Yuanming Yuan Garden: Space Arrangement Principles among Italy and China in Eighteenth Century

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Marzo 21, 2014 - Castello del Valentino - Politecnico di Torino
Yuanming Yuan Garden: Space Arrangement Principles among Italy and China in Eighteenth Century

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Dottorando di ricerca in Architettura e Progettazione Edilizia - (XXVI Ciclo)
Tutor: Professor Marco Trisciuoglio
THANKS

My tutor, Professor Marco Trisciuoglio
Ti ringrazio di cuore.
Thanks for your humor, your enthusiasm, your patience, your encouragement and your always kind help!
Thanks for helping me study Italian culture, the solemn monuments, the immortal memories, the glory and the beauty.
Thanks for giving so many excellent books to me, and for recommending me to study Yuanming Yuan in Bibliothèque nationale de France.
Thanks for helping me to discover the knowledge and science, inspiring my ideas step by step, and encouraging me to do it better and better.

China Scholarship Council (CSC)
for China Scholarship Council always help and support, thank you so much!
for Southeast University, help me to study, to research, to create!

Professors and Collaborators of the DAD institute
for your courses and for your kind advices, help us discover a new field and find directions.

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Professor Pier Antonio Val
Thank you so much for your kind advices and inspirations!

Scudo
for the possibility to study in Italy, for all the friendly helps.

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Thanks to Wenwei, my dear friend and sister. Thank you so much for your always help and for the discussion on the fruitful teamwork! Thanks to Ji-ang Lei, for finding inspirations and creative ideas. Thanks to dear Ilaria Ariolfo, for your warm-hearted help with my Italian, and to Enrico Boffa, Tomas Mendez, Andrea Rosada, for your humor and for your ideas and discussions about study.
Corinne Le Bitouzé (the curator in charge of 18th century collections of Richelieu Library, BnF., Paris)
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Thank you so much for your enlightenments and kind helps for Yuanming Yuan archives research in Bibliothèque nationale de France.

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My dear parents. Thank you for your eternal love, your patience and your support. My Rourou Zhang, thank you for your always kind help.

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Thank you for your always encouragements and support from my heart.

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Thank you for providing the Restitution Garden Plans of “Forty Scenes of Yuanming Yuan”.

Li Li (ETH Zürich)
Thank you for helping me study knowledges about computer-aided program.

And whoever was confronted and helped with small and big miracles to the work. Thank you very much!
ASTRATTO

Yuanming Yuan è l’unico giardino Imperiale nella storia cinese, unisce giardini classici cinesi e giardini dell’Italia Rinascimentale e Barocca.

Architetto Significativo per Yuanming Yuan

Giuseppe Castiglione (1688 – 1766): La storia del Western Mansions ha inizio nel 1747, quando l’architetto, Giuseppe Castiglione riceve l’incarico di intraprendere i lavori del nuovo giardino Italiano dentro il giardino imperiale Yuanming Yuan.

Giuseppe Castiglione ha avuto un ruolo importante come pittore, architetto, e politico nei tempi suoi in Cina. Castiglione riunì cultura tra Oriente e Occidente, teoria e pratica, potenza e virtù, pensiero e azione.

Il Preludio: una genealogia di ricerche accademiche occidentali dei Yuanming Yuan (dal 1743 ad oggi).

Nel primo capitolo vengono presentati i principi di arrangiamento dello spazio del Western Mansions – gli assi ortogonali per rappresentare la pianificazione territoriale, le prospettiva geometrica per ricercare la sequenza spazio, e gli elementi Italiani per leggere compositivamente il giardino.

Nel secondo capitolo seguiranno note sui tradizionali giardini Cinesi di Yuanming Yuan – un sistema di Modularità. Il capitolo presenta Le Quaranta scene di Yuanming Yuan (1744) e la Cartografia di giardini anglo-cinese da Georges Louis Le Rouge (1707 – 1790), che sono stati analizzati per ricercare il sistema di Modularità del giardino Yuanming Yuan.

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- 1744, Emperor Qianlong’s Court Painters: Shen Yuan, Tang Dai
  *BnF. 1744, Giuseppe Castiglione’s Paintings

- 1767, P. Michel Benoit’s Letters

- 1743, P. Jean-Denis Attiret’s Missionary Letters

- 1782, Missionary P. Pierre Martial Cibot
  *BnF. 1781 – 1786, Qianlong Emperor’s Court Painters, “Copperplates of the Twenty Views of the Western Buildings of Yuanming Yuan”

- *BnF. 1861, Lettre de Victor Hugo au capitaine Butler
  Victor Hugo et le sac du Palais d’été: visions d’artistes

- 1862, M. G. Pauthier wrote the book Un Visite’à Youen-ming Youon, Palais d’été de L’Empereur Khien-loung

- 1873 - 1940, Photos of Yuanming Yuan

- 1900, National Library of China Archives of Yangshi Lei Family (Drawings and Models for Yuanming Yuan)

- 1984, The Yuanming Yuan Society of China

- 1998, Régine Thiriez
  *BnF. Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces

- Restitution Drawings of Mission Palais d’été (1982), France

- 1800, Giuseppe Castiglione’s Paintings

- 1750, Historical Archives, Copperplate, Photo

- 1700 A.D., Historical Painting, Survey, Measure, Monograph
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I. Experiments of Western Mansions:

Experiment: Perspective System – View and Horizon of the Western Mansions

- Representative Samples for the Experiment:
  - *Copperplates of the Twenty Views of the Western Buildings of Yuanming Yuan, (1781 - 1786)*
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  - *Restitution Drawings of Western Mansions come from “Mission Palais d’été” (c. 1985)*,
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- My Experiment Methodology:

  Strategies: Digital Models, Mathematical calculations, and Perspectival System Diagrams

Step 1: Make Scientific Three-dimensional Digital Models:

  Data of the digital model of Western Mansions comes from “Guo Dailong Studio in Beijing
  Urban Planning Design and Research Institute of Tsinghua University”; For the details of garden design, refer to the Archives of Drawings and Models of Lei
  Family, from China History Archives No.1 and from the National Library of China.

Step 2: Analyze Spaces Sequence: Graph of Relation Diagrams between eye height, the
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  The Mathematical calculation Formula for View Points and Horizon comes from TUDelft;
  Data collection comes from Tsinghua University.

Step 3: Analyze the Perspectival System: Composition Scheme

  Transverse Space Sequence
  Longitudinal Space Sequence

  Make Axonometric Projection and research active composition elements.

My Work: 1. Design the experiment methodology and the scientific research program.

  2. Make a Digital Three-dimensional Models for Western Mansions; make the
     Axonometric Projection to analyze the space sequence.

  3. The active composition elements study.
II. Experiments of Chinese Traditional Gardens: “Forty Scenes of Yuanming Yuan”

Experiment: Axiom of Modularity in “Forty Scenes of Yuanming Yuan”

- Representative Samples for the Experiment:
- The album “Forty Scenes of Yuanming Yuan” (1744) from Bibliothèque nationale de France, Paris
- The Forty Garden Plans of “Forty Scenes of Yuanming Yuan”, Restitution on Paper by Prof. He Zhongyi, Tsinghua University, Beijing.

Experiment Theories and Inspirations from:

- My Experiment Methodology:

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My Work: 1. Design the experiment methodology and the scientific research program

2. Draw analysis charts to analyze the Axiom of Modularity in Space Arrangement of Yuanming Yuan.

List of Abbreviations

GENOVA, ITALY
ISTITUTO PIO RICOVERO MARTINEZ

PARIS, FRANCE
BIBLIOTHÈQUE NATIONALE DE FRANCE
MUSÉE NATIONAL DES ARTS ASIATIQUES-GUIMET

BEIJING, CHINA
THE PALACE MUSEUM
THE NATIONAL LIBRARY OF CHINA
CHINA HISTORY ARCHIVES No.1

TAIBEI, TAIWAN, CHINA
NATIONAL PALACE MUSEUM
ACADEMIA SINICA
INSTITUTE OF MODERN HISTORY

UNIVERSITIES
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The Chronology of Qing dynasty refers to Qing Emperors’ archives in China History Archives No.1 (Beijing). The Chronology of Yuanming Yuan construction refers to the documents of Lei Family from the Palace Museum (Beijing). The information of Western Mansions refer to the archives of Bibliothèque nationale de France (Paris).

My work: research these archives, summarize significant events, and display the Yuanming Yuan history through a comprehensive perspective.

1707, 46th year, Kangxi Emperor
The initial constructions started.

1709, 48th year, Kangxi Emperor
Kangxi gave his son, Prince Yinzhen (the future Yongzheng Emperor) a small garden, named it Yuanming Yuan (Garden of Perfect Brightness).

1715, 54th year, Kangxi Emperor
Giuseppe Castiglione arrived Beijing. In 1716, Castiglione participated in the Royal Painting Institution (inside the Forbidden City).

1725, 3rd year, Yongzheng Emperor
Yongzheng Emperor furthered the constructions of Yuanming Yuan: enlarged the area to the northwestern suburbs of Beijing.

1736, 1st year, Qianlong Emperor
Qianlong Emperor inherited Yuanming Yuan from Yongzheng Emperor.

1744, 9th year, Qianlong Emperor
During the period of Qianlong Emperor, the “Forty Scenes of Yuanming Yuan” completed. Qianlong Emperor selected forty best sceneries by himself, named each of them a poetic title, and ordered best court artists to make the paintings and the calligraphies. Today, this album have been kept in Bibliothèque nationale de France, Paris.
1747, 12th year, Qianlong Emperor
   The construction of Western Mansions began. Western Mansion designed by Giuseppe Castiglione (1688 – 1766), consisted ten Western style buildings.

1751, 16th year, Qianlong Emperor
   Changchun Yuan (the Garden of Eternal Spring) and Qichun Yuan (the Garden of Blossoming Spring) were built to the east of Yuanming Yuan.

1773, 48th, Qianlong Emperor
   The construction of Western Mansions had completed.

From 1781 – 1786, Qianlong Emperor
   *Copperplates of the Twenty Views of the Western Buildings of Yuanming Yuan* had completed.
   These copperplates have been kept in Bibliothèque nationale de France, Paris. For each Copperplate: 26 kilograms of red bronze, the size is 65 cm in height and 90cm in width.
List of Western Academic Researches of Yuanming Yuan
Genealogy Researches From 1743 till Now:

- **The Epoch before Second Opium War 1860:** Ultimately, much of the theory and European research concerned with Yuanming Yuan can be traced back to Missionary Letters of 18th century.

  In 1743, P.Jean-Denis Attiret¹ (1702 - 1768), wrote a letter to his friend M.D’Assault. In the letter, Attiret described the grandeur scenes inside Yuanming Yuan.

  In 1767, another Missionary P.Michel Benoit (1715-1774), who designed the hydraulic system inside Western Mansions, wrote to M.Papillon d’Auteroche and described the marvelous Yuanming Yuan with passion.

  In 1782, Missionary P.Pierre Martial Cibot² wrote a book *Essai Sur Les Jardins de Plaisance des Chinois*. This book analyzed the design strategies of Yuanming Yuan. Missionary P.Pierre Martial Cibot had worked inside Yuanming Yuan with Giuseppe Castiglione for a long time. This monograph published in Europe, and had a widespread influence in the academic fields³.

  From 1774 to 1789, Georges Louis Le Rouge, published a series of books: *Détail De Nouveaux Jardins À La Mode: Les Jardins Anglo Chinois*. The volume IV included the *Forty Scenes of Yuanming Yuan* redrew by Le Rouge himself in ink.

  In 2004, Bibliothèque nationale de France reedited Le Rouge’s researches, published his studies in book *Georges Louis Le Rouge: Les jardins anglo-chinois*. The monograph not only contained Forty Scenes of Yuanming Yuan redrew by Le Rouge in ink, but also analyzed the anglo-chinois (Italiano: anglo-cinese) gardens of 18th century in Europe.

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French missionary Jean Denis Attiret (1702-1768) had cooperated with Giuseppe Castiglione for Yuanming Yuan design and construction.

² P.Pierre Martial Cibot, had worked inside Yuanming Yuan as a court painter, and had researched Chinese traditional garden design for decades.


  Prof. Guo is the vice president of Yuanming Yuan Society of China. Guo had written and published several authoritative monographs about Yuanming Yuan research.
- From the Second Opium War (1860) to the First Half of 20th Century:

Victor Hugo (1802 – 1885), the great French poet, novelist, and dramatist, gave high praise to the art of Yuanming Yuan in *Lettre au capitaine Butler* \(^4\)(1861). In this letter, Hugo described Yuanming Yuan as “*un rêves des mille et une nuits*” (a dream of one thousand and one nights), and commented the garden art as a “*chef-d’œuvre*” (masterpiece). Hugo wrote:


Victor Hugo’s letter emphasized the arts of Yuanming Yuan, denounced the war, and called for the world peace. Hugo’s letters, his literature works, and his noble characters touched the heart of Chinese people. Today, a statue for Victor Hugo’s locates inside the Western Mansions. The whole China will be remembered the great man, the kind friend of China forever.

The historical photos of Yuanming Yuan (1873 - 1940): Regine Thiriez, in monograph *Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces*, presented precious photos of Yuanming Yuan from 1873 to 1940. Today, this monograph could be read in research library of Bibliothèque nationale de France, is one of the most important historical archives analysis for Yuanming Yuan.

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4 Victor Hugo’s *Lettre au capitaine Butler* (1861) is very famous in China. Today, in Yuanming Yuan, there is a statue for Hugo inside Western Mansions.


- **Influential Contemporary Research from the second half of 20th Century till now:**

**Mission Palais d'été**: The Great International Academic Collaborative Research for Yuanming Yuan, established and promoted by French government and Chinese government (Ministry of Culture) since 1983.

French representative is Jacques Langer; Chinese representative is Vice Minister Zhou Weizhi. French experts and scholars were responsible for the mapping and restitution drawings of Western Mansions in Yuanming Yuan. Chinese experts focus on researches of Chinese classic gardens in Yuanming Yuan.

In summary, research works include:

1. Study the paintings by Giuseppe Castiglione.
2. Analyze the history of the Western Mansions.
3. Collect and research the old photographic and archives from 1873 to 1940.
4. Garden art and landscape research, restitution drawings of Western Mansions.
5. Documentation of academic archeology sources, analysis of Jesuits missionary letters (since 1743).

**Bibliothèque nationale de France** contains a large number of historical archives of Yuanming Yuan (La Palais d’été) in Richelieu Library, such as engravings, antiques, paintings, writings:

1. Historical Engravings (1781 - 1786) of Buildings in Western Mansions of Yuanming Yuan, for example, *Copperplates of the Twenty Views of the Western Mansions* (1781 – 1786). These copperplates are precious culture heritages, which present the grandeur and original appearance of Western Mansions in front of us.

2. Restitution Drawings of Mission Palais d’été: for example, the plan of the Western Mansions, the façade of Fangwaiguan (Belvedere) etc. French experts, such as Ms. Michèle Pirazzoli-t'Serstevens and Mr. Antoine Durand, played significant roles in academic fields, completed many important Restitution drawings for Yuanming Yuan.

3. Antiques from Yuanming Yuan, for example, historical ornaments from palaces in Western Mansions.


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Chapter 1:
Italy Principles Embodied in Western Mansions of Yuanming Yuan
Chapter 1: Italy Principles Embodied in Western Mansions

1.1 Giuseppe Castiglione (1688 – 1766): the Architect of Western Mansions and the Chief Consultant of European Art in Chinese Court (Qing Dynasty)

Giuseppe Castiglione, (Chinese name: Lang Shining), (July 19, 1688 – July 17, 1766). Giuseppe Castiglione is an Italian Jesuit Brother, travelled to China as a missionary.

In Chinese architectural history, Castiglione possessed an extraordinary position. Castiglione was the chief royal consultant of European art in court. His masterpiece is the Western Mansions, the unique Italy style garden inside Yuanming Yuan.

He is a painter, but more than a painter. He is the unique one who synthesized the Chinese painting style and Western painting skills in perfect harmony.

He is the leader responsible for the great project “Western Mansion” inside Yuanming Yuan. Yuanming Yuan, in Chinese architectural academic field, is considered to be the historical peak of garden design¹.

He is a genius architect. Castiglione researched an abundant of blueprints of Italian gardens from Rome. The design team for Western Mansions includes artists, scientists, and technicians²: Jean Denis Attiret, Gilles Thebatult, and Ignaz Sichelbarth.

He is a poet, a master of traditional Chinese language and Manchu language (Lingua Mancese)³. His Chinese calligraphy achieved Qianlong Emperor’s high compliments.

He is a bridge connecting East and West. He is a window, presenting Renaissance and Baroque arts in front of China.

He was born in Milano, passed away in Beijing. Three hundred years ago, Castiglione left his native land Italy, came to China with his talent, his honest, and his enthusiasm. Cross the time datum of hundreds of years till now, the great man is famous around the whole China and will be remembered forever.

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¹ Yuanmingyuan Garden, a popular name in China was the “Garden of Gardens”. This name was first mentioned in French missionary Jean Denis Attiret’s letter in 18th century.


³ Qing Dynasty (1644 – 1912) founded by Manchu people, is the last feudal imperial dynasty of China. Historically, the Qing became highly integrated with “Han Chinese”, synthesized various cultures over the course of its reign. Manchu language is the first language for nobility in Qing dynasty.
The Youth of Giuseppe Castiglione:

Three hundred years ago, Castiglione left his native land (Milano, Italia), sailed to China. Michèle Pirazzoli-t’Serstevens, the famous expert, participated in the program “Mission Palais d’été”, researched on Giuseppe Castiglione and Western Mansions inside Yuan-ming Yuan for decades. In her monograph Giuseppe Castiglione: 1688-1766, Peintre et architecte à la cour de Chine, she narrated several significant events in the early life of Giuseppe Castiglione.

- Giuseppe Castiglione born in Milano, on 19 July 1688.
- At the age of nineteen (1707), Castiglione joined the Society of Jesus (Compagnia di Gesù).
- In his adolescence, he studied in Milano and practiced his painting, probably in the workshop of Filippo Abbiati (1640-1715)\(^4\).
- In 1709, Giuseppe Castiglione accepted the mission and went to China. He stayed in Portugal for some time. After that, he continued his journey and arrived Macau (south part of China) in 1715, accompanied with another Italian Jesuit Giuseppe da Costa\(^5\) (1679-1747). In December of the same year, Castiglione arrived Beijing. At that time, Castiglione did not know that one day in future, he would become a great man, who make the Chinese architectural history.


Giuseppe da Costa (1679-1747) is an Italian Jesuit came to China, accompanied with Giuseppe Castiglione. Giuseppe da Costa was a physician and worked in Beijing for thirty-two years.
The following analysis about Giuseppe Castiglione’s works base on my research of archives records in the National Palace Museum (Beijing), and in the China History Archives No.1, classifying according to the chronology.

**Eminent: the Genius Painter in Chinese Court**  
(Giuseppe Castiglione and Kangxi emperor)

According to the archives in the National Palace Museum (Beijing), around 1715, all of the Court Painters worked together in the Royal Painting Institution, which located inside the Forbidden City (the Imperial Palace, Beijing).

When Castiglione met the emperor Kangxi, he submitted two paintings to the aged emperor: one is *Pine, Hawk and Glossy Ganoderma: symbols of immortality in Chinese culture, (Songxianyingzhi tu 1724)*, another is *Numerous auspicious signs (Jurui tu 1723)*.

These two paintings represent Castiglione’s superb talent in painting – creative and unique – combines the Chinese traditional painting style with Italy painting skills together. In Chinese cognition of art, the traditional paintings should contain philosophy meanings, the poem, and the calligraphy – not to seek for a realistic image, but to arouse an intangible mood from soul.

Castiglione is the master who well versed in the underlying painting principles among China and Italy. Historically, Castiglione is the first painter who synthesized the Chinese painting style and Italy painting strategies in perfect harmony.

**Promote the Perspective Geometry in China**  
(Giuseppe Castiglione and Yongzheng emperor)

After Yongzheng emperor acceded to the throne, Yongzheng began to further the constructions of Yuanming Yuan in 1725: enlarged the area to the northwestern suburbs of Beijing.

According to the record in the Chinese History Archives No.1, Yongzheng invited Castiglione to participate the Chinese palaces construction. Castiglione presented his excellent talent in Quadratura paintings (also called trompe-l’œil) in many projects. Through these Quadrature paintings, Castiglione made a fixed optimal viewpoint for observing the illu-

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This is one of his early paintings in Chinese Court. From that time, Castiglione began to combine Chinese painting styles with Italy painting skills together. Today, this painting is kept in The Palace Museum, Beijing, inv. n°Gu 5357.

7  Giuseppe Castiglione, *Jurui tu (Numerous auspicious signs)* 1723, Vertical Scroll, Ink and Colors on Silk, H.173 cm; L. 86.1 cm, National Palace Museum, Taibei
sionist spatial continuity between palaces.

In China royal court, Giuseppe Castiglione is not only an outstanding painter, but also a respected scholar who promote the development of Geometry science in China.

Castiglione wrote the First Perspectival Monograph in China, *The Theories of Perspective (in Chinese: Shi Xue)*, which analyze the axiom of perspective geometry and clarify the skills of western paintings.

**The Chief Royal Consultant of European Art in Court**
(Giuseppe Castiglione and Qianlong emperor)

When young Emperor Qianlong was still a young prince, Castiglione had already been his best friend. Castiglione had painted a portrait for adolescent Qianlong and his father Emperor Yongzheng, which named *Spring and Peace Messages, (Pingan chunxin tu 1735)*. According to the archives record in the National Palace Museum (Beijing), Castiglione and Qianlong Emperor met almost everyday, discussed the paintings, poetries, and philosophies. Throughout Qianlong’s whole life, Castiglione is his most trusting friend, imperial painter, and the chief consultant for European affairs.

In the middle of the 18th century, Castiglione was the chief consultant of European art in China court. At the same time, China reached the economy peak of 18th century: the period of Emperor Qianlong’s reign is the most prosperous era in Qing dynasty. The golden age supported a strong economy foundation for the construction of Western Mansions in Yuanming Yuan.

Beurdeley (1971), in his monograph, commented that “Castiglione submitted to Qianlong designs of a fascinating kind of Baroque, reminiscent of the style of Borromini.” There is no doubt that Castiglione’s paintings and the West Mansions construction provide precious testimonies of the civilizations synthesis.

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8 Giuseppe Castiglione, *Pingan chunxin tu (Spring and Peace Messages)*, 1735, Vertical Scroll, Ink and Colors on Silk, H. 68.8 cm, L. 40.8 cm, The Palace Museum, Beijing, inv. n° Gu 5361.

Fig. 1
Giuseppe Castiglione
Tobias and the Archangel Raphael, 1707 - 1709,
oil on canvas,
H. 175 cm, L. 265cm,
saint hospice Martinez
(Istituto Pio Ricovero Martinez),
Genova, Italia.

Fig. 2
Giuseppe Castiglione
Moses at Rephidim,
1707 - 1709,
oil on canvas,
H. 190 cm, L. 266cm,
saint hospice Martinez
(Istituto Pio Ricovero Martinez),
Genova, Italia.

Fig. 3
Giuseppe Castiglione
Christ and
the Samaritan,
1707 - 1709,
oil on canvas,
H. 185 cm, L. 265cm,
saint hospice Martinez
(Istituto Pio Ricovero Martinez),
Genova, Italia.

Fig. 4
The letter of Giuseppe Castiglione, 1725.
At that time (1725), Castiglione was the Court Painter in the
Fig. 5
Giuseppe Castiglione,
Jurui tu (Numerous auspicious signs) 1723,
Vertical Scroll, Ink and Colors on Silk, H. 173 cm; L. 86.1 cm, National Palace Museum, Taipei.

Fig. 6
Giuseppe Castiglione, Songxianyingzhi tu
Fig. 8
Giuseppe Castiglione
Pingan chun xin tu (Spring and Peace Messages), 1735
vertical scroll, ink and colors on silk, H. 68.8 cm, L. 40.8 cm, The Palace Museum, Beijing, inv. n°Gu 5361

The Painting “Pingan chun xin tu (Fig. 8)” is the Portraits of Emperor Yongzheng and his son Prince Hongli (the future Emperor Qianlong).

The Calligraphy in this painting is the comment written by Emperor Qianlong, means “Shining (Giuseppe Castiglione)’s painting is so excellent that I see my teenager portrait.”

The signature of Giuseppe Castiglione as Court painter of China.
Fig 9
Giuseppe Castiglione, Portrait Equestrian of Emperor Qianlong, undated, 1739 or 1758,
Vertical Scroll, Ink and Colors on Silk, H. 322 cm; L. 232 cm,
The Palace Museum, Beijing, inv. n°Gu 8761

Fig 10
Giuseppe Castiglione,
Portrait of Emperor Qianlong, 1735 or 1736,
Vertical Scroll, Ink and Colors on Silk, H. 242 cm; L. 179 cm,
The Palace Museum, Beijing, inv. n°Gu 6464
1.2 A Comprehensive View of Western Mansions: the History Archives in Bibliothèque nationale de France

**Western Mansions**, known as European Palaces, *les palais europeens du Yuen-ming-yuen* (French), *Xiyang Lou* (Chinese pinyin), or *Western-Style Buildings*, located in the northern end of the Eternal Spring Garden (Changchun Yuan). There is no doubt that the Western Mansions are the most extraordinary garden project in Chinese architectural history.

The Western Mansions originated from an interesting historical event\(^{10}\): one day in 1747, Qianlong emperor saw a painting of a magnificent European fountain. Qianlong was fascinated by the western garden element, not only by the Baroque style, but also by the technique - the mechanical theory of spouting water.

The period of Emperor Qianlong’s reign is the most prosperous era in Qing dynasty. The young emperor told Giuseppe Castiglione that he wished to build such a fountain inside Yuanming Yuan. At that time, in court, French Father Benoit\(^ {11}\) was famous as a hydraulics engineer. Benoit studied the aqueduct and canal system of Yuanming Yuan (the canal system included two parts: first, the Yuquan River, originates from Yuquan Mountain; second, the Wanquan River, converged by twenty-eight natural springs in Wanquan town), helped Castiglione to design the first fountain. The initial team had formed, which began to make the history of the Western Mansions.

Castiglione and Benoit constructed the first fountain, which is now in front of the Palace of the Delights of Harmony (Xieqiqu). Since that time, Castiglione began to research Italy villa and Italy gardens. The splendid creation encouraged Qianlong emperor, evoked his eager to expand a series of constructions in the next few decades. For the next decades, Castiglione designed a series magnificent western palaces. The whole Western Mansions had been completed in 1773.

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See also Régine Thiriez, *Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces*, Gordon and Breach Publishers, 1998

East Meets West:

Historically, much of the architectural theories concerned with cultural exchanges can be traced back, ultimately, to Tang dynasty (618 AD – 907 AD). The “Silk Road” (in Italiano: Via della seta) which was the main pre-modern Eurasian trade route linking China and Europe, played an extraordinary role in commercial trades, technical communications and cultural exchanges between Asia and Europe. The “Silk Road” has a large influence on Chinese social cognitions of western culture.

In Yuan dynasty, the culture exchanges became more usual. “Under the Eurasian Empire created by Mongols, European culture, especially Christian influence, permeated into China along the Silk Road”12 (Wong, 2001).

Marco Polo (1254 – 1324), the famous Italian merchant traveler, came to China along the Silk Road in Yuan dynasty, written his adventures and elaborated the cultural exchanges in his book *Il Milione*13.

In Qing dynasty, around the 17th century, the Canton system, as the only one treaty port between countries, plays a critical role in the popularization of western-style commercial buildings and residential houses in China. The cultural exchanges promoted the development of garden art. For imperial gardens in Chinese history, beyond a doubt, the Western Mansions was the uniqueness, which combines Chinese classical gardens and Italy gardens (with Renaissance principles and with Baroque style) together.

The construction of Western Mansions is a great cooperation blending east and west. At the same epoch, the anglo-chinois (anglo-cinese) gardens developed in Europe. The 18th century European gardens are defined as an analogy of a technical laboratory (un laboratorio tecnico). As Régine Thiriez had said: “The romance of distance dominated the eighteen century.”14 In that process, Giuseppe Castiglione and many other Jesuit builders opened a new chapter of the synthesis of the civilizations. The European palaces are the precious spectacles of representation, which demonstrate the communication of ideas, the exchange of techniques, and the international cooperations.

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12 Refer to Young-Tsu Wong, A Paradise Lost: The Imperial Garden Yuanming Yuan, University of Hawai‘i Press, 2001, page 59


A Comprehensive View of Western Mansions from Bibliothèque nationale de France (Paris):

To get a comprehensive view of Western Mansions, we should cross the datum of two hundred years (c. 1780 - 1985). Here, Bibliothèque nationale de France (Paris) contains a large amount of antiques and historical archives for Western Mansions.

- Copperplates of the Twenty Views of the Western Mansions in Yuanming Yuan (1781 – 1786)

Today, these copperplates are kept in Bibliothèque nationale de France. For each Copperplate: 26 kilograms of red bronze, the size is 65 cm in height and 90cm in width.

By adopting a panoramic composition, the series of copperplates give a portrayal of ten European palaces and ten sceneries of courtyard. These copperplates are precious testimonies, which display the original grandeur of Western Mansions to us.

- The Monograph: Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces. (Author: Régine Thiriez)

As the most important Imperial garden, the whole Yuanming Yuan is scarce seen by other people except the most important members of royal family. Even the princes could not be admitted to travel around the whole garden without emperor’s permission. While for European missionaries, they could have a comprehensive view - in Jesuit Attiret’s letter (1743), Attiret mentioned that “Of all the Europeans that are here, none ever entered this Inclosure, except the Clock-makers and Painters, whose Employments make it necessary that they should be admitted every where…” 15

This book collects precious photos of Yuanming Yuan from 1873 to 1940, and contains a number of photographers’ descriptions about the real Western Mansions.

Today, this monograph could be read in the research library of Richelieu library (BnF.). It is one of the most important historical archives for Yuanming Yuan analysis.

- “Mission Palais d’été”: the Great International Academic Collaboration for Yuanming Yuan Research since 1982

In May 1983, French president Mitterrand visited China. The meeting opened the new

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15 The comments from Attiret refers to Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces, Gordon and Breach Publishers, 1998, page 35

chapter of the great international academic collaboration between China and France. The program “Mission Palais d’été”, promoted by China Ministry of Culture and French Ministry of Foreign Affairs, aims to further the Yuanming Yuan researches. French representative is Jacques Langer; Chinese representative is Vice Minister Zhou Weizhi. French experts and scholars were responsible for the mapping and restitution drawings of Western Mansions.16

A Comprehensive View of Western Mansions from China Experts’ Research:

- Archives of Western Mansions in China

  According to historical archives of Lei Family, No. 077-1, in China National Library, the ground plan of Western Mansions seemed as an alphabet “T”.

- Garden Plan and Terrain

  Yuanming Yuan located in Haidian District, the north part of Beijing. The garden is 7km far from Beijing city center. “HaiDian”, in Chinese language, means “plenty of springs”. Obviously, based on natural environment and resources, Giuseppe Castiglione designed diverse Italy fountains and pools for Western Mansions.

- Restitution drawings of the ground plan of the “Forty Scenes of Yuanming Yuan”

  - The Yuanming Yuan Society of China (founded in December 1st, 1984), aims to promote the preservation and research of the garden.

  - Guo Daiheng Studio in Beijing Urban Planning Design and Research Institute of Tsinghua University17. Guo Daiheng is the vice president of Yuanming Yuan Society of China and the professor of School of Architecture in Tsinghua University (Beijing).

  - Professor He Zhongyi: the mapping and restitution drawings of the ground plan of the “Forty Scenes of Yuanming Yuan”.

  - Tsinghua University: Digital Models and Visual Heritage Researches.

16 See Regine Thiriez, Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces, Gordon and Breach Publishers, 1998, page 139

Fig. 12  *The Labyrinth (Wanhuazhen Huayuan)*, 1747 – 1751, Copperplate Engraving 1781 – 1786, H. 60cm; L. 95cm, Bibliothèque nationale de France, Paris, inv. Oe 18a Pl.5

Fig. 13  *West façade of Aviary (Yangquelong Ximian)*, Copperplate Engraving 1781 – 1786, H. 60cm; L. 95cm, Bibliothèque nationale de France, Paris, inv. Oe 18a Pl.6

Fig. 14  *South façade of the Delights of Harmony Palace (Xieqiqu Nan-mian)*, 1747 – 1751, Copperplate Engraving 1781 – 1786, H. 60cm; L. 95cm, Bibliothèque nationale de France, Paris, inv. Oe 18a Pl.1

Fig. 17  *South façade of the Vast Ocean Palace (Yuanyingguan Zhengmian)*, Copperplate Engraving 1781 – 1786, H. 60cm; L. 95cm, Bibliothèque nationale de France, Paris, inv. Oe 18a Pl.14
Fig. 11 Plan of Western Mansions in Yuanming Yuan (Plan des Palais européens), Restitution on Paper, Antoine Durand 1985

Fig. 15 West façade of the Calm Sea Palace (Haiyantang Ximi-an), 1756 – 1759, Copperplate Engraving 1781 – 1786, H. 60cm; L. 95cm, Bibliothèque nationale de France, Paris, inv. Oe 18a Pl.10

Fig. 16 North façade of the Calm Sea Palace (Haiyantang Beimian), 1756 – 1759, Copperplate Engraving 1781 – 1786, H. 60cm; L. 95cm, Bibliothèque nationale de France, Paris, inv. Oe 18a Pl.11

Fig. 18 Painting of the Perspective on the East Bank of Lake (Hudong Xianfahua), Copperplate Engraving 1781 – 1786, H. 60cm; L. 95cm, Bibliothèque nationale de France, Paris, inv. Oe 18a Pl.20
Fig. 19  Xieqiqu, the Delight of Harmony Palace, south across the lake, c. 1876, by A.T. Piry. Albumen print, Source: Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces.

Fig. 20  Xieqiqu, east, c.1873, by E. Ohlmer from wet collodion glass negative. Source: Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces.

Fig. 21  Xieqiqu, north c. 1875, ano. Albumen print. Source: Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces.

Fig. 22  The Model of Xieqiqu (the North façade of the Delight of Harmony Palace) and the Labyrinth. Model Source: The Yuanming Yuan Society of China, Yuanming Yuan Exhibition, Beijing. Photo by Jiang Qingyu (2013).
The Photo of Belvedere (1873)

Fig. 23 Belvedere c. 1873 by E. Ohlmer. From wet collodion glass negative. The damage to the emulsion apparent on the left lower corner is old. Source: Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces.

Fig. 24 The Model of Belvedere (North façade of Belvedere) and the North façade of the Bamboo gazebos. Model Source: The Yuanming Yuan Society of China, Yuanming Yuan Exhibition, Beijing. Photo by Jiang Qingyu (2013).

The Photo of the Calm Sea Palace (1873)

Fig. 25 Haiyantang, west, c. 1873 by E. Ohlmer. From wet collodion glass negative. Source: Barbarian Lens: Western Photographers of the Qianlong Emperor’s European Palaces.

Fig. 26 The Model of Haiyantang (the Calm Sea Palace) Model Source: The Yuanming Yuan Society of China, Yuanming Yuan Exhibition, Beijing. Photo by Jiang Qingyu (2013).
Fig. 27  Yuanyingguan, the Vast Ocean Palace.
Source: Photos by Michèle Pirazzoli-t’Serstevens.

Fig. 28  Yuanyingguan, the Vast Ocean Palace.
Photo by Jiang Qingyu (2013).

Fig. 29  Yuanyingguan, Restitution on Paper,

Fig. 30  Yuanyingguan, south, apparel and ground map.
Reconstruction, lead on paper by A. Durand, 1985.
Italy Style:

Formalist Criticism

Beurdeley (1971), in his monograph, stated the historical research that “Castiglione submitted to Qianlong designs of a fascinating kind of Baroque, reminiscent of the style of Borromini.”

Michèle Pirazzoli-t’Serstevens, in book *Giuseppe Castiglione: 1688-1766, Peintre et architecte à la cour de Chine*, commented that most palaces and elements in Western Mansions reflected Italy style.

One of the most important monographs in Chinese academy field is Jin Yufeng’s book “Yuanming Yuan Lou Pinxi (1984)” (A critical analysis of the European section in the Yuanming Yuan). Through this monograph, Jin summarized that the Western Mansions contains Italy renaissance principles, Italy baroque ornaments, and a little Chinese elements, such as colorful *Liuli tiles*¹⁹, *Taihu rocks*²⁰, and bamboo pavilions.

Young-Tsu Wong, the famous expert for Yuanming Yuan, through analyzing the Western Mansions, highlighted that the Western Mansions not only contains Italy Baroque palaces, but also applies Italy principles to space arrangement system.

There is a consensus in academy field that the Italian Renaissance and Baroque style have large influences on Western Mansions. Many experts and scholars, through their archaeology analysis, architecture researches and historical surveys, confirm that the culture roots of Western Mansions derived from Italy.

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¹⁹ “Liuli”, in architecture, always refer to tiles of Chinese palaces. It is the main artificial material for Chinese palaces roof. The main component of Liuli is clay. After firing temperatures above 1100 degrees, coated with glaze to form colorful shape.

²⁰ “Taihu Rock” is a kind of natural rocks, comes from Taihu Lake (Taihu Lake is the third largest freshwater lake of China). Taihu Rock has three outstanding characteristics: transparency, wrinkles and skinny, is widely used in Chinese artificial hills.
1.3 Italy Villas Influences

The Italy villa is an infiltration of the Arts. In order to get a comprehensive understanding of Italy gardens, there are two ways to be delivered: the one historical, by analyzing the classical villas; the other logical, by studying the philosophy and the underlying principles.

1.3.1 The Rational Poetics

- Otium and Negotium: from Petrarca to Leonardo Bruni

“In the mid 14th century Francesco Petrarca (1304 – 1374, Petrarch in English) had revived the ancient idea that the contemplative life, the life of artistic and philosophical creativity, the life of otium, could only blossom in the quiet of the countryside. His experience of the noisy, turbulent life of Papal Avignon left only repugnance for the evils of the city existence. In the valley of Vaucluse he found a modest ‘villetta’ of three or four rooms with two gardens, one dedicated to Apollo, and the other to Bacchus. (Lettere familiari, XIII, 8)” (David R. Coffin, 1979).

Although Boccaccio, Petrarca’s friend and student, believed that the pastoral seclusion most pleasant for the poetry creation and monastic contemplation. Petrarca’s Florentine contemporaries, the famous humanists of 14th century, for instances, Salutati, Bruni, had little interest in hermit. In other words, the villa, contains various social meanings, presents different humanist elites’ different cognitions of cosmology.

The garden art is an universal poem, which people from different countries express the common humanity. In Chinese philosophy, Confucianism emphasizes a similar notion of negotium; while the Taoism chases for otium, scilicet, flee plagues and political instability. Historically, these two philosophies pervade Chinese traditional garden art.


22 Refer to David R. Coffin, The Villa in the Life of Renaissance Rome, Princeton University Press, 1979, page 10: “Leonardo Bruni writes in 1401 that he joined Coluccio Salutati and others one day to visit the villa of Roberto Rossi. After viewing the garden, they retired to the loggia where Salutati, inspired by the surroundings, expatiated on the grace and beauty of the buildings of Florence, and Bruni himself emphasized the same theme in his Laudatio Florentinae Urbis.”
See also H.Baron, From Petrarch to Leonardo Bruni, Chicago and London, 1968, page 238-243
The humanist-architect Leon Battista Alberti (1404 – 1472) in his more original dialogue on the family, *I primi tre libri della famiglia*, considers that the villa not only offers the peace for the life and the contemplation for the soul, but also forms a refuge to flee the tempest of the world.

In anthropology field, Italy villa and Chinese traditional garden are different in approach but equally satisfactory in human nature.

- **Arcadia as the Garden Ideal: Monastic Contemplation and Pastoral Seclusion**

  “Yesterday I came to the villa of Careggi, not to cultivate my fields but my soul. Come to us, Marsilio, as soon as possible. Bring with you our Plato’s book De Summo Bono. This, I suppose, you have already translated from the Greek language into Latin as you promised. I desire nothing so much as to know the best road to happiness. Farewell, and do not come without the Orphean Lyre.” (Cosimo de’Medici, 1462)

  The comment above is famous. In 1462, Cosimo de’Medici wrote to Marsilio, described the Careggi villa as a place for cultivating his soul. The villa culture are pervaded by the spirit of Arcadia. Classical literature and humanist poets promoted the development of humanism. One of the important literatures is *Hypnerotomachia Poliphili* (1499). Different from symbolic medieval representation of paradise, the Renaissance villas were inspired by poeties of rational ideals, endowed sensuous pleasure to tangible nature.

  Italy villas influences are the roots of the Western Mansions design. The ideal Italy classic garden is an infiltration arts, which combines monastic contemplation and pastoral seclusion, reflects *Vergilian* and *Ovidian* pastoral poetry. Furthermore, the numerology, the geometry, and the divine order pervade Italy villa design. The villa, presents a humanist elite’s cognition of cosmology. For the Western Mansions, with Renaissance principles and with Baroque styles, the characteristic of garden forms not only summed up the whole past, but also shared a historical statement of emulation, sublimation, and creation.

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See also D. R. Coffin, *The Villa in the Life of Renaissance Rome*, Princeton University Press, 1979, page 10: “a refuge to flee those uproars, those tumults, that tempest of the world, of the piazza, of the palace. “
Complex Composition Strategy: Orthogonal Axes and Bilateral Symmetry.

Geometric Module of Squares
Digital Model by Jiang Qingyu.
1.4 The Italy Principles Embodied in Western Mansions

1.4.1 The System of Arrangement: Axis, Bilateral Symmetry, and Geometric Module of Squares

There are three main strategies for the complex composition of Western Mansions: Orthogonal Axes, Bilateral Symmetry, and Geometric Grids of Squares.

- Orthogonal Axes of Western Mansions:

The axes of Western Mansions, superimposed onto the landscape of the whole garden. Based on these Orthogonal Axes, Giuseppe Castiglione design a series of magnificent sceneries.

a. Longitudinal Axes: Space Sequence from South to North

The Fountain – Palace of the Delights of Harmony (Xieqiqu) – Reservoir (Xushuilou) – Chinese bridge – labyrinth (Wanhuazhen) – Hill – Pavilion

b. Transverse Axes: Space Sequence from West to East

Reservoir (Xushuilou) – Aviary (Yangquelong) – Belvedere (Fangwaiguan) – Bamboo gazebos (Zhu ting) – Palace of the Calm Sea (Haiyantang) – The Vast Ocean Palace (Yuanyingguan) – The Great Fountain (Dashuifa) – Triumphal Arch – Hill of Perspective (Xianfa Shan) – Fang Pool (Fanghe) – Paintings of the Perspective

The east-west axis, which formally connects the Reservoir (Xushuilou) and the Paintings of the Perspective, is situated centrally and symmetrically within overlap.

- Bilateral Symmetry:

Through researching on the Composition Scheme of Western Mansions, the strategy of “Bilateral Symmetry” has been widely used in garden plan design by Giuseppe Castiglione.

For the definition of the term Symmetry, W. J. Mitchell gave an interpretation in his monograph *The Logic of Architecture* (1990): “The word Symmetry, which derives from Greek term Symmetria, but it has come, by a gradual process of differentiation of notions, to refers to a different kind of formal regularity from that connected to modules, ratios, dimensioning disciplines, and progressions.”

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Renaissance villas frequently suggested the formal properties of bilateral symmetry. The composition scheme of Western Mansions emphasized that every palace is situated in such a way: its architectural axis coincides with the correspondence axis of the garden (the longitudinal axis or the transverse axis). Most garden elements are arranged according to the mode of bilateral symmetry.

- **Rational Management for Spaces: Intangible Geometric System of Square Grids**

  Euclid, the “father of geometry”\(^ {25} \), established the research field of geometry in the history of mathematics. In architectural field, much of the theory concerned with the numerology and the geometry could be traced back to the Pythagoreans. C. Steenbergen and W. Reh\(^ {26} \), summarized that with the authority of Pythagorean, the Platonic, the neo-Platonic, and theologians, there was an explicit relationship between geometry and harmony concept of arts.

  Western Mansions embodied the harmonic ratios. The underlying geometric system of Western Mansions can be seen as a dimensional scheme. Based on the hypothetical geometric system of square (module), the arrangement of magnificent palaces, the spaces sequence inside the garden, and the surrounding landscape outside the garden, are controlled mathematically.

  The design grammar of Giuseppe Castiglione is a geometric interpretation of integrazione scenica of the garden. The plan of Western Mansions conforms to square grids, which functions as a margin and appears to occur regularly.

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26 Clemens Steenbergen and Wouter Reh, *Architecture and Landscape – The Design Experiment of the Great European Gardens and Landscapes*, THOTH Publishers, Netherlands, 2003, page 23: “Divine numbers (such as 3, 4, 7, 12, 40), divine proportions (golden section) and divine forms (the equilateral triangle, the square, the circle) were partly derived from Holy Scripture as a secret canon, preserved by the guilds and used by the masters in works of art.”
1.4.2 The System of Perspective

Around 1729, Giuseppe Castiglione had wrote the First Perspectival Monograph in China, *The Theories of Perspective (in Chinese: Shi Xue)*, which analyze the axiom of perspective geometry and clarify the skills of western paintings.

The perspective not only had large influences on the history of painting, but also played a critical role in the history of geometry. In the book *The Projective Cast – Architecture and Its Three Geometries*\(^{27}\), Robin Evens proposed that “Perspective did what theology aspired to, and what painting and architecture simulated.”

Significant theories who researched on rationalizing subjective observation by perspective experiments: “Alberti (Trattato della pittura, 1435), Jean Pélerin (De artificiali perspectiva, 1505), Albrecht Dürer (Unterweysung der Messung, 1525). Leonardo da Vinci (1452 – 1519) experimented with it in his paintings and constructed practical perspective into a method known as ‘costruzione legittima.’”\(^{28}\)

Giuseppe Castiglione’s strategy for space arrangement of West Mansions is to form a series of spectacular perspectival scenes. That is to say, through making geometric spaces sequence, Castiglione fixed an optimal viewpoint for visitors. In the visual perceptual field, an array of such sceneries falling on visitors’ retinal constitutes various sensations.

1.4.2.1 Quadratura Painting (also called trompe-l’œil)

Before the construction of Western Mansions, Giuseppe Castiglione had completed several quadratura paintings (trompe-l’œil) in Juanqizhai (Juanqi hall) for the emperor. In the middle of the hall, there is a Chinese pavilion used as the stage of traditional Chinese theatre. By adjusting these quadratura paintings, Juanqi hall had a fixed optimal viewpoint for observing this illusionist spatial continuity between the stage (the pavilion), the actors, the musicians, the audiences, and the painted pictures (natural sceneries). In summary, through these quadratura paintings, Giuseppe Castiglione made a fantastic perspective relationship between the stage props and the painted decors. Today, we can appreciate Castiglione’s paintings in the National Palace Museum (Beijing).


1.4.2.2 Viewpoints, Horizons, and the Panorama:  

**Chinese Gardens outside Western Mansions as a Landscape Theatre**  
At the top of each palace, visitors could appreciate the magnificent panorama – the surrounding Chinese tradition gardens of Yuanming Yuan. Giuseppe Castiglione synthesized the whole Yuanming Yuan sceneries into Western Mansions: made the Chinese traditional gardens around Western Mansions as a landscape theatre.

**There are several views from the Delights of Harmony Palace (Xieqiqu):**  
The location of the Delights of Harmony Palace adjoins the Chinese gardens. The two wings of the palace unite the views over the Garden of Eternal Spring (Changchun Yuan) and over the northern sceneries of Western Mansion.  
At the top of the palace, visitors can achieve a fantastic visual sensation. The windows opens out, almost as if by surprise, to the panorama of the Garden of Eternal Spring, direct the view to infinity.

**The view from the top of the Clam Sea Palace (Haiyan tang):**  
The Calm Sea Palace stands on the east-west oriented main axis, is the most magnificent building of Western Mansions. The view from the top of the Clam Sea Palace makes the panorama of the Garden of Eternal Spring as a landscape theatre.

**The view from the Vast Ocean Palace (Yuanying guan):**  
The Vast Ocean Palace is situated in such a way that its architectural axis coincides with the north-south axis of the whole Garden of Eternal Spring (Changchun yuan). The visitor could appreciate the splendid panorama.
Fig. 34  The analysis of viewpoints:
A. Xieqiqu, the Delight of Harmony Palace
B. Haiyantang, the Calm Sea Palace
C. Yuanyingguan, the Vast Ocean Palace
Drawing by Jiang Qingyu.

Fig. 35
The Panorama from the viewpoints of Xieqiqu (the Delight of Harmony Palace)
Model Source: The Yuanming Yuan Society of China, Yuanming Yuan Exhibition, Beijing.
Photo by Jiang Qingyu (2013)
1.4.3 Rhythm and Proportion: Space Sequence inside the Western Mansions

Castiglione researched the principles of classical Italy villas, designed the Western Mansions in rhythmic and well-proportioned mode.


There is no doubt that most palaces inside Western Mansions emphasize the principle of rhythm. Take the Palace of the Delights of Harmony (Xieqiqu) as an example: Castiglione designed the façade with an array of columns and pilasters, as a symphony, not only illustrates harmonic ratios and bilateral symmetry (with two symmetrical logia surrounding), but also displays marvelous Baroque decorative details and asymmetry of fantastic shadows.

From a macro point of view, the notion *integrazione scenica*, plays a very important role in the arrangement system of Western Mansions. The well-proportioned space sequence, which is controlled mathematically by Castiglione, includes two advantages: firstly, maintains the harmonic dimension for each small garden; secondly, forms an integrated composition of several magnificent sceneries, in order to fix the optimal visual sensation for visitors.

The Italy space sequence above reflects the rational poetics of Renaissance gardens. For Western Mansions, Castiglione not only followed the tradition, but also created new ideas as a pioneer. By retracing the steps of the emperors, we could find out that Castiglione designed the Western Mansions as an art of perspective within the rational continuum of space. The central avenue forms the central transverse axis. Winding footpaths, such as the trod in front of the Clam Sea Palace (Haiyan tang), although parted from the main east-west axis, still weaving in and out of correspondence with it.

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The Transverse Space Sequence:

Various elements are united to a great space sequence by the central transverse avenue, which on one side connects the Fountain Plaza to the east bank of Fang Pool (reflecting pool); on the other hand, the Clam Sea Palace (Haiyan tang), on the middle of the avenue, directs the view to infinity.

Flanked by cypresses and pines, the visitor proceeded through the central avenue from the Aviary (Yangque long) to the Clam Sea Palace (Haiyan tang). Due to the manipulation of visual impressions and the enforced detour in its approach, the Clam Sea Palace (Haiyan tang), which when seen from the lowest level appeared to be a comprehensible axial scheme. Combined with the sceneries such as the Fountain Plaza, the Aviary (Yangque long), the Belvedere and the Bamboo Pavilion, the visual impression of Clam Sea Palace is gradually revealed as a magnificent and mysterious complex.
1.4.4 Italy Classical Garden Elements Embodied in Western Mansions

Labyrinth:

The labyrinth is a western conception. One of the earliest mazes could be traced back to Egypt, near the lake Moeris. Labyrinth emerged as garden elements in the second half of fifteenth century, while became a regular ornament in Italy Renaissance villas. During the sixteenth and seventeenth centuries, labyrinth becomes popular in European garden design.

“Alberti, nel De re aedificatoria, non discorre di labirinti: il giardino ch’egli teorizza – composto da “cerchi, semicerchi e altre figure geometriche” – resta fissato da una rigorosa ratio che non ammette trasgressioni o stravaganze di sorta. Per primo Filarete, nel suo Trattato di architettura, propone la figura di un grande labirinto a protezione del parco del re Zogalia. Più avanti nel tempo, Sebastiano Serlio, nel Quarto libro (Venezia 1537), inserisce, fra alcuni modelli di giardino, due schemi a labirinto.” 30 (Paolo Carpeggiani)

The labyrinth inside the Western Mansions locates in the middle of the north-south axis symmetrically. In the middle of the labyrinth inside Western Mansions, there is an octagonal kiosk with one eclectic style dome and two circular stairs. Different from plant structure maze, it was made of bricks and surrounded by pines. Michèle Pirazzoli-t’Serstevens31 (2007) speculated that one reason is the difficulty of maintaining. A labyrinth without European plant specialists prompted the Italian Jesuits to choose bricks as the main material for the final design.

The Ceremony of Entry:

The original approach to enter the Western Mansions is from the Southern entrance, from the south gate leading to the Delights of Harmony Palace (Xieqiqu). The Palace is a rectangular building with two wings projecting to the front. These two wings were designed as a ceremony of entry for the whole garden.


31 Michèle Pirazzoli-t’Serstevens (2007), Giuseppe Castiglione: 1688-1766, Peintre et architecte à la cour de Chine, wrote “La présence d’un labyrinthe dans un ensemble concu par un jésuite italien n’arien d’étonnant, tant il est vrai qu’il s’agit d’une composante obligée du jardin occidental du XVI au XVIII siècle... il s’agit d’une construction en brique et non d’une structure végétale. On peut penser que la difficulté d’entretenir, à Pékin, un labyrinthe végétal sans les services d’un spécialiste européen incita les jésuites à construire le Huayuan dès l’origine en dur ou à refaire en brique un labyrinthe d’abord concu en arbustes taillés.”
The Geometric Clipped Topiary Garden:

“In Italy… the topiary garden is an extraction from nature. The secrets and patterns of nature are revealed in this geometric garden and controlled by imitation.” (C. Steenbergen, W. Reh, 2010)

In Western Mansions, especially the plants around the Clam Sea Palace (Haiyan tang), trees and hedges are transformed into spheres, cones and status. Cypresses and pines are arranged rhythmically surrounding by willows and bamboo.

In Western Mansions, the arrangement of the 18th century Geometric Clipped Topiary echoes the modern Gestalt psychologists’ theories. From Gestalt psychologists’ point of view, people’s perceptions of spatio-temporality base on the physical stimuli, which are transduced from perceptual receptor system. Gestalt psychologists also formulated various “Gestalt laws” to clarify the figure perception mechanism such as “Proximity” and “Similarity”. Giuseppe Castiglione not only designed the clipped topiary into similar geometric shapes, but also grouped these similar shapes into a matrix of composition. Through that process, Castiglione endowed the topiary garden with formal properties, such as proportion and symmetry.

Fountains:

A series of fantastic fountains make the Western Mansions as a paradise garden. Take the fountain in front of the Clam Sea Palace (Haiyan tang) as an example, the splendid fountain gives rise to a palatial impression. A large fountain located in center of the pool, surrounded by one Chinese-style water clock and twelve Chinese zodiac animals. The Chinese zodiac animals spouted water sequentially, symbolized the twenty-four hours of the whole day. Western zodiacal symbols and Chinese zodiac animals are different in approach but similar in calendar methods.

Another great fountain, which is in front of the south façade of the Vast Ocean Palace, named the Great Fountain (Dashuifa). A Baroque arch located in the southern part of the palace, in front of the great fountain. The baroque fountain is the aesthetic peak of art. In the middle of the pool, Giuseppe Castiglione designed a series of sculptures: a running deer with ten hounds chasing behind. Facing the fountain, there was the imperial throne for emperor Qianlong, from which the emperor could have the best viewpoint to appreciate the scenes.

Reflecting Pool:

In the east part of Western Mansion, Giuseppe Castiglione designed the Fang Pool. As an important element, the reflecting pool has been widely used in Italy classical garden designs. The remains of gigantic Villa Hadriana (built between 118 and 138 AD) have two elegant reflecting pools, which inspire many Renaissance architects. In many other famous villas, such as Villa Gamberaia, Villa D’Este, etc., the pool not only mirrors nature, but also presents its images to people.

The Fang pool, mirrored the surrounding and extended to the Painting of the Perspective on the east bank; while the Hill of Perspective located in the west bank. In summary, Castiglione applied the perspective geometry into space arrangement system: made the reflecting pool as a medium, linking a series of spaces and presenting the magnificent perspectival sceneries.
Chapter 2:
Chinese Principles Embodied in Traditional Gardens of Yuanming Yuan
2.1 Yangshi Lei Family: Architect Family for Chinese Court (*Qing dynasty*)

Lei Family, the Imperial architects of Qing dynasty, was responsible for traditional Chinese gardens design of Yuanming Yuan. Generally, people call Lei Family as Yangshi Lei (in English means ‘Model Masters, Lei Family’).

For several generations, as royal architects, the Lei Family obtained an art studio inside Yuanming Yuan. They executed the new construction programs, repaired the weathering timber structures, and maintained the previous projects. The Lei family have the dexterous ability to make colorful classical edifice models by various materials, such as stone, timber, and paper. Today, hundreds of Lei’s models are exhibited in the National Palace Museum (Beijing), displaying architects’ sophisticated craftsmanship, presenting the magnificence of Yuanming Yuan.

In order to get a comprehensive understanding of the garden arts of Lei Family, we should trace back to a significant canon, *Yuan Ye* (*The Craft of Gardens*)\(^1\), wrote by Ji Cheng in seventeenth century. This book is one of the most important monographs for summarizing the principles of Chinese garden art. Ji Cheng made the typology work for Chinese traditional architecture forms. His research based on the edifice functions and on garden elements organizations. For the English edition of Yuan ye, we could refer to the edition translated by Alison Hardie, *The Craft of Gardens (1988)*, Yale University press.

Yangshi Lei Family had drew much of their aesthetic theory from *Yuan Ye*, so it is not surprising to find that they applied all the architectural forms of *Yuan Ye* to the design of Yuanming Yuan. Their designs rooted in Chinese culture, reflected the syncretic relationship among Confucianism, Taoism, and Buddhism.

The Graph drawn by Jiang Qingyu

The data refers to Guo Daiheng, Heyan, *Yuanming Yuan Memory: Archives of Yangshi Lei*, Zhejiang Guji Press, 2010
2.2 The album “Forty Scenes of Yuanming Yuan”: A Comprehensive View from Bibliothèque nationale de France

Today, the album is kept in the “département des Estampes et de la Photographie de la Bibliothèque nationale de France (Site Richelieu-Louvois).”

The album “Forty Scenes of Yuanming Yuan” was completed in 1744. The album is a high mark for the art of Yuanming Yuan.

Two court painters, Shen Yuan and Tang Dai undertook the paintings. Qianlong Emperor selected forty best sceneries by himself, named each of them with a poetic title. The album not only includes the paintings, but also the poems. Every page with calligraphy and inscription (describing the fascinating garden) on the facing side, wrote by a famous calligrapher, Wang Youdun. The album has eighty pages. The size of each page is 62.3 cm in height and width. In Chinese cognition of artistic, the traditional paintings should combine the philosophy, the poem, and the calligraphy together. The album is an infiltration of arts – not to seek for a realistic image, but to arouse an intangible mood from soul.

- Georges Louis Le Rouge (c. 1707 – c. 1790):

  Cartography for Yuanming Yuan and Anglo-chinois Gardens

  As an outstanding cartographer and a geographical engineer of King Louis XV², Georges Louis Le Rouge had completed the Copy Paintings of “Forty Scenes of Yuanming Yuan” (Pen and Ink on Paper) around 1786.

  From 1774 to 1789, Georges Louis Le Rouge, published a series of books: Détail De Nouveaux Jardins À La Mode: Les Jardins Anglo Chinois. His atlases analyzed the magnificent Yuanming Yuan and Chinese traditional gardens, investigated the universe cognitions inside the anglo-chinois (anglo-cinese) gardens, and summarized the typology of the forms of anglo-chinois gardens in Europe.

² Bernard Korzus, in thesis Georges Louis Le Rouge: un cartographe franco-allemand du XVIII siècle, gave the analysis of the whole life of Le Rouge’s. Korzus highlighted that Le Rouge’s social intercourse straddled France and Germany.

- Monographs: Yuanming Yuan Study and Anglo-chinois Gardens in Europe


Elisabetta Cereghini, in her scientific thesis *Les Jardins anglo-chinois à la mode, un recueil à l'image des nouveaux jardins du XVIII siècle* (2004), wrote that “Les sources disponibles à l'époque sur les jardins d'Orient sont fondamentales à l'enquête et, en premier lieu, la lettre du père Attiretécrite en 1743.”

The comment above clarifies the prelude of anglo-chinois garden history. In 1743, P.Jean-Denis Attiret (1702 - 1768), wrote a letter to his friend M. D’Assaut, described the grandeur scenes of Yuanming Yuan. Cereghini investigated the letter, noted that Yuanming Yuan plays a crucial role in anglo-chinois garden creation of 18th century Europe.

“L'auteur (P.Jean-Denis Attiret) commence sa description du palais de l'empereur à Pékin… le jésuite introduit la distinction substantielle entre les jardins réguliers et irréguliers ou naturels: les premiers, les réguliers, ont eu de l'influence sur la création des nouveaux jardins chinois en France et les seconds, les irréguliers, constituent le modèle pour la création des jardins anglo-chinois.”

The predicate irregular (irréguliers) in Cereghini’s comments gives rise to the formalist criticism – criticism that concerns Chinese gardens primarily with the abstract formal regularities and with the composition strategies. The Chinese perception of traditional garden space privileges the *intangible* over the *tangible*. The underlying principle for space arrangement of Yuanming Yuan is the axiom of modularity.

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3 French missionary Jean Denis Attiret (1702-1768), worked with Giuseppe Castiglione, participated the whole Yuanming Yuan construction.

2.3 Chinese Philosophy and Cosmology: Roots of Yuanming Yuan Art

The Spatio-temporality of Chinese traditional garden origins from the perception of nature, and develops with the infiltration of traditional arts.

Chinese cosmology roots in the canon *I Ching (The Book of Change)*, from which Confucianism and Taoism derived splendid philosophy inspirations. The core values of *I Ching* are the dialectical bi-polar and the derivation process, which are derived from the territorial influences as well as the sociological significance. Therefore, as a brilliant synthesis of art, the Chinese traditional garden has been designed as a miniature cosmos to evoke contemplation – “to create spaciousness and flexibility senses within a limited area” (Chen Congzhou, 1985), and to achieve a harmony between man and nature.

2.3.1 Nature: the Roots of Chinese Perception of Spatio-temporality

“Chinese gardens, with their buildings, landscaping and different kinds of flowers and trees, are integrated works of art, lyrical and picturesque. The overall appearance, though man-made, appears to be formed by nature.”5 (Chen Congzhou, 1985)

**The Initial Nature Worship:** The ancient Chinese were fascinated by the magnificent nature and territory. They drew lots of philosophy and aesthetic theories from the nature. Mountains and rivers were perceived as livings entities and permanence symbols. The Chinese spatial schema of ritual and ceremonious buildings comes from the initial nature worship. The Chinese garden art, originates from naturism, demonstrates the enlightenment of the spatial orientation cognitions. Because of the influence of traditional philosophies, a sense of underlying harmony pervades Chinese garden design.

**The Geography of China:** China is a typically continental country with large amount of mountains and highlands. Hills and highlands cover approximately sixty-six percent of the nation’s territory, while the basins and plains cover circa thirty-three percent of the territory.

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5 Chen Congzhou (1918 – 2000), the professor in Tongji University (China), the consultant and the friend of I.M.Pei since 1985. He is one of the most famous experts for traditional garden research of China. Chen Congzhou, *On Chinese Gardens*, (English & Chinese), Tongji University Press, 1985, page1

6 For the further reading about Chinese nature worship, we could refer to Tuan Yifu, *Passing Strange and Wonderful: Aesthetics, Nature and Culture*, Kodansha International, 1993, page 128:

“Reciprocity was the central moral-aesthetic principle at work: Mountains, rivers, forests and other natural features were all considered to be the local embodiments of cosmic energy, in which sprits and deities dwelt; they bestowed benefits, such as good harvests, upon people and, in return, excepted respect and sacrificial offerings.”
Aqueduct and Canal of Yuanming Yuan: Generally, the water resources of Yuanming Yuan include two parts: First, the Yuquan River, originates from Yuquan Mountain; Second, the Wanquan River, converged by twenty-eight natural springs in Wanquan town.

2.3.2  I Ching (The Book of Changes): the Dialectical Bi-polar and the Derivation Process

I Ching has great influences on Confucianism, Taoism, Mencius, and many other philosophies of China.

Introduction of I Ching: The basic diagram of I Ching is the Supreme Ultimate Symbol. The Supreme Ultimate Symbol expresses two core values: one is bi-polar relationship; the other is derivation process (according to certain reasonable principles and rules).

“In premodern times, Chinese scientists used I Ching-derived symbolism, numerology, and mathematics to explain a wide range of natural processes and phenomena in the fields of knowledge that we now call physics, astronomy, chemistry, biology, medicine, meteorology, and geology. And even today many devotees of the Changes see in the mathematical symbolism of the document the seeds of modern scientific theories of DNA. In short, to understand much of Chinese history and culture, we need to understand the Changes.”7

---- Richard J. Smith, The I Ching: A Biography

The Spatio-temporality of Chinese traditional garden drew much of philosophical theory from I Ching. The Chinese traditional garden has been designed as a miniature cosmos. Within a limited area, architects created kaleidoscopic spaces and spacious layout in order to evoke the poetic sentiment and contemplation. The garden art aims to achieve a harmony between man and nature.

2.4 Chinese Principles of Imperial Garden Embodied in Yuanming Yuan

2.4.1 The System of Spaces Arrangement: Tangible Axis and Imperial Codified Space Sequences

The arrangement of palaces in Yuanming Yuan has Tangible Axis and Codified Sequences. Just as western architecture embodied the harmonic ratios, which corresponds with the proportions of human body; the layout of China imperial gardens always match the constellation, geomancy, philosophy, and naturalism.

In Yuanming Yuan design, the Tangible Axis and the Intangible Space-logic form a complementary bi-polar balance. Yuanming Yuan not only contains the lyrical aesthetics from Chinese private gardens, but also emphasized the Imperial Hierarchy and Hegemony. Through researching archives of Yuanming Yuan from the National Library of China, we can get a comprehensive understanding about the codified sequences and underlying rules inside Yuanming Yuan.

The Plan View of Yuanming Yuan

National Library of China, Beijing, archive n°043-1

Drew by Yangshi Lei Family

Date: in the middle of Qianlong Emperor Year, circa 1766
Scale: 1:2000; Ink and Colors on Xuan paper, H.65.7 cm; L. 91.3 cm

By arranging a Macro-Grids for the whole ground plan, court architects Lei Family designed the Yuanming Yuan with a basic calculation and collation. The dimension of every Grid is 10 zhang multiplied by 10.4 zhang, which equals to 32 meters times 33.3 meters. In Qing dynasty, zhang is the Chinese traditional unit of measurement. In Yuanming Yuan design, Yangshi Lei Family use zhang as the basic unit to measure the garden. 1 zhang equals to 3.2 meters.

Obviously, most palaces are arranged according to Grids. For examples, the right line of No. 19 vertical grids is the North-south axis of Jiuzhou Qingyan; the right line of No.4 vertical grids is the North-south axis of Hongci Yonghu; the No.28 vertical grids correspond to the dimension of palaces in Zuoshi Linliu.

This Marco-Grids layout is one of the key strategies for complex arrangement in Qing dynasty. The Forbidden City, which was the previous political center before Yuanming Yuan construction, has the similar Marco-Grids plan arrangement.
The Plan View of Yuanming Yuan
National Library of China, Beijing, archive n°043-1
Drew by Yangshi Lei Family
Date: in the middle of Qianlong Emperor Year, circa 1766
Scale: 1:2000; Ink and Colors on Xuan paper, H.65.7 cm; L. 91.3 cm
Photo by Jiang Qingyu (2013)

Jiuzhou Qingyan (Nine Continents Clear and Calm): Emperor’s Private Residence
Hongci Yonghu (Vast Compassion and Eternal Blessing): Ancestral Shrine
Zuoshi Linliu (Sitting Rocks and the Winding Stream)
The three sceneries above are contained in “The Forty Scenes of Yuanming Yuan”.
2.4.2 The System of Combination: Axiom of Modularity

In order to analyze the underlying rules of space arrangement of Chinese traditional gardens, we should refer to Lothar Ledderose’s research first, to understand the logic of Chinese art. In Ledderose’s famous monograph Ten thousand things: module and mass production in Chinese art (2000), he provides a macrocosm classification scheme for describing Chinese art, scilicet, the modularity. Ledderose “begins with the modular system par excellence,” clarifies the Chinese modularity within the calligraphy, the ritual bronzes, the terracotta army (Qin dynasty), and the world’s first printing system, etc. He devises a hierarchy of five levels: the Element, the Module, the Unit, the Series, and the Mass.

Objectively, Ledderose’s research not only reflects the fundamental logic of Chinese arts, but also echoes the Chinese cosmology and philosophy. Chinese traditional modularity originates from the philosophy of *I Ching* (Classic of Changes). We know that the basic diagram of *I Ching* is the Supreme Ultimate Symbol. The Supreme Ultimate Symbol expresses two core values: one is bi-polar relationship; the other is derivation process (according to certain reasonable principles and rules). The former emphasizes the Relationship (complementary or contradictory); the later demands Recursive Application of Modularity (eg. the Hexagrams, the organic evolution, etc.).

In summary, axiom of modularity is the central strategy for Chinese art and for Chinese traditional architecture design system.

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Lothar Ledderose holds the chair of East Asian Art at the University of Heidelberg.
The Modularity System of Script
(Lothar Ledderose, 2000)

The Modularity Derivation of
I Ching (Classic of Changes)

The Supreme Ultimate Symbol

The Modularity System in Chinese
Traditional Architecture

Figure 37: Book of the Yellow Court (detail), Calligraphy by Wang Xizhi (303 - 361), Rubbing, Regular Script, Kaishu Calligraphy. Source: Ledderose, Ten thousand things: Module and Mass production in Chinese Art, page 10, page 21

Figure 38: The Supreme Ultimate Symbol and the Hexagrams

Figure 39: The modularity system of Chinese timber pagoda
Source: Ledderose, Ten thousand things: Module and Mass production in Chinese Art, page 129

Figure 40: The modularity system of courtyard,
Source: Ledderose, Ten thousand things: Module and Mass production in Chinese Art, page 113
The Axiom of Modularity in the Space Arrangement of Yuanming Yuan:

Typology Research

Refer to Ledderose’s theories and the Chinese philosophy we elaborated above, I clarify my research mechanism, scilicet, the modular system embodied in the physical typologies of Yuanming Yuan space forms.

- In Macrocosm, the space formation of Yuanming Yuan could be identified as:

  Element (palaces and sceneries) – Module (courtyards and complex) – Principles (bi-polar: bilateral symmetry, axes; derivation: repeat, multiplication, reduction, replacement, etc.) – Unit (small garden or buildings, classified according to functions and styles) – Series (Yuanming Yuan, the Garden of Eternal Spring, and the Garden of Blossoming Spring) – Whole

- While in Microcosm, in Subtypes and in Subsystems:

  Each subtype modular system, such as an individual garden among “Forty Scenes of Yuanming Yuan”, would also include the composition from element to whole. From macrocosm to microcosm, I would like to construct typical hierarchies of subsystems within subsystems, and provide a comprehensive classification scheme for the whole space forms. In Chapter III, I analyze the typology program in detail by experimenting the “Forty Scenes of Yuanming Yuan”.

In Summary, the Macrocosm system and the Microcosm subsystem could be clarified as:

- The Bottom-up Strategy for Arrangement Research:
  1. The composition scheme: classical vocabulary elements
  2. Correctly combined into high-level components

- The Top-down Strategy for Arrangement Research:
  1. The central axis; bilateral symmetry; Proportion and Grids: rational stage management
  2. The Axiom of Modularity in garden forms and in buildings combination
  3. Derivation: Metaphorical spaces and kaleidoscope forms

The top-down and bottom-up strategies are complementary.
2.4.3 Inspirations for Kaleidoscopic Spaces: Lyrical Literature

In Qing dynasty, the classical gardens always get aesthetic inspirations from the lyrical literature and the calligraphy. The Chinese garden design is a syncretic art, which includes the literature, the calligraphy, and the painting.

The literary work *Dream of the Red Chamber* (also known as *The Story of the Stone*), which is generally acknowledged as a masterpiece in Chinese literature history, describes the ascendancy and fall of an aristocratic family in Qing dynasty. A series of stories happened inside a magnificent garden - the *Grand View Garden*. In the chapter XVII, the author wrote a story: nobility family members make inscriptions on tablets for the kaleidoscopic sceneries inside the Grand View Garden. In the prelude of the chapter, the author remarked that if there is no inscriptions made for the pavilions, for the halls, and for the splendid scenes, even the beauty of hills and springs will fade.

There is no doubt that the lyrical literature have large influences on the design of Yuanming Yuan. In the album *Forty Scenes of Yuanming Yuan*, every landscape painting page has a calligraphy or an inscription on the facing side. Emperor Qianlong wrote lots of poems for the sceneries inside Yuanming Yuan. A famous one is composed for praising the lake around Green Lotus Gazebos:

“A lotus was carved out of stones, so beautiful
It strikes me, like a Chan Buddhist, a sudden enlightenment
The rock, it appears, has flown here from nowhere
I deserve to have it now
But it pleased me so immensely…”

The lyrical literature endows the garden art with romantic, evokes the metaphorical space in Yuanming Yuan design. Yuanming Yuan is a distinct masterpiece, brings together various Chinese aspects, such as poetry, history, paintings, music, etc.

---

9 “*Dream of the Red Chamber*” wrote by Cao Xueqin (1715 – 1763) in Qing dynasty, circa mid-eighteenth century, is one of China’s Four Great Classical Novels. There are lots of available translations, the standard English translation refers to *The Story of the Stone*, 5 vols., David Hawkes and J. Minford, trans. Bloomington, IN: Indiana University Press, 1987

10 See Qianlong’s poem with commentary in YMYJ, 1983
See also Young-Tsu Wong, *A Paradise Lost: the Imperial Garden Yuanming Yuan*, University of Hawai‘i Press, 2001, page 16
2.4.4 Typologies of Chinese Architecture Forms inside Yuanming Yuan

Garden Porche – Covered Walkway is the most important element for complex composition. The porches have two functions: “in-position viewing” and “in-motion viewing”, scilicet, “lingering observation from fixed angles, and moving observation from changing angles.” (Chen Congzhou, 1985) Garden porches connect different palaces, so that an optical journey inside Yuanming Yuan would not be terminated by rain or snow. The porches are the walkways with roof, and have been widely used inside Yuanming Yuan.

Another important element is Pavilion: In Chinese traditional gardens, the pacilion could be located in flexibly ways: on the top of the mountain, on the bottom of the ravine, beside spring and bamboo, or inside a forest. There are various geometric forms of pavilion plan. The function of pavilion is to appreciate the sceneries from the optimal viewpoint.

Belvederes are widely used in garden design. There are two basic functions: one is used to appreciate beautiful scenes alone; the other is used as a library for reading and for contemplation. In order to achieve the best panorama, a belvedere always has two floors. The windows always open to “picturesque” sceneries.

Studios are places used for study and drawing. Chinese emperors are fascinated by lyrical literatures and calligraphies. Royal artists of Qing dynasty, such as Yangshi Lei family and Castiglione, also had their own studio inside Yuanming Yuan for design and for painting.

The main edifice inside Yuanming Yuan is the great hall. Historically, the emperors are regarded as “the son of Heaven”. The divine number “nine” had been emphasized in the space arrangement of Yuanming Yuan. The complex of palaces always has the codified space sequence, which reflects the absolutism and the hegemony of emperor. Therefore, in the layout of great halls, in the arrangement of columns, this principles of numerology had been repeated frequently.
Digital Model of Western Mansions
- made by Jiang Qingyu
Chapter 3: Design Experiments for Yuanming Yuan Research:

- Digital Models
- Mathematical Calculations
- Typologies Diagrams
- Computer-aided Processing
I. Experiments of Western Mansions:  
Perspective System – View and Horizon of the Western Mansions

- Representative Samples for the Experiment:  
Copperplates of the Twenty Views of the Western Buildings of Yuanming Yuan, (1781 - 1786) 
Bibliothèque nationale de France, inv. Oe 18a Pl. 1 - 20, Paris

Restitution Drawings of Western Mansions come from “Mission Palais d’été”, 
Bibliothèque nationale de France (BnF).

- My Experiment Methodology:  
Strategies: Digital Models, Mathematical Calculations, and Perspectival System Diagrams

**Step 1: Make Scientific Three-dimensional Digital Models:**  
Data of the digital model of Western Mansions come from “Guo Daiheng 
Studio in Beijing Urban Planning Design and Research Institute of Tsinghua 
University”; For the details of garden design, refer to the Archives of 
Drawings and Models of Yangshi Lei Family, from China History Archives No.1.

**Step 2: Analyze Spaces Sequence: Graph of Relation Diagrams between eye height, 
the distance to the horizon and perceptible height behind the horizon:**  
The Mathematical calculation Formula for View Points and Horizon comes from 
TUDelft research; Data collection comes from Tsinghua University.

**Step 3: Analyze the Perspectival System: Composition Scheme**  
Transverse Space Sequence 
Longitudinal Space Sequence 
Make Axonometric Projection and research active composition elements.
Methodological Framework - Scientific research and Three-dimensional Models

I make a full-scale, three-dimensional digital model for Western Mansions. The data collection comes from Tsinghua University, Chinese History Archives No.1, and from Mission Palais d’été. The shapes of buildings and garden elements in the digital model are isometries of shapes in the construction world.

The representations depend on the specific purposes of the work, and normally are typical of the Scales:
- 1: 2000 – the volumetric definition for the garden elements in Western Mansions
- 1: 1000 – the volumes of buildings enriched with information of characteristic elements
- 1: 500 – the features of buildings and garden elements, such as the façade decoration, roof structures, and the number of floors, etc
**Copperplates of the Twenty Views of the Western Buildings of Yuanming Yuan, (1781 - 1786)**
Bibliothèque nationale de France, inv. Oe 18a Pl. 1 - 20, Paris

<table>
<thead>
<tr>
<th>Individual Palaces</th>
<th>Locations of Palaces</th>
<th>Twenty Copperplates (1781 - 1786) Archives, BnF</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Delight of Harmony Palace</td>
<td><img src="image" alt="South façade of the Delight of Harmony Palace" /></td>
<td>No.1 <em>South façade of the Delight of Harmony Palace,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 1</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="North façade of the Delight of Harmony Palace" /></td>
<td>No.2 <em>North façade of the Delight of Harmony Palace,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 2</td>
</tr>
<tr>
<td>The Reservoir</td>
<td><img src="image" alt="North façade of the Gateway to the Labyrinth" /></td>
<td>No.4 <em>North façade of the Gateway to the Labyrinth,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 4</td>
</tr>
<tr>
<td>The Labyrinth</td>
<td><img src="image" alt="The Labyrinth" /></td>
<td>No.5 <em>The Labyrinth,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 5</td>
</tr>
<tr>
<td>The Aviary</td>
<td><img src="image" alt="West façade of Aviary" /></td>
<td>No.6 <em>West façade of Aviary,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 6</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="East façade of Aviary" /></td>
<td>No.7 <em>East façade of Aviary,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 7</td>
</tr>
<tr>
<td>The Calm Sea Palace</td>
<td><img src="image" alt="West façade of the Calm Sea Palace" /></td>
<td>No.10 <em>West façade of the Calm Sea Palace,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 10</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="North façade of the Calm Sea Palace" /></td>
<td>No.11 <em>North façade of the Calm Sea Palace,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 11</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="East façade of the Calm Sea Palace" /></td>
<td>No.12 <em>East façade of the Calm Sea Palace,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 12</td>
</tr>
<tr>
<td></td>
<td><img src="image" alt="South façade of the Calm Sea Palace" /></td>
<td>No.13 <em>South façade of the Calm Sea Palace,</em> Bibliothèque nationale de France, inv. Oe 18a Pl. 13</td>
</tr>
</tbody>
</table>
Fig. 41:
The eight figures of this page:
*Copperplates of the Twenty Viewa of the Western Mansions*
Source:
Bibliothèque nationale de France
<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Bibliothèque nationale de France, inv. Oe 18a Pl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td><strong>South façade of the Belvedere</strong>,</td>
<td>8</td>
</tr>
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<td></td>
<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
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<tr>
<td>9</td>
<td><strong>North façade of the Bamboo gazebos</strong>,</td>
<td>9</td>
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<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
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<tr>
<td>14</td>
<td><strong>South façade of the Vast Ocean Palace</strong>,</td>
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<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
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<tr>
<td>15</td>
<td><strong>South façade of the Great Fountain</strong>,</td>
<td>15</td>
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<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
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<tr>
<td>16</td>
<td><strong>View of the Great Fountain</strong>,</td>
<td>16</td>
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<tr>
<td></td>
<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
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</tr>
<tr>
<td>17</td>
<td><strong>Gate West of the Hill of Perspective</strong>,</td>
<td>17</td>
</tr>
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<td></td>
<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
<td></td>
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<tr>
<td>18</td>
<td><strong>The Hill of Perspective</strong>,</td>
<td>18</td>
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<tr>
<td></td>
<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
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</tr>
<tr>
<td>19</td>
<td><strong>Gate East of the Hill of Perspective</strong>,</td>
<td>19</td>
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<tr>
<td></td>
<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td><strong>Perspective Paintings on the East Bank of Lake</strong></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><em>Bibliothèque nationale de France, inv. Oe 18a Pl.</em></td>
<td></td>
</tr>
</tbody>
</table>
Fig. 42
The six figures of this page:
*Copperplates of the Twenty Viewes of the Western Mansions*
Source:
Bibliothèque nationale de France
Experiments of Western Mansions

3.1.1 Three-dimensional Digital Models:
The Space Arrangement of the Western Mansions
Arrangement analysis graph - by Jiang Qingyu
Aqueduct, Canal System

The Transverse Axis and Longitudinal Axes

Walls and Gates: Distinctions within the Continuum of Space
Buildings Location

Garden Elements

Vegetation
- Labyrinth
- Plaza
- Fountain

Retrace the Steps of Emperors

- Avenue
- Footpath
- Labyrinth Path
Digital Models - from North to South:
The Pavilion
The Labyrinth (Wanhua Zheng)
Reservoir (Xushuilou)
Aviary (Yangquelong)
Belvedere (Fangwaiguan)
Bamboo gazebos (Zhu ting)

Figure 43:
The Pavilion in the middle of the Maze.
Photo by Jiang Qingyu (2013)
Figure 44:
Model - The Calm Sea Palace and the Vast Ocean Palace.
Digital Models:
- Palace of the Calm Sea (Haiyantang)
- The Vast Ocean Palace (Yuanyingguan)
- The Great Fountain (Dashuifa)
- Triumphal Arch

Digital Models - from West to East:
- Triumphal Arch
- The Hill of Perspective (Xianfashan)
- Gate East of the Hill of Perspective
- Painting of the Perspective on the East Bank of Lake
Experiments of Western Mansions

3.1.2 View Points and Horizon:
The Mathematical Calculation for Space Sequence
The Mathematical Calculation Formula from TUDelft research

\[ Z_n = L^*z_n \]
(with a scale of \( x \); where \( x = L/A \))

Table giving the factor by which \( L \) must be multiplied in order to calculate the length of the \( n \)th line segment \( (Z_n) \) for the given \( X \) \((X = L/A = \text{number of fields of equal perspectival depth})\)

The formula refer to Clemens Steenbergen and Wouter Reh (2003)

Mathematical Calculation Theory for Perspective Analysis:

In the following analysis graphs, I will apply the formula to the digital model, bring the data of the Western Mansions into the formula, calculate and research the south-north space sequence designed by Giuseppe Castiglione.
a : b : c : d = 1 : 1 : 1.5 : 1
Graph of relation between eye height, the distance to the horizon and perceptible height behind the horizon: (the Formula comes from TUDelft research, data collection comes from Tsinghua University and Mission Palais d'été)
The formula and the graph above aims to calculate the proportion between buildings. The formula is made by Jiang Qingyu.
Perspectival relationship in the size (and the visibility) of the Clam Sea Palace (Haiyan tang) with regard to the Fountain Towers, viewed along the axis.

A From the middle of the Great Fountain Plaza
B From the east part of the Great Fountain
C From the Triumphal Arch
D Normal projection in actual sizes of the Fountain Towers and the Clam Sea Palace.
Experiments of Western Mansions

3.1.3 The Western Mansions as a Landscape Theater
The Perspective System: Viewpoints, Horizons, and the Panorama
The Transverse and Longitudinal Axes
Complex Composition: Orthogonal Axes and Bilateral Symmetry

Geometric Module of Squares
Digital Model by Jiang Qingyu
Digital Models:
Palace of the Calm Sea (Haiyantang)
The Vast Ocean Palace (Yuanyingguan)
The Great Fountain (Dashuifa)
Triumphal Arch
Hill of Perspective (Xianfa Shan)

The photo of the Vast Ocean Palace (2013), by Jiang Qingyu
Garden as a Landscape Theater

A. The Palace of the Calm Sea

B. The Vast Ocean Palace

C. The Hill of Perspective
Digital Models:
Reservoir (Xushuilou)
Aviary (Yangquelong)
Belvedere (Fangwaiguan)
Bamboo gazebos (Zhu ting)
Palace of the Calm Sea (Haiyantang)
Giuseppe Castiglione combined the Pavilions and the Garden Porches into Western Mansions:

- The Function of Pavilions: Observe from Fixed Angles.
Scenography of the Transverse Axes: Space Sequence from East to West
In the top of the Hill of Perspective (Xianfa Shan):
Triumphal Arch – The Great Fountain (Dashuifa) – The Vast Ocean Palace (Yuanyingguan) – Palace of the Calm Sea (Haiyantang)
Scenography of the Transverse Axes: Space Sequence from West to East
In the top of the Hill of Perspective (Xianfa Shan):
– Gate East of Hill of Perspective – Fang Pool (Fanghe) – Paintings of the Perspective
Palace of the Calm Sea
The Vast Ocean Palace
The Triumphal Arch
The Panorama from the Hill of Perspective (Xianfa Shan)

C = the Hilltop
B = the third level
A. = the ground level
Paintings of the Perspective

Fang pool

Gate East of Hill of Perspective

The Panorama from the Hill of Perspective (Xianfa Shan)

Scenography of the Transverse Axes, from west to east

C = the Hilltop

B = the third level

A. = the ground level
The Vast Ocean Palace is situated in such a way that its architectural axis coincides with the north-south axis of the whole Garden of Eternal Spring (Changchun yuǎn) in which the palace is situated. The visitor could appreciate the splendid panorama - make the Chinese gardens as a landscape theatre.
Viewpoints, Horizons, and the Panorama:
Chinese Gardens outside Western Mansions as a Landscape Theatre
Figure 45:
The Panorama of Chinese Gardens as a Landscape Theatre: View from the Western Mansions
Model Source: The Yuanming Yuan Society of China, Yuanming Yuan Exhibition, Beijing.
Photo by Jiang Qingyu (2013)
Experiments for Chinese Gardens
“Forty Scenes of Yuanming Yuan”

The System of Combination: Axiom of Modularity
II. Experiments of Chinese Traditional Gardens
The System of Combination:
Axiom of Modularity in “Forty Scenes of Yuanming Yuan”

- Representative Samples for the Experiment:
The album “Forty Scenes of Yuanming Yuan” (1744), Bibliothèque nationale de France, Paris
The Forty Garden Plans of “Forty Scenes of Yuanming Yuan”, Restitution on Paper by Prof. He Zhongyi, Tsinghua University, Beijing.

Experiment Theories and Inspirations:
The logic of Typology and Modularity Derivation comes from Professor Marco Trisciuoglio, Scatola di Montaggio, L’architettura, gli Elementi della Composizione e le Ragioni Costruttive della Forma, Carocci editore, 2008

In monograph, Professor Trisciuoglio analyzes the fundamentals of volumetric composition, summarizes ten important principles of form logic:
"Accostare, Sovrapporre, Compattare, Moltiplicare, Semplificare, Complessificare, Compenetrare, Confrontare Incompatibili, Confrontare Dentro E Fuori, Giocare."\(^1\)


- My Experiment Methodology (from the Macroscopic System of Garden Form to the Subsystem of Buildings Arrangement):
The Macroscopic System of Garden Form: The Axiom of Modularity among Architecture, Mountains, and Aqueducts

**Step 1: Absolute Essences of the Chinese Traditional Garden Form:**
the Syncretic Relationship among Architecture, Mountains, and Aqueducts:

a. Waters Enclosing Hills and Buildings;
b. Hills Enclosing Waters and Buildings;
c. Parallel and Integrated System.

**Step 2: Recognition and Labeling Rules:**
Extraction of A Primal Sketch of the combination for every scene.

**Step 3: Derivation of Alternative Elements.**
Drawing A Tree Diagram depicting the derivation and structure of the Composition

---

\(^1\) Professor Marco Trisciuoglio, Scatola di Montaggio, L’architettura, gli Elementi della Composizione e le Ragioni Costruttive della Forma, Carocci editore, 2008, page 52 - 58.
Scheme Order of garden form.

- **Subsystem for Experiment:**
While in microcosm, each modular system such as a courtyard space itself would also
incorporates the development from element to whole, constructs hierarchies of subsystems
within subsystems, provides a comprehensive classification scheme for the whole garden:

**The Subsystem: Principles of Buildings Arrangement in “Forty Scenes of Yuanming
Yuan”**

**Step 1: Absolute Essences of the Chinese Traditional Buildings Arrangement:**
- **Point System:** Complex, Single Building
- **Line System:** Line of Garden Porches, Line of Buildings
- **Volumetric System (Enclosing System):** Four Orientations Enclosing, Three
  Orientations Enclosing, Compound Courtyards

**Step 2: Recognition and Labeling Rules:**
Extraction of A Primal Sketch of the building combination for every scene.

**Step 3: Derivation of Alternative Elements.**
Drawing A Tree Diagram depicting the derivation and structure of the Composition
Scheme Order of Spaces.
In order to specify the form in a scientific logic, we could parameterize all the elements by computer-aided "Processing".

Here, I would like to introduce the "Processing", a programming for visual designers and artists. Processing was invented by Casey Reas and Ben Fry in MIT. The programming based on JAVA language.

**Typology in Motion:**

The Processing has played a critical role in calculating the possibilities of types in motion. The space arrangement types could be generated by programming, and enumerated in the screen, according to the rules of modularity.

Take the ground plan types of courtyards inside Yuanming Yuan as an example, we could extend the possibilities of various complex combinations by programming.

The Processing provides us many significant functions, such as draw(), setup(), fill(), etc.

The basic logic of JAVA programming for typology in motion is:

![Diagram of the basic logic of JAVA programming for typology in motion]

The graph of computer logic combines theories from William J. Mitchell, research of Casey Reas and Ben Fry, and my analysis for Yuanming Yuan. Drew by Jiang Qingyu

ARRANGEMENT PRINCIPLES AMONG HILLS, WATERS, AND BUILDINGS: THE UNDERLYING RULES OF CHINESE GARDENS IN YUANMING YUAN

Garden Forms: Forty Scenes of Yuanming Yuan

- The “Forty Scenes of Yuanming Yuan”. 1744, 9th year, Qianlong Emperor, the size is 62.3 cm (24.5 inches) in height and width, kept in Bibliothèque nationale de France, Paris. Photo by Jiang Qingyu.

- The forty garden plans, Restitution on Paper, by Prof. He Zhongyi, Tsinghua University, Beijing.

- Research Tutor: Prof. Marco Trisciuoglio. Analysis Diagram and Experiments are designed by Jiang Qingyu.

Composition Systems

Elements

Composition Strategies

Strategies of Derivation

Approach Superimpose Compact Multiply Simplify

......

Forty Scenes of Yuanming Yuan Projects from No.1 to No.40

Derivation

Composition Systems

Elements

Composition Strategies

Forty Scenes of Yuanming Yuan Projects from No.1 to No.40

Derivation
SPACE ARRANGEMENT PRINCIPLES AMONG BUILDINGS: THE UNDERLYING RULES OF CHINESE GARDENS IN YUANMING YUAN

Forty Scenes of Yuanming Yuan

- Research Tutor: Prof. Marco Trisciuoglio
- Analysis Diagram and Experiments are designed by Jiang Qingyu

Composition Systems

Point Systems

Line Systems

Enclosing Systems

Complex

Single Building

Four Orientations
Enclosing - Porches

Four Orientations
Enclosing - Buildings

Compound Courtyards

Three Orientations
Enclosing - Porches

Double Systems

Fourteen Scenes of Yuanming Yuan Projects from No.1 to No.40

Derivation

Composition Strategies

Line Systems

Point Systems

Enclosing Systems

Forty Scenes of Yuanming Yuan

A. B. C. D. E. F. G. H.

No.9 No.13 No.20 No.8 No.15 No.12 No.4

No.21 No.32 No.26 No.36 No.25 No.18 No.17

No.35 No.33 No.20 No.16 No.28 No.11 No.34

No.38 No.39 No.30 No.19 No.27 No.14 No.31

No.40 No.29 E + H No.23 E + C No.10 B + C No.14 C + G
Analysis Diagram for “Forty Scenes of Yuanming Yuan”
The Macroscopic System of Garden Form: The Axiom of Modularity among Architecture, Mountains, and Aqueducts

The SubSystem within Macroscopic Garden Form System: Spaces Arrangement Principles among Buildings

- The "Forty Scenes of Yuanming Yuan". 1744, 9th year, Qianlong Emperor, the size is 62.3 cm (24.5 inches) in height and width, kept in Bibliothèque nationale de France, Paris. Photo by Jiang Qingyu.

- The forty garden plans, Resititution on Paper, by Prof. He Zhongyi, Tsinghua University, Beijing.
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Analysis Diagram and Experiments are designed by Jiang Qingyu.
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**Fish Leap and Birds Fly**

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Chapter 4:
Future Development of Yuanming Yuan
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4.1 Tourism: Visual Heritage Development

“Guo Daiheng Studio in Beijing Urban Planning Design and Research Institute of Tsinghua University” has promoted the contemporary researches of digital models and visual heritage for YuanmingYuan.

In 2008, China National Tourism Administration held the Tourism Projects Promotion Conference on Beijing (2008). Mr. Chen Ming Jie, the director of Yuanmingyuan management office, announced the finance policy for the visual program of Yuanming Yuan would increased dramatically in the next five years. The visual program named “rebuild the brilliance”.

My thesis researches the principles of Yuanming Yuan space arrangement. Through making the digital model of Western Mansions, I wish to present the geometric perspective strategies of Giuseppe Castiglione; by typology analysis of “Forty Scenes of Yuanming Yuan”, I research the underlying rules of modularity system inside Chinese garden form. Furthermore, I believe that computer-aided programming would play a critical role in typology in motion, give us a comprehensive view for the great garden, and promote the Yuanming Yuan study to a splendid future.

4.2 A Historical Reference for Gardens around the World

“Il giardino, forma superiore della creazione umana, nel corse del tempo e attraverso lo spazio ha sempre cercato di combinare armoniosamente le forme più sottili elaborate dalla natura, talvolta piegata dalla mano dell’uomo, e gli artefatti più raffinati.”

Monique Mosser e Georges Teyssot

L’architettura dei giardini d’Occidente – dal Rinascimento al Novecento

Yuanming Yuan is a legend, an immortal memory. What is the root of the garden art? Why the miracle fascinates hundreds and thousands of tourists around world? The grandeur palaces? Think about the great epic about the ascendancy and fall. The fascinating scenes? Yes, certainly, but more than these…
Eternal Friendship (L’amicizia)

Yuanming Yuan represents the Eternal Friendship between Italy and China. Historically, Italy is the window of the world, and has the greatest influence on China than any other European country. Much of the architectural theories concerned with cultural exchanges can be traced back, ultimately, to Tang Dynasty (618 AD – 907 AD), through the “Via della seta” (in English: Silk Road).

Hero (L’eroe)

“The Jesuit builders were themselves a synthesis of the civilizations of their native lands and of the one they had adopted.” (Régine Thiriez, 1998)

Giuseppe Castiglione is a great artist, a great architect, and a great politician. With his artistic talent and enthusiasm, and with the cooperation of many other European technology experts and missionaries, Castiglione completes the great garden and makes the history.

French Jesuit builders: Father Jean-Denis Attiret, Father Michel Benoit, Father Pierre Martial Cibot, they had dedicated their talent, enthusiasm, and knowledge to the great art.

Love and Peace (L’amore e la pace)

The soul of the miracle garden roots in the noble emotion of human beings, that is, love.

Yuanming Yuan is a story about “East meet West”, about mutual appreciations between various cultures, about collaboration, about trust and faith, about love.

The history of Yuaning Yuan emphasizes the peace for human beings. Although many parts of Yuanming Yuan had been destroyed in 20th century wars, it still has the unique status in Chinese garden history and in world academy field.

International Academic Collaboration (La collaborazione accademica)

Three hundred years ago, the garden originated from international collaboration between Italy, France, and China. The Western Mansions occupy the unique high status in the history of Chinese architecture and in the history of Chinese landscape gardening.

Today, the history endows us with the new mission – further the Yuanming Yuan research through the international academic cooperation among Italy, France, and China.

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APPENDIX

I. Glossary

II. Chronology of Chinese Dynasties

III. Bibliography
GLOSSARY
This glossary includes the names of most of man-made architectures in the “Forty Scenes of Yuanming Yuan” and in “Copperplates of the Twenty Views of the Western Buildings of Yuanming Yuan”.

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<td>Fangwaiguan Zhengmian</td>
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<td>14.</td>
<td>Yuanyingguan Zhengmian</td>
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<td>15.</td>
<td>Dashuifa Nanmian</td>
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<td>Guanshuifa Zhengmian</td>
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<td>Xianfashanmen Zhengmian</td>
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<td>20.</td>
<td>Hudong Xianfahua</td>
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**Chinese Dates and Dynasties**

The following are important China dynasties, which are generally accepted in history academic field. Dates cited here, is adapted from Strassberg, Richard E., 2002.

<table>
<thead>
<tr>
<th>Dates</th>
<th>Dynasty</th>
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<tr>
<td>trad. circa B.C. 1900 - B.C. 1500</td>
<td>Xia 夏</td>
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<tr>
<td>circa B.C. 1600 - B.C. 1046</td>
<td>Shang 商</td>
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<td>circa B.C. 1046 - B.C. 256</td>
<td>Zhou 周</td>
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<td>circa B.C. 1046 - B.C. 771</td>
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<td>circa B.C. 770 - B.C. 256</td>
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<td>circa B.C. 475 - B.C. 221</td>
<td>Warring States period 战国时代</td>
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<td>circa B.C. 221 - B.C. 206</td>
<td>Qin 秦</td>
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<tr>
<td>circa B.C. 206 - A.D. 220</td>
<td>Han 汉</td>
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<tr>
<td>circa B.C. 206 - A.D. 25</td>
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<td>A.D. 9 - A.D. 23</td>
<td>Xin (Wang Mang interregnum) 新</td>
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<td>907- 960</td>
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<td>907- 979</td>
<td>Ten Kingdoms 十国</td>
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<td>Dynasty/Region</td>
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<tr>
<td>960 - 1279</td>
<td>Song 宋</td>
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<td>960 - 1127</td>
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<td>1616 - 1911</td>
<td>Qing (Manzhou/ Manchu) 清</td>
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</tbody>
</table>
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