Incorporation
of Chinese Architecture and Garden.

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1. Background

- Setting
- The philosophy
- The Classification
1. SETTING

The most impressive feature of China is that it is endowed with a diverse natural landscape. Eighty-five percent of the country is markedly mountainous. The three main mountain ranges extend from the center of the country to the pacific Ocean, two other mountain systems that run north and south. The mountains divide all country into a checkerboard pattern. In China, the five famous holy mountains - Hua mountain, Tai mountain, North Heng mountain, South Heng mountain and Sung mountain
symbolize the center of the earth and its four corners. These mountains frequently appear in Chinese landscape art. China is also traversed by the world's three greatest rivers. These three rivers - the Yellow River (Huang He), the Yangtse River (Chang Jian), and the West River (Hsi He) rise in the central area of the China and flow east into the Pacific, splitting into myriad small streams and several great lakes. The third feature of China's physical context is its distinct regional variation in climate. China depends heavily on its agriculture, so the changing of the climate has remarkable influence on the Chinese life. The four seasons are celebrated by the Chinese people and are regarded as the background to the creation of Chinese art.

Fig. 1.2
*Landscape, Rocks and Peaks from Huang Mountain*
by Mei ch'ing (1623 - 1697)
The abundance and beauty of the natural landscape resources originated and nurtured Chinese art, as well as Chinese gardens and architecture. According to Chinese tradition, man was not different from all the other created things and regarded as the part of the universe. Human character could be partly judged by the quality of man's adjustment to the natural forces of his environment. A person who truly loves nature more than worldly "dust" was regarded as a person of the highest spiritual cultivation. The purpose of the Chinese garden is to "bring" nature into the human experience. The Chinese garden may be viewed as a miniature of the Chinese landscape. Nature is loved and held in highest honor in Chinese art, but this does not mean that the nature must be simply "duplicated" in its original form. The main principle of Chinese garden art is to recreate nature, to present its essence without an artificial effect. The recreation must be based on profound observation and a deep understanding of the nature. The design of Chinese garden is a process of abstraction and stylization of the existing landscape. The final aim of creating a natural form in the Chinese garden is to celebrate the human spirit.
2. THE PHILOSOPHY

Chinese philosophical traditions also played an important role in the molding and regulating the Chinese architecture and garden form. There were two major philosophies that originated in ancient China: Confucianism and Taoism. Each made important contributions to Chinese architecture and garden art. Confucianism, the "art of the living", influenced the character of Chinese architecture. Taoism, as the "law of the nature", is regarded as the main principle of Chinese garden making. There is a saying that "A Chinese is a Confucianist when he is inside the building; but Chinese will be a Taoist when he enters the garden."

CONFUCIANISM

Confucianism was a whole system of moral-political-religious philosophy of ancient China. It was defined by Confucius, and then was carried on and developed by his disciples and later scholars. The whole Confucian system of philosophy and morality may be summed up in one Chinese word "Ren", which is a composite character made up of two simple characters "Man" and "Two". "Ren" basically tell us that the central theme of Confucianism is chiefly concerned with man as an individual living in social relations. Confucianism is called the art of the living in China. According to Confucianism, everybody must fulfill his right function and maintain the proper relationship to the society, wherein "the king is kingly, the minister is "ministerly", and the father is fatherly." Loyalty to the emperor
and filial obedience to the patriarch were the basic tenets of the Confucianism.

As the life companion and life guide of the ancient Chinese people, Confucianism, with its rigid and hierarchical conception of social organization, was the main philosophy which dominated and regulated traditional Chinese architecture. It produced a extremely restricted, formal, axial, and symmetrical architecture style. Each building was regulated by the rank and social status of its occupant in the ancient Chinese society, with the parent rooms definitely in a better position, with more space and luxurious ornamentation, than those of their sons.

Fig. 1.4
The king is kingly, the minister is ministerial; the father is fatherly.
Taoism was the philosophy about the "truth" of the universe, or the law of nature. Tao "道" - the essence as well as the sum and substance of Taoism - is a composite word made up of two Chinese word characters: the character "Shou" 首 , meaning "first", "beginning" or "leader" and the character "Zhou" 踢, meaning "to walk", or "to pace". Taoism is the philosophy suggesting the idea of the "Way" or the "Path" in which we should walk-- the one path of life. Tao is the eternal law of nature, it never changes, but witnesses and withstands all changes. It is sublime and majestic, but it is formless, nameless and indefinable. According to Taoism, in order to have the "happiness" and "long life", one must follow the Tao, or the law of nature and must harmonize his own rhythm to the pulse of the nature, to the changing of the season, to the flow of the thing.

Taoism, which summoned people back to nature from mundane interests, has greatly influenced the layout of Chinese gardens. Contrasting with formal axial and symmetrical system of classical Chinese architecture, the Chinese garden expresses the formless, indefinable, asymmetry with a curvilinear layout derived from the nature.
Fig. 1.5
Wandering leisurely in moon light.
by Tu Chin. (2nd half of 15th century)
3. THE CLASSIFICATION OF CHINESE GARDENS

Chinese traditional architecture and gardens are generally classified into two major styles: the imperial style of the north and the scholarly style of the south.

IMPERIAL STYLE:
In Chinese history, most of the ancient emperors built their capitals in the northern cities of China, such as Peking, Taiyun. Because of that, almost all the Chinese imperial architecture and garden art are found in the northern part of the country. The purpose of the imperial style is to serve the imperial political purpose as well as to show imperial wealth. This imperial style is unlike the private garden, which intends to provide a feeling of spaciousness in small limited areas. Imperial architecture and garden usually have large scale, as though built by a "million" people. Displaying the imperial grandeur and extravagant life style and fitting the huge site dimension, the imperial architecture and garden have little or not reduction in the scale. The imperial gardens of the north tend toward studdness, dignity, and resplendence consistent with a sense of palatial grandeur. Special approaches are employed in dealing with imperial architectural and the garden's form, color and layout to show its palatial grandeur, such as the more obvious axial plan layout and more colorful decoration, for example: yellow-glazed tile roofs, multi-colored beams and brackets, embellished eaves and brilliant vermilion pillars, etc., and the imperial gardens are full of unusual plants, exotic stones, and rare animals.
Fig. 1.7
A pavilion in *Summer Paradise*.

Fig. 1.8
A walking gallery in *Summer Paradise*. 
SCHOLARLY STYLE:

Most occupants of the Chinese private gardens are the painters, the poets, and other scholars. We can call those gardens as the gardens of the literati. The ancient scholars created the gardens to provide a retreat from the world "dust", or the political life, and to refresh, nourish and improve their own heart. So the Chinese private garden embodied the sentiment of the poet and the view of the painter. The Chinese private garden may be seen as the three-dimensional painting or poem. Comparing with the imperial style, the characters of the classical Chinese gardens are more delicate, more refined, more elegant and more flexible. One of the poems by YuanMin Tao (365 - 427, one of the Chinese ancient famous romantic poets), gives us the generally idea about the purpose of the Chinese private garden.

"When I was young, I was out of tune with the herd,
My only love was for the hills and mountains.
Unwittingly, I fell into the web of the world's dust,
And was not free until my thirtieth year;
The migrant birds longs for the old wood,
The fish in the tank thinks of its native pool;
I had rescued from the mildness a path of the Southern Moor,
And, still rustic, I returned to field and garden,...
Long I lived checked by the bans of a cape;
Now I have turned again to Nature and Freedom."2
Fig. 1.9
A artificial mountain with a pavilion in one of private Chinese garden- Yi Pu Garden in Suzhou, Jiangsu province.
2. Architecture

- Introduction
- Design
1. INTRODUCTION.

Architectural style may be regarded as a reflection of the life and the culture of the people in a particular history period. Each great architectural work is an integral part of its own time, and expresses the culture and technology of the particular period in history. Architecture styles have greatly changed over the course of time. Traditional architecture is today but a remnant of the past, an antique ruin which a modern architect may admire but would hardly seek to imitate. Architectural style changes over time, but in any valid architecture there always remains an underlying system that gives the architecture its validity. We can cite the words of Kamo Chomei, in his book titled the *Hojoki*, to describe the change in architecture styles.

"The water of a river flows constantly, and today's water is no longer that of yesterday. Even the bubbles that float in a pool appear and disappear; they do not remain for long. But, the river which flows in this way always swirls where it is supposed to swirl, does it not?"

In the follow pages, I do not intend to provide a history of Chinese architecture, but want to search for the roots of the Chinese architecture, for the system that gave Chinese architecture its distinct nature. Dougles Kelbough, in his article titled "Toward an Architecture of Place", gives us a critical attitude towards the traditional architecture.

"A building type that has stood the test of time for many generations must be doing something right in terms of responding to building materials and
practices, to climate, to social and cultural needs, to tradition, and to economy."\textsuperscript{4}

Traditional architecture in a large country with a long, diverse history such as China must contain many appropriate and time-lasting architectural solutions. Learning from the past can help us ensure the continuation of our culture, and provide us with some useful resources and reference materials to apply to contemporary architectural problems. China is a nation of vast territory, long history, and rich resources. Great differences in geographical and climatic conditions have caused marked diversity in the architecture of various regions. However, it is possible to discern the underlying distinctive common characteristics.
2. DESIGN TECHNIQUES.

The axial city plan and site plan.

As noted before, one of the great religious beliefs that influenced the design of the classical Chinese city and architecture is Confucianism. In order to create a stable social order, Confucianism established the strict doctrines putting the society in order with rites and filial piety. An axial, symmetrical city and architecture plan layout was the most suitable means of expressing the concept of such a rigid hierarchical social system. This is because compositional elements in an axial layout plan are never independent -- they are always subordinate to the axis and ruled by its coordinates. The relationship of each compositional element to the reference axis is an important factor in the axis plan. For example, it is important whether a building is on the north-south axis or on the east-west axis.

Fig. 2.1
An axial, symmetrical city and architecture plan was the means of expressing the concept of a rigid hierarchical social system.
Unlike some traditional western European country cities which utilized an axial plan with polar coordination, the classical Chinese city axial plan was based on an orthogonal system which was regarded as the best means to express the social system in ancient China. Some common characteristic features of the classical Chinese cities were as follows:

(1) The classical Chinese city's plan exhibited obvious axial symmetry, with palace or other important government building in the axial center, symbolizing the centralized power of the emperor.

(2) The traditional Chinese cities were usually designed with a square plan, the streets were laid out running north-south and east-west along the plan axis to form a checker-board grid.

(3) They were all enclosed inside a wall.

![Qianbulang plan, Beijing. Ming and Qing dynasties.](image)

1. Tianan Men.
2. Qianbulang.
3. Da Qing Men.
5. Zhengyang Men.
6. Imperial city.
7. Ministries.
8. Qinpan street.
Like the Chinese city, the house, representing a microcosm of Chinese private life, was also influenced by Confucian doctrine. The obvious axial arrangement of Chinese architecture had often been seen as an expression of Confucian idea of harmonious social relationship, which was formal, regular and clearly defined. Nothing inharmonious or irregular existed inside this kind of the building. Usually the north-south axis was considered to be the major axis and east-west axis as the minor. This was because China is geographically situated north of the equator and the climate is, for the most part, cold in the winter and warm in the summer with a southeasterly prevailing wind. A north-south axis makes it possible for building to take the advantage of the southeasterly winds and sunshine. Thus, the buildings along the south-north axis usually have a more pleasant environment than the buildings along the east-west axis.

One of the essential points of the Confucianism is "harmony". Harmony with a family was considered the primary source of happiness of one's life by most Chinese. Most Chinese believed the Confucian ethical concept of deference to elders was the useful way to have family harmony in which happiness and propriety prevailed. The Classical Chinese house was planned to express and reinforce this philosophy. The halls for the older generations and for important ceremonies were arranged along the main axis, which usually was the north-south axis, to have the best ventilation and sunshine, while the young occupied the side halls facing east and west. The halls for the parents would be higher, more exquisitely decorative than the quarters for children.
Various types of buildings had been created to fit the different uses. Such as, T'ing (Hall)-- the largest and the most formal room used to treat important guests, T'ang (Living room)-- the place to hold family meeting, L'ou (Apartment)-- the place for family member live and for taking advantages of scenery, 'Ting (pavilion)- the place for relation and the appreciation of the scenery, and so on.

Fig. 2.3
A typical axial plan of Chinese architecture.
Usually, the entire house was enclosed by a high, solid wall. One or two doors lead out to the street. The function of the wall was to make the house a safe domain of one family, to protect the home from theft and fire, and to provide a sense of privacy and seclusion. This wall engendered a special serene mood for the family and helped to preserve a peace of mind. When one was in the lane outside the buildings, he would find he was in a narrow space enclosed on both sides by heavy masonry walls. Occasionally, a small high window, parts of the roof and a piece of tree seen over the top of the wall indicated that there was a courtyard house behind the wall.

Fig. 2.4
From the lane outside the buildings, only the small windows or pieces of tree seen over the top of heavy walls indicate that there is a courtyard house behind the wall.
The alternation between the architecture interior and exterior space.

The axis in Chinese architecture not only controls the plan layout, but acts as a path. When one passes through the main gate and steps into a classical Chinese courtyard house along such a path, he will see that the entire building complex is composed of alternating interior and exterior spaces. From a building to a courtyard, and then from the courtyard to another building, one experiences a spatial sequence of solids and voids. The interior and exterior spaces in the Chinese courtyard house are complementary to one another, rather than being independent. So we can see the courtyard as an exterior space is also one of the necessary parts of the spatial organization in classical Chinese architecture. The courtyard in the Chinese architecture may be seen as the extension of the interior space. Almost all the doors and windows of
the buildings in the Chinese courtyard open toward the courtyard. Courtyards usually are the center of family activities. The courtyard has many great advantages for living. Usually, large deciduous trees are planted inside the courtyard. In the warm climate season, the dense leaves of these trees provide cool shade and pleasant scent. In the winter, almost all of the leaves fall, it allows courtyard to have the most plentiful sunshine. In addition, there are also some other articles of furniture inside the courtyard, such as stone tables and chairs. The courtyard is a pleasant exterior place for one to look at the buildings around it, to have tea with friends or family members and to view the moon on a summer night. Indeed, the courtyard is really an ideal space shared by all for relaxation or recreation.
Fig. 2.7
An analysis of the space complex of a typical Chinese architecture.

A view:
From outside into architecture.

B view:
From courtyard into a building.
In the ancient Chinese cities, there were no parks, squares or other public spaces, like in the western country cities. Chinese divided the exterior public spaces into the private areas, such as the courtyards and gardens. Although it is convenient and intimate to use these private courtyards or gardens for family activities, the lack of public gathering areas indicates that there were no places for people to express or exchange their political opinions in ancient China.
The modular system.

One of the basic principles of classical Chinese buildings is the use of a module, much like the modular concept of prefabrication in contemporary architecture. Traditional Chinese carpenters used "Jian"—a structured bay as a standard unit to construct all buildings. "Jian" was a rectangular space marked by adjacent structural frames. "Jian", as the basic interior unit, can be expanded or repeated along the architectural plan axis to join together to create a hall, then a building. Along a longer axis, several buildings can be connected around a courtyard to form a courtyard house. Several courtyard house units along the city plan axis create an small street district. A number of such districts form a grid-like network based on the longer city plan axis with palaces, government buildings and other public buildings in the center. This is typical of traditional Chinese cities.

Fig. 2.8
Structural system.
Sectional plans and elevations were not needed by the traditional Chinese carpenters in the construction of a building. The most important factor for the Chinese carpenters was the location of the pillars in the floor plan, the code symbols of the basic plan unit in a building. So, an understanding of the "Jian", the modular standardized units of Chinese architecture, will help us better understand the space concepts of classical Chinese architecture and the method of design.

The exposed structure.
Since brick and stone structures were never widely adopted, almost all of the main structures of classical Chinese architecture were made of wood. So, the art of Chinese traditional architecture may be seen as the aesthetic of wood. In order to prevent the wooden structure from decaying in the moist weather, Chinese exposed the wood directly to the air to allow for good ventilation. At the same time, the original texture and color of the wood itself was so delicate and pleasurable that the wood is never covered or hidden. The wood frame in Chinese architecture was only painted with a kind of transparent wood oil to prevent it from decaying. This kind of the transparent oil allows the wood's original texture, grain and color to be seen directly and made the wood frame intimate and warm to the eye.
Fig. 2.9
Traditional Chinese architecture may be seen as the art of the aesthetic of wood.

The wood frame, the skeleton of the classical Chinese building, supported the weight of the huge roof as well as the upper stories. Walls were used only as enclosing elements. This structural system made it possible for the interior space to be divided freely according to need. In the division of the interior space, besides using "positive" partitions, such as solid walls, sliding screens and folding panels, Chinese also used "negative" partitions, such as a moon door, decorative panels, open shelves, decorative panels etc.. The "negative" partitions only partially divide the space, or we can say, merely suggest the "separation of the space" and allow free access and the continuity of vision.
Fig. 2.10
Negative partition.

Fig. 2.11
Negative partition.
In the buildings in southern China, the character of the exposed wood structure was even more obvious. In this region the weather is more hot and humid, so the walls are thinner and not only the interior wood structure, but also all the columns and beams were exposed or half embedded in the outside walls of the building. The exposed wood framework expressed the human energy, the will to defy the natural forces and created a strong rhythmic effect on the facade of the building. And always, dark shadows created by the strong sunshine in southern China intensified the rhythmic feeling. This creates a building with an beautiful musical visual image. The exposed framework in the wall is the integral part of the form composition of classical Chinese architecture.

Fig. 2.12
The exposed wood structure creates a strong rhythmic effect to the facade of buildings.
3.

Garden

- Purposes
- Characters
- Comparision
- Components
- Design
1. PURPOSE.

Chinese have a long tradition of being in harmony with nature. Tracing the roots of the Chinese love for nature is a difficult process. Perhaps it came in part from the particular geographic and economic condition of each individual people. As noted before,
the Chinese people depend heavily on their agriculture. The fertility of the soil and the suitability of the climate have greatly influenced the life of Chinese people. Thus, nature seemed to have a supernatural power to ancient Chinese people. From primitive times, Chinese people seemed to have bowed to the nature forces and learned that living in harmony with their environment was the only way to live harmoniously, even only to survive in the world.

The second reason of the Chinese people's love of nature was from the beautiful landscape picture, which functions spiritual refuge. There was a long time in Chinese history that the whole country was full of war and devastation, a political chaos and a continuously changing social condition, and corrupt and hypocritical government. All of these lead Chinese people to lose faith in the Confucian hierarchy system and their interesting in political life. Mentally they escaped from the physical chaos into a new interest in Taoist views of nature. But, the Confucian ethics value of neutrality had so deeply influenced on Chinese people's mind that they usually had the passive attitude toward the corrupt political system. In according to the Confucian's demand, in the time of a bad government, one should not tend to be against his government, but should withdraw from the political, and even the public life. So, in ancient China, many Chinese assumed a political tinge and a character of passive resistance and a tendency to seek a life in the solitude of nature. A place where "only mountain birds enter and leave here, no worldly man is found at this secluded place" had a particular appeal for
those Chinese anchorites which some Chinese scholars used to be proud to call themselves. This is vividly manifested in one of Wang Wei’s poems:

I sit alone deep in a bamboo grove,
strumming on my lute while singing a song;
In the deep forest, no one knows I am here,
Only the bright moon comes to shine on me.\(^6\)
In fact, there were only a small number of Chinese beside those who already retired from the activities of the world wishing to spend their contemplative old age in quiet harmony with nature that lived in the small huts or cells on the remote solitary mountains, due to lack of opportunity. In ancient China, most of the literati were also officials. Once in office, it was not easy to escape the duties of their position. At most, they only could temporarily leave their offices and family to enjoy their anchorites' life in the country area. When it was impossible for them to go and live in nature, those Chinese literati-officials brought nature into their houses in the cities or towns by laying out gardens. These gardens arise out of an attempt to imitate nature, they then became a substitute for nature in urban surroundings. So, although living in the rustic huts held the most appeal to most of the Chinese scholar official, it was always just as common for them to retreat to the gardens adjoining to their house. As one scholar-official remarked, "if heart is at peace, why should one not create a wilderness even in the midst of town? All that was needed was a high wall to exclude the cares of men, and then the inside could be returned to nature."\(^7\) Because, those gardens were private, one of their most important characters was their serenity. Chinese private gardens served as a setting for the masters' tranquil retreat as well as their relaxation and enjoyment. These quiet, serene gardens provided their masters with the places for contemplation, introspection and poetic mediations and help them to gather and renew their energies during their time of absence from the activities of outside world. Chinese scholar-officials used to love
nothing better than to wander along the intricate paths inside the gardens. The beautiful scenery of the gardens helped to mold their temperament and heighten their artistic cultivation. This feeling vividly described in one of Yuanming-Tao's famous poems.

*I lean on the south window and let my pride expand*
*I consider how easy it is to be content with a little space.*
Every day I stroll in the garden for pleasure.
There is a gate there, but it is always shut.
Cane in hand I walk and rest,
Occasionally raising my head to gaze into the distance.
He clouds aimlessly rise from the peaks.
The birds weary of flying know it's time to come home;
As the sun's rays grow dim and disappear from view,
I walk around my lonely pine tree, stroking it.⁹

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**Fig. 3.3**
Private garden became a substitute for nature in urban surrounds.
*Ge Garden*, in Yanzhou, Jiangsu province.
In addition to providing a quiet refuge place or offering the owner a enjoyment of nature while living in the city, the private garden also served as a place for scholars to gather together to discuss philosophy, art and politics. Thus, it was customary to share several jars of wine with friends inside the garden, just as Lao-tze said in the forty-seventh dictum of his Tao-te-ching (It was regarded as the Taoist original doctrine):

*Without going outside the door, you can know the world.*

*Without looking out of the window, you can see the Tao of Heaven.*³⁹

---

**Fig. 3.4A&B**

Cups of wine floated down the serpentine water course in a private garden while the scholarly inhabitants composed poetry. Drinking the contents of the cup was the reward for writing poem in time or the penalty for not.

*Garthering at the Orchid Pavilion.* (detail)

by Ch'en Ku (1530 - 1613)
2. CHARACTERS.

The Chinese private garden was owned and built by highly cultivated individuals in the society in such a way that which walking through it, one would feel a complete enjoing of all aspects of the country's cultural traditions, including the philosophy, architecture, poetry, painting, calligraphy and gardening. Just as Edwin T. Morris wrote in his book titled "The Garden of China", "We enter the entire culture of China through the moon gate of the garden."

The scholar-official who created a garden for himself was generally also a poet, a painter and perhaps also a musician. He built the garden for his own pleasure, on one hand as a means of cultivating his being, through bringing himself into unison with the forces of nature, on the other hand a means of pure self-expression. So, the Chinese private garden embodied the sentiment of the poet and the eyes of the painter. When one enters a Chinese garden, he finds himself surrounded by the atmosphere of the poetic and the painting. To learn some cultural background about the art of the Chinese poem and landscape painting will help us to understand the characteristics of Chinese private garden.

The first characteristic of Chinese garden is its rich poetic content. The integration of poetry with the art of garden-making is one of the special achievements of Chinese private garden's construction. Chinese private gardens are extraordinarily rich in poetic content. For example many scenes depicted in gardens have been based on themes taken directly
Fig. 3.5
Poetic content in private Chinese garden. A couplet and pieces of poetic quotation carved on a rock or a wood tablet in garden provide the viewers with great aesthetic enjoyment.

from poems of famous poets. Such as, the Keep and Listen Pavilion (the Lin Ting Ge) in Suzhou's Zhuo Zhen garden was built on the theme of the lines by Li Yi Shan: "Keep the remaining lotus leaves, that I may listen to the sound of rain."\textsuperscript{10} Garden scenes helped one to visualize the selected verses and enriched the garden's artistic content. A rock grouping with a waterfall and a gnarled pine or plum tree shaking under summer wind etc., such the successful scenes inside the garden, in their turn, could evoke the poetic mood within the viewers. Private gardens were favorite subject of Chinese literature. They became a common background for many famous poems and novels, for example, the entire story of classical work "The Dream of the Red Chamber." was happened on a background of a imaginary private garden, Ta Kuan Garden. Strolling in a Chinese
private garden, one will often encounter couplets written on boards hanging beside the gateways and doors and poetic quotations carved on stone tablets or rocks. Either they are the famous lines which guided the construction of the special garden scenes or poetry inspired by the beautiful scenes. The poetic inscriptions, usually written in the wonderful calligraphy, provide the viewers with great aesthetic enjoyment and also help them understand and appreciate the garden's scenes. Poetry can be regarded as the guide book for the garden builder as well as the viewers.

Fig. 3.6
The story of a classical word “The Dream of the Red Chamber” was happened on a background of a imaginary private garden, Ta Kuan Garden.
The second characteristic of the Chinese private garden was generated from the painter's eyes of its owners and can be summarized as free and asymmetrical. It is almost impossible to fully understand the Chinese private garden without any background knowledge of Chinese paintings, especially the Chinese landscape paintings. Almost all of garden-makers were also painters. When building a garden, the Chinese garden-makers not only followed the natural landscape formations, but they also imitated the brush works of the old masters. Even for the visitors, they also looked at the garden through eyes educated by thousands of years of landscape painting. Chinese landscape painters provided several basic conventions through which Chinese looked at their garden. Because the art of Chinese garden-making was integrated with the art of the landscape paintings, the evolution of garden styles in different regions could be thought as being guided by the style of original landscape paintings. The gardens in the south of China are distinctly different in character from those of northern regions. The differences seem to be due not only to the different functions, which, as noted before, the gardens in south served those Chinese scholar-officials for private use while those in the north served mostly imperial needs, but also to the different styles of paintings developed in these regions.

There were two obvious different styles of the landscape paintings in the ancient China, the "Northern" and "Southern" style. The former stressed "Kungbi", which can be translated in English as "the hard-work brush.", and devoted itself to meticulous detail; the latter,"Xieyi", focused on "expression of
Fig. 3.7

*Narcissi*

by Chao Menchiien - "Kungbi" painting, or "the hard-work brush".

Fig. 3.8

*Orchids*

by Li Shan, (1670 - 1754) - "Xieyi" painting.

feeling". Garden styles developed correspondingly in these regions. The gardens in the northern regions of China, like the Kungbi landscape painting, usually reveal the exuberant and ebullient character while those of southern are dainty and
subtle. The majority of following discussion will be about the private garden in the southern of China. In order to better understand the character and the designing principles of this kind of garden, it would be better to learn some background knowleges about its corresponding painting, the Xieyi painting, first.

Xieyi painters think of painting as a mode free self-expression. To paint is really nothing but to express one's innermost emotion, or to pursue one's own enjoyment. Xieyi painters sought to create a atmosphere of Shensi, or similarity in spirit to natural beauty. For instance, in order to paint a landscape painting, the Xieyi painters wandered among many famous mountains and rivers to assemble and digest the quintessence of the natural environment, and then after months of preparation, they finished, or "express" their paintings perhaps just in a second. One essential difference between Chinese Xieyi paintings and the Western European painting lies in that, for Western artist, the landscape crystallizes into its final art form only during the process of creation, while the Chinese Xieyi painter show up the imagination already complete in his mind. Xieyi art is much more subjective than objective. This characteristic is revealed clearly by the following sentences from the "Collection of the Purity of Landscape", written by Han Cho in 1121.

"Painting is brush lines, and these lines in turn reveal the emotion of the heart. Painting reaches back to before that which is still unformed and is first comprehended beyond the law. It stands in subtle concord with the creative process of nature and has the some driving forces as the Tao. In adhering to its
law one unfolds all forms, and is wielding the brush one sweeps over thousands of miles.”

Corresponding with Xieyi painting, the Southern Chinese private garden does not simply represent the actual scenes of nature, but synthesizes the idealized scenery of Chinese landscape. Like the painter, the garden-maker must grasp the essence of nature, not the particular element, to create the shapes with deeply spiritual similarity, not the individual likeness. In a word, while making scenes for a garden, a garden-maker must be an interpreter of nature, not merely a duplicator of a scene. For example, even a single rock in the Chinese garden
may represent a complete range of mountains. The following sentences from Yuan Yeh (which had been thought as only one garden manual in ancient China) can be used to reinforced this kind of the garden designing principle: "Follow nature's plan to a certain extent, but do not forget that it is to be executed by human hands, select the particular and seize upon what is gold. Those who have the right interest will understand the matter."
In ancient China, there was not any professional garden designing, almost all the private gardens were designed by those scholars. So like the Chinese paintings, Chinese gardens also can be seen as manifestations of its owners' character, as well as reveal their care and interests. Scenes in the Chinese garden were made following two major principles: One, of course, was to follow the Tao of nature, or to be in tune with the underlying rhythms of the seasons, the plants, and the universe; and the other is to reflect the owners' innermost emotion. A elastic zigzag of the pine tree or a grotesque rock which conflicts with the smooth serenity of a white-washed wall in the garden can be seen as a reflection of the unpeaceful mood of its owner during a period of political turmoil. The owner's personal emotion is so much a part of the scene that is really hard to tell whether he is part of nature or nature is part of him. So, to enter a Chinese garden and find just "rocks, water and trees" as well as architecture is to miss the deep meaning of the scene, or the hidden language that all these object embody. Regarding the garden as a reflection of his interest, as the constant changing of his interest, a garden owner usually recreates the old scene or adds new scenes into his garden. So, Chinese private garden was a contionuing process, that never tend toward an abssolute the end. The follow sentences can give us some general idea how Pan En ( a sixteenth century Chinese painter ) built his garden. "For twenty years I continued to build the garden, L sat a sit, and rested a rest, but it was still not very good.... I creased the site of the ground, adding fifteen plots of land, I made seventeen pools. Furthermore I bought many fields
and devoted the entire revenue from these to beautifying the garden. \textsuperscript{13} For Chinese people, there is not a perfect garden just as there is not a perfect human being in this world. Chinese private gardens are so subjective in nature that it is impossible to try to summarize all of their different characteristics. They do not add up to any single conclusion, and there is no one style that is essential.

Fig. 3.11
A elastic zigzag of a tree or a grotesque rock in a private Chinese garden reflected the unpeaceful mood of its owner.
3. COMPARISION OF THE CHINESE PRIVATE GARDEN AND EUROPEAN GARDEN.

It is possible to find some mutual influence between the Chinese private garden and the European garden. They are the world's two major ancient garden systems. They have substantial differences in their contents, design principle and characteristics.

The first difference between these two kinds of gardens comes from their purposes. The aim of the garden in European is merely for leisure, for people to have relaxation or entertainment in the natural environment. In this purpose, the plant material undoubtedly was selected as the major component.

Fig. 3.12
Ta Kuan Garden, an imaginary reconstruction of garden according to the Dream of the Red Chamber.
Besides the use of the physical relaxation, Chinese private gardens also provided a place for spirit refuge and poetic contemplation. Chinese people not only rest in their garden but they also live in it. So the Chinese garden was built as a livable environment with a distinct character that included an exceedingly high density of architecture inside it. There was a saying in China: "There was no garden without a pavilion."

In order to satisfy the requirement of spiritual refuge, Chinese garden-makers selected and laid
the rocks inside the garden to imitate the holy mountains in China. Grotesque and tortuous rocks dominated the garden scene in much the same way that flower-beds highlight an European garden. The use of a rockery component in the garden was an important reason that made the Chinese garden distinctly different from those in Europe.
The second difference was their obviously different plan layout. This difference came from the different attitudes toward nature in these two areas. The garden in ancient Europe usually had a geometrical plan layout. The axial, symmetrical layout with series of geometrically shaped patterns and rectilinear paths in the gardens of Europe present a clearly artificial order in opposition to what occurs in nature, demonstrating a strong human will of controlling natural forces. Under the influence of the Taoist natural philosophy, Chinese people had a deep love of nature and a sincere belief that the human being is only a subordinate constituent of nature. While designing their gardens, Chinese people never accept any artificial shapes which conflict against the natural order. Chinese gardens tended to intimate nature and had a naturalistic curvilinear plan layout. Chinese prefer the zig-zag paths because they make the gardens more natural than the stiff rectilinear ones. So, it was not surprising to find that there is not a point in a Chinese garden from which the entire garden's scene can be visible at a glance. The pursuit of the curvilinear plan layout in the Chinese garden is toward a cumulative effect.

The third difference comes from the relationship between the gardens and buildings. The traditional garden in Europe was usually built around the architecture. Architecture was dispersed within the garden. The garden was used as the approach, adjunct, or a background to the architecture. However, the private garden in China was built inside the architecture. In Chinese house, there was ambiguity between the garden space and architectural space. The garden in China can be
seen as extension of the interior space, and the building a sheltered part of garden. In order to enter the garden, one must pass through the building and to enter the building, one must pass through the garden.

Fig. 3.16
In Chinese garden, there is ambiguity between garden space and architectural space. A half pavilion on Garden of the Stupid Official in Suzhou, Jiansu province.
4. COMPONENTS.

Although dominated heavily with architectural structure, the Chinese private garden still prevails as a naturalistic landscape. The Chinese word for the landscape is *Shan Shui*, which literally means "Mountain and Water". This origin clearly indicates that mountain and water have always been considered as favorite subjects of the Chinese landscape artists: the painters, the poets, and the garden makers. The major natural components in the Chinese private garden include: the rock—the "skeleton" of the universe, the water—the "blood" of the universe, and the plant—the "hair" of the universe.

**ROCK**

European visitors are often overwhelmed by the heavy rocks they find in the Chinese garden. The appreciation of the strange rocks, which was thought as aesthetic activity as much as a religion one, was elevated to connoisseurship, and was practiced by cultivated gentlemen in ancient China. Chinese scholars collected the stones in much the same way as the Europeans collected their antiques. In a famous story, the famous painter, Mei, Fu (1051-1107) elected a certain rock in his garden as his "elder brother", visited it everyday, greeted it and even bowed down to it.

The first reason for the stone loving of the Chinese stems from the magical views of the Chinese five holly mountains, which seems to have played an important role in the Taoist anchoretism. Rocks in the Chinese garden called to the minds of the visitors the beauty of these mountains. It is worth mentioning
that not only were the scenes of these mountains evoked in garden settings, but many of which had also been enormous "garden" themselves. Entire mountain was landscaped with Taoist or Buddhists Temples, pavilions, bridges etc..

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Fig. 3.17
The Mountain Tai is also an enormous "garden" itself. The kuang-hsi Emperor's Second Tour of the South Mount Tai, by Wang Hui. (1632-1717)

In Chinese gardens, a stone was valued for its bumps, furrows and hollows, and for the color and texture of its surface. The rock was much more appreciated for its grotesque shape than for its resemblance to a particular mountain. The surging convolutions, twists and gullies of the rocks remind one of the forces of the nature, and hint to the meaning of the Tao. Climbing over or through these rocks or pondering around their suggestive shapes, one could easily imagine being perched in the mountain wilderness, confronting the forces of the nature, and being a Taoist without leaving his house.
Fig. 3.18
The rock in Chinese garden was much appreciated for its grotesque shape than for its resemblance to a particular mountain.

If the rocks are large enough, they will be used to pile up the rock hills, the artificial mountains, or to build the rocky shores of the lakes and water courses. If the shapes of the rocks are unusual enough, they will be celebrated and selected as the single standing rocks. For those of the small size, they will be incorporated with the dwarf trees to make
Artificial mountains are the essential scenic features in the Chinese private gardens and also function as space-dividing structural components. For this reason, building proper artificial mountains was regarded as the crux of making a successful garden. A Chinese gardener builds his artificial mountain in much the same process as the modern sculptor does his art work. However, the ways of the Chinese artificial makers looked more like the ways of the Xieyie sculptors, which tended to obtain the similarity of the spirit, than the ones of the realistic sculptors. Chinese gardeners build their artificial mountains not in front of their "models", the mountain, but inside their gardens, after filtering the beauties of the individual images experienced outside.
remodeling them into the generalized statements. As a result, artificial mountains in the Chinese private garden is not replicas of individual mountains, but are rather visions of the beauty of the landscape that has already been abstracted and purified by those gardeners after several months, even years. "wandering' and observation.

Fig. 3.20A
A Chinese gardener erected his rockely in much the same way as a modern sculptor does his artwork.
Rock arrangement in a private Chinese garden.

Fig. 3.20B
A sculpture by Henny Moor.
Mountains in Chinese paintings were not simple replicas of individual mountains but rather a vision of the beauty of the landscape that has already been abstracted and purified. "Literate in their Mountain Retreats," by Kuo Hsi (1020-1075).
There was an old saying in China: "Where there are mountains, there is bound to be water in the same place." Mountains and water are complement each other in the Chinese arts. Water serves as peaceful opposition and balance to mountain scenery, and is regarded as the absolutely necessary element to represent the totality of nature in perfect harmony. In the Chinese landscape painting, although water was rendered simply by leaving the picture ground bare, or by a light, even wash of ink, these blank areas, the "void" areas, are as important as those "solid" objects, such as mountains, and occupied plenty of areas. Not only did water offer a counter balance to the mountains in the composition, but they also served as a means of the spatial separation of landscape elements. Like in the Chinese painting, water surfaces boldly dominate areas exceeding more than a half of entire area in the Chinese private garden. For example, in the Unsuccessful Politician Garden in Suchou, water
occupies almost three-fifth of the total garden, and over 80% of the buildings were constructed along the water courses. Through reflecting rocks, architectural structures as well as the changing sky, and nourishing the plants, water brings movements and life into the Chinese private gardens. In China, a garden without water could be considered dead.

Fig. 3.23
Water surfaces dominate areas exceeding more than a half of the entire garden area in Shizhi-lin garden in Suzhou, Jiansu province.

Water is used in the Chinese private garden, not only because of its physical beauty but also for its important symbols. Water is one of Taoist's favorite symbols. Lao Tzu had decreed that "the highest virtue is like water," which may yields, but can course over any obstacles, and which takes the lowest place, but will wear away rock. In addition, water reflects like a mirror without any egotistic distortions. It is not superising that the Chinese scholars, who were usually also Taoists, liked to sit down by the lakeside pavilions watching the water reflections,
especial the full-moon reflection, and thereby cleanse their soul. Many names of the scenes in the Chinese garden, such as: Willow-shaded Winding path, Linger and Listing Pavilion etc., suggest visitors to "linger" or "loiter", along the serpentine paths or the zigzag bridges, to behave like the water.

While making their gardens, Chinese used to check to find out first if the site had a natural water source. It would be best that the garden site itself had the water source. If not, an artificial water source could be used as a represent, but it must be hidden behind the man-make mountain to be made like a "natural" water source. Water courses were never be shaped into any unnatural geometrical patterns in the Chinese private garden. A water fountain is never found in the Chinese private garden, although it may be the central interest in a European garden. In order to make the water courses appear more larger and more attractive, Chinese gardeners used rockerys and architectural elements to break the water into many scattered but interconnecting areas. Each area of water seemed quite unlike the others. Some Chinese private gardens are almost the water-labyrinths. It is much more difficult to unravel them when one is actually inside those gardens than it is in their plans.

Besides serving visual pleasure, water was also used for providing listening satisfaction in the Chinese private gardens. Water makes pleasure sounds as it gurgles over rocks, dashes down gullies and trickles from the eaves.

Water, much loved and extensively applied in the Chinese private gardens, are not only for its aesthetical function, physically, it absorbs the heat
and adjust the microclimate during the warm seasons. This is particularly important for the gardens in southern China. In addition, because almost all the traditional buildings were made of wood, the water courses inside the gardens fitted the requirement of the fire protection.

Fig. 3.24
In a private Chinese garden, the entire water surface is often broken into many scattered but interconnecting areas. The water course plan of the Garden of the Stupid official in Suzhou, Jiangsu province.
Fig. 3.25
The pine trees are the favorite objects of the Chinese painters and gardeners, for they symbolize robustness and dignity.

PLANTS.

Breezes in spring,
Flowers in summer,
Moon in autumn,
Snow in winter.

From this old Chinese jingle, we can see that of four seasons, plants are only important in the summer in a perfect Chinese garden. Compared with the extraordinary number of the architecture and man-make mountain, plants indeed don't seem to be given any special prominence in the making of a Chinese private garden. Everything in a Chinese garden seems to have an inner meaning, including the plants. The willow represents grace, for its tender and slender blanches. It is usually planted lakeside to "dance" rhythmically as the young girls along the
wind from the surface of the lake. The bamboo tree, with its tall and slender stalks and its long and narrow leaves, symbolizes fidelity, humility, wisdom, and gentleness. The pine tree symbolizes the robustness, dignity, and majesty of a wise old man. The chrysanthemum symbolizes such things as gentility, good friendship, and longevity. Lawn is used least in the Chinese private garden, for its beauty is best perceived with inexhaustible sight ranges, and contradicts the Chinese private garden designing principle of avoiding total exposure of everything at a glance. Therefore, lawns are well planted in the large tracts of lands in an American park, not in the stringent area of the Chinese private garden.

Fig. 3.26
The lotus rises undefiled from the mud, it has been one of Chinese most popular garden flower which was planted to symbolize the "unpolluted" spirit of its owner. 
Lotus
by Chen Shun (1483-1544)
5. DESIGN TECHNIQUES.

Although the private gardens were pervasive in ancient China, there was only one book about the garden making: Yuan Ye (Garden Smith) by Chi Cheng, published in 1634. This book unravels some guiding principles of the Chinese private gardens, but the application of those principles was so personal that there was no strict "rule" for the garden making in the ancient China. In the follow pages, I will introduce some general design techniques, and provide a visual insight into how private gardens were built, without providing a "rule" to be followed step by step.

SITE ANALYSIS.

According to Yuan Ye, the most important designing principle of the Chinese private garden is that" you should follow the natural lie of the land to obtain interesting views." In order to "follow the site to create the best",14 gardeners must first investigate and explore carefully the natural landscape resources of the site, and seek inspiration directly from the site's characteristic environmental atmosphere. Chinese gardeners would never destroy the natural configuration of the site. Instead, they would simply improve the site while attempting to retain its natural charm.

If the site itself is a plain land with unfavorable qualities, Chinese gardeners would place attention on the environment off the site to find any proper scenery which could be "borrow", such as a Tao temple in the remote hill, a pavilion in the lakeside, even a flower in the neighboring garden. The place
which takes advantage of these scenes will be preserved for the main halls.

The aged trees existing on the site were preserved with great effort. For "it is comparatively easy to construct caravel beams and soaring pillars, but it take a long time to grow Pagoda trees old enough to give real shade and bamboo groves like a mass of green jade."\textsuperscript{15}
The Chinese gardeners endeavor to use natural sources. Water was seldom introduced in the Chinese private gardens artificially. Finding the natural water supplies was usually a top priority during the site analysis. Fortunately, southern China has an abundance of water resources. That is the main reason why the Chinese private gardens usually can keep well-balanced ecosystems requiring little maintenance.

Fig. 3.28
The plan of Yi Garden in Suzhou, Jiangsu province.

Fig. 3.29
The plan of Liu Garden in Suzhou, Jiangsu province.
Walls were raised to keep away the hubbub of the street and to take the site, perhaps in the mist of the city, back to nature. The walls which kept the garden a secluded place usually were hidden by the heavy trees or rockery to avoid the feeling of constriction.

**DIVIDED, BUT INSEPARABLE.**

As being built in the cities, the common problem of the Chinese private gardens is the limitation of the land. To compensate for the small space, the entire Chinese private garden was usually divided into several scenic sections. Garden scenes were concealed inside these different scenic sections and could only be disclosed not at one glance but gradually in sequences. Every scenic section should have its own landscape character, but the garden as whole must be unified under a central theme. In a word, the whole garden is divided but not separated. Since each section is a complete enchanting scene unit itself, one does not have to wait until visiting entire garden before enjoying it. This design technique creates a Chinese private garden seeming spaciousness in its restricted space.

Fig. 3.30
The entire garden was usually divided into several scenic sections.
The various scenic sections inside a Chinese garden offer the Chinese gardener the greatest freedom in arranging multifarious natural views for his landscape idyll purpose. Subdividing the garden into different independent sections also satisfies various functional needs of the Chinese private garden. The central section is usually the place for such group activities as family party and gathering, entertaining friends etc.. For this reason, the central section always has the most dominating landscape scene along with the sizable main hall "Ting" or "Tang". The subordinate parts may only have a zigzag streamlet, a rock peak, a rock caravan, even a particular piece of plant along with a den, or a bed camber. But, the subordinating section is also important for garden owners, for it provided a place for spirit refuge. Inside the subordinate section, one could find a sense of relief, freedom and privacy, and could get rid of the restraints of rigidly enforced social etiquette.

Fig. 3.31
Subdividing the garden into different independent sections satisfies various functional needs.
Walls were the most common means of demarcating one spatial segment from the another. At the same time, rockeries, group of trees, sides of a buildings, and even two adjoining pillars of an open pavilion could also served this function.

Fig. 3.32
A wall is the most common means of demarcating one space from the other.

Fig. 3.33
Rockeries are also used as space demarcating elements.

Fig. 3.34
Group of trees partly separate one space from the other.
Fig. 3.35
A dividing wall in *Yongcuishan-zhuan* garden in Suzhou, Jiangsu province.

Fig. 3.36
The garden space which is divided by pillars is never completely separated, but is half separated and half connected.
In order to avoid feeling too closed-in after the space has been divided into many sections, Chinese garden designers created many successful stratagems of walling in and penetrating at the same time. Thus, the space in a Chinese private garden is never completely separated, but is half separated and half connected. When one inside a section, he will always have an opportunity to perceive a segment of a neighboring section. Such features as latticed openings in walls, decorated doors, and the low part of the walls tend to reveal the scenes beyond. In China, the design technique of partial revelation of a scene is called "Lou Jing" - the divulging scene. The trick of the divulging scene is that it simply makes the tantalizing suggestion of the scenes beyond, but does not discloses everything. Partial revelation of a space not only intrigues viewer's interest for further exploration but also encourages the viewer to imagine a space that is larger than its actual size. In fact, the stratagem of that a space seems larger and more attractive when seen through a barrier was also regarded as an important method by Chinese landscape painters. This technique could be manifested by the following sentences of the Sung Dynasty painter Kuo Hsi: "if one wishes to paint a high mountain, one should not paint every part, or it will not see high, when mist haze encircle its waist, then it seem tall.... Indeed, a mountain shown in its entire is not only without beauty, but it is as awkward as a picture of a rice mortar." The divulging scene which encourages a viewer's sight "divulge" into the inner scenes is an important method to achieve a visual unifying of the the different garden scenes. When a viewer finally
reaches the scenic section which had been partially revealed before, the real garden scene may be a dramatic contrast to the imagine one. However, this change will not occur abruptly, as the previous observation of the scene, even a mere glimpse of the scene through a grill window, has a psychologically unifying effect upon the beholder.

Not only were the gardeners divided the entire garden into different horizontal sections, they also divided the garden space into different vertical sections along the rise and fall of the site. For example, One terrace rising above another, a pavilion built on the peak of a man-made mountain, a stone bridge which is lower than the ground level.

The concept of the divided but unseparated which has been practised by the Chinese gardeners for long time is also common to the modern architecture designing.
Fig. 3.38
The garden space is also divided into different vertical sections along the rise and fall of the site.
**Fig. 3.39**
The plan of the Yi-pu Garden, Suzhou, Jiangsu province.

1. Waterside building
2. Boya Tang, or Boya hall.
3. Shilun Tang, or Shilun hall.
4. Ruyu pavilion.
5. Hexagonal pavilion.

**Fig. 3.39A**
The hexagonal pavilion on the top of the artificial mountain along the edge of the center pond is the main scenery of the garden.
Fig. 3.39B
The square pavilion, Ruyu pavilion, built on the edge of the pond is the perfect place to enjoy the water scene.

Fig. 3.39C
A wall was used to separated the inner garden's area from the main garden's area.
A full-moon gateway on the wall avoided the feeling of constriction, by revealing the scene beyond.
The zigzag bridge in front of the Ruyu pavilion separated the water surface.

several pieces of the stones can be the interesting center of the small court garden area in front of the Boya hall.
From the pavilion on the top of the artificial mountain, to the low level stone bridge, the garden scene also was divided into different vertical sections.
REVEALED IN A SEQUENCE.

As we know, in the Chinese garden, the garden scenes are concealed inside different scenic sections, thus they only can be revealed in sequence along the paths. In imitation of free nature, the paths in the Chinese garden are never straight and symmetric because that would recall man's order, but are curved, free and irregular, such as: serpentine paths, zigzag bridges and winding stone steps. So, to proceed from one scenic section to another, the person usually has to cover a much longer distance along the curved paths than if the paths were straight. Thus the curved paths actually prolong the traveling distance and time. Laying out the curved paths is the another major way for Chinese gardeners to create a feeling of spaciousness with the limited area of a private garden.
The scenic spots in the Chinese private gardens are built for static and dynamic viewing, and lingering observation. The rest stops along the paths, such as an opening pavilion beside a path, a small stone chair beside a pond or a terrace in front of a main hall, are places for static viewing of focused scenes. Many fascinating scenes along the paths are meant for close observation and attract visitors for further exploring. Unlike a path in a European garden which was designed to approach the scenes to have static perspective view, a path inside a Chinese private garden is built to encompass the scenes to have dynamic viewing of the scenes as well. Thus, a scene in a Chinese private garden was designed for viewing from a number of observation points and angles. The Chinese garden art is an experience in time, a process. Repeated occurrence of the same scene presented from different aspects and in various sequence makes a Chinese private garden look more extensive than it really is. The same principle was used by the traditional Chinese landscape painters. A Chinese landscape painter did not utilize a static viewpoint and a certain vanishing point in his painting, rather, he used many viewpoints and vanishing points together at one painting to visually describe a total feeling of the landscape, not any particular spot of scenes. So, strolling inside a Chinese garden just as unrolling a hand of Chinese landscape scroll, one's views change at every step, discovering and enjoying the whole garden scenery step by step through time and space.
In addition, the paths in a Chinese garden are usually constructed with varying widths or paved with different pavement materials to give the beholders the different senses of experience: constriction, roughness, release, and smoothness. The more differences, the more spacious the area will seem.
The touring routes are not only curved in the horizontal level but they also undulate vertically following the constructed or natural configuration of the site and offer pleasing views from vantage points at different vertical levels, such as a far-reaching panoramic view at the summit of a artificial mountain, or a close look at the water surface in a waterfront pavilion. The height of the stone step climbing up to an artificial mountain is often made lower than a normal step to make the beholders feel that the artificial mountain is higher than it actually is after they take more "steps" up to observe it.

Fig. 3.43
The touring routes undulating vertically following the configuration of the site offer pleasing views from vantage points.
Fig. 3.44
The plan of the Garden of the Stupid Official, Suzhou, Jiangsu.

Fig. 3.44A
The touring routes and view points analyzing of the Garden of the stupid Official.
The bird's eye view of the Garden of the Stupid Official.
A-A section of the Garden of the Stupid Official.

Strolling inside a Chinese garden just as unfolding a Chinese landscape hand scroll.

Traveling in Wu, by Shen Chou (1623-1698)
BORROWING.

The terrain of a Chinese private garden itself is always confined, so in order to avoid the feeling of cramping, the investigation and incorporation of outside natural landscape resources into garden's own scene is considered seriously by Chinese gardeners. For the places where there are no captivating landscape features worth borrowing, the gardeners will use artificial mountains, trees or architectural structures etc. as screens. On the other hand, gardeners will try to borrow any features which are worthy and interesting for their gardens.

Fig. 3.45
A pagoda on a remote hill as well as branches of trees of neighbor's garden can be "borrowed" into one owns garden scenery.
outside their gardens as well as scenes from within their own gardens. The outside landscape features can include any things, such as an attractive silhouette of a mountain, a temple or a pagoda on a remote hill, a floating fishing boat in the distance, or even a flower of neighbor's garden is also attractive to the Chinese gardeners. Through proper arrangement, these outside natural landscape can be intimately mingled into the garden scenery. Thus, the garden's boundary is extended far beyond its limits to the outer landscape and the garden's site is seemingly multiplied. Sometimes, it is really hard to say whether those beautiful outside landscapes belong to the garden or if the gardens are just an extended part of those landscapes.

Inside a Chinese private garden, one scenic section always partially borrows the scenery of another section, not only to inspire the viewer's curiosity for further discovery but also to enlarge the confined areas as well.

Fig. 3.46
A lattice window in Wangsi Garden in Suzhou, Jiangsu province.
Fig. 3.47
A moongate in **Yu Garden** in Suzhou, Jiangsu province.

Through reflecting, water in the Chinese garden was used to borrow the floating cloud, the moon and stars, the trees or the architecture on the lakeside. Water adds another dimension to the garden and also visually widens the garden space.

Fig. 3.48
The central pond in **Wangsi Garden** in Suzhou, Jiangsu province.
Contrast is a common technique to all forms of Chinese art. A Chinese landscape painting, for instance, always contains a large empty area that constrasts with the other "solid" detail objects. Chinese painters used little color in their paintings. Most of the visual effect of Chinese paintings are produced by two kinds of contrasting ink techniques, wet and dry. The wet technique which uses ink that has been highly diluted with water, mainly to draw, or to "wash" the "void" sky, water or distant mountain areas. The dry technique which used ink that is only slight diluted with water is used to describe "solid" objects, such as: detail mountain, trees and figures. Exclusive use of either of these two kinds of the ink techniques would considerably restricted the artist's range of expression. A traditional Chinese painting may be seen as a symphony of contrasting ink techniques.
Contrasts are also practised in all aspects of Chinese private gardens, including from the largest space disposition to the smallest detail design of a particular object. In the entire layout of a Chinese private garden, the dominant scenic section obviously occupied the largest space and is made up of the most attractive landscape features, contrasting to the confined space and the unpretentious scenes of the subordinate sections. The twisted paths, zigzag galleries and the small, dim sections are always lie around the central section of the garden to enhance the impression of the main garden scenery, and to maintain the artistic theme of the garden. Among those subordinate sections, one section always contrasts to another. If a section is open and bright, the one which next to it must be closed and dark. So, generally, one should pass through narrow, dim, and secluded spaces before entering broad, bright, and open spaces. Thus, by restraining and limiting one's sight and sense of space, the sudden release into a bright, large place makes one feel all the more lighthearted and joyful. The contrasting design technique dramatically intensifies the beauty of the garden scenery.

**Fig. 3.50**
A narrow, winding stream in *Lan-ling garden* in Shaoxing, zhejiang province. The narrow twisted water course is always lie around the central pond to enhance the impression of the main pond.
Contrast is also an important technique to make a particular garden scene captivating. If the main feature of a scene is emphasized for its height and size, the surrounding elements must be kept low and small. This is why the trees in a Chinese garden are always pruned for they are usually only used as subordinated features to the main rockery feature. Rough, convoluted and dark rocks are always erected on the lakeside to contrast the smooth, clear and bright water surface.
Fig. 3.52
A grotesque rock stands in the middle of a pond in Shisi-lin garden in Suzhou, Jiangsu province. Rough rocks contrast the smooth water surface.

Fig. 3.53
Convoluted trees contrast the clear white walls.
CELEBRATING FOUR SEASONS.

The scenes in a Chinese private garden not only change along the touring route, but also change with the four seasons. The plants in Chinese gardens were celebrated not only for their attractive features and their symbolic meaning, but also for their seasonal changes which help to create a dynamic viewing of the scenery in the Chinese gardens. Sprouting in Spring, flowering in Summer and dropping leaves in Autumn, even the shaking of a bare branch under Winter's wind are all interesting to Chinese people. As seasons pass, the changing scenery in the gardens reminds the visitors of the passage of time, and helps them "touch" and live in harmony with the rhythm of nature.

In Chinese private gardens, the scenic sections were created for use in the different seasons. For instance, a section which is dominated by a lotus pond is irresistible in summer, when the scent of the lotus in the pond will draw you to them, while one planted with chrysanthemums is the focus in Autumn.

Yuan Yi also stated the importance of the four seasons in making use of natural scenery during the designing Chinese private garden:

"There are no fixed rules for designing gardens but there are certain principles in making use of the natural scenery. The essential thing is to keep in mind all the four seasons, at which point of the compass any feature is place is of little importance."
Fig. 3.54
Not only the flowering of the lotus in summer, but also the shaking of the bare branches under winter’s wind is attractive to garden owners.
Incorporation

- Yin-Yan thesis
- Design techniques
- Significance for today
1. YIN-YAN THEORY.

The Chinese garden arose out of an attempt to imitate nature. In order to imitate nature, garden designers scrupulously avoided all strict geometrical layout that would recall man's ordering hand. Inside a private Chinese garden, zigzag bridges, twist paths and winding water courses all display the characters of freedom and irregularity. However, the freedom of layout in private Chinese gardens does not mean ancient Chinese people lacked the skills to handle geometrical lines. In fact, in ancient China, both the street plans of the city and plans of private houses followed a strict geometrical order with symmetrical axes. In architecture design, Chinese used symmetry to indicate their own dignity and prestige, and to express their social relationships and moral disciple. Inside the house, a Chinese lived under the influence of the Confucious's strict moral conventions. The Chinese private garden was built as a place for residents to escape from the restrictions of their home, and to help them fulfill the need for the free and romantic side of their spirit. Inside the garden, a Chinese behaved like a Taoist, who is carefree, primitivistic, and romantic. The formal geometric pattern of the architecture serves for its owner's serious mood and the irregularly naturalistic arrangement of the garden satisfies his lighthearted side. They seemingly stand in sharp contrast to each other. However, when one passes through a traditional Chinese building into its courtyard, through a moon gate into a gallery, and then enters the garden, through a twisting pathway to the building, he will experience the rhythmical
alternation between the architectural and garden space.

Confucism and Taoism were harmoniously unified inside the spirit of the ancient Chinese people. The relationship of Chinese house and its garden implies to us a Chinese traditional philosophy: the Yin-Yan principle. Yin-Yan was regarded as a universal principle pervading all things, whether in the realm of physical nature or in the human spirit. This philosophical principle expresses itself in two opposite aspects: the negative and the positive force, the passive and the active element, and the voids and the solids. These two opposites harmoniously juxtapose themselves inside all things. The architecture, which is ordered, unmoving, restrained and solid, presents the Yan character. The garden which is free, irregular, changing and voidness, displays the Yin character. The private garden is not a subsidiary place, but a necessary counterpart to the house.

In the following pages, I will introduce some design techniques which were followed by ancient Chinese people to follow the principle of Yin-Yan -- the order of the universe -- to achieve a harmonious relationship between the "soildness" of the architecture and the "voidness" of the garden. Some of them are still meaningful for contemporary architectural practice.
Fig. 4.1
The plan of Yang's house in Fuzhou, Fujian. This plan shows that a formal geometric architecture and an irregularly naturalistic garden are deftly integrated.
2. DESIGN TECHNIQUES.

SCALE.

A private Chinese garden was enclosed by the architectural structures, creating a limit to the outside. On the inside, there is no obvious boundary between the garden and the architecture; in other words, there is no limit between the garden space and the architectural space. The Chinese private garden is a part of architecture. Together, the garden and the building constitute the entire Chinese architectural space. There is no Chinese garden without architecture, and there is no architecture without garden. Chinese architecture and its garden are dependent on each other. A garden is enclosed and defined by the walls, the pavilions, the covered walking galleries and other architectural features. Chinese architecture is laid out in group form. Instead of building a massive many-story building, Chinese constructed a group of smaller sized, one or two story buildings which incorporate garden space to accommodate the various functional requirements. This design technique prevents the huge scale architecture from overpowering the small garden space. Furthermore, Since the structures were arranged at ground level, they have more opportunities to directly contact the garden. Chinese architecture was not so impressive as that of a great edifice because it is low, small, and light gray in color. The feeling of the Chinese architectural space is a cumulative effect obtained through presenting alternately the architectural and garden spaces. In a word, the traditional architecture presented an a process, not a vista.
4.2
A house perspective drawn by Antonio di. A massive many-story building seem to overpower its environment.

4.3
The plan of Net Garden in Suzhou, Jiansu.
As mentioned previously, Chinese architecture and garden are enclosed inside a limited space. In order to avoid the feeling of confinement, Chinese architecture presents a perimetric layout. Buildings are often arranged along the boundary of the site to conceal the boundary walls. In addition, this kind of layout prevents the architecture from separating the entire garden into several disconnected sections. Instead it creates a relatively more concentrated and larger garden area to match the scale of the architecture.

4.4
The plan of the Roar-Resounding Mountain Villa in Yanzhou, Jiangsu province.
The two-story, large buildings are set in the remote corner of the garden. This placement not only avoids dwarfing the garden with building mass, but maintains the sight continuity inside the garden and blocks out unpleasant sights and noises outside. Sometimes, two-story buildings were constructed with two level roofs to create a lighter appearance. This visual deception reduced the large building proportional related to other garden features and surrounding space. Another technique is to surround the large main buildings with many smaller buildings. The smaller buildings, galleries, side halls, and pavilions, were used as the transitional elements from large building to the garden features. Sometimes, when a large building was erected close to a small water surface, it was set back from the water with a terrace. Thus, the reflecting imagine of the main building will be proportionate to the scale of the pond. The terrace prevents the large reflection from dwarfing the small pond. As a result, the main buildings in the Chinese garden may look imposing but never overpowering.
Private Chinese gardens were dominated by rock features. Those rock structures and artificial mountains were half natural and half artificial. They were erected around the buildings to act as an intermediary transitions from the architecture to the pure natural features, like plants. Sometimes, rocks were incorporated into the wall of a building, and at other times, a stone step in an artificial mountain will be the only path to ascend to the second story of a building. Through careful arrangement, the rock and the building can fit naturally together. When appropriately scaled, the gray color, and the rough texture of rock in the Chinese garden are an effective means of linking the architecture with the surrounding landscape. For this reason, the architecture should never appear too imposing inside the Chinese garden.

Proportional scale between buildings and landscape is one of the most effective ways of incorporating Chinese architecture with its environment.
A rock arrangement beside a main hall in *Net Garden* in Suzhou, Jiansu province.
TRANSITIONAL SPACE.

Passing from the interior of a Chinese architecture to its garden, one experiences an ordered sequence of spaces, from fully enclosed, to sheltered, to half sheltered, and finally, to open. Instead of being abrupt, the changing from the architectural space to the garden's space is made gradual through various intermediary transitional spaces.

The first transitional space from the architecture to the garden is the verandah. Almost all Chinese architecture was surrounded by verandahs. The verandah is the open area under a broad eave around a building. As it belongs to both the interior and the exterior of the architecture, the verandah forms a transitional space between the architecture and the garden. Under the verandah, the posts and beams and other structural elements that support the broad eaves are always exposed. This technique maintains the visual unit of the architectural interior space and the verandah's sheltered-semi enclosed space, and also serves to display the elegant simplicity of Chinese architecture. The verandah area under the broad eave, of course, has many important practical functions. The broad eave protects the wooden structure elements from being destroyed by the frequent storm of southern China, and reduce the influence of the scorching summer sun on the interior space. However, from Chinese point of view, the most important purpose of the verandah is to integrate the interior space of the building with the natural world outside. As it is opened fully to the outside on all sides, the verandah would reasonably be regarded as an exterior area. However, the deep eaves protect the verandah area...
from direct effects of sunshine and rain, and the terrace under the broad eaves of the verandah was the extension of the interior floor, so this area is, in a sense, interior as well. As a space which is either interior or exterior, the verandah blurs the boundary between architectural and garden space.

4.8
The deep eaves protect verandah areas from direct influenced by sunshine and rain.
Verandah mingles interior and exterior space with an ambiguity boundary.
The walking gallery, or covered walk, or "lang" is the second transitional space between the architectural and garden's space. As noted, Chinese architecture presents a group layout instead of a single multistory building. The practical function of the walking gallery is to connect different buildings with a sheltered circulation. The walking gallery, in a sense, can be seen as a further extension of the verandah. Although the walking gallery is built for circulation, it is not intended for the walker to reach his or her destination in a hurry. It is also built as a cover touring route for viewing the garden scenery. Instead of following a straight line, the walking gallery often is zigzagged, or undulating. It may curve around flat terrain, run deeply into a grove of trees, or ascend up to an artificial mountain, or down to the water's edge, and then sometimes even passing across a small pond like a covered bridge. A walking gallery can be free-standing, or half attached to a boundary wall, and sometimes be two-stories high. The walking gallery is one of the most active architectural features. Since Chinese architecture had no need of supporting walls, pillars always support the roof of the walking gallery. Thus, living inside the walking gallery, one can directly touch the natural environment. The walking gallery provides a chance for residents to wander around their garden without leaving their rooms. The garden scenery is always laid out along the walking gallery. Passing through the walking gallery, one can observe the natural scene at close range, often within touching distance, without being disturbed by the weather. Inside the walking gallery, one can enjoy the sound of the raindrop on a rain. At
The practical function of a walking gallery is built for sheltered circulation. Midnight, one can "touch" the reflection of the moon in the pool near the walking gallery. The pillars of the walking gallery together with the balustrades set between the pillars. They form picture frames which focus attention on the garden scenery. Some interesting scenic features are arranged at the turning points of the walking gallery to entice the viewers to extend their further tour. In so doing, the walking gallery coaxes the inhabitant to enter the realm of nature, and dissolves the disparity between the architectural and garden spaces.
4.11

Top: *The Honololu album* by Chin Nung in 1759.
Bottom: A walking gallery makes it possible for resident to "touch" the natural scene.
Although the walking gallery is built for circulation, it is not intended to reach its destination in a hurry. It also built as a cover touring route for garden scenes.
4.13

These two examples of that walking galleries pass cross ponds.
The walking gallery also serves as a space-confining device. While dividing, it unites the different scenic sections by being open on both sides. This greatly add to the depth and sequence of the garden scenes. Sometimes a wall is built along the center line of a walking gallery, making it into a double walking gallery. The wall inside the walking gallery intensifies the feeling of the interior. Many fanciful lattice windows on the wall provide viewers with a glimpse of the scenery on the other side encouraging further exploration. In some large gardens, a two-story walking gallery is erected along the boundary of the site to serve practical functions or to provide a panoramic view.

4.14
A two-story walking gallery in *Net Garden*, Suzhou, Jiansu province.
A walking gallery also serves as a space-confining device.
Another architectural feature with which residents can touch their natural environment with cover is the pavilion. The pavilion, Chinese word “T'ing”, originated phonetically from a Chinese word meaning "stop'. This etymology clearly indicates that a pavilion is a place to stop, and have a rest. Like a walking gallery, a pavilion is often completely open, leaving only pillars to support the roof. The pavilion is a very playful architectural feature. It can be any shape: octagonal, five sided, square, half round, triangular, etc. It can attach to a wall or an end of a walking gallery and become a half pavilion, or be a free standing element. It is really hard to say whether the pavilion space is a sheltered garden or a extension of the architectural space.
A pavilion is another active architectural feature with which residents can touch nature with cover.

Through these intermediary transitional spaces, one can enter the purely natural space of the garden from the interior space of the building without a feeling of an abrupt change. Those transitional spaces play an important role in harmoniously incorporating Chinese architecture with its garden.
BOUNDLESSNESS.

In traditional Chinese architecture, the supporting and enclosing elements were separated. The pillars bore the weight of the giant roof. Walls are not load-bearing systems. Walls are set completely free, serving only to define and enclose space. Thus, the walls could be pierced at will by doors and windows of any sizes. This kind of architectural structure enables architectural space to be penetrated by the garden space to a great extent.

In some buildings, the space between the pillars is filled in with pivoting doors or windows instead of walls. These pivoting doors and windows were made of wood lattice-work filled by a kind of opaque white paper. When fully opened, the pivoting doors and windows permit the interior architectural space to completely merge with the outside garden space. A building could be fenestrated with the pivoting doors and windows on all sides. Fully opening the pivoting doors and windows can turn a building into a large "pavilion" with an unobstructed fluidity of air and sight lines between architectural and garden space. Those who live inside the building can enjoy the full landscape panorama around the building by simply turning around. Use of pivoting doors and windows makes the space of architecture and garden run together and evokes a sense of boundlessness. There was a fully developed grammar of lattice work for the pivoting doors and windows in ancient China. From cracked iced patterns to plum flower designs, these lattice works were designed very freely with various intentions. The finished products were thoughtful and elegant.
When the moonlight cast the shadow of a tree on the transparent paper of the pivoting doors and windows, it was very pleasing to see those gnarled and twisted shadows contracting with the dedicated geometrical pattern silhouette of the lattice work.
Fully opening pivoting windows can turn a building into a large "pavilion" with unobstructed fluidity of air and sight line between architectural and garden's space.
4.19
The pivoting doors can be fully opened. This design technique permit the interior space to completely merge into outside garden space.

4.20
The silhouette of the lattice work of a pivoting window is dedicated and attractive.

the tree on the transparent paper of the pivoting doors and windows, it is very interesting to see those gnarled and twisted shadows contracting with the dedicated geometrical pattern silhouette of the lattice work.
When the side of a building was enclosed by a masonry wall, windows were employed to open the architectural space into the garden space, reducing the feeling of enclosure. In Chinese architecture, a window was only opened where there was scenery outside worth “viewing”. The outside garden scene which was borrowed and framed by the windows looked just like the landscape “paintings” hanging on the interior walls. A trace of open lattice work is often set on the periphery of a window to intensify the feeling of the scene, framing and focusing and enhancing the beauty of the garden scene outside. Sometime, as we can see, windows in Chinese traditional architecture were elaborated and filled with too much intricate lattice work so that they became vulgar and pretentious.

4.22
The outside garden scenes which is borrowed and framed by the windows look just like landscape “painting” hanging on the interior walls.
4.23
A hexagonal window is created to focus and enhance the beauty of garden's scene outside.

4.24
The outside garden scene which is borrowed and framed by the window looks just like a "painting" hanging on the wall.
4.25
The garden scene formed by the window is always the view focus inside architecture.
Inside Chinese private gardens, the architecture functions not only as a garden scene viewing-point, but also as a pictorial component of the garden scene. A hatched cottage on a remote mountain was always a favorite subject in Chinese landscape painting. Similarly, a landscape scene inside a garden without architecture will seem to lack a focus in China. Thus, when seated inside a building, looking through the open windows or doors, one will perceive the other buildings on the side of a artificial mountain, or on the water side, or at the other end of a walking gallery, instead of seeing just pure natural features. This technique moderates the distinction between the architectural and natural features. In addition, even though the shapes and settings of the architecture could be different, their repetition on the landscape creates a strong unity among the various garden scenes.
Inside Chinese garden, a architecture functions not only as a garden scene viewing-point, but also as a pictural component of garden scene.
A courtyard inside Chinese architecture is the transition space from a building to garden space. A courtyard is regarded as the extension of the architectural interior space.

Various halls, apartments, walking galleries and pavilions could be found anywhere inside a Chinese private garden. It may seem at first that the architectural features are invading the natural beauty of the scene. However, the natural space, in turn, penetrates architectural spaces in different ways. The clearest and the most obvious example occurs when the different sizes of courtyards are inserted inside the architectural space.
As noted before, in China, the entire building complex is composed of alternating buildings and courtyards. Many beautiful pieces of furniture, such as stone tables, stools and benches, are assembled in the courtyard to accommodate outdoor activities. The courtyard satisfies its owner’s functional needs, and at the same time, with some rocks and plants, displays a sense of the landscape of nature. As a result, the courtyard presents a midway place between the architectural interior space and garden space. Thus, the courtyard is a particular garden place for living or uncovered rooms. After passing a series of courtyard space, one will not feel an abrupt change when entering into the garden.
A moongate is created to blur the boundness between interior space and courtyard space.
Sometime, courtyard and interior space is simply separated by a moongate. Moongate intensifies the beauty of the scene inside the courtyard.
Besides those formal courtyards, there are many tight spaces or tiny courtyards attached to one side of back rooms or side halls which do not face a large courtyard or garden. Inserting these tiny courtyards into the building originally comes from the practical requirement for the lighting and ventilation of the building. This design approach related to Chinese geomancy, was defined as the "art of adapting the residences of the living and the dead so as to cooperate and harmonize with the local currents of the cosmic breath." According to Chinese geomancy, everything under the universe was influenced by a common natural force, the ch'i. Keeping this natural force flowing fluidly inside a building is a key point necessary to preserve a harmony with environment. Thus, although a tiny courtyard is only a very tight open space, it keeps the natural force flowing into a building. By doing so, it gives "life" to the building. Besides serving to ventilate the building, the tiny courtyard also provides beautiful landscape scenery to the building. Because it is in a compact area, the tiny courtyard is only for viewing not for entering. The scenic compositions in the tiny courtyard are often limited to one or two stalks of trees complemented with a few pieces of rock. The landscape inside the tiny courtyard can be seen as an enlarged bonsai in the building.

Not only does the tiny courtyard provide beautiful views, but it also offers olfactory and acoustic satisfaction for the residents. The fragrance of the plant and the noise of raindrops coming from the tiny courtyard creates a highly poetic atmosphere. Moreover, the slathering of the leaves swaying in the
wind inside the tiny courtyard is reminiscent of the feeling of thatching in a remote mountain.

4.34 Although a tiny courtyard is only a small open space, it gives "life" to the buildings.
4.33
Inserting the tiny courtyard into building originally comes from the practical requirement of the lighting and ventilation of some side building.
A walking gallery may be attached to the side of a building or a walk will often turn away from the attached element and then turn back to it to form a tiny courtyard between the gallery and the side of the building. The miniature landscape inside those tiny courtyards serves as a vista along the touring route. Repeated appearances of these tiny courtyards along a walking gallery intensifies the sense of penetration between the architectural and the garden spaces.

4.36
Tiny courtyards formed by walking galleries.
4.37
A walking gallery inside The Garden of Stupid official.

4.38
A walking gallery in Net-Garden in Suzhou, Jiangsu province.
The platter landscape was considered as necessary component of the interior space in China. The “platter landscape” is a recreated natural landscape on a greatly diminished scale. It is praised as “living sculpture,” and treated as a miniature garden inside the room.

From the five holy mountains, to accessible artificial mountains inside the garden, to the pieces of rock and plant inside the courtyard, and finally to the platter landscape inside the room, nature was gradually incorporated into Chinese architecture.

4.39
A platter landscape is considered as necessary component of the interior space in China.
4.40 Nature is gradually incorporated into architecture

Platter landscape.  Rock for viewing  Artificial Mountain.  Holy Mountains
GRAY TONE.

Color which is considered by European artists as the essential medium of expression in painting is the least important element for the Chinese landscape painter. Chinese painters attained a great capacity for presenting spiritualized landscapes with monochrome. Similarly, a hazy gray tone also prevail on all features inside a private Chinese garden. The gray color used in the Chinese garden demonstrated the simple, modest and quiet virtues of the garden’s owner. Chinese architectural work is also appreciated for its tints. Masonry walls are always white, or light gray, roof tiles are blue black, and columns are painted dark brown. Thus, the building and its garden are harmoniously juxtaposed together under a restrained subtle gray tone.

Rocks and trees are often arranged in front of a white wall. The white wall serves as the background for the landscape. In the morning mist, the gray white wall might seem to have melted away, leaving the rocks and trees floating in front of a misty blank background. The white walls become the equivalent of the white painting papers in order to capture the shadows of the rocks and plants. The shadow of those rocks and trees casting on the white wall looks like the black ink brushes of a Chinese monochrome painting. The scene becomes even more picturesque when viewed through a lattice window of a pivoting door or a moon gate. Through its gray white color, masonry walls of architecture merge into their natural environment.
CURVED ROOF.

A large, heavy, and curved roof with deep overhanging eaves is one of the most prominent characteristics of Chinese traditional architecture. The broad eaves of the roof serve as a simple yet effective device for reducing the amount of strong summer sunlight that penetrates the interior of the house. Extended eaves also serve to prevent the rain from blowing into the house when the pivoting doors are completely open during the rain season. Since the wooden structure of Chinese architecture is always prone to rotting, the broad eaves are also an essential device for protecting the wood structure from water damage.

The up-turned curved roof of traditional Chinese architecture gently sits against the bright backdrop of the sky with its sweeping curve silhouette, creating a graceful poetic atmosphere. A building could be fully opened with only the pillars supporting the roof making the hovering impression of the roof even more pronounced. However, the curved outline of the roof somehow resembles the contour of tree branches, reminiscent of the rhythm of nature. Thus, even though the roof is huge and heavy, it never seems to overpower the natural features in the garden. The curved roof of Chinese traditional architecture is a perfect example of the poetic form artistically derived from practical considerations.

The up-turned curved roof, a striking feature of Chinese architecture, is another successful means by which the house is closely integrated with the exterior world of nature.
The curved outline of the roof of Chinese architecture somehow resembles the contour of tree branches.
4.41
The curved roof of Chinese architecture sites against the bright backdrop of the sky with its sweeping curve silhouette, creating a gravef ul poetic atmosphere.

4.42
The curved roof of Chinese architecture reminds us the rhythm of nature.
4.43 Two level curved roof makes a building appeal light and airy.
SIGNIFICANCE FOR TODAY

Providing enough living places for the world's largest population is one of the most emerge problems in China today. The crowded condition in Chinese modern cities makes land prices exorbitant and demands constructing tall and large buildings to make maximum use of available lands to fit the need of population growth. Since its material is wood, Chinese traditional garden house should preferably be not more than one story in height or, at most, two stories. At first sight it would seem the theme of low Chinese garden house is not of current theme. The wonderful style of garden house has thus been abandoned in some Chinese urban area. Many modern buildings in China are only attempting to offer roomier accommodations for vast population and lacking of the imagination and aesthetics. The harmonization between the house and its environment is lost in the mist of the huge scale of modern buildings. Today in most Chinese cities, environment is no longer rich in trees, artificial mountain, clean stream, and other creations of nature. The air itself has lost its freshness and luster in the all-pervading upsurge of smoke, soot, and dust. It becomes more and more difficulties for people to contact with nature environment in the urban area. For long time, living hormonally with nature has been considered as the necesserial way to have a happy life by Chinese people. The rhythm of nature, such as the cycles of the seasons, used to have great effect on the Chinese spirit life. Such, it is a part of Chinese people's spirit that is increasingly difficult to find in contemporary cities.
Top: It becomes more and more difficult for people to contact nature in the urban area in China today.

Bottom: *Fragrant Hills Hotel* in Beijing. This modern hotel was designed by I. M. pei to harmonize with its environment. Water, trees, and rockery are enclosed by the modules of the hotel in a way that is reminiscent of classical Chinese garden house.
In ancient China, pieces of open space attached to back or side of houses had been converted to livable gardens regardless of sizes and shapes. Through thousand of years of practice, Chinese people accumulated an abundance of successful experiences with garden house design and developed a unique vocabulary of garden architecture. Many concepts and design techniques are still meaningful for today architectural design practice. Chinese garden houses provide us with some possibilities and ways of keeping a harmonize relationship between buildings and their environment. Chinese garden house offers an adaptable way for restoring urban man's link with nature. This does not mean that traditional garden house should be copied, but its spirit can be alive and full of promise in China today.
Organization

As stated before, the physical openness of Chinese architecture toward its environment, with the resulting particular house-garden relationship, obviously displaced and strongly stimulated the Chinese love of nature. Inside a Chinese traditional garden house, the garden space is of the same value as the architectural interior space. There is no separate design of house and garden as in some contemporal architecture in which after completion of the building construction, the garden is adapted to the building. For Chinese garden house, a garden is not mere a accidental nature space but it is a purposely designed space inside the house by which man enrich his life. A garden is created in such a
way as to provide a place more for the requirement of the activities of people than for the decoration of house. That could be one of the reasons that trees are not numerous inside a Chinese garden. In china, a garden is a architectural space. Garden thus becomes a part of the dwelling and is incorporated into the dwelling organism of house.

4.47 Garden is only a luxury decorative element attached to a building.

4.48 Garden is incorporated into the dwelling organism of house.
In Chinese garden house, architecture defines garden space, and as well only through the garden can mere a house become a real home. Contrary to some contemporary residential building in which the non utilitarian garden is considered as a luxury rather than a fundamental component. Garden is only created as a decorative element attached to sides of a building as front yard, side yard or back yard. In Chinese garden house, garden space is enclosed inside architecture. As perimetric layout, architecture serves as a three-dimensional defining element for garden space. At same time, some architecture, such as opening pavilions and walking galleries, depend on the garden space for their particular relationship to garden space. This design technique becomes more and more significant in Chinese contemporary cities, as land become more and more scarcer and more expensive. For it corporate the separated side yard, front yard and back yard into one area. Thus, it offer us a economical and effect way to utilize land. At same time, garden space is enclosed by architecture instead of solid walls or fences. Through many opening methods, such as pivoting doors and windows, opening pavilions and walking galleries, garden's space can be extended to the interior space of surrounding building. While those opening spaces increase in number and size, the garden space loses its sense of enclose, becomes more diffuse, and begins to merge with adjacent architectural space. In addition, the "borrowing" technique can extend one's visual limit out of the garden's space to a larger scope. The "borrowing" adds another dimension to the garden space. The
advent of the new building methods and materials, such as steel frame construction and use of glass, makes this design technique could be achieved more effectively.

The windows of some modern houses open toward the street. In order to prevent the disturbing of noise and dust from outside, the windows are covered with heavy drapes or curtains. Modern houses assume a defensive posture to the environment. In the Chinese garden house, scenes in enclosed garden provided view focus for architecture space. From large pivoting doors and windows, to small openings which frame views so that they are seen as paintings on walls, to narrow openings which give only a hint of what lie beyond the space, all of the openings of architecture face into the seclude, quite and air-fresh inside garden’s space instead of to the outside noise dust world. Thus, living inside Chinese garden house, we can not only fully enjoy sunshine, but also can enjoy
moon view, tree view, and even rain view. Any of these things which had brought so much pleasure to ancient scholars are gradually lost from the life of urban people today. Through incorporation of the garden and architecture, Chinese garden house provides a place through which people leave behind the hurried world of profession and competition and have a rest on the secludness of this home in the mist of cities.

4.50
The full-length pivoting doors in the Retreat and Meditate Garden in Suzhou, Jiangsu province.

4.51
View to the northeast from the Bright Zither Mansion in Lingering Garden in Suzhou, Jiangsu province.
Form and space

"We put thirty spokes together and call it wheel;
But it is on the space where there is nothing that
the utility of the wheel depends.
We turn clay to make a vessel;
But it is on the space where there is nothing that
the utility of the vessel depends.
We pierce doors and windows to make a house,
and it is on these space where there is nothing that
the utility of the house depends.
Therefore, just as we take advantage of what is,
we should recognize the utility of what is not."

The design of Chinese garden house is concerned only with space. Space organization and interior and exterior space relationship become "substance" in designing a Chinese garden house. All space-forming elements become absorb and immaterial for the supreme dominance of the pure and unadorned space or "void". Contemporary architectural terms, such as balance, rhythm, proportion, are not fitly used to describe a Chinese garden house, for these terms are obviously pertain to the external form of architecture. Of course, space is achieved by form, however, just as in a Chinese painting, not the beauty of the brush lines but the content of the painting is the critical of judgment. So also the quality of a Chinese garden house depends on the
character of the space, not on the external form itself. Thus, in a Chinese garden house, space itself is the major expression medium.

Fig. 4.52
The space analysis of a typical Chinese garden house.
The space in Chinese garden house is human space. Being controlled in all dimensions: length, height, and width, the spaces in Chinese garden house are created in different characters and purpose according to man's needs. For displaying owner's social situation and fitting group activities, the space of main hall inside a Chinese garden house is always voluminous and formal, and at same time, the space of a pavilion is small, free and opening, for it only be used as a place in which one can has a rest or mediation. For a Chinese garden has group layout instead of a massive many-story building. This design method provides more freedom on creating different scale and character space to fit the different practical functions. The garden space inside a Chinese garden house also focus on third-dimensional experience. Garden space, like interior space of architecture, is concerned mainly on the dedicate tactical sense creating instead of pure external form making. Thus, selecting and using the proper textures of building materials is always the essential step during composing the space. From exposed wood structure inside the building, to the gray white walls, then to the natural texture of the stone inside garden scene, the appreciation of the texture is also a effect way to create unity between architecture and its surrounding, for their congruity or harmony in the spirit.
4.53
Top: Interior, Astor Garden Court, Metropolitan Museum of Art.

Bottom: A rock group in Wang Shi Garden, Shuzhou, Jiangsu province.
Even though the current extent and the physical aspect of modern architecture are drastically from those of Chinese traditional garden space. We still can find that there are many obvious affinity between the spirit of Chinese garden house and the thought of contemporary architecture. Today, we depend on the fact that the new materials, such as concrete, steel and glass, are finding their way into our house, whether we wish them or not, science and economic necessarily are forces too strong to be denial. Our environment has come to be made up such artificial material instead of the natural material used in Chinese traditional garden house. Thus, only depends on the new techniques, new building materials, new concept of life and new environment, can Chinese garden find its way to a developed level in Chinese cities today.

4.54
The entrance lobby of Fragrant Hills Hotel, Beijing.
Creating regional character

We can have a better understanding of Chinese garden house, taking particular regional conditions into consideration. For the climate in the south of China is always hot and humidity, natural ventilation and sunlight are important for Chinese garden house. The distinguishing character of Chinese garden house is its desire to locate harmony in environment, even to become one with nature. Many open space, from garden to tiny courtyards which are built only to be seen from interior house and not to walked through, were created inside Chinese garden house not only for pure visual pleasure, but also for the practical necessaries for living harmony with nature. These open spaces provide natural sunlight and fresh air for the interior room. Otherwise, some of room would be in complete darkness because of the tightness of the site. For Chinese people, a house that not facing the sun was courting cosmic disaster. Advance artificial lighting and ventilation techniques make it possible for us to live in the environment of constant light, temperature and humidity. But, at same time, overuses of those techniques make people lose the sense of four seasons, and the direction of sun. In contrast, Chinese garden house depends on natural sunlight, without it, rooms would be dark, or "dead", the plants inside garden would not grow, the water would not sparkle, and the shadow would not fall. For the qualities of the sunlight that a site receives - its intensify, color, movement, and angle will never be quite like those of any other places. The regional topographical and climatic conditions render
Chinese garden house with a distinct regional character.

4.56
The regional climatic conditions render garden house with a distinct regional character.
The tiny courtyard not only provides pleasure view, but also provides natural sunlight and fresh air for interior.
Chinese garden house creating also emphases the personal value of house's owner. For the owner of a Chinese garden house directly took part in his own garden designing and building, the garden inside Chinese garden house could be seen as individual image, it express the personality of the family, at the same time, the main buildings in the Chinese garden house substantiates the ethics and concepts of society. Chinese garden house reflect its owner's attitude toward nature, life, and the universe. This concept is significance for us today, for users always find lose their personal value in contemporary architecture.
Chinese garden house is an expression of integrated ecologies of climate, resource and culture. Today we respect Chinese traditional garden house because it provides us a living example that is still viable and significance for today. Fusion of this traditional living concept together with the most contemporary of techniques and materials might provide us a successful way to live harmony with nature in the urban area.

4.59 Interior of Huafu Restaurant in Fuzhou, Fujian province.
Conclusion

It is not my purpose to write a history of Chinese garden house, or theoretically set out rules and orders for creating a traditional Chinese garden house. Through analyzing the basic the philosophies, which influenced Chinese garden house, the design techniques and the space concept of Chinese garden house, I want to use the principle and technique of Chinese garden house as inspiration to seek the direction in which Chinese architecture may develop in the future. The essence of Chinese garden house can be briefly concluded as unity and harmony. Unity is found in the appearances of building - the modular construction system, the unity of materials, regularity and the order arrangement. The harmony is found in the relationship between the buildings and their environtment. In a Chinese garden house, building and garden form a inseparable part- one can not exit without the other. Buildings establish physical security and identify and safety from nature's elements and society demands, gardens provide places to interact with nature and get naturing inputs of the Sun, the Moon and air. For Chinese people, to build and maintain the harmonious relationship between the living place and its environment will engender harmonious relationship relationship between men and men, and men and nature. Harmony expresses a quality of modesty of Chinese people: Unfortunately, harmony is generally disppearng from contemporary Chinese architectural practice. In the search for inspiration and aesthetic principles to guide the construction of new building, we need to avoid simply copying a skin-deep image
of traditional building. This would lead to regression into sentimental nostalgia, instead, we should penetrate the generating principles and fundations of the past, transforming them into forms that conform to the new society.

The concept of the harmony relationship between Architecture and environment is adapted and developed in many other countries. Next are some successfully examples of Architecture in the other countries, which are influenced by the concept of Chinese garden house.

Fig. 4.60
The site plan of the Rudolf Schindler house in Los Angeles. In this site plan, the buildings and the gardens are interlocked to each other, just like the typical site plan of a Chinese garden house.
Fig. 4.61
The site plan and the garden view of Walter Tower House, Barrington, Illinois.
In this house, the garden is enclosed by the buildings and became a extension of the interior space.
In the house the architect Luis Barragan designed for himself (Tacubaya, Mexico), the same walls that define the interior reach out to enclose the garden. The extension of the building's fabric enhance the feeling of the interpenetration of the interior and exterior space. This strategy was often be used by Chinese people to link the buildings and the gardens.
Fig. 4.63
In a Chinese garden house, the deep verandah areas surrounding buildings are used as transitional spaces from the interior spaces to the exterior spaces. This concept is adapted and developed in the Welch House (Barrington, Illinois).
Fig. 4.64
The site plan of the Santa Rosa Creek Cooperative and the view from the private courtyard onto the larger common garden.
These examples show us what the architects from other can learn from the Chinese garden house. For Chinese people, we also need to discover the influences from other culture and find a way to absorb and take advantage of those culture. Contempary Chinese architecture should fuse the past and present, the regional and universal.
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