garden's rosary (Pirnia, 2002, 290-291).



Picture 1. Presence of water in Iranian garden.



Picture 2. Presence of water in Japanese garden as a part of.



Picture 3, 4, 5. Iranian garden's planting system (Rohani, 1992).

2.2. Planting System

Usually in the Iranian garden, plant tree, flower and etc in the distance between paths. Some sources, the design which is

Japanese prefer green color in their gardens, but, they use floral trees and bushes, too. Generally, the used trees in Japanese garden divided into many types: "stylus leaves like pine and cedar, tree farms like poplar and oak".

Permanent broadleaf trees like fig and fir. Floral trees like peach and almond and also shrubs like raspberry are as the same of planer tree and never been lopped.

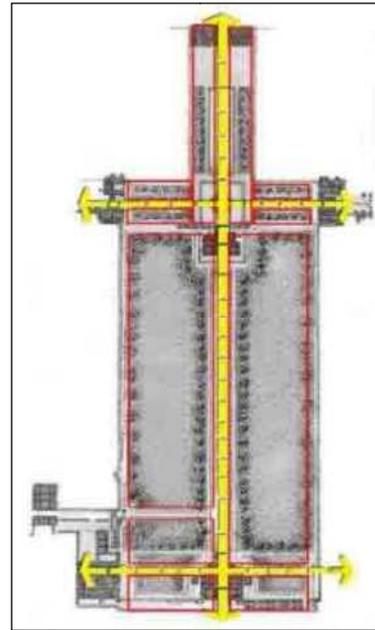
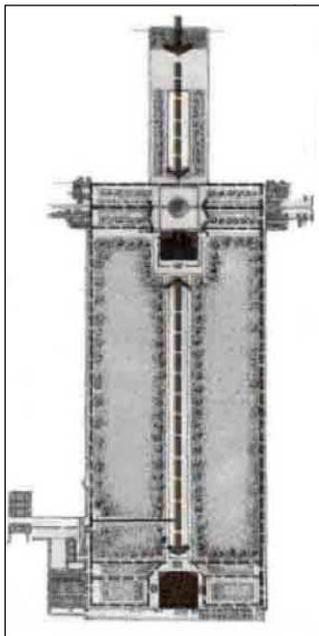
They plant seasonal flowers like marguerite and gladiolus scattered and in natural from and don't use those similar to border. (Rohani, 1992).



Picture 6. Japanese garden's planting system. (Rohani, 1992).

In the Iranian garden paths and straight axis's have a main role in its structural establishment?

"These gardens owing to their design dividing into two types: one, the gardens which have two parallel axis's, and by streets and avenues which cross these two axis's at right angle, like Dolatabad and Delgosha's garden. 1And the other ones are the gardens that have 2, 3 or 4 multiple and parallel axis's which crossed each other in the garden's center like Hasht behesht and Jahannama (Pirnia 1387, 31). Granges was placed the man axis or in the axis's crossing line.



Picture 7, 8. Pathe's system in Dolatabad garden in Yazd. (Masoudi, 2006).

In Japanese garden the passing ways are so meandered and avoid making straight paths surface of foot paths are made of pebble and in some places are rugged.

<<Beside the paths and pools, they put linters for alighting and avoid planting trees which is cause hiding, lanterns. The lanterns are in different shapes and usually are almost stony. >> (Rohani, 1992-80)



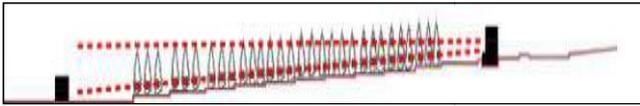
Picture 9. lantern in Japanese garden. (Rohani, 1992).

2.3. Grange's Building System

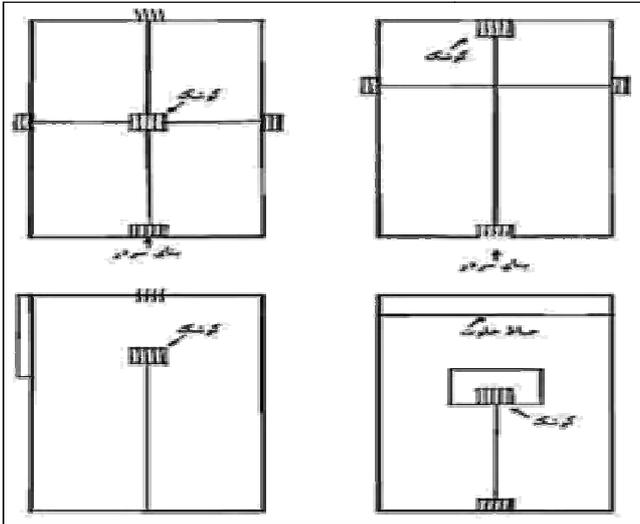
Iranian gardens almost have grange which was placed in pivot or above it.

<<The used maps in these granges are four or eight square>> (Pirnia, 1380, page 287)

Their design is extravert and includes many balconies and walls in front of the gowned. The grange in Iranian garden is made on water's symbol and due to its emphasizing aspect, usually place on the highest place in the central axis in the garden.



Picture 10. Shahzade Mahan's garden in Kerman (Masoudi,2006).

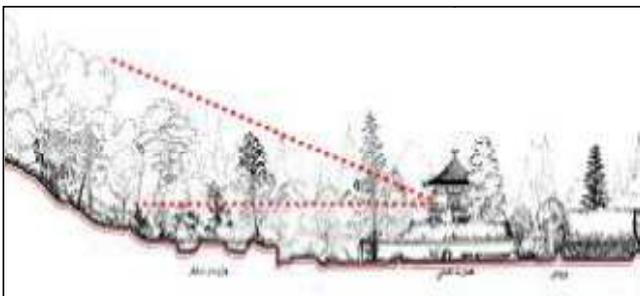


Picture 11. The way of grange's topology in Iranian garden.(Masoudi,2006).

Sometimes, in Japanese garden because of more polarity and arrangement gangs or coffee house was seen in front of the lake.

Especially we can mention Catsora villa in kioto.

Generally these buildings had visible and invisible presence in garden. Its materials are natural and untouched.



Picture 12. Ginka kiuji garden in Japan (wayembergh & Bring 1981).



Picture 13. catsora villa in kioto, the relation of garage by Japanese garden.

2.4. Restriction

Iranian gardens are usually rectangular and covered by wall.

These walls are made of brick or stone and sometimes some bay or ornament was used in it.

<<In spite of Europe garden, the Iranian are not harmonized with its environs outlook, due to the fact that garden seems as it was naturally. >>

Beside the linear material (water course), which are placed along four main direction, walls for fastening the environment, play special role in describing the space and cognitional scope which is according to Iranian and Moslem's subjectivism.

Japanese gardens are restricted like Chinese garden and sometimes right angled, but in Japanese designee unlike Chinese garden seems that the presence of audience doesn't understand, so it seems bigger than what it actually is. By looking at Tesokiyama's sandy garden, the look of viewer leading to environmental mountains and seems that mountains are the read part of garden.

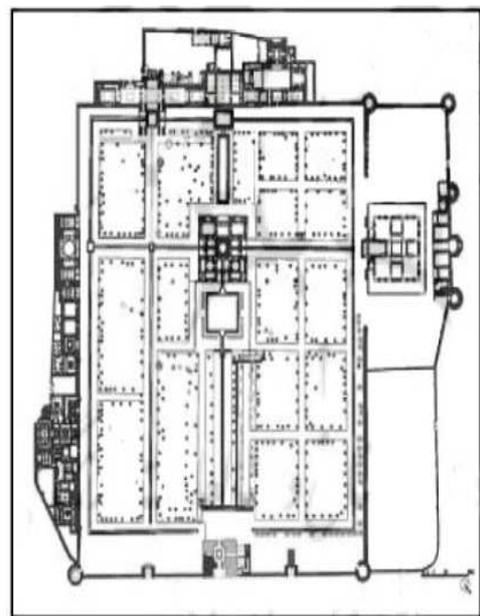
Sometimes, fences was made of masonry lining and sometimes pale and how was used.

2.5. Hierarchy Principal

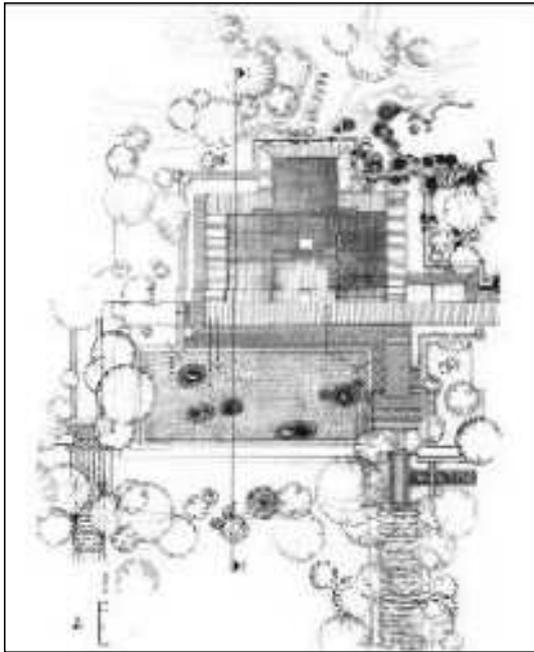
One of the important jointly point in Iranian and Japanese garden making is hierarchy principal. According to this principle, different spaces and material put next to each other depending on their importance, function and many other factors. This principle is observable in designing many of Iranian traditional gardens.

The hierarchy in gardens start from incoming portal or sometimes scope and a water fall out of garden (forecourt) and by passing of vestibule and main axis receive to grange.

You can search this principle in material's high, color and size in the garden.



Picture 14. hierarchy principal of fin's garden in Kashan (wayembergh & Bridge 1981).



Picture 15. hierarchy principal in Ryo Anji's garden in Japan (Wayenbergh & Bridge 1981).

Arrangement and sequence in indwelling spaces and function, accordance of activities, view and motion existed in Japanese garden for example perfection of artifice is visible in space arrangement in Zen Rivan Ji meeting house near about Kioto. This sequence and hierarchy is accessibility to one kind of creative picture which can suddenly reach by reducing high, changing in level of space's light and passing of bight. Some kind of affective experience which is surrounded by extreme combination of silence and arrangement (Hal, 2006:180)

3. Cognitioningal Process in Iranian and Japanese Garden (Geometry-Ingredient and Main Constructor)

Environmental Conception in Iranian garden Cognitioningal the distances between locations is affected by factors like way's geometry. Usually, Iranian garden have an ordered diagram which was separated from outside by s.th like barrier. These main formative factors are Cortland gardens, raceways and pool, the way and axes and also one or more buildings. Representation of Iranian garden is observable in carpet, flagstone and Iranian painting. On important factor in Iranian garden making is outlook which is in the shape of rectangle.

There are two main points in Iranian garden making geometry: three beside elongations and dividing the garden into squares that have ordered and square like divisions. As a result: The geometric constructional system in Iranian garden, describes the straight and propulsive axis's that gives a person propulsive feeling, consideration and creativity in environmental psychology.

Environmental conception in Japanese garden

Although all the trees and plants, plant thoughtfully but there is no geometric and order shapes. Methinks these trees and plants ran wild. Also the granges aren't flushed with space and sometimes are at the bottommost level in the garden at the same level as lakes.

These are common ingredients in Japanese garden making: real or symbolic water. Rocks or stones as back ground or different combinations. A grange or coffee house. Stony lantern. A bridge to island or echelon stones. Barrier of fence, rail or traditional wall or plants purpose of japanning garden is creating. A space which is eligible for human's value and it can reach by environmental skill and harmonic with human. Japanese garden was succinct of natural environment that reached by hu

Man's interference in stone, plants, water.

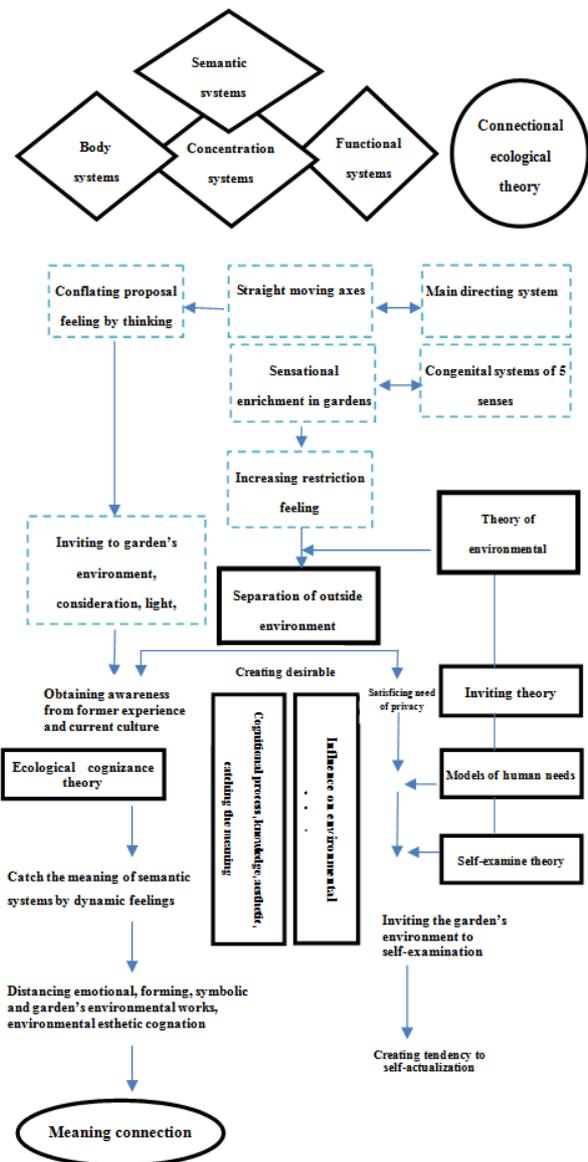


Diagram 2. understanding modality of cognitional process in Iranian garden by using it harmonistic comparison from the view of conceiting the source (sh.cheraghi-2003).

The chart below is attended to do comparative comparison between Iranian and Japanese garden.

Chart 2. comparative comparison between Iranian and Japonion garden (autor, 2015).

| Difference | | Similarities | | |
|---|--|---|--|-----------------------|
| Japanese (land dry) | Iranian (land scape) | Japanese (land dry) | Iranian (land scape) | |
| Stone (basic element in the garden) Gravel and sand | Water (basic element in the garden) | Artificial space (portal, space, shrine, connective space) | Artificial environment (portal, enclosure, grange, connective space) | Formative elements |
| Curves and rotary lines harmonic with natures lines | Crossover and geometric forms | Existence of dominant axis in the femoral way before receiving to main building (shrine) | Existence of dominant axis between bypasses | Dominant forms |
| Main use of trees which by changing the season present exposition of different colors. | Designing garden's space in different categories by using trees and bushes. | Applying tree form near to evergreens except changing the background color in garden (existing of nature around space) there's no dominant color in the space | Changing the time as for change in tree's color/ using green, blue and natural colors. | Color and texture |
| Using agree mental parallelism polarize in design space by emphasize on central space | Applying geometrical arrangement according to axis's parallelism and centralization. | Creation simple spaces without any complexity in shapes. | | Geometric arrangement |
| Human's arrangement according to his believes. Flexibility | Arrangement of human and nature. Designed before | Creating perspective from controller's point of view by arranging elements. | | |
| Creating visual connection by garden's space as background/ curtail minting barrier around Garden | Absence of visual connection to garden's around space/ high ranking of barrier around garden | Considering hierarchy of access | | |
| | | Applying lucidity in designation of shrine inside the garden | Applying lucidity in designation of grange inside the garden | |
| | | Balance (stone's arrangement) rhythm (size of stone) | Balance, rhythm (in tees, and waterfalls) | Space ' s structure |
| | | Harmonization in designing gardens elements, position, height and color. | Harmonization (selecting and arranging elements harmonized together and also by space) | |
| | | Designing garden in the restricted space | | |
| | | Effect of mode of attitudes to world and believes under goes by Buda's custom/ (Human is part of nature not upper it) (Indecision of everything) | Believe in world which is made by God and Endeavour to showing god's favor more glorious | |
| Lack of human's connectivity by garden's, elements, designing a dry space in a green "environment, stone as a basic element | Human's connection with garden's elements, designing green area in deserted space, water as a main element | Creating space for thinking and silence | Like water's role in garden's space | Symblic concepts |
| | | Using odd numbers in stones arrangement and stone collection | Creating space to achievement of security and calm. | |
| | | Maintenance the real nature of natural elements for garden designing | Using odd numbers in architecture (trivalent...) | |
| | | | Respect for nature | |

4. Conclusion

It's hesitating. Garden is habitu  with human's natural liking, affection and believes. And sometimes is exposition of human's culture. Iranian and Japanese garden have main elements like water, plant, grange, and paths but usage of these are different in both of them.

Iranian garden is more geometric and have a distinct barrier which detach the garden from around space, but in Japanese garden; although it's surrounded, but tried barrier not to be visible and garden link to around space. In Iranian garden, grange is in the central axis and is totally visible. Sometimes besides the main building, other buildings were built in the garden. Japanese garden have a coffee house or small or big grange which tried the way sides to have a visible & invisible presence in both of these gardens, the main building was in front of garden, or pool.

In the Iranian garden the paths are so arranged and in the shape of parallel or perpendicular axis and is so harmonic by waters geometry and plants.

But in Japanese garden not only the paths aren't straight but also these are so complex and diving the passes there are elements like lantern and bridge. In Iranian garden water have a main role and structure of garden and paths shaped according to that, because the way of its division and usage is so vital. In these gardens presence of water is in the shape of raceway, waterfall and big pool foreside the grange. In Japanese garden, raceways have an irregular movement and finally terminate to the lake or pool. In both of gardens, builders prefer to Waters Lake or pool seems deeper. Also in Japanese sandy gardens, the water is abstract.

In both of gardens there are ever green, tree farm, fruit and flowers by some differences.

Beside, the trees have a natural form but planting trees in Iranian garden have an arranged geometric system harmonize

with accessibility to water's paths, while Japanese gardens aren't in such a way. Iranian garden is like paseo and human's permanent and temporary life is visible in it.

Japanese garden is a garden farm separation of routine life and returning to selfhood and joining to nature. This garden had May connection by east's custom and people went there alone or together.

Iranian garden is separated from around space and actually a person comes to the new world named Iranian garden. Here, plant and water except its materialistic presence has a symbolic appearance. Japanese garden try to be similar and harmonic by nature and actually, builders attend to show scared nature in a small scale.

Finally, due to the fact that human's building is indication of his believes and culture, we can get more knowledge about these two historical civilizations the elements of Hafez's garden make connection with all the human's feelings.

References

- [1] Shahcheraghi Azade. Atemn and Winter 2009. Analysis cognisance process of Iranian gardens space, according to ecological psychology theory.
- [2] Ardalan, Nader and bakhtiar, Laleh.2001. Feeling Iranian architecturer mystical tradition .T: Hamid Shahrokh. First edition .Esfahan: soil
- [3] Naema, Gholamreza.2001. Iranian gardens. Tehran: Payam Publications.
- [4] Vilber, Donald. 2003. Iranian gardens and granges. T: Mahindokht Saba. Tehran: Sientific and Cultural Publications.
- [5] T-Hal, Edward. 2006. Cryptic phase. T: Manuchehr Tabibian. Tehran: Tehran University Publications.
- [6] Ansary, Mojtaba .1998.Spaciman of symbolic declaration. Tehran: Sorush.
- [7] Khansary Mahdi Moghtader, Mohammad reza and Yavari Minuish. 2001. Iranian garden as a symbol of paradise. Aran consultant engineers.Tehran: Cultural Heritage and Tourism Publications.
- [8] Hosseiny Sahar. December 2001. Nature of Japanese traditionah view. Manzar Internet Jornal. Number 10.
- [9] Samiee Kave. 2003 .Harmonic analysis of Iranian and Japanese cultural conceptions. (Designing Iranian and Japanese cultural gardens). Master thesis. Tarbiat Moderres University.
- [10] Motedayen. Heshmatollah. 2006. Collection articles of first Iranian gardens congress. Tehran 52-55.
- [11] Khorramshahy – Bahaodin, Hafeznameh, Sientific and Cultural Publications Company.1999.
- [12] Iranian Danesh Sorush. Islamic architecture publications – Mohammad Karim 2008, Pirmia, -Tehran University, Third publication – Chapfar – Einy Alireza.
- [13] Wayemberg, J. Bring, M. (1981). Japanese Gardens: Design and Meaning -McGraw-Hill.
- [14] Panzaru, O. (2007). Symbolic elements and aesthetic values of the complex traditional Japanese garden, Lucrari Stiintifice, Universities de Stiinte Agricole Si Medicina Veterinara "Ion Ionescu de la Brad" Iasi, Seria Agronomie, Vole: 50, Issue: 3, PP.469-474
- [15] Van Tonder, Gert J. and Lyons, Michael J. (2005). Springer. Visual Perception in Japanese Rock Garden Design, (<http://www.kasrl.org/axiomathes.pdf>.)
- [16] Moynihan, Elizabeth B. (1982). Paradise as a Garden: In Persia and Mughal India. London: scalar press.