

THE DESIGN PRINCIPLES AND CREATIVITY TOUCH IN JAPANESE GARDENS

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Japanese gardens have much variety of forms; however their identity can be recognized by viewer as Japanese when they see it. All designers of Japanese garden have to follow design principles of garden making which guide their sense creativity into sense of Japanese spirit. This article will focus on variety of forms of famous Japanese gardens and how their designer develops their creativity in shaping natural landscape into man-made environment.

Keywords : design principles, variety, creativity

The Japanese traditional gardens have been known for their beauty for most people around the world. Although they might never really see and visit the actual Japanese gardens, people all around the world are familiar enough with the term "Japanese Garden". It has become one of the most honorable legacies of the past.

Traditional Japanese garden, from its beginning of development, has a deep root in the Japanese native culture. The nature of Japanese land had provided source of inspiration for Japanese people to build some prehistoric gardens. This initial development can be seen on the stone arrangement and the ponds which derived from the Shinto faith about 1000 years ago (Keane, 1996:15). At that time there was no religious architecture, temple or Shrines which can be used a place for worshipping god. The Japanese people then choose some specific spot in the nature to be used as a place for worshipping. This place usually consists of stone and ponds as a manifestation of two gods, the god from the sky and the god from the sea.

After thousands years of development Japanese garden has reached its classic status and have a strong identity to

be recognized as a Japanese style garden all over the world. Although the design and the type is different from one garden to another, Japanese gardens still show a strong identity which can be grouped as Japanese style.

The traditional knowledge of garden design, like many others traditional thoughts, has been transferred for generations through books, oral teaching and imitation. This process made the Japanese gardens have a common similarity because of the same source of knowledge. In the other hand, the individual who carriage this sacred teaching also lived in the particular era and time which had a deep effect in their thought in designing the garden. This paper tries to analyse the basic design principles and how the designer develop an innovative garden by keeping the spirit of Japanese style garden.

All of Japanese garden has a certain elements which described in the classic book of Sakuteiki but each garden also tried to make a distinctive character without abandoning the basic principles of the design.

Basic Prinsiples and Design Techniques of The Japanese Garden

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As mentioned above, the Japanese Nature had become the source of inspiration for the garden designer for centuries. The Mountain, sea shore, river and island are the most natural scenery that copied into Japanese garden as a miniaturization. Based on the Sakuteiki, learning from nature is the primary lesson from any garden designer in order to understand the art of garden design (Earle, 2000:19)

Learning from nature also means to understand the limitation of the human senses (Slawson, 1987:43). By understanding human sense designer has to adjust the design to be fit into human perception through five senses. The sound of the waterfall will be too loud if it placed near the tea house. If it has to be placed near the tea house then there will be an adjustment to make the sound softer as human ears can comfortably catch it.

Nature can provide a great deal of inspiration for gardener as they observed in a first hand experience and try to make careful attention. A stream running downhill in natural environment can give a good example in designing stream in the garden. A stream which runs in unnatural way will be look so awkward in the garden that can ruin the whole composition.

Japanese garden is an artificial environment which means everything in the garden was made by human interventions. The control of the environment in the Japanese garden then becomes one of the successful factors of the design. Everything in the Japanese garden is a mixture between human control and the wilderness of the nature. Without maintenance and control the garden will grow in confusing pattern and lost its beauty. Although it was intended to create the imitation of the nature, the elements of the Japanese gardens are always in human control such as the rounded shaped shrub and the pine trees.

Keane (1996) described this control as the poem of natural beauty. In the poem the author used words to create powerful meaning by controlling and choosing the right words. In the Japanese garden the designers used form and control the environment to create beauty.

Japan has four seasons in a year which offers different looks of the garden.

Every designer should understand this so that can make the amazing looks in each season. Autumn and spring are usually the most preferred season in Japan, in the autumn the leaves turn into red and change the atmosphere of the garden into colourful tone. The spring is loved for the cherry blossom and the new beginning of year in Japan. The cherry blossom will change the looks of the garden into a white fluffy looks and create a sense of joy to the viewer.

Every season has its distinctive looks which can enhance the quality of the design if it understood by designer. Even in the coldest winter when the garden is covered by snow the garden will offer magnificent looks of its snowy shape.

Every Japanese garden was created based on the most beautiful natural or imaginary scenery of Japanese people. The image of western paradise in Buddhist teaching is the favourite theme in the Japanese garden. This land of immortality are depicted as an island surrounded by the sea and connected by bridges. The utopia serves as the ideal model of the environment that Japanese people try to recapture in their garden. This utopia is derived from many different sources such as religious beliefs and the aesthetic ideal (Bring & Wayenberg, 1980:164).

In an artificial garden maintenance obviously plays the important part in keeping the shape of the garden. In the case of Japanese garden the maintenance is not only intended to keep the garden in its best shape but it has become an art as well. Keane (1996:28) argued that the looks of the Japanese garden is achieved through years of maintenance rather than the result of the design when it was built. This means that after the construction of the garden has already finished the garden did not look as good as we see today.

The composition served as the basic structure of the garden but the whole atmosphere of the garden needs time and maintenance to reach its desirable effect.

Design Techniques

As a controlled environment, Japanese garden needs a certain limitation of its ground. This limitation is not just for the

physical barrier but as visual barrier also. By building a visual barrier around the garden the undesired scene can be eliminated and enhance the focus to the main garden composition.

Many materials are developed for this purpose. These materials are including solid wall, tress, shrub, bamboo fence and hill. It is in the hand of the creative designer that these materials blended so well in the garden and make viewer doesn't realize of its presence as a barrier.

The garden of Ryaonji will not look as impressive as it is now if the wall around it were never built. The visual barrier made the viewer focused on the stone composition and textured white gravel without any destruction from disturbed view from outside the garden.

Japanese garden is very similar to the Chinese painting which used foreground, middle ground and background as illusion to create depth. The viewer of the Japanese

garden will experience these perspective when they sitting on the veranda.

In creating these effect, Japanese garden designers sometimes use miniaturization as a means to get a proper balance. To make vast area of the natural landscape into reduced manageable site the designer makes many miniaturizations such as an island and a mountain. The pond is described as the sea and the small land in the pond is considered as an island.

The composition in Japanese garden is key factor in creating dynamic looks. Japanese garden designer mostly applied the interlocking composition in his design. The interlocking composition is similar to the yinyang symbol which provides the solid and void combination in a balancing way.

Another composition that usually applied by the designer is the mirroring effect. Although Japanese garden never has a symmetry form, the mirroring effect is widely



Picture 1. The Wall Block the View Of the Spectator and Provide Firm Limit Of the garden (Ryaonji, Kyoto)

used to make the composition in balance. Mirroring effect in this term is mostly associated with the balance of two form which lies in the opposing site.

Shakkei or borrowing scenery is a brilliant technique in Japanese garden design. Using this technique a designer can create an amazing view and made a garden appear larger than its original size.

Shakkei actually is a simple technique and yet it can produce the most beautiful scenery in the garden. The idea of *Shakkei* is placing the mountain or hill as the background of the garden. By doing this the garden will looks as foreground and the background is natural scenery such as hill or mountain. Although the notion is quite simple the implementation of this idea need a careful attention and high skill from the designer. Just

designing garden.

Not all Japanese gardens have these elements some garden doesn't have a bridge, lantern and water pond however it still make a Japanese garden. Three of these elements, the rocks, fence and water or its imaginative form is always present in the Japanese garden. These suggest that these elements are the core of the Japanese garden design.

The description below is an example of the Garden element in its physical environment. The form of the element is varied from one to another as a modification trough times and personal taste.

The fence is a barrier which mostly functioning as visual block against unwanted scene. The fence could be made from solid wall, bamboo or hedges.

Generally the gate in Japanese



Picture 2. A Formal Gate in Kodaiji Garden Kyoto and Informal Type of Gate in Daishin-in Garden Kyoto

like the wall that blending so well in the garden, *Shakkei* needs smooth and subtle transition between the real garden boundary and the background in the distant.

Nyunt (1978:22) described the general features of Japanese garden with emphasis on the element on the garden. These elements, unlike individual element of the building such as wood and stone, cannot be assembled without basic principles of the garden. Combining these entire elements into one single garden doesn't mean creating a Japanese garden. However these elements are the important and integral part in

garden has two types the formal gate and the informal gate. The informal gate can be seen in the gate of the tea garden while the formal gate usually leads to the main entrance of the garden.

The path in Japanese garden is designed to enhance emotional experience of the viewer. The stone path of tea garden gives a sense of remoteness and preparation before entering the tea house.

The large pond and island in centre of it is usually connected by bridge. This bridge is also has a symbolic meaning as an effort to reach the western paradise in the Buddhist



Picture 3. Triangle stone composition and Stone Lantern placed near the pond in Taizo-in Garden, Kyoto

teaching. Three types of bridge in Japanese garden are the arch, plain and stone bridge.

Stone grouping is always present in Japanese garden. The grouping is mostly combining between vertical and horizontal stone in the dynamic way. The most common stone composition in Japanese garden is the triangle composition. This composition is classic way of arrangement follows the aesthetic ideal of Japanese people which applied the triangle form in most aspect of the art including Ikebana and building design.

The type of stone usually used in stone grouping are standing stone, flat stone, lying stone, arching stone and combination between standing and lying stones.

Stone lantern is relatively new in Japanese garden design. This element was introduced in the garden by the tea master and usually placed near the pond or the gate of the tea garden.

Before entering the garden usually there is a water basin in the corner of the entrance way. The water basin doesn't always in the main gate, some time it was placed in the place near the tea garden. The main purpose of the water basin is to provide water for cleaning hands therefore it is usually place near the entrance of the garden.

The water basin sometimes also placed near lavatory so that people can wash their hand after went to lavatory. The water flows in the water basin in many ways one of the most artistic way in to fill the basin with dripping water.

When we see Japanese garden, the twisted pine is the most noticeable trees in the garden. The big trees usually placed in back of the garden as a visual barrier and the twisted pine is placed in the island or the side of the pond.

The pond is one of the oldest elements in Japanese garden. Together with the stream, pond provides the water surface in the garden. The pond usually has irregular shape and creates sense of movement in the garden composition. The size of the pond is usually large especially in the paradise type garden. In the Heian period the function of the pond was for boating and fishing. This make the pond in the Heian gardens were relatively large comparing to the garden in the next period.

The Zen garden sometimes doesn't have a real pond instead of the abstract form of the pond made from the white sand. The stream also presented in the white sand. The example of the dry stream can be seen in the Daisen-in garden in Kyoto.

One of the advantages of having waterfall in the garden is to have a beautiful sound of the dripping water. The sound can create a sense of peaceful environment and enhance the natural atmosphere in the garden.

The garden of Kinkakuji has a high dripping water type while another garden like samboin has a cascade type waterfall. The type of the waterfall has to be fitted to the surrounding environment to create a natural

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The Type of Japanese Garden

Bring and Wayamberg (1981:7) described three type of Japanese garden as follows: the paradise model, the zen stone landscape and tea garden. Most of the garden has a combination of these types; however the main garden usually showed the basic type of the garden.

The paradise model is a garden developed from the Heain garden type. The main characteristic of these garden are including the pond and island composition and the beautiful scenic view of the nature. The garden of Kinkakuji is considered the paradise model.

Zen stone landscape garden also has a pond-island composition; however the zen stone garden doesn't use a real water to create the garden. Zen stone landscape is also well known for its simplicity and abstraction. Although not all the Zen stone landscape has a simple composition, their form is considered less simple than the Paradise model.

The main characteristic of the tea garden is a sense of remoteness when we entering it. The small tea house with the rustic looks and stepping stone made the tea garden as a retreat compound in the city life. Unlike two other types above the tea garden was designed to be as natural as possible. The path leading to the tea house also very important in creating the sense of remoteness, therefore many garden designers put emphasis in designing this path.

Sakuteiki, the classic book of gardening in Japan, is a manual book to design a good garden. This book is concern with the taboo in designing certain aspect of

the garden such as the flow of the stream and the source of waterfall. Some design feature sometimes followed by warning such as it would bring a bad luck if the designer failed to follow the rules. Many part of the Japanese garden showed faithful design to what is described in Sakuteiki. However this did not mean that the designer has no innovative idea in creating a masterpiece work.

During my field survey in almost 20 classic gardens I have found many creative ideas from the designer in coping with the certain problem in the site. This classic garden shared the same spirit of Japanese garden and yet showed it distinctive characters of the individual who design it.

Not all the basic elements of the Japanese garden described above are presents in those entire gardens. A garden like Ryoanji only has 3 elements like the rocks, the wall, and the sands. The lack of the general elements of the garden does not make Ryoanji less attractive than any other garden in Japan. In fact Ryaonji is one of the most visited and photographed garden in Japan.

The design focus of each garden is different from one to another. This emphasis on certain aspect makes the room for creativity in designing a garden. In fact sakuteiki also described the need to adjust the design to the surrounding environment. (Earle, 2000:19).

The notion of all Japanese garden according to (Keane, 1996) are the same, it is an artificial garden to imitate the idealistic view of nature, but each garden then develops an interesting point to make it impressive to the viewer. Based on the innovation and creativity in its composition, there are four tendency of the Japanese garden design.

The first one is tendency to create a new and pure geometric shape, the second is a tendency to cope with a difficult site, the third is tendency to simplicity and the last one is a tendency to create a rich and playful composition. Some gardens may have two tendencies at once because the designer shared the same inspiration in designing Japanese garden.

The garden such as Ginkakuji, Shisendo and a part of the Samboin garden has this kind of tendency. In Kinkakuji the sands composition after the viewer entering the garden will instantly recognized by the

viewer as a unique composition. It is a new and innovative in comparison with another sand composition because of its thick layer and unusual shaped edge.

The truncated sand cone is also an innovation using pure geometric form. The overall compositions of the Japanese gardens are mostly dominated by irregular form and curve line.

Another example of the pure geometric shape is the three circle composition of the moss surrounded by white sand. This simple circle is contrast with the playful composition of the stone arrangement in the main section of samboin garden.

In Shisendo the pure geometric form can be seen in group of shrubs which dominated the main garden. Although such a round shaped shrub is typical in Japanese garden design, the Shrubs in Shisendo are special because of its dominated form. From the veranda the viewer can enjoy these shrubs composition with white sands as a planar ground. This white sand makes the shrubs more interesting because of the contrast.

Daisen-in is a good example of how the designer made the clever solution over the L-shaped site in the corner of the temple. The garden is a dry landscape type which is rich with stone arrangement and playful composition. Although the site was quite small comparing other garden, this garden is one of the most famous gardens in Japan.

The difficult site was transformed into a rocky hill and stream in a Zen manner. Unlike

many other gardens in the small site the designer of Daisen-in decided to use big and vertical stones. As a result the small site turns into a tight stone composition which is quite different with one in Zuiho-in. In Zuiho-in the vertical stone composition doesn't create a sense of tightness but in Daisen-in one can feel a tight and compact stone composition.

Daisen-in clearly doesn't look simple in a term of composition. Many garden in small space has a simple composition can create a sense of clean and calm space but Daisen-in took different tendency among a small space garden.

Another example of how the designer coping with difficult site is Chisakuin garden. In this garden the high artificial hill was made to cover the higher ground behind the garden. This hill is look too sharp in a term of ratio between the high and a distance view. It blocks entire high ground behind it and makes it a centre focus in the garden. The hill was decorated by stone composition and shrub which make it richer in view. The decision to build a high hill in the close range view is a creative decision and unique comparing any other gardens.

Most of the hill or islands in the center of the pond in Japanese garden are relatively small. Chisakuin took different approach and give a sense of shock to the viewer when they saw a big massive hill in the centre of the pond.

Simplicity in Japanese garden can be seen in the garden of Ryoanji. Many dry landscape gardens also shows these simplicity tendency but Ryaonji has the most



Picture 4. The Unique Edge Shape in Ginkakuji Garden,Kyoto



Picture 5. A Combination Between Dry and Green Element in Nanzenji Garden, Kyoto

impressive image in transforming the simplicity into meaningful composition. Simplicity itself was not directly mentioned in the Sakuteiki, this concept was derived from the Zen Buddhism and mostly applied in the dry landscape garden. However not all dry landscape garden applied this concept just like we see in Daisen-in.

The simplicity in Ryoanji began with the rectangular plan of the garden. This plan gives a sense of clear border and simple form. The plan also shows a tendency toward pure geometric form but not as element of the garden rather than the boundary of the area.

Nanzenji, another classic example of the zen garden, also offers the simple looks in its design. Unlike Ryoanji which doesn't have green element in its design, Nanzenji consist of the dry element and the green element. The green element such as trees, shrub and moss was not as complicated as in paradise style garden. In overall looks Nanzenji still maintain the Zen spirit of simplicity.

Although all Japanese gardens have a dynamic and playful composition, some gardens are more playful than the others. This playful composition mostly applied to the rock composition in the garden. The garden like Samboin has many stones compare to other garden. The Stone in Samboin garden is famous for its number and has many combination type of stone composition.

Another garden which has many stone compositions is the Nijo garden in Nijo castle. This garden is paradise type model and has three island in the pond enriched with

stone composition and greenery.

The stones in this garden are mostly in medium size stone, at least in a ratio to the size of the garden. The domination of the stone is gained through the number of stone composition not trough the size.

In general Japanese gardens have its standard arrangement. This arrangement mostly based on an old book of gardening called Sakutekei; however the designers also have their own creative vision on how the gardens should be built. There is no garden in Japan that has the same exact composition; each garden is unique and particular. The identity of Japanese gardens is not determined by its compositional form. It is mostly determined by the design principles which embrace the Japanese spirit of natural environment.

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