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CHINESE SCHOLAR SCHOLAR GARDEN DETAIL WITH GRACE OF RAIN WATER

The Master-of-Nets Garden
Suzhou City, Jiang Su Province
Peoples Republic of China



Figure 1: Master-of-Nets Garden rain detail

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Chinese Scholar Garden Detail with Grace of Rainwater

CHAI, Dafang

Abstract:

When the Astor Court / Ming Room was built at Metropolitan Museum of Art in New York in 1980, it attracted visitors from all over the world. Replicating the Master of Nets Garden, added in UNESCO World Heritage List in 1997, it was constructed in China, and shipped and assembled here. This first exported garden of the Peony Court is the only part of the garden suitable for the second floor site's limited load capacity. Standing in the Astor Court enclosed with twenty-foot high walls around it and under the glass skylight, there's something missing of the natural condition; that is, the weathering test of rain and wind. Standing in the original garden, especially during the rain, there's a better understanding of the architecture. For example, the Cold Spring Pavilion has a soaring roof as an attractive feature and while people sketch from various corners, no one gets inside this half pavilion to sit. In the original garden, the Cold Spring Pavilion was placed as a spot to view a rainwater detail intricately designed. This detail reflects the water principles of Chinese garden design with the wholesome idea of respecting water and thus treating it with grace. This detail transforms the stain of weathering into a graceful architectural detail embracing the aesthetics of rainwater in 18th century Chinese culture.

This thesis tells the story of a series of intimate rainwater details in the Master of Nets Garden in Suzhou, China, known as the oriental Venice, where water is the essence of the culture. Originally built in 1174, re-built in 1765, it was last renovated in 1958 after it was donated to the government in 1950. It has withstood years of vicissitude. This paper argues for a connection between understanding rain and architectural design including aspects of space, material, technology, tectonic detail, aesthetic idea and the cultural meaning of rain. The ideology of rain as one aspect of Neo-Confucianism "Views of Nature of China" developed by Zhu Xi (Chu Hsi) (1130-1200) has continued to influence Chinese philosophy.

Research included critical readings of the garden literature, 12th century Chinese philosophy, and garden poems and paintings of the time. The essay includes an abbreviated garden history with an overview of architectural detailing for rain in Eastern and Western architecture from ancient times until today. An analysis of ancient Chinese characters for rain and garden are noted as a reflection of cultural ideas. Discussions with peer researchers, an architect practicing in Suzhou today, a Suzhou garden photographer and the Mayor of Suzhou support this research.

By examine every single drop of water along this fascinating series of details, missing in the Astor Court, this particular case study shows the presence of rainwater moving with the path we take from building to building in the garden, as a look back to nature. If we design a sensitive path based on understanding the fundamentals of nature, it will give us pleasure.

Dedicated to my grandpa XU Jia-zhen 徐家震 and Dr. Marco Frascari



2000 厘米 森林故事
Figure 2: Story telling-passing on knowledge of human being [14]

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PREFACE

Living in the Washington, DC area, we are accustomed to hearing news of broken infrastructure, some problem with a drainage pipe, problems with traffic caused by heavy rain, or commuters being interviewed complaining about the weather. One person's optimistic comment struck me, "it's just Mother Nature". The main idea of this thesis is to understand rain, and appreciate rain from an architectural perspective.

One main function of architecture is to protect us from bad weather, including rain. A key principal in architectural design is to keep the rain out. We are all aware of the damage rain can do and the importance of keeping the rain out. However, rain gives life to the earth and to human beings. This analysis will demonstrate the beauty of rain, and how architecture helps us to enjoy rain without care.

Rain on architecture is inevitable. Protection from the rain is not enough. Runoff needs a path through the built environment to the sea, its natural home. Protection is only solving the problem superficially. To really understand rain, one must pay attention to where the rainwater goes, and then integrate the idea of conducting water into architectural design to create the ultimate solution.

In this preface I'd like to present two examples of the impact of rain on architecture from modern times. The first example failed to take the power of the rain into consideration and almost brought down a global landmark, Bartholdi's Statue of Liberty in New York City. Correcting the error cost a fortune to adjust the ignorance. The second example uses its understanding of the rain to save money in essential services.

Nowadays when you go visit the Statue of Liberty, you enter the exhibition at the base of the statue and immediately one sees an old torch on exhibition. There's an interesting story about it. When the statue was made originally, the torch was a solid piece. Later, when technology developed and electricity became available, the torch was changed to a glass with light inside so it could be seen from far away. The torch was made by piecing together glass panels. However, the joints of glass had gaps. Rainwater came through the gaps into the inside of the statue. The interior of the bronze statue was so badly damaged that it required two hundred million dollars in repairs. Now the torch is replaced back as a solid piece. The glass torch became history and is on exhibit for visitors to enjoy. If more attention had been paid to where rain goes, as in the details in the Master-of-Nets Garden discussed below, the expenses could have been easily saved. This is just one lesson that can be learned from misunderstanding rain.

An example of understanding the rain and utilizing it is the landmark Yokohama Tower high-rise in Yokohama, Japan. Because of its extreme height, pumping water up to upper floors became a big effort and expense. Since it rains a lot in this area, engineers installed a water treatment facility on the roof of the tower. Rainwater is collected, processed and then put into use inside the building. It saves the cost of pumping water against gravity by taking advantage of water falling naturally from heaven.

This thesis presents a stellar historical example of how rain and architecture have lived in harmony in a traditional urban Chinese Scholar Garden for almost a millennium.

A CONVERSATION ABOUT SCENARIO

Representation of Rain:

Hearing rain by banana window—

蕉窗聽雨

A genre of Chinese aesthetic

I have been trying to find ways of representing rain in traditional Chinese painting. But to my surprise, I found “Hearing rain by banana window”. Here, rain becomes more than visual raindrops. It reaches an aesthetic conception of enjoying the rain.

In searching for the representation of rain, what I found is the highest level of appreciating Chinese garden— Imagination. To talk about this discovery, I’d like to share with you a conversation with my friend who’s a visiting scholar at the University of Pennsylvania.

September 19, 2006

Dafang Chai says:

My research focus is RAIN/water and architecture/roof, and any interesting thing about how to deal with rain/water is included. Like Carlo Scarpa's bank in Verona, an interesting tectonic solution below the round window, Chinese Four Gods eave tile, drip tile, the saying of Chinese roof form with a soaring edge is to throw rainwater further away from the building... It's a fairly big topic. It is everywhere. I've narrowed down somehow. Discuss with you later.

Liu Gang says:

OK, very interesting, “Throw water rapidly while further away. Rain Touching Banana Leaf” itself is one important aesthetic genre in the culture of Chinese domestic architecture.

DC:

Which genre?

LG:

Genre? It is nothing more than “ENJOY PLACE’s SCENARIO”. And I suspect the patio/gap between Guest room and inner wall, besides getting light, an important function is to get in some rainwater, thus to enhance environment quality. Also, as rainwater hits the roof, it generates mist, this is also a SCENARIO of traditional Chinese aesthetic.

DC:

Light and water come together. In ancient city Pompei, Impluvium and Compluvium are what conduct and collect rainwater. Could you find the poem that describes “Big roof grows mist”? I’ve been thinking what the Chinese translation of “SCENARIO” is all along. What about story? Plot?

LG:

Water-Mist-and so on, I consider Domestic (Ying zao fa shi [12] classify Domestic architecture from Government architecture) Chinese architecture space has a strong feminine characteristic. It corresponds to masculine Government architecture, so Water’s importance is obvious in domestic architecture. [13] SCENARIO, complex/love knot is a better translation than plot, here it can be understood as “artistic conception”, “an enjoyable status reached in

your mind”

SCENARIO, complex/love knot is better than plot, here can be understood as artistic conception. Feminine and gentle

DC:

Comparing to dragonhead in the Forbidden City, is gargoyle Feminine and gentle??

LG:

That, no. That’s the issue of functionality and detail ornament. The Aesthetic gender it represents is Masculine, nobody would think of Monster as female ☺

DC:

!!! “Artistic conception”, you solved my question for years, I always wonder the English translation of “artistic conception”.

LG:

But this SCENARIO is more of a MONOLOG, not show.

DC:

Can function and so-called ornament be separated?

LG:

No. Masculine is function and ornament co-exist, feminine could be pure decoration, this match understanding of traditional Chinese architecture. Masculine space without decoration, Front gate of the Forbidden City is a symbol of important officials being beheaded. There are numerous text records of rainwater, rainwater-cloud and mist. In Chinese painting’s artistic conception, it is indeed grandeur. Leave a blank/void. VOID is not VACANT. VOID space’s importance speaks itself. I am rambling around. I just say where my mind goes. Gonna run. That’s it for today.

DC:

Very interesting, let’s chat more later.

INTRODUCTION

TO RAIN ON STRUCTURE

- ◆ Ancient Pompeii's compluvium and impluvium,
- ◆ Medieval gargoyles,
- ◆ Chinese dragonhead waterspouts,
- ◆ Rain details in Carlo Scarpa's Bank of Verona,
- ◆ The "w" shaped waterspouts and a sculpture pond below in Le Corbusier's Chapel in Ronchamp,
- ◆ The "stain" painted by running rainwater in Peter Zumthor's bath house,
- ◆ The music triggered by utilizing the mechanics of flowing rainwater in Herbert Dreiseitl's Waterscapes, [11]
- ◆ Harvesting rainwater from roofs,
- ◆ Rain gardens...

The beauty of rain in architecture is widely applied.

The focus of this thesis is an up-close observation of architectural details dedicated to rain in Wang Shi Yuan or the Master-of-Nets Garden. It is one of several remaining scholar gardens in Suzhou that gives an impression of the lives led by the educated and bureaucratic elite in imperial China.

The Master of Nets garden is representative of the kind of garden which inspired many culturally significant literary works, most notably, *The Story of the Stone* which in turn has inspired music, film and painting for centuries.[07]

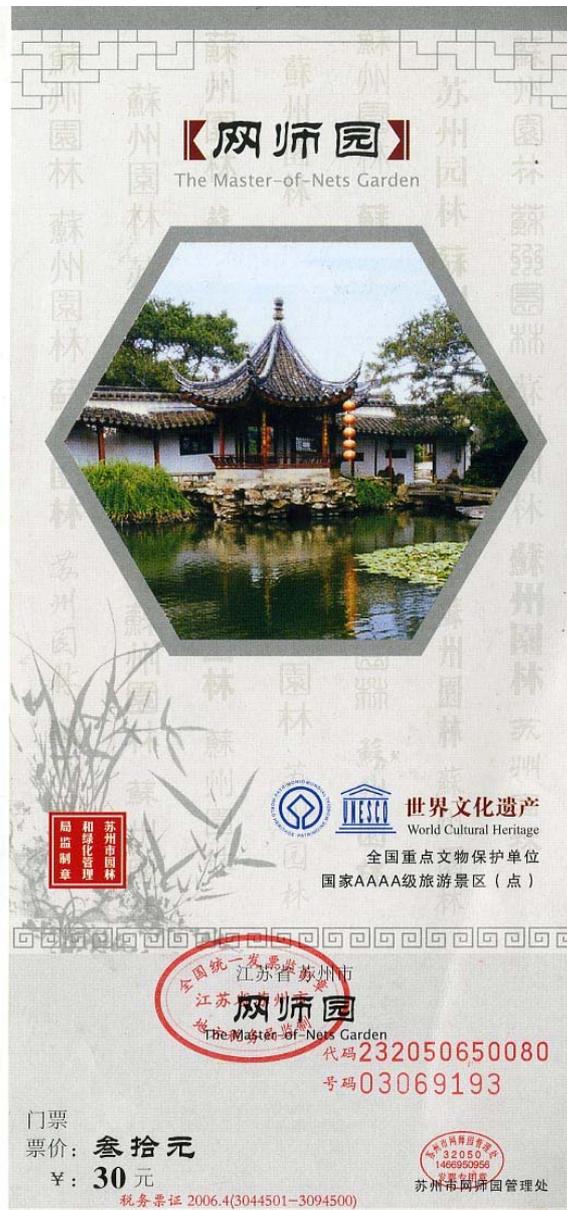
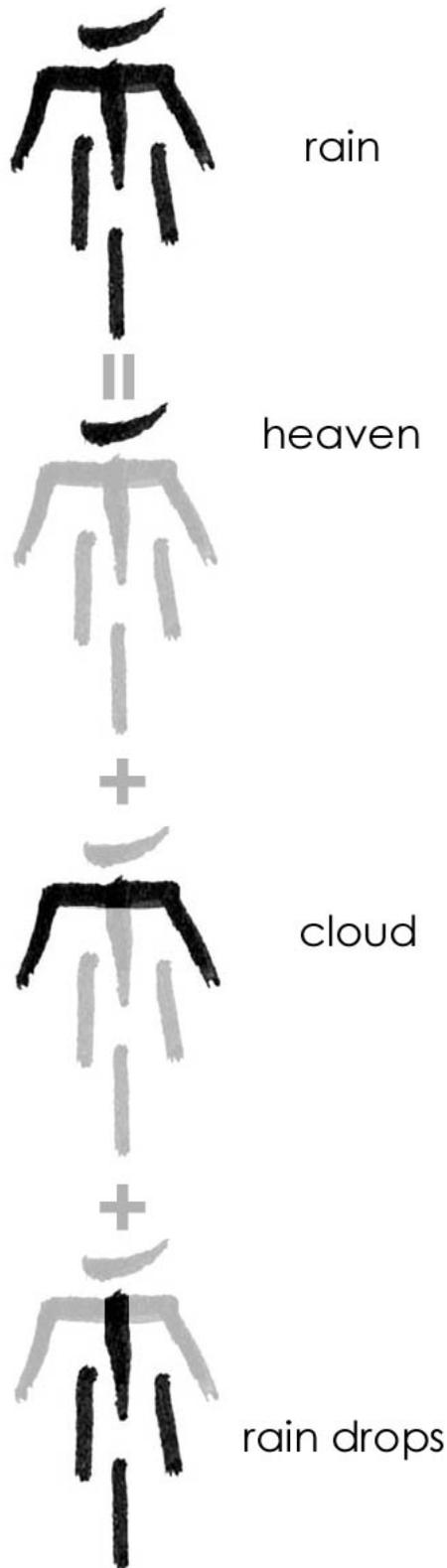


Figure 3: Ticket of Master-of-Nets Garden

**PART ONE:
BACKGROUND
IN
CALLIGRAPHY**



Chinese Character for Rain Falling on Architecture

Before I talk about Master-of-Nets Garden, I would like to explain the components of some significant Chinese characters. They record ancient architecture before there was any drawing of architecture.

To the left is the ancient Chinese character for “rainwater”. This Oracle bone script dates from between 1200-1050 B.C. and was written as shown. It is a clear picture of the water falling from cloud under heaven.

In a traditional Chinese garden, the roof is covered in tiles. The end tile is shaped with a pointy end, which follows most leaf shapes in nature; conducting rainwater from above, down back to earth.



Figure 5: Raindrops along eave
[photographed by Cai Shuang]

Figure 6: Carved Stone Drain



Figure 4: Chinese character of “rain”

Chinese Character for Garden

Ancient garden experts consider four elements to be essential to a garden: Build mountain, Manage water, Building, Planting. It was clearly shown in the Chinese character “Garden”:

GARDEN

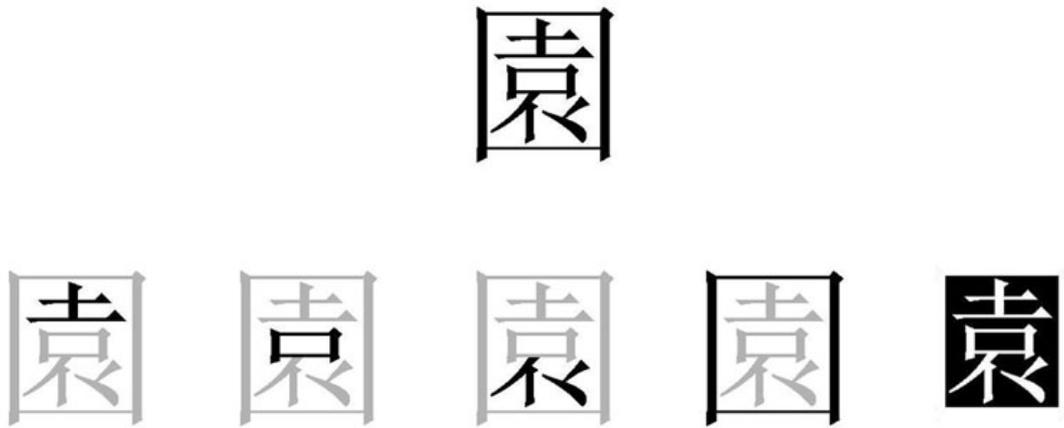


Figure 7: Chinese character of “garden”

earth/rock pond/water plant/green wall/building spaces

Roof Shape and Chinese Character for Building

- Functional and Beautiful

The most distinct feature of Chinese garden is the roof developed as sophisticated beautiful structures. But the basic idea is simple as the primary function of architecture is a shelter to protect us from rain and inclement weather. For at least three thousand years Chinese characters of buildings showed the usual roof forms before modern architecture entered China in early 20th century. This beautiful roof shape is deeply rooted in its function - conducting rainwater around and away from the building.



Figure 8 Chinese characters of “building” [03]

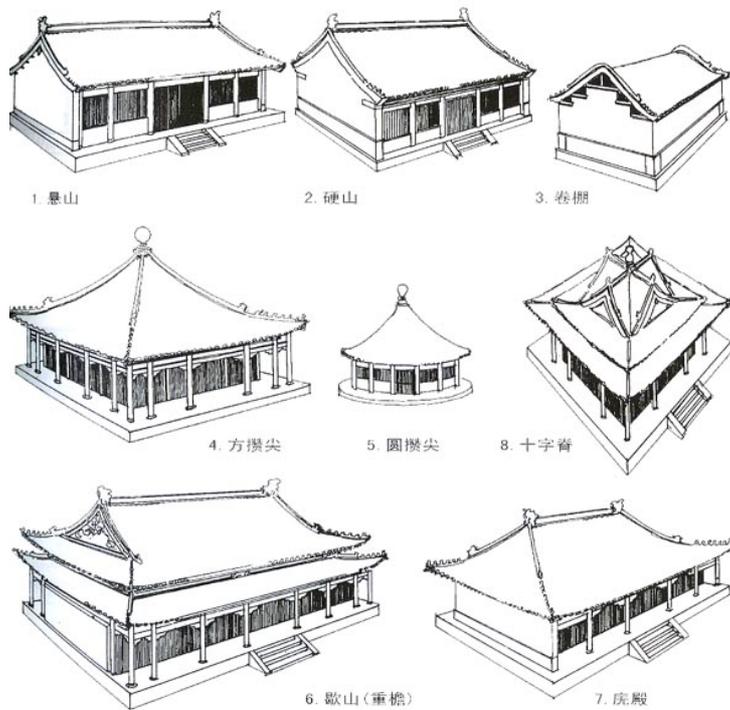


Figure 9. Usual roof forms[03]

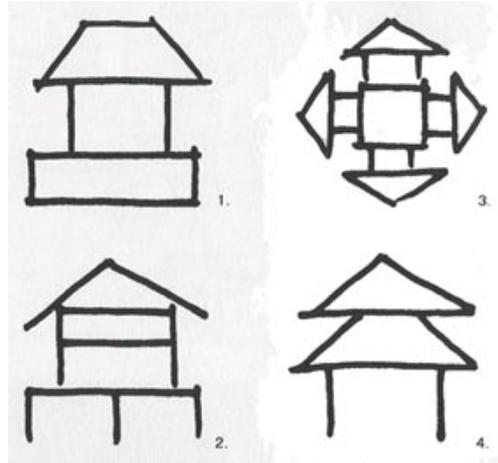


Figure 10: Four Chinese character of different building types. [03]

The earliest surviving treatise of Chinese architecture is Li Jie's *Ying zao fa shi* written in 1103 during Song Dynasty (960-1279). But Chinese character, with at least three thousand years of history, developed with Chinese culture is a vivid record of Chinese architecture.

In Figure 10, 1 means "Chamber/Room", it's a four-side sloped building on top of podium. This is an elevation. 2 is word "residence". It expresses the structure of the building. With podium, wall, roof structure, it is truly a section. 3 is word "house", it's a plan of a square courtyard with buildings around it. 4 is a another way to write "residence", it depicts a two story building with double roof.

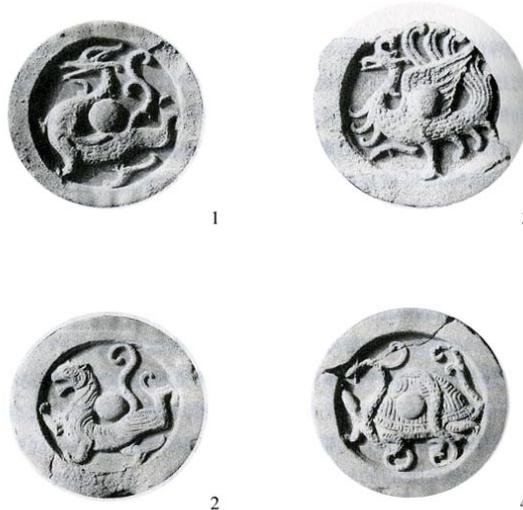


Figure 11. Chinese Four Gods Eave Tiles[03]

1. Black dragon/the Orient God—Wood—East—Spring
2. White tiger--Metal—West—Autumn
3. Red sparrow—Fire—South—Summer
4. (of Taoism)Tortoise/God of the Northern sky—Water—North—Winter

"Fengshui" which literally means "Wind Water" is the science of Chinese architecture's relationship with nature. The Chinese five elements Metal, Wood, Water, Fire and Darth, with earth in the middle, other four are all associated with the directions, season and an animal simple. A popular Han Dynasty Wa Dang-eaves tile pattern represents these four animal symbols. [06]

**PART TWO:
THE MASTER OF
NETS
GARDEN**

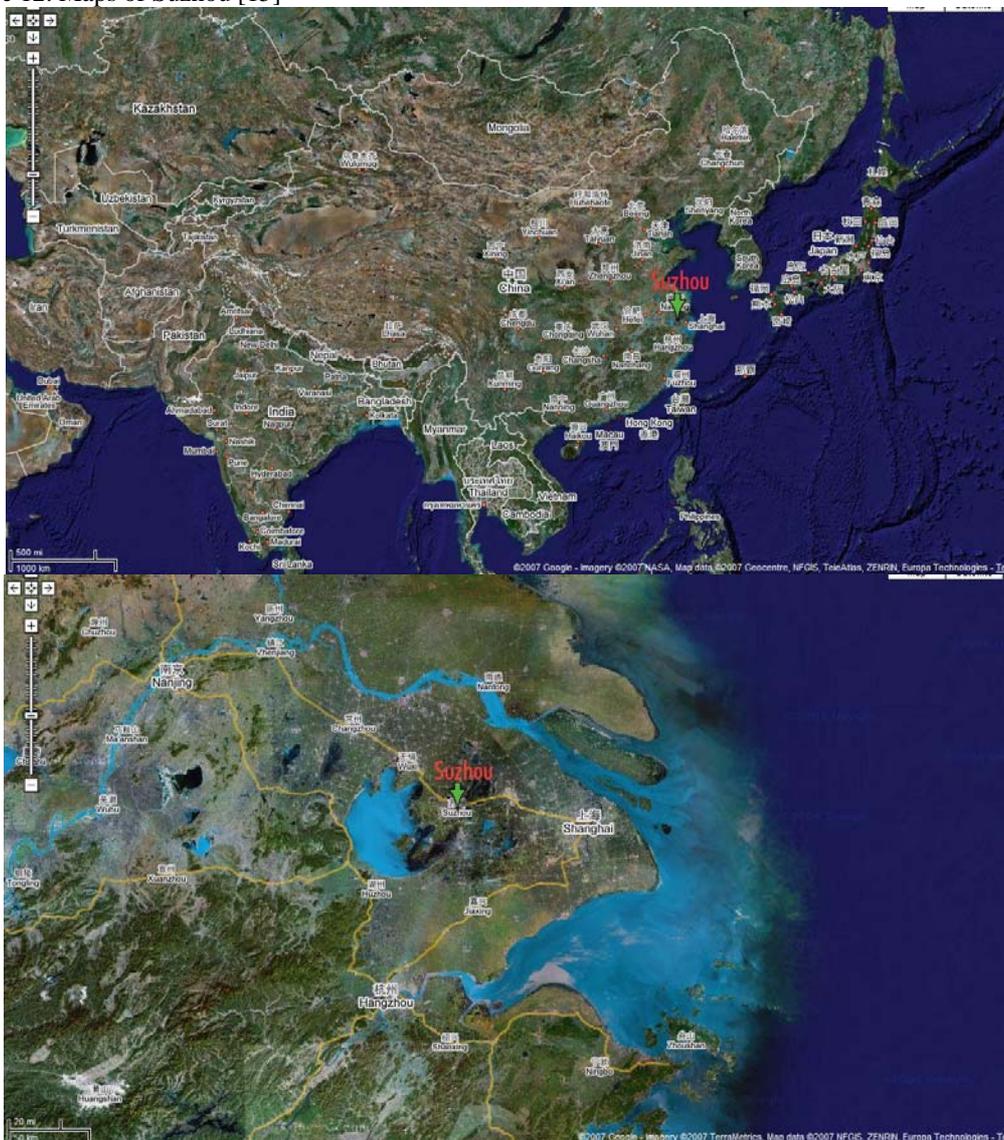
MASTER-OF-NETS GARDEN

Suzhou City, Jiang Su Province

Master-of-Nets Garden was first laid out in 1140, during a period known as the early Southern Song Dynasty. It was restored in 1770 by another official, Song Zongyuan, as his retirement retreat. Though altered both before and after, it became accessible to the public when it was appropriated by the municipal government of Suzhou in 1958. Its outlines and principal features remain the same as in the Qing period (1644-1911). Like other scholar-gardens, it is highly compartmentalized, with courtyards and roofed structures interlocking like pieces of a puzzle. (Figure 3)

Provide map of China with Suzhou's location highlighted and perhaps some history of the city, like center for commerce or education or significant activity (Royal summer home or whatever it is famous for and why...)

Figure 12. Maps of Suzhou [15]



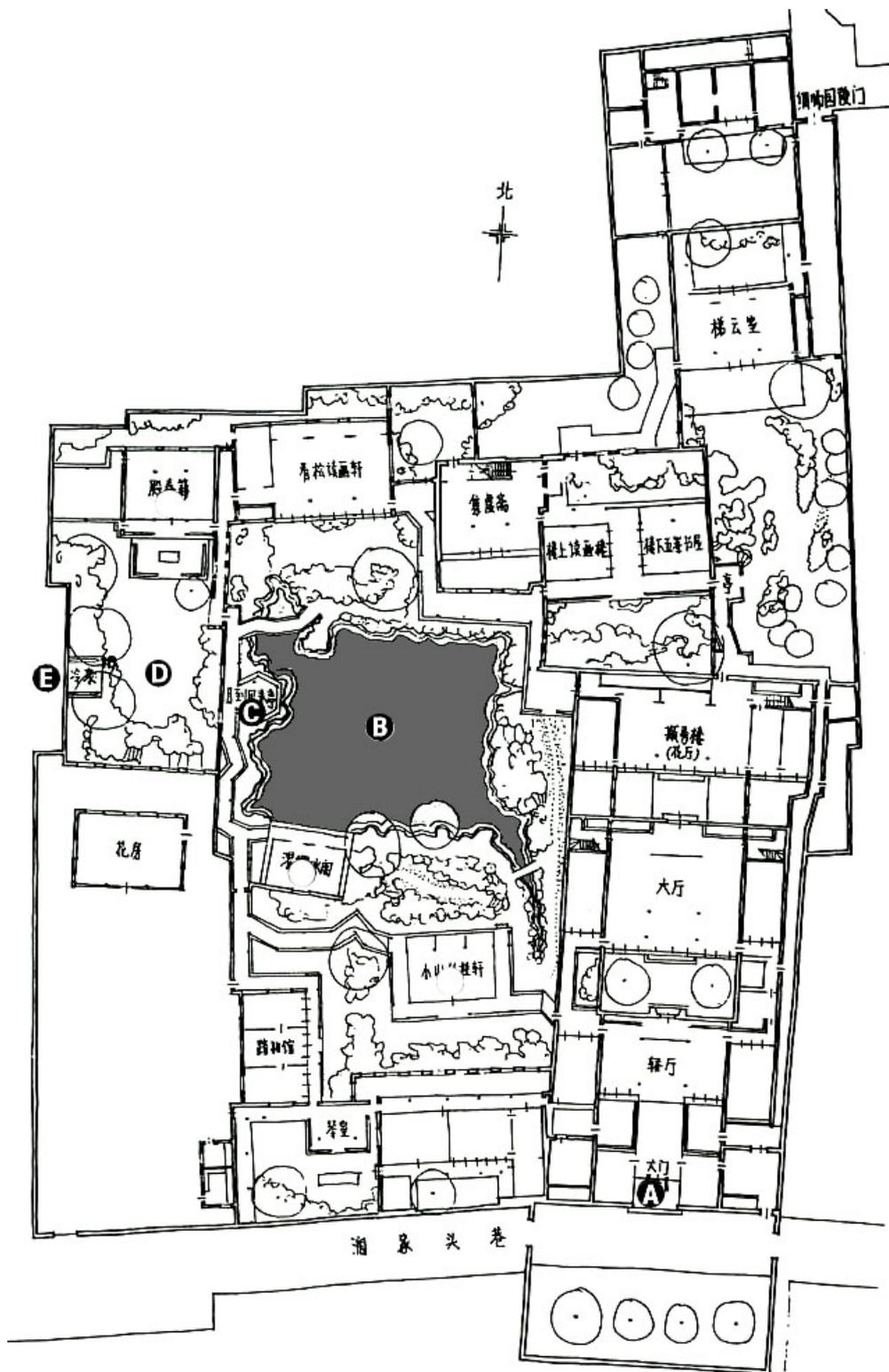


Figure 13. Plan of Master-of-Nets Garden, Suzhou, China, Qing Dynasty [02]

- A. Main entrance
- B. Rosy Clouds Pond
- C. Pavilion of Arriving Moon and Wind
- D. Tan Xi Yu Yin, Seclusion west of Rosy Clouds Pond
- E. Cold Spring Pavilion

There are limited elements in Chinese garden design, but they bring forth a series of intriguing scenes, one after another. They are like the stories in *One Thousand and One Arabian Nights*, once the journey starts, you'll be completely absorbed and become part of the garden, a character in the story. At the beginning you enter along one route, pass by pond, bridge, corridor wall... then you find yourself enter the same place from another direction...

In any route, you enter the central garden space dominated by a water feature called Rosy Clouds Pond. Its chief focal point is the Pavilion of Arriving Moon and Wind, a delicate, six-sided structure with soaring rooflines collected in a high finial (Figure 3).

This paper is a close up study about this specific pavilion.

The visitor does not arrive by an obvious path to this spot, but is diverted along the way by other pavilions and their adjacent courtyards. As a typical scholar garden, the Master of Nets Garden maintains the integration of the residential area and the garden area, the human space and the natural space. There are gardens within gardens, view outside view.

The Pavilion of Arriving Moon and Wind from all of its perspectives:

- ◆ View Of The Pavilion—Viewing the Pavilion from around the pond,
 - ◆ View Inside The View—Views of people inside the Pavilion,
- and
- ◆ View Outside The View—A garden beyond the Pavilion.

“View Outside The View”, describes three unique architectural details of conducting rain, which is the focus of this paper.

View of Pavilion of Arriving Moon and Wind

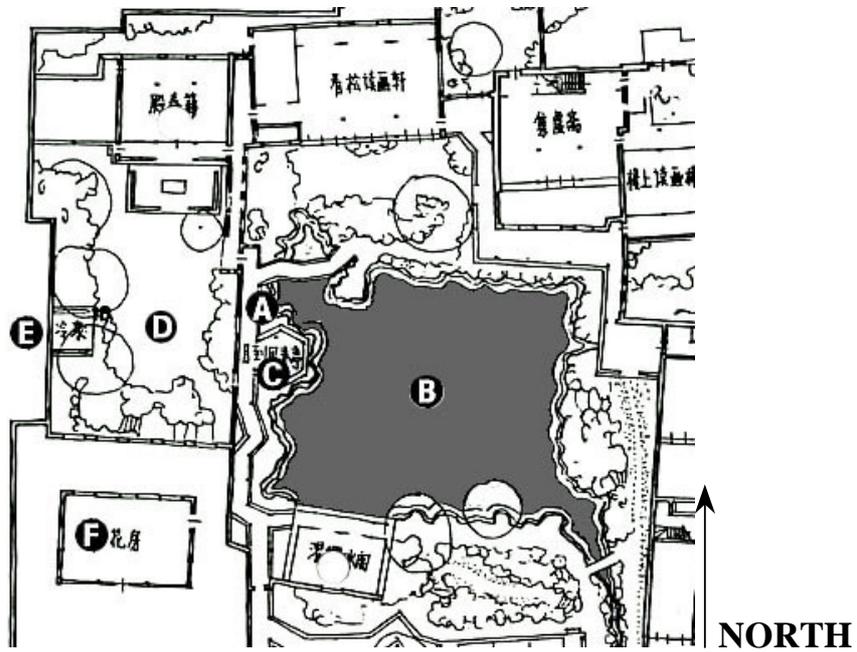


Figure 14. Plan between Rosy Clouds Pond and Seclusion west of Rosy Clouds Pond

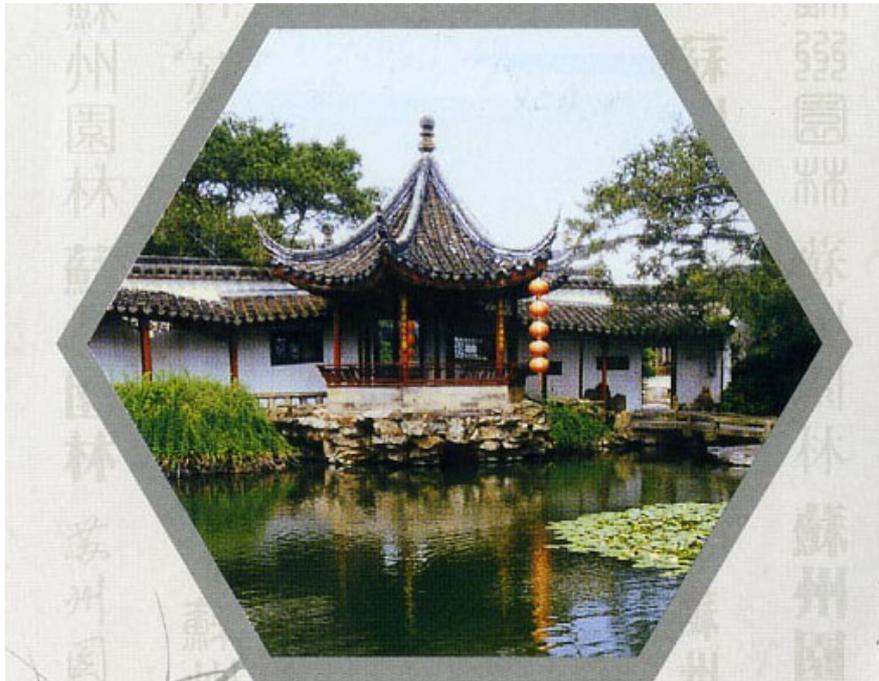


Figure 15. East view of Pavilion of Arriving Moon and Wind [ticket of Master-of-Nets Garden]

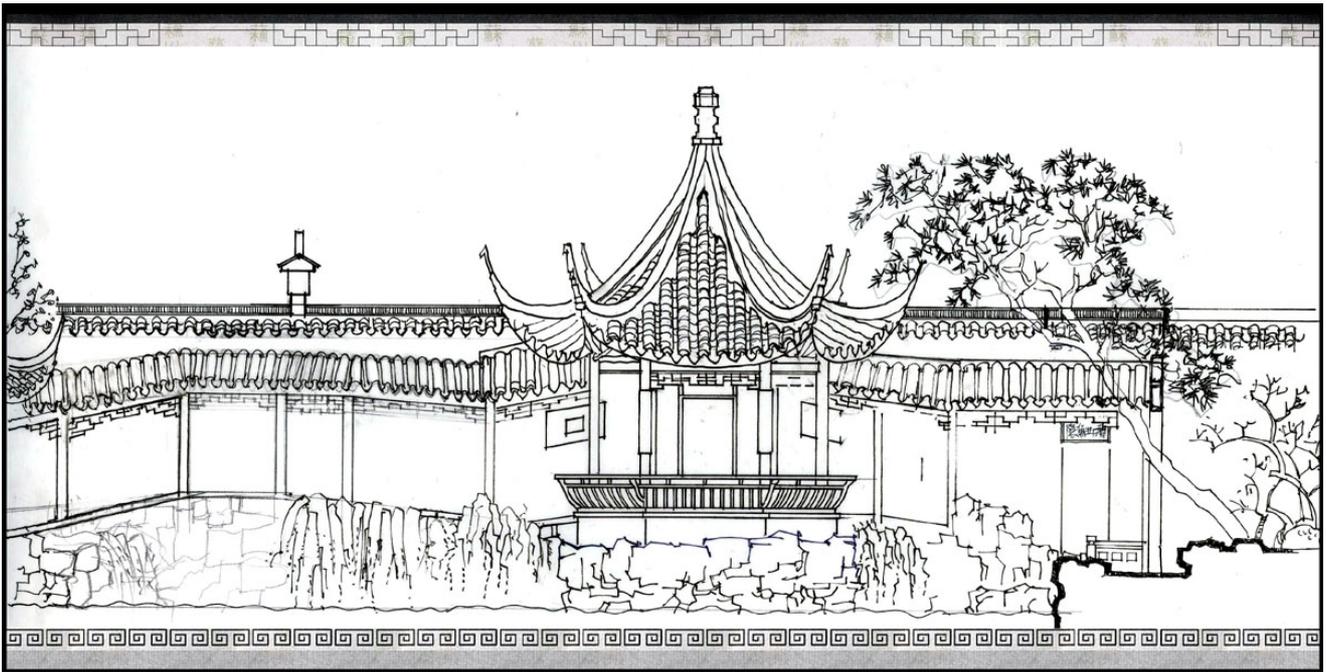


Figure 16.

EAST ELEVATION

Situated on its appropriately scaled rockery above the surface of the pond, in the central garden space, the Pavilion of Arriving Moon and Wind is a resting place where one can gaze dreamily at the reflections in the water. A mirror inside increases the sparkling play of light on its surfaces.

The pavilion itself is the focal point from all around the pond.

View Inside Of View

月到風來亭

moon arrive wind come pavilion

The naming of places in a garden is a means to lead the imagination to an ideal place that exists only in every visitor's mind. Interpretation of the pavilion's name is intended to cultivate the potentials behind the name in cultures



Figure 17: Enjoying “four moons”

FOUR MOONS

Moon up in the sky
Moon in the water
Moon in my wine glass
And
Moon in my heart
- anonymous

Pavilion of Arriving Moon and Wind is a place specifically designed to view and admire the moon. Resting by the Beauty Lean (See Figure 27), the visitor receives the breeze, and looking up through the soaring roof, one can appreciate the moon up in the sky and looking down to the quiet surface of Rosy Clouds Pond. One can look up the moon in the sky, gaze dreamily at the reflection in the water; look into one's own hand, is moon flickering in the wine glass. Above all, the art of garden creates moon in one's own heart.

View Outside Of View

Three distinct architectural details of rain in the Master-of-Nets Garden.

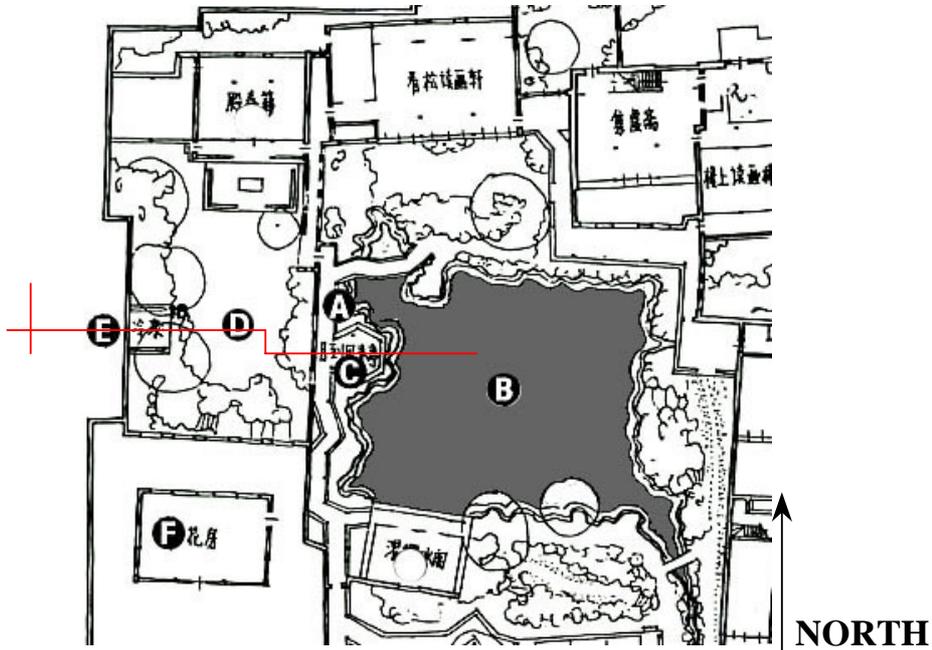


Figure 18. Plan between Rosy Clouds Pond and Seclusion west of Rosy Clouds Pond

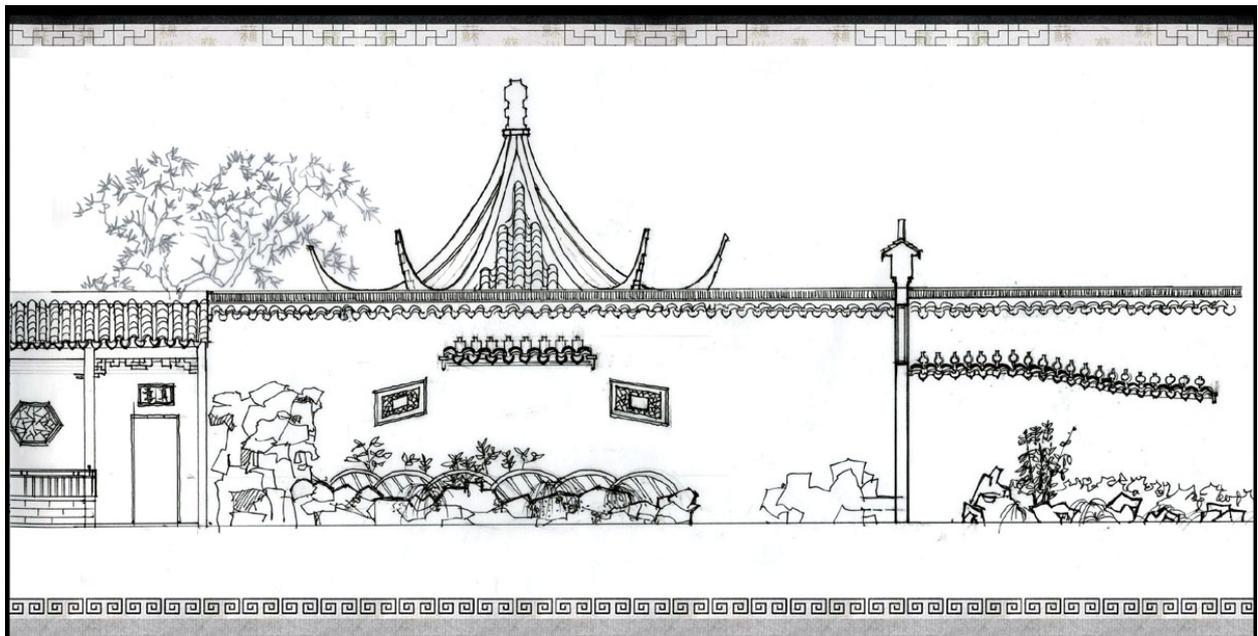


Figure 19.

WEST ELEVATION



Figure 20: View from Cold Spring Pavilion. [Photographed by Cai Shuang]



Figures 21, 22, 23 Details of Eight Holes
[photographed by Cai Shuang]

Waterfall Created At Eight Holes

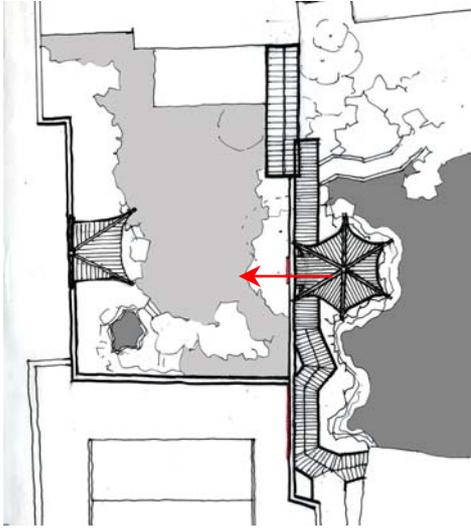


Figure 24.
Rainwater comes through partition wall.

The study called the “Cottage to Accompany Spring” has its own private pebble-paved courtyard garden to the south. This is located west of the Pavilion of Arriving Moon and Wind. When strolling along the veranda through Pavilion, two latticework windows show the hint of another garden inside. To arrive this view outside the pavilion, the visitor can’t enter through the middle of the pavilion where there’s a mirror. The veranda continues along the pond and let to a door to enter the courtyard. Here, eight holes punched through a partition wall allow rainwater collected from the west side of the Pavilion of Arriving Moon and Wind to fall in this private study courtyard. Three rows of tile with a typical row of eave tile compose a miniature eave about three inches away from the white wall. Rainwater comes through the wall and drops in the planter along the pointy end of eave tile. Under afternoon sunlight, the bright white wall of this courtyard constitutes the pictorial ground upon which the shadows of the pine tree are cast, forming a “black ink on white rice paper” painting of shadow and the latticework window openings.

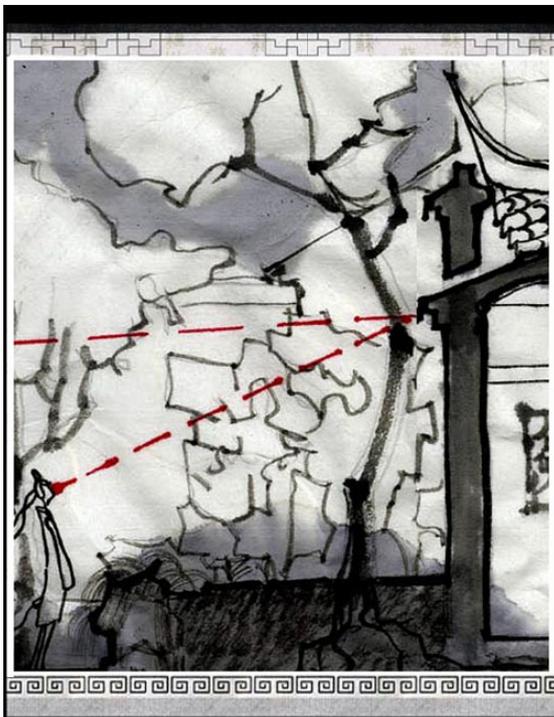


Figure 25. Viewing path



Figure 26. Wall with eight holes in sunny day

Beauty Lean View

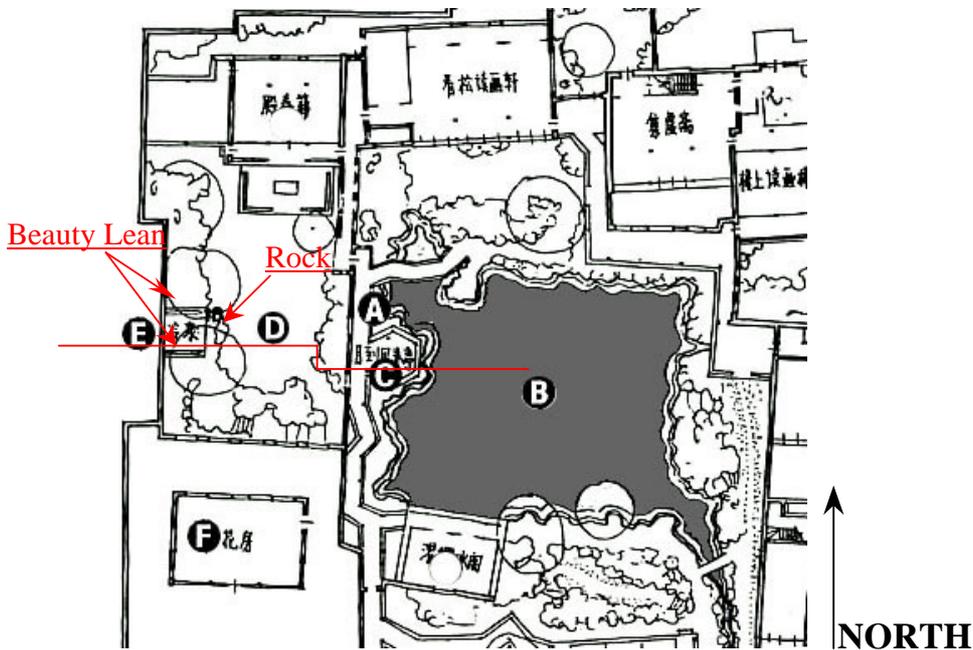
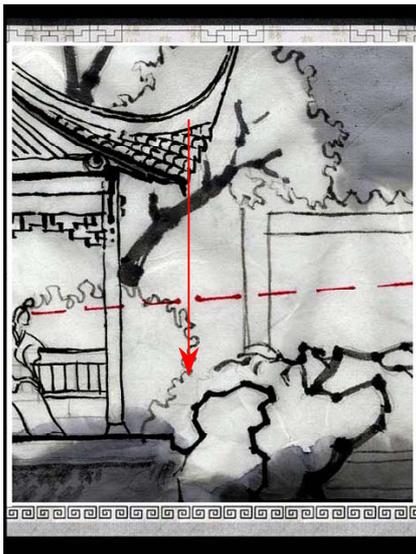


Figure 27. Beauty lean plan

Now, to continue the story of rainwater coming through the partition wall, let's enter courtyard Tan Xi Yu Yin/Seclusion West of Rosy Clouds Pond. Facing the eight holes and the planter below is Cold Spring Pavilion. It provides a perfect resting place to appreciate the waterfall on rainy days. From the plan we can see Cold Spring Pavilion is a little off the axis of the center of the eight holes. However, the layout of seats in the Cold Spring Pavilion explains the situation: There are two rows of benches called a "Beauty Lean" along the north and south edge of the pavilion. At the south Beauty Lean, one would sit facing north, then twist the upper body to the east and naturally put your right arm on the top of the handrail of the Beauty Lean. Now, one's face would end up facing right at the eight holes as shown below.



Right below the eave of Cold Spring Pavilion, there is placed a "Tai Rock". The raindrops collected in the roof come down to the rock then create splashes and mist. The rock also indicates the entrance to the pavilion where the steps are on both sides of the rock. The indirectness finishes sentence!

Figure 28. View trace from beauty lean Figure 29: Raindrops falling from Cold Spring Pavilion

Controlling the Flow of the Rain

Section 1, Section 2, Section 3

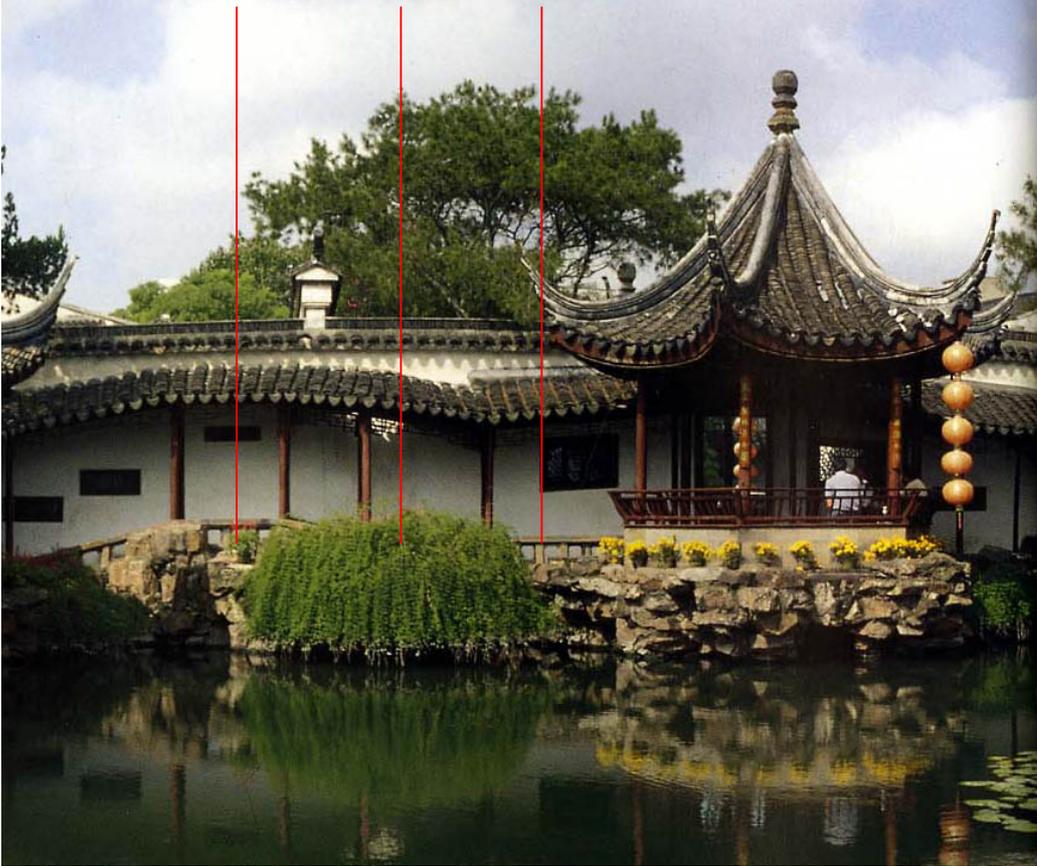


Figure 30. Three places for rain to go along veranda [02]

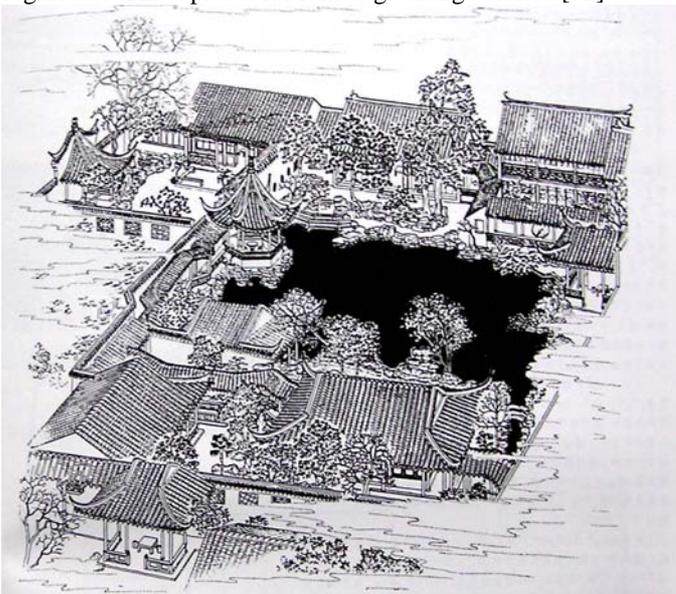


Figure 31. Axonometric view [01]

Three Sections along Veranda

1. Single sloped veranda covers
The rain ends up in the Pond.
2. Triangle patio
The rain goes in the triangle patio.
3. Double sloped veranda cover
The rain goes to another garden.

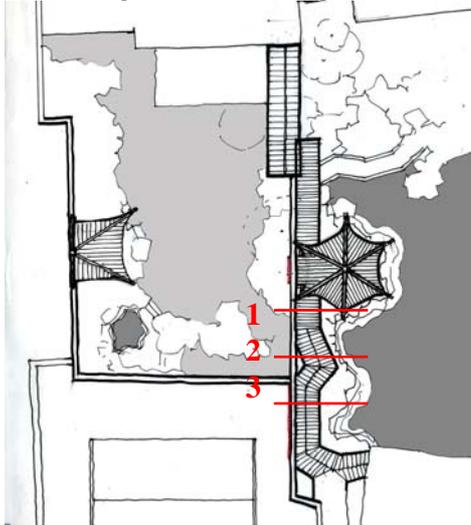


Figure 32: Three sections location

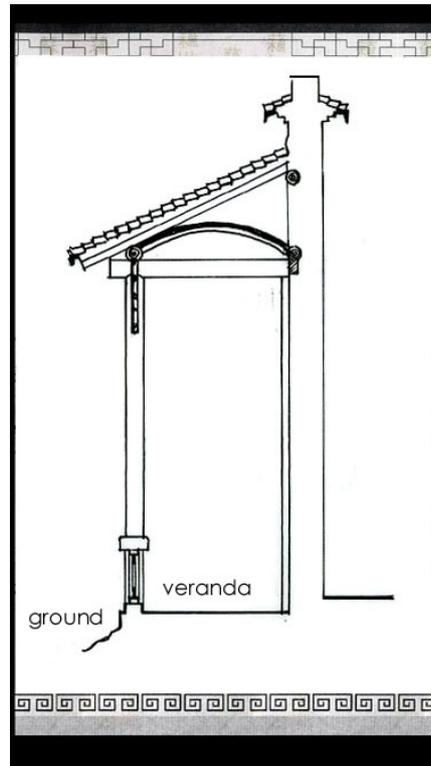


Figure 33: Section 1

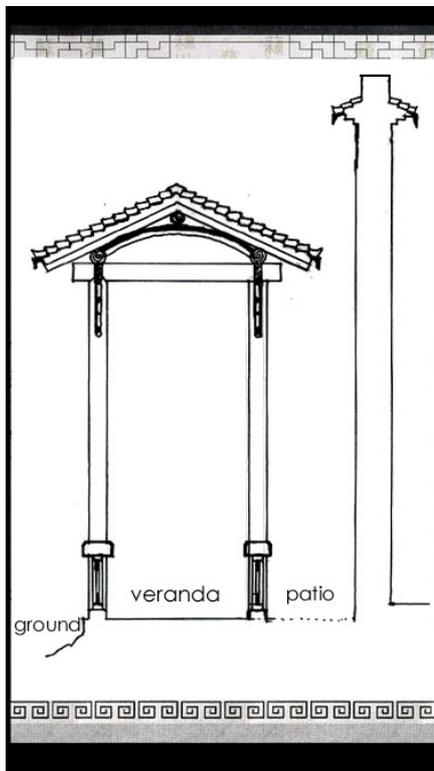


Figure 34: Section 2

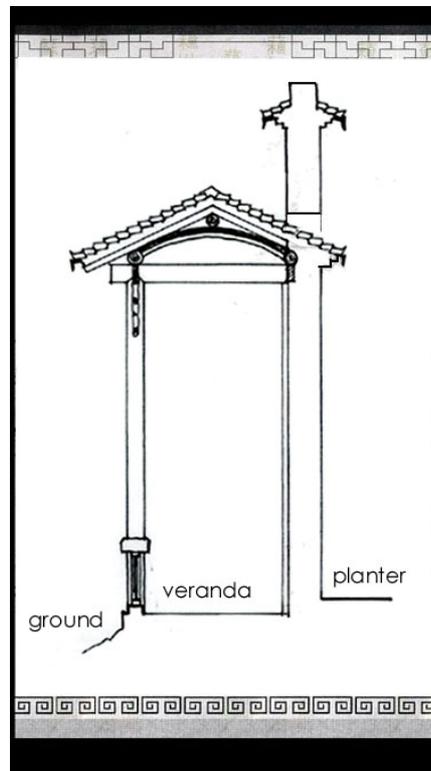


Figure 35: Section 3

Figure 36. Section Two-Triangle patio, rain harvest in patio



Figure 37 Section Three-Twenty holes, rain goes to greenhouse courtyard



Figure 38: Drain below Twenty holes 1
[photographed by Cai Shuang]



Figure 39: Details of Twenty holes



Figure 40: Drain below Twenty holes 2

**PART THREE:
THE THREE LEVELS
OF
APPRECIATING
CHINESE GARDENS**



Figure 41: Architecture of expectations

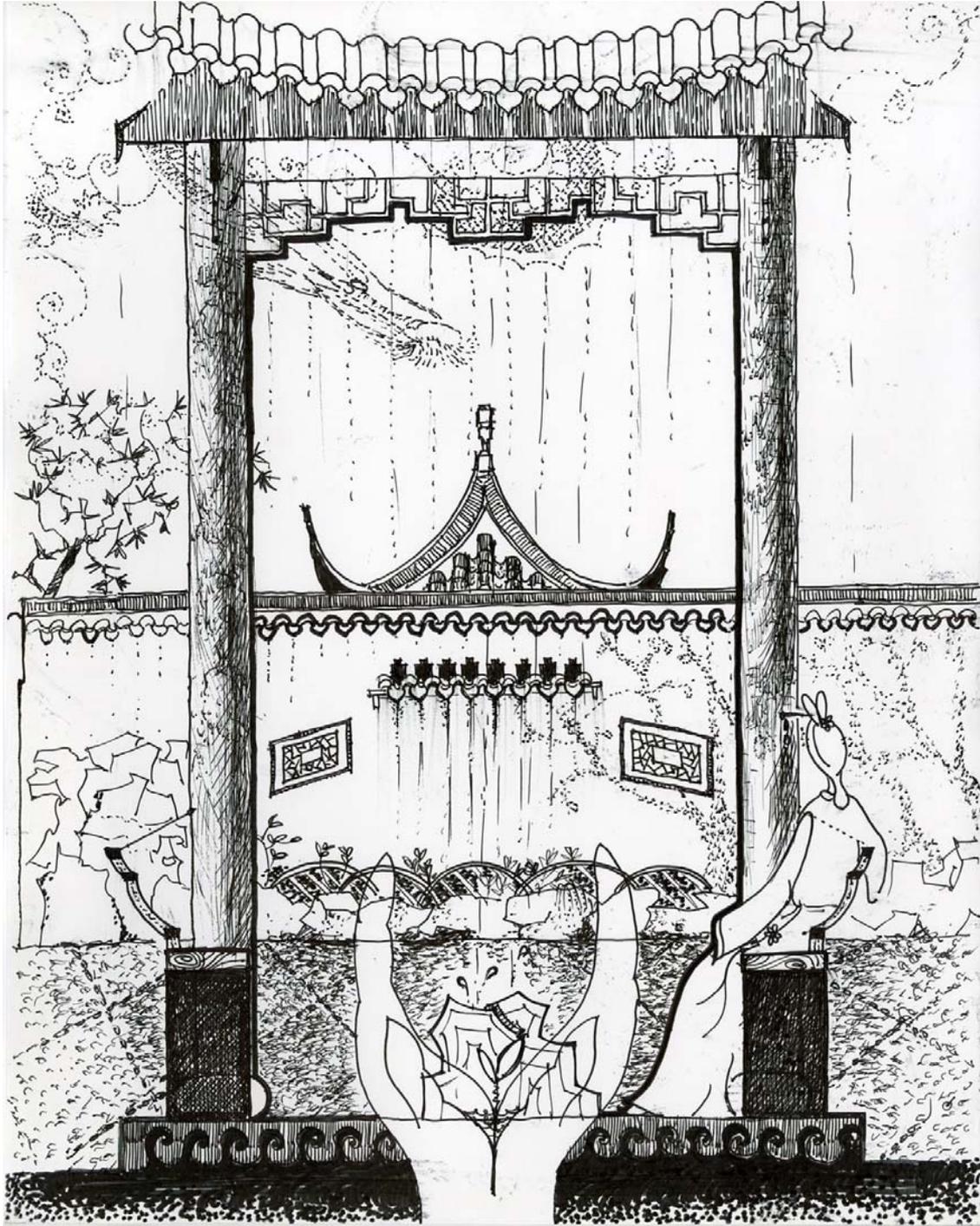


Figure 42: three levels of appreciating Chinese garden

The above drawing is about the key questions of rain, the three levels of appreciating Chinese garden:

How to represent the flow of rain?
 How does rain inspire us?
 How to invite people to feel the rain?

SIGHT
 SOUND, TOUCH
 IMAGINATION

The Master-of Nets Garden was designed for the visitor to enjoy the rain with all the senses. Sitting at the Beauty Lean in Cold Spring Pavilion, in a private corner of the garden, the rain is present in every aspect:

The focal point is the eight holes with a small row of tile; raindrops keep falling along the eave tiles and the raindrops.

The raindrops are so close that you can feel them. If you reach your hand out, you can catch them. Raindrops in front come down to hit the Tai rock in front, thus creating splashes and mists.

The tip of a distant pavilion and views through the two lattice windows together lead the imagination to the idea that there is another world beyond.

Rain in Art—The Art Of Appreciating Chinese Garden With Sight

I've been searching the representation of rain in Chinese painting around the time this garden was built. I found "Hearing rain by banana window" as the spirit of Chinese garden. Every garden design principle is around the feeling, the mood of people inside.

To truly understand Chinese gardens, we have to go beyond the material existence, the real spirit lies in appreciating garden art.

So the mood of the visitor is more important part. This is why naming is so important in Chinese garden. It reveals the owner's intention of constructing the place.

Pavilion of Arriving Moon and Wind reveals the literary quotation of the Tang Dynasty poet Li Bai (701 762 CE)'s famous line in a poem "Drinking alone under moon light" Raise my wine glass and invite the moon,

Moon, my shadow and me become a party

of three." Association with poetry leads to imagination—the highest level of appreciating Chinese garden.



Figure 43. 1174 AD, Li Di Feng Yu Mu Gui Tu Herds going back home in the rain and wind



[15]Figure 44 Rain washing the mountain foot[15]

“Hearing rain by banana window” — The Art of Appreciating Chinese Garden with Sound

Just because
Visually, there's flower and willow hiding
Acoustically, rain drops on lotus
For sense of smell, secret fragrance floating around
We can thus feel completely relaxed, our heart feel open and vast, our spirit feel comfortable
It could be said, if it were not for spirit of flower and woods, there's no Garden artistic
conception/ scenario/the imagine territory of garden

Lying down to listen to the billows of pine trees,
look the scene of China fir
Open the door to watch the rain,
Flow in sound of banana trees.

Raindrops hit banana leaves
Pavilion to linger, Xuan/a small room to hear the rain
Fine rain, rain sound from banana window
Echoes gently
Just like people recall the past
Obscure and far away
The whole garden setting weaving together to become a moment of expectations.



Figure 45: Banana tree window



Figure 46: hearing rain by banana window [15]

SUMMARY:

The spirit of Suzhou Chinese Scholar Garden is to show big within small, represent the universe within inches, shows the sophisticated technique of shrinking dragon into inch (縮龍成寸). [05] By doing so, Suzhou garden integrate itself under heaven and earth. The three rain details discussed in this paper have the same spirit as Suzhou traditional Chinese gardens. The key design principle is to understand the nature of the “place” and then deal with the specific situation according to its nature.

Ending this paper, I'd like to propose a question:

Future historians will be in a unique position when they come to record the history of our own times. They will hardly know which facts to select from the great mass of evidence that steadily accumulates. What is more, they will not have to rely solely on the written word. Films, gramophone records, and magnetic tapes will provide them with a bewildering amount of information. They will be able, as it were, to see and hear us in action. But the historian attempting to reconstruct the distant past is always faced with a difficult task. He has to deduce what he can from the few scanty clues available. Even seemingly insignificant remains can shed interesting light on the history of early man.

Choices somehow make people frantic. Our modern life is packed with “to do” lists. Architectural design is facing numerous choices. Under this circumstance, start from the specific situation itself and go from there, the design will be a less bewildering process and calm. Oneness, choices don't have to be a lot, but the right ones. Study deeper the situation and come up with a good proposal is more important than abundant options. The feeling can be felt by doing Zen gesture, closing up both hands and close our eyes, what we feel is the heart, the truth.

Postscript

With all the abundant words, drawings and pictures, this is all about observing the scene/story of rain falling on architecture, and reflecting on the relationship between architecture and rain. The eight holes behind Pavilion of Arriving Moon and Wind in Master-of-Nets garden is a very delicate design example. Only the eight holes bring out so many stories. Some are facts; some are my teachers' and my hypotheses. We tried to prove some, deny others, and there are always new discoveries during the research.

The delicacy of rain is that heavy rain/downpour and drizzle tell different stories. When it's drizzling, I like strolling in the rain, feeling every single raindrop hit on my face, like a kiss. When it is pouring, when I was in high school, I got soaked through on the way back home, I'd change to dry clothes, put on rain boots, holding an umbrella, dash back to the rain, wade in the puddle at the edge of the road, play with the splashes, and watch the passersby running in the rain. I believe in down pouring heavy rain, or in drizzling gentle rain. In the Master-of-Nets garden each has its charm.



Figure 47. 48. Playing rain [15]

Special thank to Cai Shuang, my college classmate now in Suzhou. She took all the rain pictures while three months pregnant. Wish the baby grew healthy in her belly! Life is indeed the greatest magic! Rain bestows the earth life; also bestows us life.

Caren suggested I to think about how we observe rain? For misty rain in the mountains, sometime, you can't see the rain if you are in it, but from away, the rain became more clear. I then realized when I was little, I judge if it is raining not by looking at the sky out the window, but by going by the window and looking down the puddle on the street. If there's ripple, then it is raining. When it rains, to see the main view of Pavilion of Arriving Moon and Wind, the ripples of Rosy Clouds Pond become the foreground. In Tan Xi Yu Yin, with pebble-paved floor, will there be ripples in the puddles?



Figure 49: Ripples [15]

Science of rain starts with wonder, with observation.

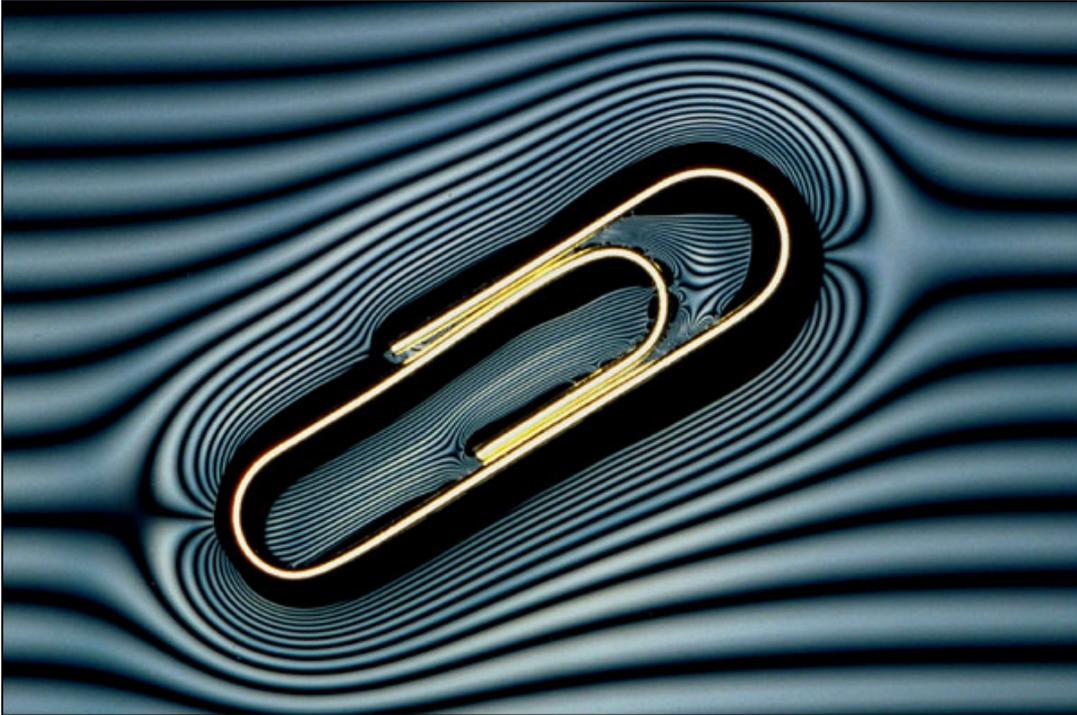


Figure 50 Science of water [15]

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EE&K Architects	2007-

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GRDP Award Virginia Tech	2006
Word and Image Installation Exhibition, University of Pennsylvania	2006
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Honored Graduate	1999
Consecutive College Scholarship	1994- 1999
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Modern Interpretation of Grand Sight Garden in traditional Chinese novel <i>Red Chamber Dream/The Story of Stone</i> Urban Planning Forum 2002/5, Tongji University Press	2002
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Acknowledgment



Figure 51: Prof. Jaan Holt, during defense



Figure 52: Dr. Paul Emmons, in defense party in WAAC library



Figure 53: Dr. Caren Yglesias, after defense

Jaan, teach me the important lesson of life—happy
Paul, being righteous and guiding my research all along
Caren, guide me to put my heart into this work, understand the oneness of Zen
Grandpa, could this be a conversation with you?

And endless thanks to teachers, family and friends



Figure 54: In the rain [15]