



Suzhou Gardens: Exploring the Use of Gardens and Landscapes in the Urbanization
Process in China

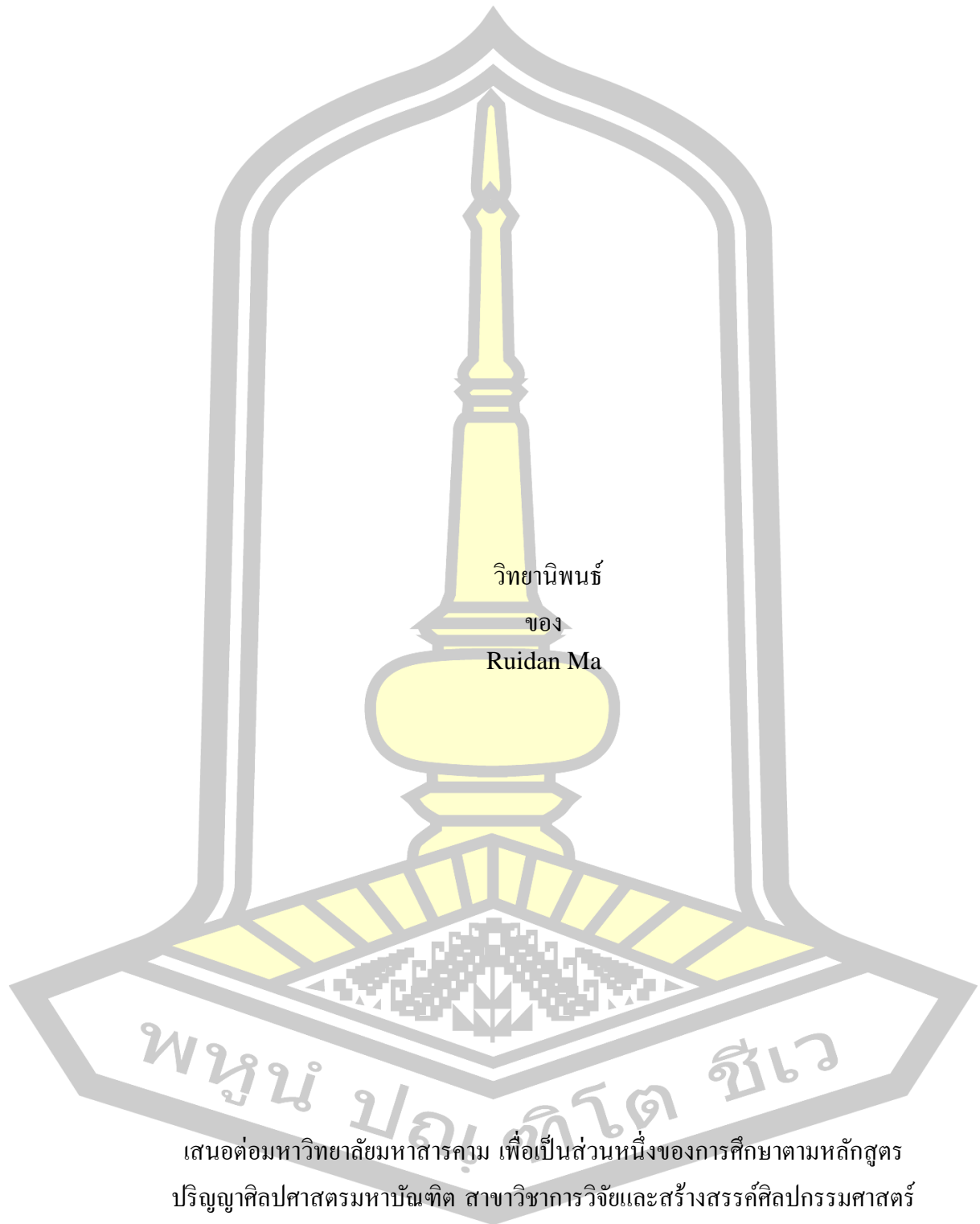
Ruidan Ma

A Thesis Submitted in Partial Fulfillment of Requirements for
degree of Master of Arts in Fine and Applied Arts Research and Creation

December 2024

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Process in China



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ปริญญาศิลปศาสตรมหาบัณฑิต สาขาวิชาการวิจัยและสร้างสรรค์ศิลปกรรมศาสตร์

ธันวาคม 2567

ลิขสิทธิ์เป็นของมหาวิทยาลัยมหาสารคาม

Suzhou Gardens: Exploring the Use of Gardens and Landscapes in the Urbanization
Process in China

Ruidan Ma

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December 2024

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The examining committee has unanimously approved this Thesis, submitted by Ms. Ruidan Ma , as a partial fulfillment of the requirements for the Master of Arts Fine and Applied Arts Research and Creation at Mahasarakham University

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DEGREE	Master of Arts	MAJOR	Fine and Applied Arts Research and Creation
UNIVERSITY	Maharakham University	YEAR	2024

ABSTRACT

As a model of Chinese classical gardens, Suzhou Garden contains rich cultural connotation and gardening techniques, and its design concept has important reference value for public landscape design in the process of modern urbanisation. Based on the development history of Suzhou Gardens and the gardening techniques of the four major gardens, this paper systematically explores the unique design concepts of Suzhou Gardens and their application in modern landscape design from the aspects of culture, ecology, spatial layout and artistic expression. The results of the study show that the ‘unity of heaven and man’ and the techniques of ‘seeing the big in the small’ can effectively optimise the use of space in modern landscapes, and at the same time, they have significant advantages in solving the problems of the lack of cultural connotations and ecological degradation of urban public spaces. This paper combines theoretical analysis and design practice. Combining theoretical analysis and design practice, this paper proposes a specific method of introducing Suzhou Garden elements into modern public landscape design, which provides new ideas for the cultural heritage, ecological friendliness and humanistic innovation of modern landscape design.

Keyword : Suzhou Garden, gardening techniques, modern landscape design, spatial layout, cultural heritage

ACKNOWLEDGEMENTS

In the process of writing and researching this thesis, I have received support and help from many teachers, classmates and family members and friends, and I would like to express my heartfelt thanks.

First of all, special thanks to my supervisor, Dr Yingfeng Li, for his attentive guidance in the selection of the thesis topic, the direction of the research and the writing process. My supervisor's rigorous academic attitude, profound knowledge and meticulous advice enabled me to progress in my research and guided the direction of my academic growth.

Secondly, I would like to thank my professional partners. Many valuable suggestions and help were provided during the dissertation writing and research process. The process of discussing Suzhou gardens and modern landscape design with all of them deepened my understanding of the research.

In addition, I would like to thank my family for their encouragement and support for my studies. They have always been my driving force, giving me firm support and understanding when I encountered difficulties, enabling me to focus on my academic research and successfully complete my thesis.

Finally, I would like to thank all the assessors for reviewing my thesis and providing valuable comments during their busy schedules, so that I can further improve and enhance my research work.

Ruidan Ma

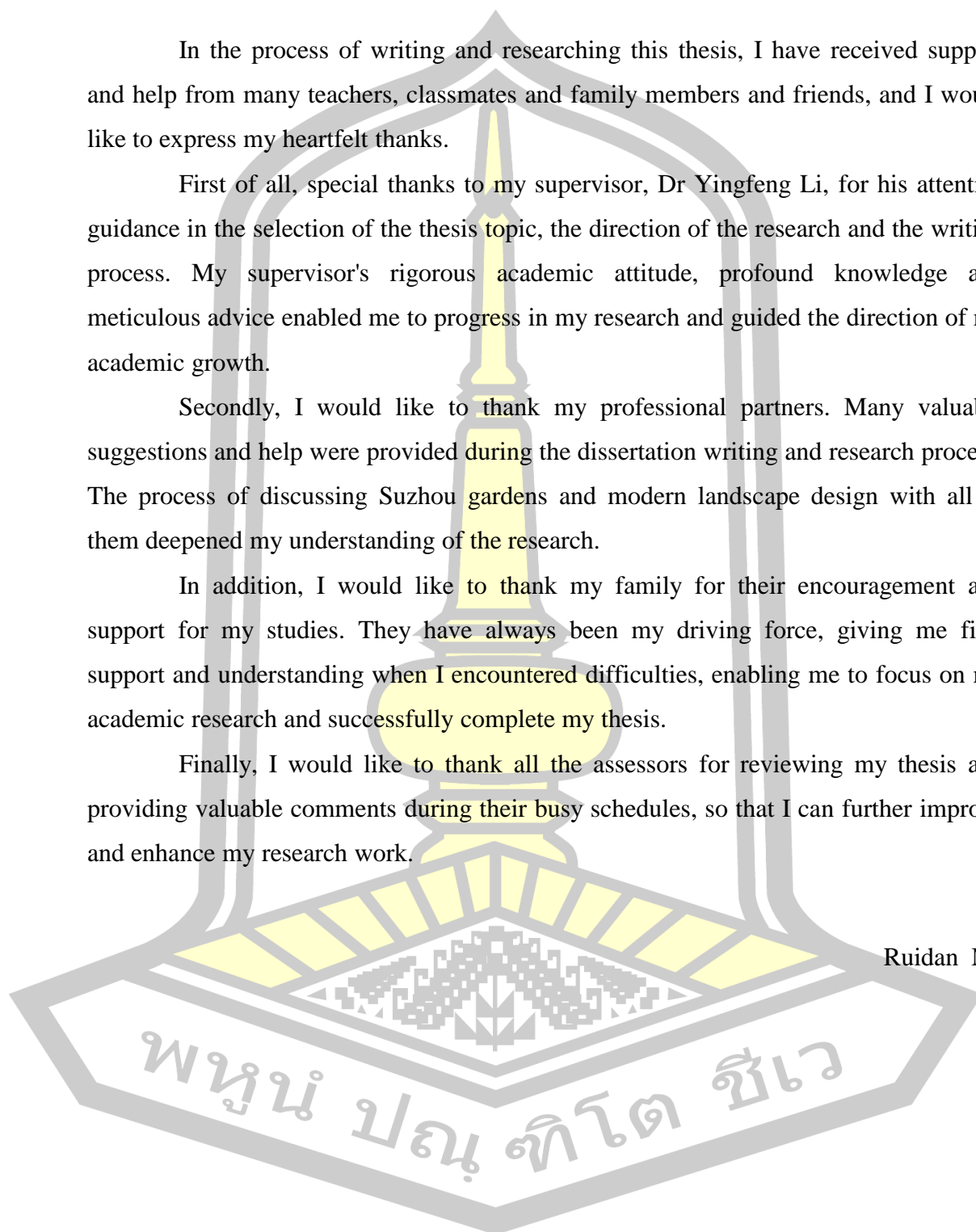


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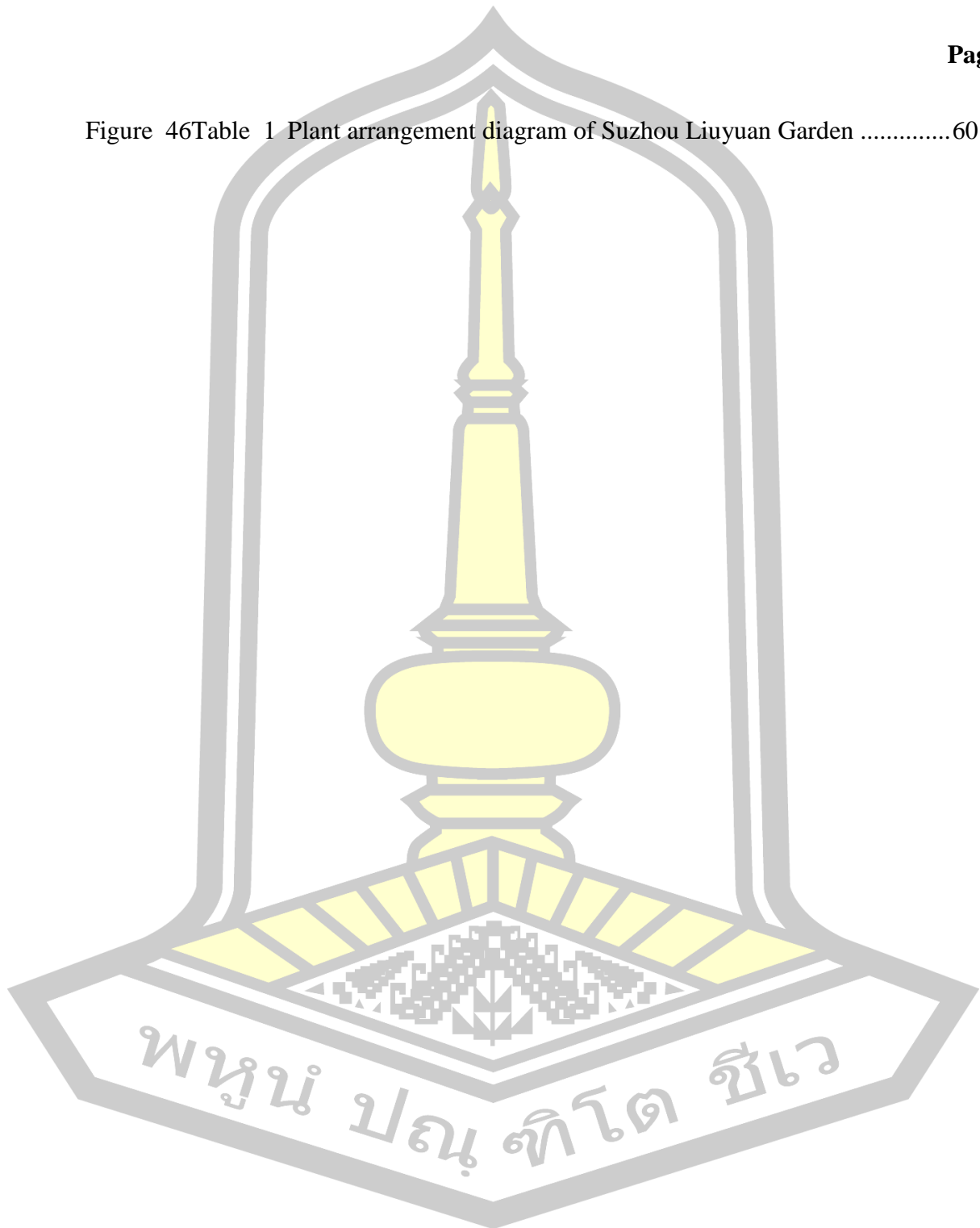
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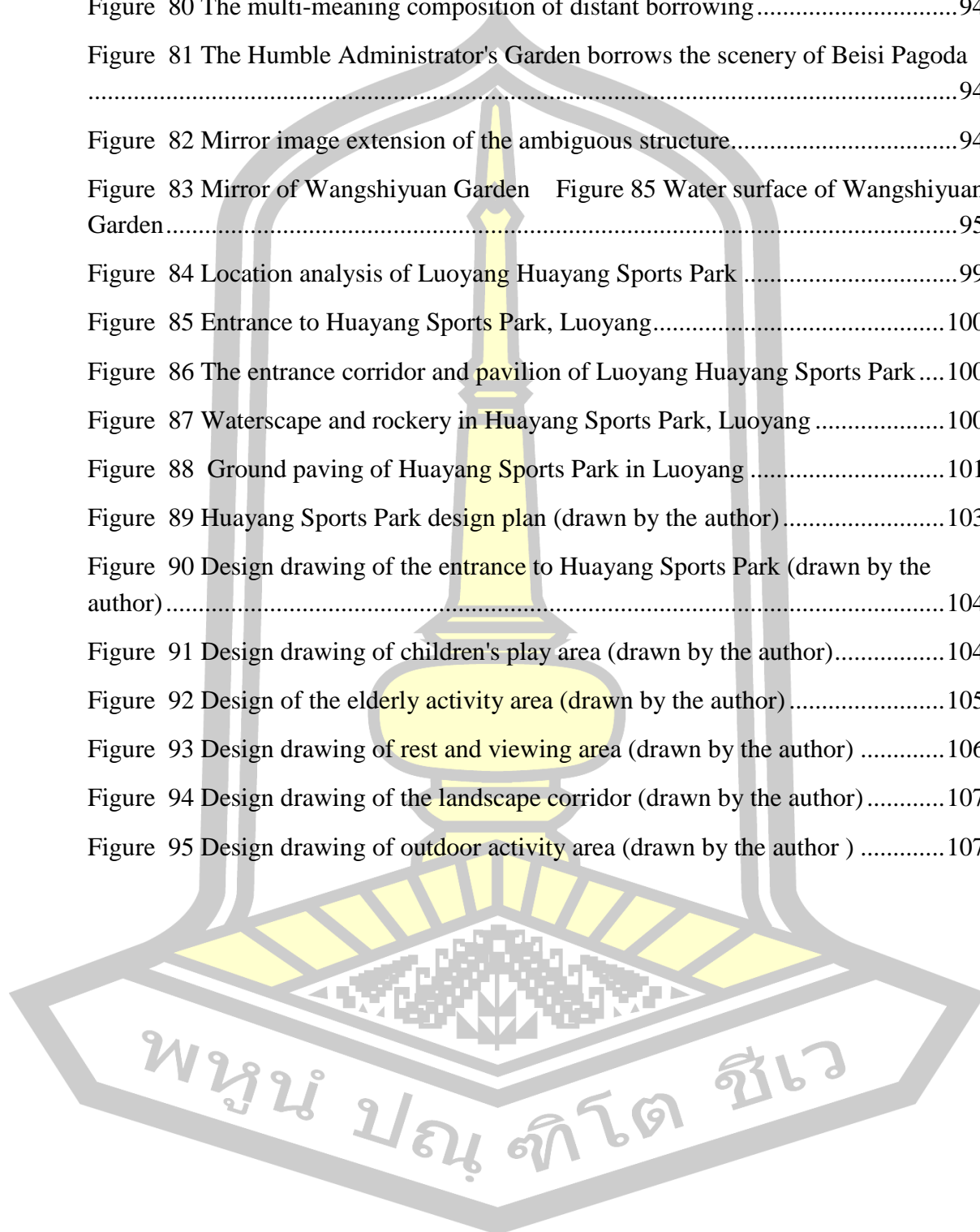
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Chapter I

Introduction

1.1 Background to the study

Suzhou, abbreviated as "Su" and known as Gusu and Pingjiang in ancient times. Jiangsu Province It is a prefecture-level city under the jurisdiction of Jiangsu Province, a megacity, and a major city in the Shanghai Metropolitan Area and Suzhou-Wuxi-Changzhou Metropolitan Area It is an important city in Shanghai Metropolitan Area and Suzhou-Wuxi-Changzhou Metropolitan Area, one of the important central cities in the Yangtze River Delta, a national high-tech industrial base and a scenic tourist city as approved by the State Council. is located in East China, the central part of the Yangtze River Delta, and the southeast part of Jiangsu Province, and is close to Shanghai to the east. Shanghai Shanghai to the east and Zhejiang to the south. Zhejiang in the east, Zhejiang in the south, and embracing Taihu Lake North by Yangtze River As of 2022, the city has five districts and four county-level cities under its jurisdiction. As of 2022, the city has five districts and four county-level cities under its jurisdiction, with a total area of 8,657.32 square kilometres, a resident population of 12,911,000, and an urbanisation rate of 82.12%.

Suzhou is one of the most economically active cities in China, and was approved by the State Council in 1994. Suzhou Industrial Park Known as "the important window of China's reform and opening up" . In 2022, Suzhou achieved a GDP of 2.4 trillion yuan, with a per capita GDP of 186,000 yuan. . In 2023, all four counties and cities of Suzhou entered the top ten of the country's top 100 counties, including Kunshan Kunshan ranked first in China for 18 consecutive years.

Suzhou is one of the first 24 National Famous Historical and Cultural Cities Suzhou is one of the first 24 National Historic and Cultural Cities in China, a famous water town in the south of the Yangtze River, and is known as "Paradise on Earth". There is China's first national historical and cultural city reserve (Gusu District); Suzhou City was founded in 514 BC, with a history of more than 2,500 years. In 589 A.D., Emperor Wen of the Sui Dynasty changed the name of the city from "Wu County" to "Suzhou", taking the name of Gusu Mountain. From the Spring and Autumn Period Wu Zixu Wu Zixu built the capital city of Suzhou in the Spring and Autumn period, to the present day, the the ancient city of Suzhou basically maintains the double checkerboard pattern of "parallel land and water, river and street adjacent to each other", with "small bridges and rivers, whitewashed walls and famous historical sites and gardens" as its unique style. The Humble Administrator's Garden The Humble Administrator's Garden as the representative of Suzhou Classical Gardens and the China Grand Canal Suzhou section is listed as World Cultural Heritage with the Zhouzhuang Ancient Town as the representative of the ancient water towns in the south of the Yangtze River was included in the preparatory list of China's world cultural heritage, and the vast majority of the attractions of Taihu Lake are distributed in Suzhou. As "Jiangnan Culture As the core carrier of "Jiangnan Culture", the 2,500-year-old Kunqu Opera, commentary, gardens and Suzhou embroidery have become the distinctive symbols for the world to recognise China. The classical gardens of Suzhou, also known as "Suzhou Gardens", are located in the city of Suzhou, Jiangsu Province. Suzhou in Suzhou City, Jiangsu Province. Classical

Gardens of Suzhou, also known as "Suzhou Gardens", are located in Suzhou City, Jiangsu Province. Suzhou Classical Gardens The classical gardens of Suzhou originated in the Spring and Autumn Period, developed in the Jin and Tang dynasties, flourished in the Song Dynasty, and flourished in the Ming and Qing dynasties. Suzhou is known as the "city of gardens" reputation, the territory of private gardens were built in the sixth century before the end of the Qing Dynasty, there are more than 170 gardens inside and outside the city, more than 50 existing. Suzhou's classical gardens are a combination of houses and gardens, which can be enjoyed, travelled and lived in. The formation of this architectural form is a creation of human beings' attachment to nature, pursuit of harmony with nature, beautification and improvement of their own living environment in a densely populated city lacking natural scenery. The Chinese philosophy, history and humanistic customs embedded in the classical gardens of Suzhou are the most important characteristics of Jiangnan. It is a symbol and concentration of humanistic and historical traditions and local customs, showing the essence of Chinese culture, and has a unique historical status and significant artistic value in the history of gardening in the world. Taking The Humble Administrator's Garden The Humble Administrator's Garden Liuyuan The classical gardens of Suzhou, represented by the Humble Administrator's Garden and the Lingering Garden, are regarded as "re-creating Qiankun within a stone's throw", and are the leading and proud of Chinese garden culture.

In 1997, one of the classical gardens of Suzhou The Humble Administrator's Garden and Liuyuan Garden and The Garden of the Master of the Nets and Huanxiu Mountain Villa were inscribed on the list of World Cultural Heritage List; in 2000, the Canglang Pavilion, the Lion Grove and The Couple's Garden The Garden of the Couples, The Garden of Arts and Retreat Garden as extensions of Suzhou's classical gardens are also listed as World Heritage Sites. Suzhou, as one of the cultural representatives of traditional Chinese gardens, is also one of the outstanding representatives of ancient Chinese garden art. Suzhou gardens are famous for their unique garden aesthetics and exquisite garden architectural style, and are also an important part of Chinese gardens. The development history of Suzhou Gardens is closely related to the socio-economic and cultural history of the Jiangnan region, and is a comprehensive manifestation of thousands of years of cultural integration and regional characteristics. Suzhou gardens began to be built on a large scale during the Tang Dynasty, and reached their peak in the Ming and Qing Dynasties, with many gardens formed since then. Suzhou gardens, including the Humble Administrator's Garden, the Liuyuan Garden, the Tiger Hill, the Lion Grove, the Garden of the Master of the Nets, and the Garden of Ruikang, have their own unique styles and modelling. All of these gardens are made of concrete and brick, and each of them demonstrates a high level of artistic attainment in ancient architecture and gardens. Suzhou gardens are equipped with abundant flowers, grasses, trees, and water features, and are mostly dominated by small garden buildings such as boardwalks, bright buildings, verandahs, bridges, rockeries, and water pavilions, which have different forms and distinctive features. As one of the representatives of Chinese garden culture, Suzhou Garden's aesthetic style and humanistic connotations have exerted a wide influence on Chinese and world garden culture and urban planning, etc. The Garden is also one of the most famous gardens in China. Suzhou Garden is listed in the World Cultural Heritage List, which is one of the treasures of Chinese

garden culture and an important place for people to appreciate ancient art and culture. Overall Suzhou Garden is an outstanding representative of Chinese garden culture, renowned for its unique garden aesthetics and garden architecture style. In Suzhou Garden, one can appreciate the treasures of Chinese garden architecture and cultural history as well as the extremely exquisite art, and also feel the unique charm of Chinese traditional culture and garden culture. Several representative gardens had influenced the architectural style of the whole Jiangnan city.

Famous for their exquisite design and cultural significance, Suzhou gardens have been an integral part of traditional Chinese culture for centuries. Dating back to the Ming and Qing dynasties, these classical gardens embody the principles of Chinese garden architecture and the harmony between nature, architecture and humanity. Suzhou gardens are a testament to ancient Chinese aesthetics, philosophy and craftsmanship, and their design elements, such as water features, pavilions and intricate landscapes, are imbued with symbolism and philosophical meaning. Some of the Suzhou Gardens highlighted in UNESCO World Heritage are listed as UNESCO World Heritage Sites, highlighting their global significance as cultural treasures. Its Historical Evolution and Influence discusses the evolution of Suzhou gardens over the centuries, from their origins in private estates to their emergence as influential examples of classical Chinese garden design, and the profound influence of Suzhou gardens on art, literature, and cultural expression in both historical and contemporary contexts. However, in the context of China's modernisation, the country is undergoing a process of rapid urbanisation and modernisation and development, which has led to changes in the urban landscape, as well as challenges in preserving cultural heritage, including traditional gardens, in the midst of rapid urban growth and development. Preserving cultural heritage such as Suzhou gardens in the midst of modernisation emphasises the role of cultural heritage in promoting sustainable urban development and maintaining cultural identity, allowing tradition to merge with modernity and bridging the past with the present, exploring the potential of Suzhou garden gardening techniques and concepts in modern garden design as a bridge connecting traditional wisdom with modern needs and aesthetics, and investigating the adaptability of Suzhou garden design principles to cater for the changing lifestyles and preferences of modern urban residents. Taking into account the complexity of urban spaces and user needs, this study identifies the need to explore the feasibility and significance of exploring how Suzhou garden techniques can be applied to modern garden design by incorporating the concepts of Suzhou gardens into modern garden design and modernising elements into the landscape design to meet the needs of contemporary users.

1.2 Purpose of the study

2.1 To study the historical background of classical Chinese gardens and classical Suzhou gardens before modern times and to analyse their gardening techniques and concepts.

2.2 To study and analyse the similarities and differences among the four classical gardens of Suzhou and the analysis of spatial composition.

2.3 Explore and analyse the relationship between modern people and space and the needs of users for modern space.

2.4 To study and analyse the relationship between classical Suzhou gardens and modern garden landscapes in the context of the development process of

urbanisation in modern China and how to better meet the needs of modern people for garden use.

1.3 Research questions

The classical gardens of Suzhou were gradually formed and developed according to the needs of dynastic changes and the influence of culture in the historical period. Therefore, the research text of this paper starts from the classical gardens of Suzhou, and takes the four most representative gardens as the breakthrough for in-depth study, and starts from posing, analysing and solving the problems, and conducts a research on the relationship between the classical gardens of Suzhou in the development of modern China's urbanization and the modern garden landscapes as follows. The following research was conducted:

3.1 What is the history of Jiangsu and the history of Suzhou's classical gardens from the early days of their establishment to the present day, as well as the links and relationships between them?

3.2 What are the similarities and differences in the landscaping methods and regional distribution of the four representative gardens in Suzhou?

3.3 What is the relationship between modern people and space and what do users want from modern space?

3.4 How should the classical gardens of Suzhou be used in modern landscape design under the development process of urbanisation in China and how can they be better adapted to the needs of modern people?

1.4 Definition of relevant terms

1.4.1 Classical Gardens in Suzhou

Suzhou, as one of the cultural representatives of traditional Chinese gardens, is also one of the outstanding representatives of ancient Chinese garden art. Suzhou gardens are famous for their unique garden aesthetics and exquisite garden architecture style, and are also an important part of Chinese gardens. The development history of Suzhou Gardens is closely related to the socio-economic and cultural history of the Jiangnan region, and is a comprehensive reflection of thousands of years of cultural integration and regional characteristics. Suzhou gardens began to be built on a large scale during the Tang Dynasty, and reached their peak in the Ming and Qing Dynasties, with many gardens formed since then. Suzhou gardens, including the Humble Administrator's Garden, the Liuyuan Garden, the Tiger Hill, the Lion's Grove, the Garden of the Master of the Nets, and the Garden of Ruikang, have their own unique styles and modelling. All of these gardens are made of concrete and brick, and each of them demonstrates a high level of artistic attainment in ancient architecture and gardens. Suzhou gardens are equipped with abundant flowers, grasses, trees, and water features, and are mostly dominated by small garden buildings such as boardwalks, bright buildings, verandahs, bridges, rockeries, and water pavilions, which have different forms and distinctive features. As one of the representatives of Chinese garden culture, Suzhou Garden's aesthetic style and humanistic connotations have exerted a wide influence on Chinese and world garden culture and urban planning, etc. The Garden is also one of the most famous gardens in China. Suzhou Garden is listed in the World Cultural Heritage List, which is one of the treasures of Chinese garden culture and an important place for people to appreciate ancient art and culture. Overall Suzhou Garden is an outstanding

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1.4.2 The Humble Administrator's Garden

The Humble Administrator's Garden, located in Jiangsu Province Suzhou 178 Northeast Street, Gusu District. Ming Dynasty Zhengde In the eighth year (1513), the dismissed official returned to his hometown imperial historian Wang Xianchen to build a mansion at the base of the Dahong Temple, which was taken from the Western Jin Dynasty Pan Yue The Fugue of Idle Dwelling The meaning of "building a room and planting trees this is also a clumsy person's policy" is named Humble Administrator's Garden. Afterwards, it changed its owner repeatedly, and became a government official several times, and underwent the rise and fall repeatedly. 1860 to 1863, it was a part of the Taiping Heavenly Kingdom Zhongwang Mansion It was renovated in 1951. The Humble Administrator's Garden covers an area of 78 mu (52,000 square metres) and is divided into three parts: east, middle and west. Another residential part is now the exhibition hall of the Garden Museum. The eastern part of the garden is bright and cheerful, with Pinggang and distant mountains, pine forest and lawn, and bamboo dock and curved water as its main features. The middle part of the garden is the essence of the Humble Administrator's Garden, the pool water area accounts for 1/3, mainly water, the pool wide trees, the scenery is natural, the water is arranged in different shapes and heights of buildings, the main and secondary clear. The western pool was curved shape, which is characterised by the pavilion standoff, undulating corridors, water reflection, interesting, ornate and exquisite decoration, the main building is close to the residential side of the thirty-six mandarin ducks Hall. Although the whole environment of the Humble Administrator's Garden is made by people, the wild interest of natural ecology is very prominent, and it still retains the style of the beginning of the Ming Dynasty when the garden was built, and it is regarded as the masterpiece of the classical garden in Jiangnan and the precious heritage of Chinese garden art. In 1961, the Humble Administrator's Garden was announced by the State Council of the People's Republic of China as the the first batch of national key cultural relics protection units in December 1997, as the first batch of national key cultural relics protection units. In December 1997, as typical example of Suzhou's classical gardens typical example of Suzhou's classical gardens, it was approved by UNESCO approved, the Humble Administrator's Garden and Liouyuan Garden the The Garden of the Master of the Nets and Huanxiu Villa are jointly inscribed on the World Heritage List The World Heritage List. In 2007, Suzhou Gardens (The Humble Administrator's Garden, Huqiu Mountain), and Liouyuan) were rated as national AAAAA level scenic spots.

1.4.3 Lion Grove

The Lion Grove was built in the second year of the Yuan Dynasty (1342) and is one of the representatives of classical Chinese private garden architecture. It belongs to the Four Famous Gardens of Suzhou one of the four famous gardens in Suzhou. The Lion Grove is also a World Heritage Site , the National Key Cultural Relics Protection Unit national key cultural relics protection unit, National AAAA Grade

[Tourist Attractions](#) . The Lion Grove is located in [Suzhou](#) The Lion Grove is located in the north-eastern part of Suzhou. Because of the rock peaks in the park, many of them resemble the [lions](#) The name of the park is "Lion Grove". Lion Grove plane is rectangular, an area of about 15 acres, the forest of lakes and rocks rockery and exquisite, the distribution of buildings in a patchwork, the main buildings are YanYuTang, see the mountain building, waterfall Pavilion, ask MeiGe and so on.

As the forest garden has undergone several ups and downs, temples, gardens and houses have been divided and merged, and traditional gardening [techniques](#) and Buddhism, and the introduction of Western gardening techniques and family shrines into the garden by the Bei family in recent times, it has become a temple garden that combines the principles of Zen Buddhism and the joy of gardening into one. [temple garden, combining the principles of Zen Buddhism and the joy of gardening into one](#) It is a temple garden that combines the principles of Zen Buddhism and the joy of gardening.

1.4.4 Reunion

Liyuan Garden, once known as "East Garden" and "Hanbi Villa", is located at No. 338, Liyuan Road, Gusu District, Suzhou City, Jiangsu Province, with Liyuan Road in the south, Half Street in the north, the Municipal Automobile and Passenger Transportation Group Company Limited in the east, and Xiuhua Lane in the west, and was built in the Ming Dynasty. [Wanli](#) Twenty-one years (1593) was built, and then there are many deserted change of owners, in 1953, the [Suzhou Municipal People's Government](#) In 1953, Suzhou Municipal People's Government decided to repair the garden, and then constantly repair and rectification.

The Liouyuan Garden is one of China's large [Classical](#) Private garden, covers an area of 23,300 square metres, representing the style of the Qing Dynasty, the garden is famous for its architectural art, the hall is spacious and magnificent, the courtyard is full of changes, the whole garden adopts the irregular layout form, so that the garden architecture and the mountains, water, stone and the fusion of natural interest. The garden is divided into four different scenic spots in the centre, east, north and west by using cloud walls and architectural groups. Stay in the garden pavilions and pavilions of varying heights, winding corridors continue to have more than 700 metres, quite a step by step change of scenery of the wonderful. Buildings account for about a quarter of the total area of the garden. The architectural structure represents the style of the Qing Dynasty, creating a large number of buildings with their own characteristics within a small area, showing the art of gardening at hand and seeing the big in the small.

1.4.5 Urbanisation in China

Modernisation is a goal for which the Chinese people have long been striving. The basic realisation of modernisation by the middle of this century is a strategic task made clear again at the 16th Party Congress. Cities are the central force in the realisation of national modernisation, and urban modernisation is an important part and core content of national modernisation. Urban modernisation must follow the basic laws of urban development. [Urbanisation](#) Urbanisation is a process through which human progress is inevitable, and it marks the realisation of the goal of modernisation. China's urbanisation process is accelerating and has entered the take-off line of high-speed urbanisation. "The Outline of the Twelfth Five-Year Plan proposes that the layout and form of urbanisation should be improved and the

management of urbanisation should be strengthened. Therefore, a correct understanding of the problem of urbanisation and the active and steady promotion of the urbanisation process in accordance with the theory of sustainable development is a major issue that China must face.

1.4.6 Modern Chinese Gardens and Landscapes

Modern Chinese gardens refer generally to contemporary gardens that are suitable for the modernisation process in China.

China is known as the mother of the world's gardens, and its glorious achievements have attracted the attention of the world. In recent years, through the unremitting efforts of many experts, scholars and garden workers, constantly exploring, practicing, refining and summarising, China's modern gardens have begun to form a good atmosphere in which theory, practice and achievements go hand in hand. [Chinese Garden](#) After many twists and turns, Chinese gardens are coming out of the dilemma and creating glory again.

(1), 1949-1952, the national economy was in a period of recovery, cities across the country to restore, finishing the old parks and renovation and opening of private gardens, very few new new gardens and landscapes;

(2) During the first five-year plan period from 1953 to 1957, cities across the country built a large number of new parks in conjunction with the renovation of old cities, the development of new cities and the construction of municipal projects;

(3) During the period 1958-1965, the pace of garden construction slowed down, emphasis was placed on general greening and gardens in conjunction with production, and there was a tendency towards the farmisation of parks and the forestation of forests;

(4), 1966-1976" [Cultural Revolution](#) During the "Cultural Revolution", garden construction in cities across the country came to a standstill;

(5), from 1977, especially from 1979, the construction of gardens in cities across the country restarted on the original basis, and the speed of construction was generally accelerated.

1.5 Scope of the study

This paper takes Suzhou gardens as the fieldwork site, mainly investigates and researches the four most representative gardens in Suzhou: the Humble Administrator's Garden, the Lion's Grove, the Liouyuan Garden, and the Canglang Pavilion, obtains the first-hand literature, and extracts the landscape elements in the gardens for research. 1.5.1 Geographical scope

Suzhou is an important city in Jiangsu Province, known for its rich cultural heritage. Suzhou is strategically located on the eastern coast of China in the Yangtze River Delta region, one of the most economically and culturally active regions in China. The geographical features of the delta include waterways and natural beauty. Geographically, Suzhou is located about 100 kilometres west of Shanghai, one of China's major metropolises. Suzhou's geography is characterised by an intertwined network of canals, lakes and rivers, which has led to it being known as the "Venice of the East". Suzhou gardens blend in with this picturesque landscape. Suzhou gardens are a testament to the region's historical importance and commitment to preserving traditional Chinese landscape design. Due to the different conditions of political economy, cultural etiquette, geography and climate, three main branches of Chinese classical gardens were formed, in which the private gardens of Jiangnan integrated the

essence of Chinese classical gardens, and the region of this study, Suzhou, is the essence of private gardens, and the artistic attainments of the gardens are so fine and numerous that they hold a high position in the world's gardens. Suzhou garden as the heyday of the development of private gardens of the Ming and Qing dynasties, the number of small units in the garden to create the number of methods, types, changes, the essence of the sufficient, the modern garden landscape construction can be linked and reference.

1.5.2 Time frame

The historical development of Suzhou gardens is divided into four stages: the generation period of gardens, the turning period of gardens, the heyday of gardens, and the maturity of gardens.

Before the Han Dynasty for the generation of the garden period, that is, in the early stage of civilised society, people regard the natural environment as only hunting and hunting, fishing and woodcutting, recreation and other material enjoyment of life, such as the Shang and Zhou period of "You" (Walled Garden) , "Yuan" (The original meaning refers to the place where birds and animals are raised and trees are planted, and later it refers to the place where emperors played and hunted) , "Tai (high and flat building) ", etc. is for the emperor to recreation, military parade, the buildings used for distant view. Terrace" and so on, is for the emperor to amusement, military parade, the buildings used for distant view. To the pre-Qin and Han period of the garden gardening activities on a large scale, but always in the primary stage of development, the mainstream is the royal gardens, the function of the earliest by the hunting, the gods, fairy, production-based gradually transformed into recreation and ornamental-based, the buildings are simply scattered in the environment, the overall planning of the overall sloppy, did not reach the situation of artistic creation.

The Eastern Jin Dynasty and the Southern Dynasty were the turning period for gardens. From the end of the Han Dynasty to the Northern and Southern Dynasties, Chinese society experienced a period of chaos and suffering. People have all kinds of aversion to the reality of society, back to basics, back to nature, the rise of the idea. In the Han Dynasty in the exclusive status of Confucianism at this time by the cold, Taoist thought is prevalent, the Qing talk and metaphysics became the fashion of the scholars, thus evoking the awakening of the pursuit of individuality, but also inspired the passion of the natural landscape, nurturing an independent sense of aesthetic consciousness of the landscape, so that people's understanding of the landscape from the physical enjoyment of the increase to the "free of the spirit! "This is a qualitative leap. China's unique landscape aesthetics and the results of its externalisation - landscape poetry, landscape prose, landscape painting, landscape gardening four arts were also born. In between, the Eastern Jin Dynasty and the Southern Dynasty played a decisive role.

Sui and Tang Dynasty for the heyday of the garden, Sui and Tang Dynasty gardens not only carry forward the Qin and Han's majestic style, and in the delicate art of management has made brilliant achievements. Landscape painting, landscape poetry, landscape gardens, the three arts have been signs of interpenetration, poetry and painting interest - began to form. Sui and Tang gardens as a complete garden system has been shaped, and in the world came to prominence, the influence of the Han cultural circle in Asia and the vast area. At that time, Korea. Japan fully absorbed the culture of the Tang Dynasty, including gardens.

Song, Ming and Qing dynasties for the maturity of the garden, the Ming Dynasty, the Garden Metallurgy - China's history of the most important theoretical work of a garden content: Volume I, including the "Xingzao theory" a, "Garden said that" Four, the second volume is devoted to railings, the third volume is divided into doors, windows, walls, paving, picking up the mountain, selecting stones, borrowing scenery. The design principle is that the scene to random; although made by people, like from heaven.

1.6 Research Methodology

1.6.1 Methodological structure using "qualitative research methods"

Based on the four major gardens of Suzhou, namely the Humble Administrator's Garden, the Lion's Grove, the Liouyuan Garden, and the Canglang Pavilion, this study uses methods such as comparisons, literature searches, and field research to obtain relevant textual and graphic materials, analyse the literature related to the study of Suzhou gardens, and try to establish a research model for the formation of a garden space that meets the modern needs for activities on top of the advantages of the classical gardens of Suzhou, so that it can be conducive to the development of the culture of the Chinese classical gardens at the same time In addition, the researchers will try to design a garden activity space that is more in line with the needs of modern activities while favouring the development of Chinese classical gardens culture, using its exquisite gardening techniques and cultural connotations in combination with the needs of modern urban development. Specific research methods mainly include the following aspects:

Literature analysis method: The main content of literature analysis method is as follows: through reviewing the yearbook, related literature and professional books, analyse the relevant theories and opinions in the literature, and sort out the parts that can provide a solid theoretical foundation for this research and combine them with one's own research direction. Firstly, we collect and study the professional books and related literature on the historical background and morphological structure of Suzhou Gardens, so as to gain a deeper understanding of the artistic attainments and cultural inheritance of Suzhou Gardens, as well as a grasp of the historical dynamics of Suzhou Gardens, to form an overall impression of Suzhou Gardens, to trace the literature on the historical evolution of Suzhou Gardens, to study how the design principles of Suzhou Gardens evolve over time, and to analyse how the practice of garden design adapts to the ever-changing cityscape and urban landscape, and to analyse how the design practices of the garden evolve with time. How to adapt to the ever-changing urban landscape and social needs in response to urbanisation and modernisation provides a strong theoretical basis for the direction of the research. Next, literature examining the relationship between urbanisation trends and traditional garden landscape elements in China is explored to provide insights into the main challenges, trends and urban development policies to be faced in the context of urbanisation in China.

Fieldwork method: using photo taking. Shooting images, field observation, visiting records and other methods to collect professional information on the four gardens of Suzhou, analyse the artistic characteristics and similarities and differences of the four famous gardens of Suzhou, conduct a comprehensive and in-depth field survey on the layout of the gardens, their morphological structure and the people who use them, systematically record the gardens through photographs, capture the main

features, architectural elements and the coexistence of traditional landscapes in the urban structure, carry out spatial analysis of the gardens, and research the how the spatial layout integrates natural elements into the urban space. A questionnaire was distributed to visitors to understand their experiences, perceptions and preferences related to visiting Suzhou's gardens in an urban context, observing visitors' behaviour, movement patterns and engagement with different garden features to understand the use of these spaces. Staff interviews were also conducted with horticulturists, managers and historians to understand the day-to-day management, conservation efforts and the challenges and initiatives faced in adapting to urbanisation.

Comparative analysis method: on the basis of summarising and collating the gardening techniques used in Suzhou classical gardens, through comparing the four most representative Suzhou gardens and the gardening concepts and elements of Jiangnan gardens in the modern interpretation of the space case, it analyses how the elements and concepts of Suzhou classical gardens are used in the modern composition of the urban landscape as well as the role they bring to the environment.

Diagrammatic analysis method: After the actual research, the layout analysis, functional analysis, route analysis, local detail analysis, etc. are carried out objectively through hand-drawn plans, elevation drawings, local detail drawings, etc., so as to more intuitively help to decipher the function of the use of Suzhou classical gardens in the modern public landscape space. As well as in the process of design practice, the analysis of site properties is conducive to the later design.

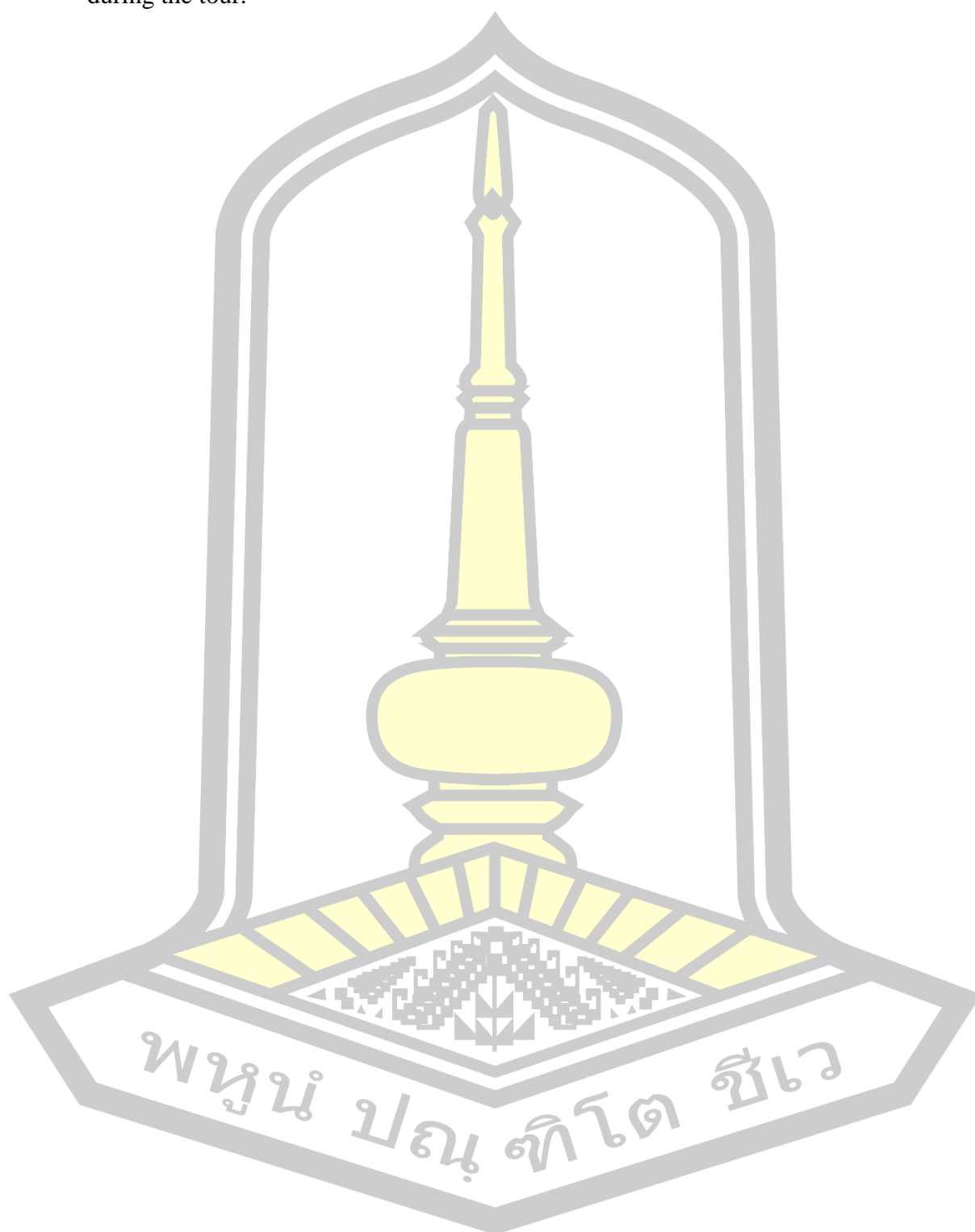
1.6.2 Subjects of study

Suzhou Garden staff, visitors to Suzhou Garden

The selection of research subjects is one of the most important aspects of field research and an effective tool to assist in the progress of the study, asking specific questions tailored to the different research subjects allows the researcher to establish a good relationship with the respondents in order to gain a deeper understanding of the content of the study, and to better complete the study through the collection of qualitative data through these interviews and surveys.

Through field visits to the four major gardens of Suzhou, interviews with Suzhou garden staff, tourists visiting the Suzhou gardens, and the Suzhou Garden Restoration Committee, the research participants were divided into three categories: garden staff, community members, and government personnel, based on the different identities of the people who developed the different forms of questioning. The field trips and interactions with garden staff provided insights into traditional horticultural techniques, landscaping practices, and ongoing efforts to preserve historical authenticity, as well as information about the historical context of specific garden elements, architectural features, and any restoration work. In terms of cultural practices, learnt how the staff incorporate traditional Chinese cultural practices into the daily maintenance of the gardens to provide an immersive experience for visitors, including the coping strategies adopted to balance the demand for tourism with the need to preserve the cultural heritage of the gardens. Interactions with district staff and tourists yielded information on the geographic origins, age groups and cultural backgrounds of tourists visiting Suzhou Garden, as well as the emotional and aesthetic responses of tourists to the various garden elements (including pavilions, bridges and plant configurations) and the assessment of overall tourists' satisfaction,

including accessibility, interpretive services and the quality of facilities for tourists, during the tour.



1.6.3 Research data collection

Data collection: Review of literature related to Suzhou gardens such as historical books, magazines, local government documentaries, cultural propaganda films and related research papers. Fieldwork and questionnaire survey.

Data analysis: a systematic review and synthesis of the content of literature related to Suzhou gardens by reviewing the literature, coding the literature thematically, classifying the information according to the key themes of the historical development of Suzhou gardens, cultural significance and the impact of China's urbanisation, sorting out and comparing and analysing the literature in different periods, identifying the shifts in the perspectives of the gardens in the urban environment, the methods of preservation and the ways of utilisation, and the changes in the discussions about the Suzhou gardens and urbanisation, sorting out and summarising the key themes, theoretical framework and research methodology of the study.

A field survey was conducted to collect data on key sources of information by visiting major gardens in Suzhou, Suzhou garden staff and tourists visiting Suzhou gardens. Garden staff were used to gain insights into the characteristics and cultural history of Suzhou gardens as well as the use of Suzhou gardens in the process of urbanisation. Area staff and tourists: to analyse observational data to identify patterns of visitor behaviour, popular areas in the gardens and interactions with cultural elements, and to interpret spatial layouts and patterns of use observed during fieldwork.

1.7 Literature review

Ling Long In "[The Characteristics and Development of Suzhou Gardens](#)" In the design of Suzhou Museum, there is a very high wall in front of the staircase, where people's eyes stop, and the water cascades down from the wall like a waterfall, and flows down from the staircase like a pool of living water. There were plants planted in the water, and light poured down from the top. It is very poetic and picturesque, and creates a mountainous and forested atmosphere within a square circle, which is the essence of Suzhou's gardens. The combination of traditional and modern gardens can create a garden that can adapt to the trend of the times without losing the traditional characteristics that have been passed down through the ages. Garden design should follow the design principles of landscape design, combined with the actual situation, to do according to local conditions, the use of a rich variety of design concepts for design, to create a local characteristics of the garden, more to the world to show a kind of humanistic care, and strive to achieve ecological, environmental protection and sustainable development. Only in this way, Suzhou Garden and the whole Chinese garden can be better inherited and developed.ผิดพลาด! ไม่พบแหล่งอ้างอิง Only in this way can Suzhou Gardens and the whole Chinese gardens be better inherited and developed.

Xue Jie, Yin Xiaokun in "[The scientific use of China's traditional elements in modern garden landscape design](#)" In "Modern Garden Landscape Design," Xue and Yin analysed that China's garden landscape design concept is to pursue the "unity of heaven and man". The so-called "unity of heaven and man" is the harmony between man and nature. Therefore, in modern landscape design, reasonable and scientific use

of traditional elements of China, can well show the "unity of man and nature" design concept. This not only makes China's traditional elements have been effectively inherited, but also to a large extent reflects the effectiveness and scientific nature of landscape design. The purpose of modern landscape design is to "beautify the environment and make it functional for daily use", "reflect the aesthetic value and promote aesthetic culture" and "maintain the balance of the ecosystem". "etc. The design of modern landscape reflects the development degree of human civilisation, aesthetic concept and value orientation to a large extent. Therefore, if you want to make our traditional elements in modern garden landscape design to reflect the rationality and scientificity, you need to have a deep understanding of the design concept. With a deep understanding of the design concept, we can design an optimal plan, so that the landscape design can achieve perfect results. **ผิดพลาด! ไม่พบแหล่งการอ้างอิง** The design concepts of the garden can be optimised to achieve the perfect effect of the landscape design.

Cao Jiliang, Ye Jienan in "[Modern Landscape Cultural Inheritance from Traditional Garden Layout Techniques--Taking Changzhou Stop Garden of Ming Dynasty as an Example](#)" "The rapid development of today's China is breathtaking to the world, but in the rapid forward movement at the same time, we also need to look back, can not just focus on economic benefits without considering the social benefits. National traditional culture is the foundation of our social development, which is the root of our society. Therefore, designers should not only focus on the design of the forward-looking, can not stick to the stereotypes, but also from the excellent historical culture to take the essence, so that the design of the landscape is both avant-garde and rich in connotation. The modern landscape requires designers to grasp the past excellent historical veins in the design process, but also to reflect the modern cultural concepts. The ecological point of view shows the way for people, which is the way to draw nutrition from traditional culture. Cultural heritage is a re-examination of the relationship between man and history. Landscape design has an important role in the process of urban development, which can not only protect and beautify the environment, but also make man and nature develop in harmony, and also inherit the excellent traditional culture of the Chinese nation. Modern landscape design should firstly meet the adaptability, grasp the historical vein and humanistic environment; secondly, it should meet the continuity, on the basis of conforming to the law of historical development, realise the continuity of landscape design, so that man and nature can live in harmony; finally, it should be integrated into the cultural nature, adhere to the development path of cultural inheritance, and reflect the regional characteristics in the landscape design. **ผิดพลาด! ไม่พบแหล่งการอ้างอิง** The last is to integrate culture, adhere to the development path of cultural heritage, and reflect regional characteristics in landscape design.

Ding Shan in "[Research on pro-nature landscape design for urban public space](#)" "The rapid development of urbanisation in China has led to environmental degradation and the gradual reduction of green space and natural space, which is not in line with the goal of harmonious living and has created a series of urban problems such as human environment and health. Nowadays, people have begun to pay attention to strengthening the connection with nature, and are eager to release stress and enjoy themselves through contact with nature. With the introduction of China's

"14th Five-Year Plan", "Healthy China 2030" and "Provisions on Urban Greening Planning and Construction Indicators", the focus on the sustainable development of urban environmental health has also increased the importance of people's physical and mental health development. The degree of importance has been increased. As an integral part of the urban green space system, city square has the attribute of convenient accessibility. In landscape design, we need to focus on the perspective of pro-nature, through a variety of pro-nature modes and means, to create interactive and experiential urban plazas, so that residents can get a richer and deeper pro-nature experience and feelings. **ผิดพลาด! ไม่พบแหล่งอ้างอิง** We need to create an interactive and experiential city square through various nature-friendly modes and means from the perspective of being close to nature, so that residents can have a richer and deeper nature-friendly experience and feeling.

Sun Yuan in "[The Generation and Development of Modern Landscape in China from City Parks](#)" "Sun Yuan talks about how China's urban construction has entered a period of unprecedented rapid development, and how urban parks, as an important part of the city's open space system, play a pivotal or even decisive role in the quality of the city's space, environment, and life. The distribution, scale, function, composition, landscape and other aspects of urban parks have been developing and evolving with the creation and development of modern cities since their birth. The condition of a city's park directly affects and determines the city's taste and environmental quality. In recent years, most cities in China still focus on landmark buildings, squares, new urban areas or new towns, etc., and the guiding ideology and methods are mostly large-scale demolition and construction, to take the road of large-scale consumption of rough construction. When people have a strong desire to create something completely new, they tend to forget a lot of things that are valuable in terms of history and culture. There is a lack of respect for the history, culture and natural environment of the site, as well as corresponding, specific and practical construction methods. This is contrary to the scientific development proposed by the state and the road of sustainable development. How Chinese city parks should be developed has become an issue that we must deeply think about and solve in front of us. **ผิดพลาด! ไม่พบแหล่งอ้างอิง** The development of urban parks in China has become an issue that we must deeply think about and solve before us.

1.8 Conceptual Theoretical Research Framework

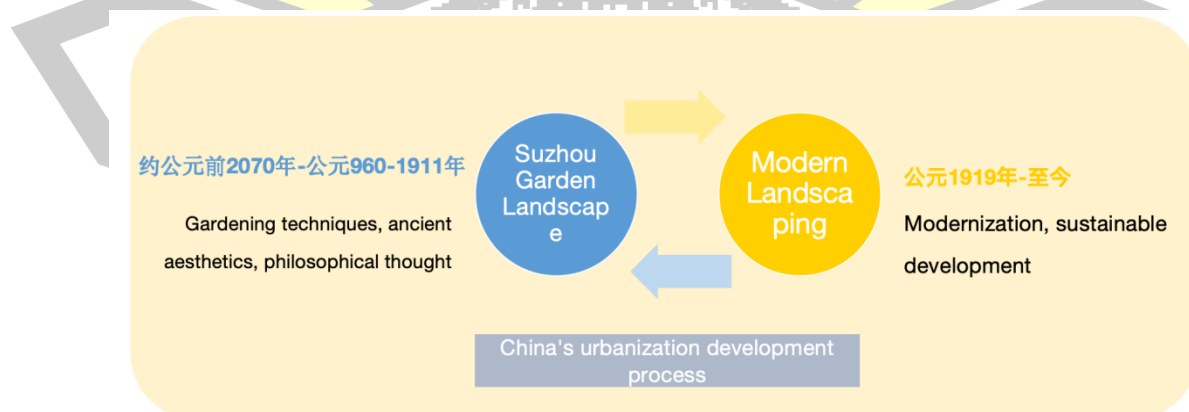


Figure 1 Research framework

Chapter II

Historical Background and Development of Classical Chinese Gardens

The historical background of the Chinese nation is the source of Chinese civilisation, which contains the traditional culture and thought system of the Chinese nation and lays the foundation of China's modernisation. In the course of the development of Chinese civilisation, there were many important events and figures with far-reaching influence, including the origin and development of the Chinese nation, the influence of Chinese civilisation, the ideological system of the Chinese nation and its inheritance, as well as the cultural traditions of the Chinese nation. Therefore, the study of the Chinese historical background and its development can provide a better understanding of the development of the society at that time and the historical evolution of the development of gardens, as well as the influence of the development of traditional culture on its development. The study of the historical background of China and its development can better understand the development of the society at that time and the historical evolution of garden development, as well as the influence of traditional cultural development on its development.

2.1 Historical background of China

2.1.1 Development of ancient Chinese civilisation

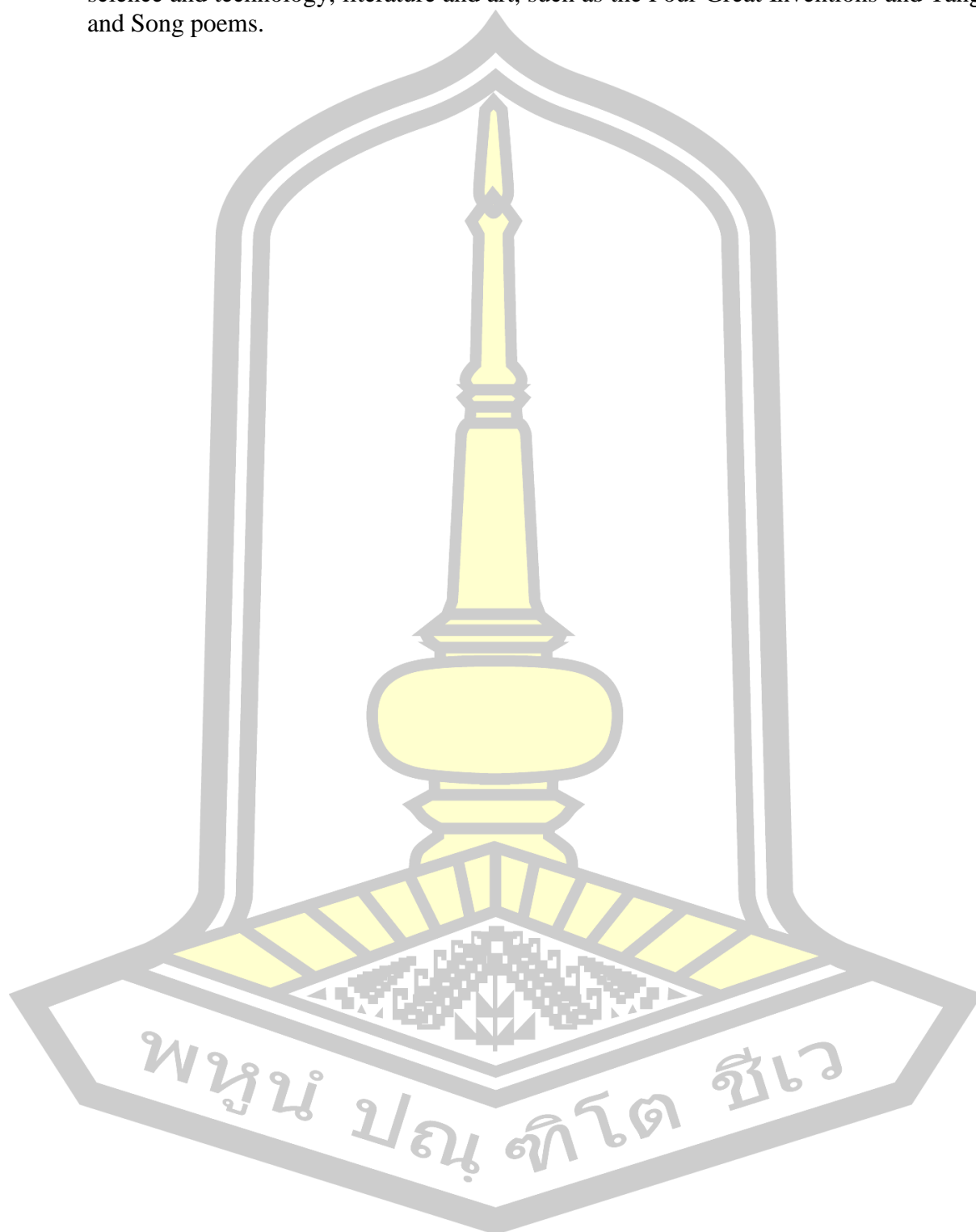
The primitive social period, during which culture was mainly expressed in the formation of primitive religion, primitive art and primitive social organisation. For example, the Shantingdong people had begun to use symbols and decorations, which indicated the germination of primitive religion and art. At the same time, the rise of matrilineal and patrilineal clan communes reflected changes in social organisation.

During the period of slave society (Xia, Shang and Western Zhou), the cultures of the Xia, Shang and Western Zhou periods took on a more complex and rich character as society progressed. The emergence of the Xia Dynasty marked China's entry into an early national civilisation, while the Shang Dynasty is known for its sophisticated culture of oracle bones and bronzes. During the Western Zhou period, the introduction of the ritual system, the patriarchal system and the feudal system had a profound impact on the society and culture of later generations.

2.1.2 The process of development of feudal society in China

The history of feudal society spans over a very long period of time, from the Spring and Autumn Period and the Warring States Period to the Qing Dynasty, covering a number of dynasties. During this period, schools of thought such as Confucianism, Taoism and Legalism emerged and had far-reaching impact on traditional Chinese culture. For example, Confucianism emphasised the values of benevolence, righteousness, propriety, wisdom and trust, which became the core of

traditional Chinese culture. At the same time, great achievements have been made in science and technology, literature and art, such as the Four Great Inventions and Tang and Song poems.



2.1.3 Changes in China's modern historical development

Modern China has experienced foreign invasion and internal turmoil, and the culture of this period has been characterised by complexity and change. On the one hand, traditional Chinese culture faced serious challenges and impacts; on the other hand, the introduction of Western culture brought new ideas and concepts. This cultural collision and fusion provided an important impetus for China's modernisation process.

2.1.4 Post-reform and opening-up China

China's economy and society have undergone great changes, and culture has developed along with them. Culture in this period has been characterised by diversification and internationalisation, while also focusing on inheritance and innovation. For example, the preservation and inheritance of traditional Chinese culture has received increasing attention and support, while modern culture and art have also continued to develop and innovate.

The influence of Chinese civilisation reaches across the globe. Chinese thought, culture and art have always provided important inspiration and revelation to humankind. For example, the thoughts of Confucius and Laozi have had a profound impact on Western philosophy; Chinese poetry and literary creation have had a significant influence on the development of global literature and aesthetics. Chinese cultural traditions are rich and varied, encompassing poetry, music, painting, sculpture, theatre, folk crafts, gardens and many other aspects. The richness of these cultural traditions played a key role in the development of the Chinese nation, and while reflecting the cultural identity of the Chinese nation, they also provided indispensable materials and inspirations for the creation of later cultural developments.

The system of thought of the Chinese nation encompasses three major traditions of thought: Confucianism, Taoism and Mohammedanism. These ideas have provided profound insights and reflections to Chinese society as well as to the global community. The transmission and development of traditional Chinese Confucian and Taoist thought is extremely important. The tradition of Confucianism and Taoism represents the core of the spirit and social culture of the Chinese nation, has a deep historical origin and ideological foundation, and has played a vital role in the history of the Chinese nation.

The development of ancient Chinese civilisation played a very important role in the creation and evolution of Chinese gardens. Deeply rooted in Chinese culture, philosophy and aesthetics, the influence of these gardens can be traced back thousands of years. Throughout history, Chinese emperors and nobles have ordered the construction of elaborate gardens as places of seclusion, relaxation and reflection. These royal gardens, such as the famous Suzhou and Beijing Gardens, were not only aesthetic spaces, but also symbols of power, wealth and cultural sophistication. And philosophically, Chinese gardens reflected the Taoist and Confucian philosophies prevalent in ancient China. Taoist principles emphasise harmony, simplicity and balance between man and nature, and these are reflected in the design and layout of Chinese gardens. Confucian ideals of order, hierarchy and respect for tradition also influenced garden design, which included elements such as carefully planned paths and symbolic features. In terms of artistic expression, Chinese gardens are regarded as

works of art, with every detail carefully crafted, from the arrangement of rocks and plants to the pavilions and water features. They often incorporate elements of traditional Chinese painting, calligraphy and poetry, blurring the line between landscape and art.

All aspects of Chinese gardens are full of symbolism, reflecting Chinese cosmology, mythology and cultural values. Elements such as rocks, water, bridges and plants are chosen and arranged to evoke specific themes or to convey philosophical concepts such as the harmony of yin and yang or the cyclical nature of life. Chinese gardens are designed to blend seamlessly with the natural landscape, creating a sense of tranquillity and peace. Chinese gardens usually incorporate landforms such as lakes, streams and hills in an elaborate landscape design that takes in the surrounding scenery and invites contemplation.

In summary, the history of ancient Chinese civilisation has provided the cultural, philosophical and artistic foundations for the construction of Chinese gardens. These gardens are both physical spaces and cultural artefacts, reflecting China's rich history, traditions and creativity.

2.2 Historical Development of Chinese Classical Gardens

Classical gardens are the treasures of traditional Chinese culture, which distinctively reflect the Chinese view of nature and life. Compared with the western garden art, classical gardens emphatically express the Chinese people's yearning and love for nature and a better living environment. Among them Jiangnan Gardens is the most representative of the achievements of Chinese classical gardens, and it unites the hard work and wisdom of Chinese intellectuals and craftsmen, and contains philosophical and religious thoughts such as Confucianism, Buddhism and Taoism, as well as traditional arts such as landscape poetry and painting.

Since ancient times, China has a tradition of reverence for nature and love of nature, whether it is Confucianism's "up and down and heaven and earth flow together" ("Mengzi - the heart"), or Taoism's "heaven and earth and I was born together, and all things are one with me" ("Zhuangzi - the theory of qiqi things"), all the human beings and all things in heaven and earth are closely linked together as an inseparable community. All things in heaven and earth are closely linked together, as an inseparable community, this "unity of man and nature" idea prompts people to explore nature, close to nature, the development of nature; on the other hand, the mountains and rivers, magnificent scenery, and inspired people to love nature, eulogising the infinite passion of nature. The development of natural landscapes and unique natural landscape garden in this conceptual form of breeding, has been a long history and the development of the magnificent, and achieved glorious achievements in art.

The historical development of Chinese classical gardens is divided into four stages, before the Han Dynasty, about 2029 BC - 202 BC) slave society to the early feudal society for the generation of the garden, the Eastern Jin Dynasty and the Northern and Southern Dynasties 220 AD - 589 AD for the turning period of the garden, to the Sui and Tang dynasties 581 AD - 907 AD the garden development into the heyday, the Ming Dynasty, Ji Cheng, "Garden Metallurgy" is the most important work of garden theory in Chinese history. The most important theoretical work on gardens in the history of China, the improvement of professional technology and the social change of urbanisation, in the Song, Ming and Qing dynasties from 960 to

1912, made the development of gardens a mature period. It is based on the significant changes in social structure, cultural influences, and the evolution of garden design and philosophy during the different dynasties.

2.2.1 Garden generation period

Before the Han Dynasty (209 BC - 202 BC), gardens were created from slave society to the early feudal period, i.e. at the beginning of civilisation, during which China transitioned from a primitive society characterised by hunting and gathering to an agricultural-based community, with the establishment of an early state and centralised rule. People regarded the natural environment only as a place for hunting, fishing, woodcutting, recreation and other material enjoyment, such as "You"

(Walled Garden "Yuan" (The original meaning refers to the place where birds and animals are raised and trees are planted, and later it refers to the place where emperors played and hunted) "Tai (high and flat building) ", etc. which were used by emperors for recreation, military parades, and distant views during the Shang and Zhou periods, The buildings were used by the emperors for recreation, military parade and distant view. The masterpiece of this period, Zhanghua Terrace, also known as Zhanghua Palace, was the home of the [King Ling of Chu](#) Six years (535 BC) to build the Palace, later destroyed in the war. This grand building, which was "built by the whole country and completed in several years", was known as the "[The First Platform in Heaven](#)" The original site of the building is located in Hubei [Qianjiang Longwan](#) (Figure 2).



Figure 2 Recovery of Zhanghua Terrace

Han Dynasty's Imperial Court to the western suburbs of Chang'an Shanglin Yuan for the largest, also belongs to the emperor's hunting grounds, manor and the nature of the Palace, which, in addition to building a large number of palaces, but also a wide range of collection of rare fruits, trees and animals from all over the country (Figure 3).



Figure 3 Restoration of Shanglin Yuan

To the pre-Qin, two Han period of garden gardening activities on a large scale, but always in the primary stage of development, the mainstream is the royal garden, the function of the earliest hunting, through the gods, seeking immortality, the production of the main gradually transformed into a recreational ornamental-based, the buildings are simply scattered in the environment, the overall planning of the more sloppy, did not reach the situation of artistic creation. The gardens in this period were very simple and mainly functional, serving agriculture, such as planting medicinal herbs, food crops and ornamental plants. The gardens emphasised utilitarian rather than aesthetic design, reflecting the basic needs of an early agricultural society and a self-sufficient lifestyle.

2.2.2 The garden turnaround period

The Eastern Jin Dynasty and the Northern and Southern Dynasties (220 AD to 589 AD) marked a turning point for gardens, a period of major political upheaval that included the fall of the Han Dynasty and the subsequent division of China into several states. Social upheaval and cultural exchange led to the emergence of new artistic and architectural styles, including innovations in garden design influenced by different cultural traditions such as Buddhism and Taoism. Gardens began to evolve from simple agricultural fields to more refined recreational spaces, reflecting the growing importance of aesthetic enjoyment and spiritual contemplation (Figure 4). The change of dynasties made Confucianism, which was in a position of exclusivity in the Han Dynasty, suffer from the cold shoulder at this time, while Taoist thought prevailed, and Qingtai and metaphysics became the fashion of the scholars, which aroused the awakening of the pursuit of individuality, and also inspired the enthusiasm of devoting oneself to the natural landscape and nurtured an aesthetic sense of the landscape with an independent significance, so that the people's understanding of the landscape was raised from the enjoyment of materialistic desires to the purely spiritual appreciation of "unimpeded spirituality". "This is a qualitative leap. China's unique landscape aesthetics and the results of its externalisation - landscape poetry, landscape prose, landscape painting, landscape gardening four arts were also born. In between, the Eastern Jin Dynasty and the Southern Dynasty played a decisive role.



Figure 4 Wei and Jin gardens

Cao [Ming Emperor of Wei](#) At the time of the large-scale construction of the palace garden in Luoyang, the [Fanglin Garden](#) The garden is equivalent to the "Danei Yuan", is an important royal garden at that time, and later renamed Hualin Garden for avoiding Cao Fang, the king of Qi, part of the garden settings are retained in the East Han Dynasty, the legacy of the court. To the Western Jin Dynasty Luoyang Palace still Cao Wei's old, the main Royal Park is still Hua Lin Yuan. The former site is located in present-day Luoyang, Henan Province, East Luoyang Imperial City. There are Jingyang Mountain, Tianyuan Pond, Jiuhua Terrace and other wins, still maintains the remains of the Eastern Han Dynasty court. Hua Lin Yuan is located at [Daxia Gate](#) The garden is located in the east of Daxia Gate and north of the palace, [Hearing Lawsuit Guan](#) It was mainly used as a place for entertaining, shooting, hearing lawsuits and lecturing on martial arts, and for a short period of time, there were also members of the royal family living in it. By analysing the relative positions of the buildings in the Hualin Garden, it can be deduced that the [Qinghui Hall](#) , the [Fluidised Drainage Canal](#) and [Wash Pond](#) and [Gwandeokjeon](#) The Hall of Concentration and Leisure [Ningshantang \(Hall of Concentration and Leisure\)](#) The complex is located in the south of Hualin Garden, near the north wall of the palace. This shows that Hualin Garden is not only a place for royal entertainment and residence, but also assumed a certain political and cultural functions. The layout of Hualin Garden is consistent with the [Li Fang system](#) The layout of Hualin Garden was in line with the riang system, with official offices, residences, monasteries and markets distributed in a planned manner between the inner city and the outer city, showing a certain degree of partition. With the expansion of the temple, the original layout of some of the inner city's neighbourhoods was broken, and the spatial layout of the residence and the temple was also changed by the "shedding of the house for the temple". This layout not only reflects the complexity of the social structure and culture of the Northern Wei Dynasty, but also demonstrates the integration of diversity in urban planning (Figure 5). It was destroyed in the second year of Tianping of the Eastern Wei Dynasty (535 AD). After more than two hundred years of continuous construction and enhancement by several dynasties from Cao Wei, Western Jin to Northern Wei, it not only became a famous royal garden in the north at that time, but also occupied a certain position in the history of Chinese classical gardens for its achievements in the art of gardening.

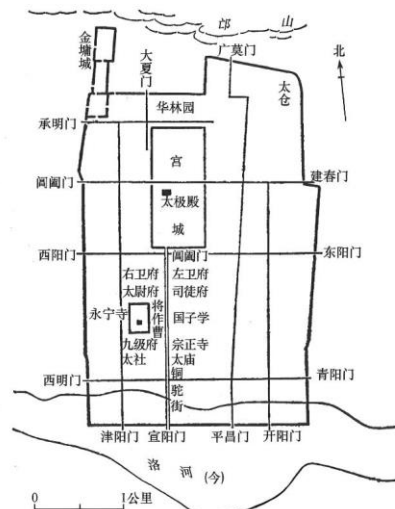


Figure 5 Plan of the Northern Wei Luoyang City - Hualin Garden

In this period of the garden features were: royal gardens, the emperor garden by the influence of the ideological trend, the appreciation of interest to the pursuit of natural beauty transfer, the Southern Dynasties of the emperor's family of the appreciation of landscape and the pursuit of the fashion trend is not the same, and thus the style of the garden has changed significantly, the Han Dynasty, before the prevalence of hunting and cultivating the park, began to be a large number of pools built in the mountains, to the performance of the natural beauty as the goal of the garden instead; Private gardens, the scale of its garden from the Han Dynasty to the simple elegance of the grand, creative approach from purely realistic to realistic and realistic combination of private gardens took the first step in the transition period; temple garden, Buddhism, Taoism, as a religious building of the Buddhist temples, Taoist monasteries, and a large number of appearances, accordingly the emergence of the temple garden of this new type of gardens.

Classical Chinese landscape gardens are made to represent nature by reproducing it, to abstract it by simply imitating it, and to explore how it can be derived from nature but higher than nature. The functions of hunting, seeking immortality, and communicating with the gods basically disappeared or only retained their symbolic significance, and the activities for enjoyment became the main or even the only function. The construction of royal gardens was incorporated into the overall planning of the capital city, and the Dainai Imperial Garden was located on the central axis of the capital city. The emergence of temple gardens opened up the field of gardening activities and played a leading role in the development of scenic spots. Architecture, as a gardening element, achieved a close co-ordination with other elements. Garden planning from the previous rough change to a more detailed and more conscious design management, gardening activities have been fully elevated to the realm of artistic creation.

The development of the northern royal gardens in the transition period of the garden is mainly reflected in the smaller scale, precise and detailed design, landscape focus change, the influence of private gardens, the use of the writing method and so on. Compared with the previous generation, the scale of the garden becomes smaller, but the planning and design is more precise and meticulous, building mountains and

water skills to reach a certain level, showing the deepening of the pursuit of garden aesthetics. The focus of the landscape has been transformed from the simulation of the realm of the immortals to the creation of secular themes, and more earthly reality instead of the illusion of the fairy world, reflecting the changes in social culture and aesthetic concepts at that time. Influenced by private gardens, royal gardens of the Southern Dynasties, individual imperial gardens and even by the then famous literati involved in the operation, the impact of this approach makes the garden design richer and more diversified. And the garden set in the use of the writing method, to build mountains, the water constitutes the geomorphological basis of artificial garden landscaping, has been more use of some of the writing method, since the Qin and Han Dynasty, the emphasis on realistic methods of creation into a combination of realistic and writing, showing the innovation of the artistic expression of the garden. As the reference object of this article, Suzhou is the most famous city in China. As the reference object of this paper, Suzhou Classical Garden still adopts the technique of "borrowing scenery" as a design element in the creation of space, and both periods make use of vistas, framing external landscapes or structures through windows and doors to create the illusion of a larger space. The "small but big" gardening technique, on the other hand, makes small spaces wide by carefully layering elements and playing with visual perspective. In terms of the integration of architecture and nature, the buildings are more closely integrated with the natural environment. Pavilions, bridges and walkways are designed to enhance the beauty and functionality of the garden. **ฝึกฝน! ไม่พบแหล่งอ้างอิง .**

The construction of gardens during this period continued the philosophical basis and symbolism, both of which were based on the idea of harmony between man and nature. Garden design is an idealised reproduction of nature, but the gardens of the Turning Period inherited this philosophy while focusing more on the representation of nature rather than literal imitation, while symbolism is shown in the elements of water, rocks and plants, all carefully chosen for their symbolism, with water representing life and mobility, and rocks symbolising stability and strength.

2.2.3 Full bloom of the garden

The Sui and Tang dynasties (581 - 907 A.D.) saw the development of gardens reach their heyday. The Sui and Tang dynasties marked a period of political unity and economic prosperity, as well as fostering a boom in art and culture, with gardens building on their previous successes to produce new developments. During this period, garden design reached its zenith, with elaborate royal gardens and private estates displaying superb gardening techniques, pavilions and water features.

This period of garden features developed as: the Sui and Tang dynasties, the royal gardens built in the two capitals - Chang'an, Luoyang, the city, attached to the outline, the suburbs and suburbs, the number of, the scale of the grand far more than the Wei, Jin and North and South Dynasties. Royal garden of the royal style has been fully formed, representative works such as the western garden of the Sui dynasty and the Tang dynasty of the Daming Palace, the garden by piling up the mountains and open pools, the formation of a large area of landscape, imitation of nature, to build a majestic and magnificent garden space. [Xiyuan](#) and [Daming Palace](#) are both famous royal gardens in ancient China, but Xiyuan is more representative in scale and influence. Xiyuan was built by [created by Emperor Yang of Sui](#) It was created by Emperor Yang of the Sui Dynasty and is located in [Luoyang](#) which symbolises the

celestial yaochi, covers an area of about 400 square kilometres, and is one of the most famous gardens in [one of the largest royal gardens in Chinese history, known as](#) It is one of the largest royal gardens in the history of China, and is known as the "[The First Garden in Heaven](#)". The design of the Western Garden is dominated by an artificial landscape garden, with the [Beihai](#) as the centre, following the [one pond and three mountains](#) (Figure 6), a garden within a garden, creating a precedent for large-scale royal water gardens, which had a profound impact on later generations of royal gardens; and the construction of private gardens was also in the minority. As the poet Yao He said in "Three Spring Lyrics of Yangzhou", "gardens are mostly houses", summarising the famous private gardens of the Sui and Tang dynasties: [Bai Juyi's Cuidaofang Mansion](#) Wang Wei's Rim Chuan Aliyah, [Wang Wei's Rim River](#) and [Li Deyu's Pingquan Villa](#) and Li Deyu's Pingquan Mountain Villa. The prosperity of private gardens was closely related to the social background at that time. After the unification of the whole country by the Sui Dynasty, the economy and culture flourished, the political situation was stable, and people generally pursued the pleasure of enjoying gardens. In particular, the [imperial examination system](#) was implemented, the literati had the opportunity to enter the officialdom, but they also faced the instability of their career, so the gardens became a place for them to retreat and be alone. The participation of the literati in gardening made the art of gardening incorporate more poetic and pictorial interests, laying the foundation of literati gardens after the Song Dynasty. However, the popularity of temple gardens was a result of the secularisation of religion, which in turn promoted the further secularisation of religion and religious architecture, and the combination of religious architecture and landscape architecture at a higher level, promoting the development of scenic spots, especially mountainous scenic spots in general.



Figure 6 Current status of the Sui Dynasty Western Garden

The classical Chinese gardens of the Sui and Tang dynasties further developed and matured many gardening features and techniques on the basis of the inheritance of earlier periods such as the Qin and Han dynasties, which are summarised in the following six aspects:

lit. pile up the mountains and treat the water (idiom); fig. to make a big fuss over sth

Piles of mountains and water as an important technique of classical gardens, since the Qin and Han dynasties have appeared, in the process of simulating the natural landscape landscape is particularly important. Development to the Sui and

Tang dynasties continued to continue this technique, but its scale and complexity greatly increased, especially in the royal garden. Garden design pays more attention to the integration of nature and architecture, through the artificial pile of mountains and excavation of ponds, the formation of landscape scenery.

Harmony between nature and artefacts

From the early garden design began to focus on the unity of nature and human activity space, such as the Qin and Han Dynasties on the Forest Garden. And to the Sui and Tang dynasties more prominent this "unity of man and nature" concept, emphasising the organic integration of man-made buildings and natural landscape. Landscape, pavilions and pavilions layout is no longer an independent separation, but together constitute a whole landscape system.

have well-defined spaces

Early gardens, especially royal gardens, have begun to emphasise the sense of spatial hierarchy and progressive layout, for example, through the division of different functional areas and landscape areas, to create a visual hierarchy of change. This technique was further applied and improved in the Sui and Tang dynasties, the garden design focuses on spatial master-slave relationship and line of sight guidance, through the front and back, left and right, as well as the staggered design of the high and low, forming a multi-level visual experience.

borrow scenery

Borrowed scenery as an important technique of classical Chinese gardens, the earliest can be traced back to the pre-Qin period, in the Han Dynasty and the Six Dynasties period has been the initial use. In the Sui and Tang dynasties, the borrowed landscape technique was more maturely applied. Garden designers through the distance and near the scene, outside and inside the scene of the clever combination of the use of natural landscape or urban architecture, to increase the depth of the garden and the sense of beauty, to achieve the effect of "step by step, a scene".

Axial symmetry combined with free layout

Early royal gardens, there has been the concept of "axis symmetry" layout, such as the Han Dynasty palaces, gardens, the central axis of the design. Sui and Tang dynasties royal gardens, axis symmetry layout is still one of the main design techniques, but at the same time also gradually developed a more natural free layout. In the core area of the royal garden, usually in a symmetrical way to the centre axis layout of the palace and the main landscape, but in the peripheral part of the garden will be more inclined to the natural free layout, to reduce the traces of man-made.

Garden within a garden design

During the Han Dynasty, the design concept of "garden within a garden" already appeared in the Shanglin Yuan, which formed an independent functional area or landscape area by dividing a number of small landscaped areas in the large garden. Sui and Tang Dynasty gardens inherited this design concept, especially in large-scale royal gardens, the design of the garden in the garden is extremely common. This design not only enriches the landscape level of the garden, but also to meet the needs of different functions, so that the garden experience is more diverse.

The spiritual or symbolic functions of gardens in their heyday, such as hunting, the search for immortality and communication with the gods, disappeared almost completely. Gardens centred entirely on aesthetics, leisure and artistic expression. The royal gardens, in particular, were planned as grand leisure places for

the elite, demonstrating the political power and cultural cultivation of the court. And the gardens of Sui and Tang dynasties not only carried forward the grand and majestic style of Qin and Han, but also made brilliant achievements in exquisite artistic management. Landscape painting, landscape poetry, landscape gardens, the three arts have been signs of interpenetration, poetry and painting interest began to form. Sui and Tang gardens as a complete garden system has been shaped, and in the world came to prominence, the influence and the vast area of the Han cultural circle in Asia. At that time, Korea, Japan fully absorbed the culture of the Tang Dynasty, including gardens.

These gardening features and techniques, which were continued and developed during the Sui and Tang dynasties, not only laid the foundation of classical Chinese gardens at that time, but also provided important references for the design of gardens in the later Song, Yuan, Ming and Qing dynasties. The grandeur of the gardens of the Sui and Tang dynasties and the concept of harmony between nature and artifice became the basic principles of Chinese garden design, with far-reaching effects. Later gardens continued to develop on these foundations, gradually forming a richer and more diverse garden styles and techniques. The above summarised gardening techniques and garden features are also used in all subsequent public landscape space design.

2.2.4 Garden maturity

The development of gardens in the Song, Ming, and Qing dynasties (960 - 1912) entered a period of maturity, during which the most influential work on garden design, *Garden Metallurgy*, was produced. **ผลิตพลาด! ไม่พบแหล่งอ้างอิง** The most influential work on garden design, *Garden Metallurgy*, was written in 1631 by Kei Cheng, a garden designer of the Ming Dynasty. It is the world's earliest monograph devoted to garden design and construction techniques, covering many aspects of garden design, gardening techniques, garden architecture, site selection, etc. It is a seminal work on classical Chinese garden design, and has had a far-reaching influence on the development and design concepts of classical Chinese gardens.

Garden Metallurgy is divided into three volumes, a total of 10 articles, a detailed introduction to the design, construction and artistic performance of gardens, with strong practical and theoretical, systematically summarises the design concepts of traditional Chinese gardens, construction techniques and the art of gardening, and for the first time introduces in detail the design concept of "borrowing the landscape", which plays an It is the first detailed introduction of the design concept of "borrowed scenery", which plays a crucial role in Chinese garden art. Borrowed scenery refers to the incorporation of natural or artificial landscapes outside the garden through clever design, so as to enhance the visual effect and artistic value of the garden space. The core gardening ideas of "Garden Metallurgy" include: to adapt to local conditions, stressing that garden design should be based on specific topography and natural conditions, making full use of natural factors such as topography, climate and landscape, and creating a garden space in line with the laws of nature; to borrow scenery and integrate scenery, through clever sight guidance and spatial layout, integrating landscapes, buildings and scenic spots outside the garden into the garden, enlarging the garden's visual space, and enhancing the garden's artistic effect; to unite heaven and man, suggesting that the visual effect and artistic value of garden space can be enhanced through the integration of natural scenery or artificial landscapes

outside the garden through clever design. Effect; unity of man and nature, the garden should reflect the harmony between man and nature, the pursuit of natural landscape and human landscape integration, so that the garden has both natural beauty, but also reflect the owner's cultural cultivation and spiritual pursuit (Figure 7). The Garden Metallurgy is the pinnacle of classical Chinese garden art, and the gardening techniques written in the book are not only widely used in classical Chinese gardens, not only provide important theoretical support and technical guidance for Chinese gardens, but also have a far-reaching impact on the design of gardens in later generations. The design concept of integrating nature and art that it advocated is still an important guiding principle in modern garden design, promoting the perfection of garden aesthetics and philosophy. Driven by advances in professional technology, urbanisation, and changes in social and cultural values, the design and construction of gardens in the Song, Ming and Qing dynasties developed further. **ผิดพลาด! ไม่พบแหล่งอ้างอิง .**



Figure 7 Gardening

With the development of China's cities and the acceleration of urbanisation, classical gardens provided a paradise away from the hustle and bustle of the city. Wealthy merchants, scholars and officials built private gardens as places of refuge, recreation and intellectual exchange. Classical gardens were often inspired or referenced by literature, poetry and painting. Garden designers attempted to recreate scenes from famous poems or paintings in garden spaces, thus blurring the boundaries between art, literature and nature. Garden designers and landscape artists of these periods experimented with new techniques and aesthetic principles to create visually stunning and emotionally evocative landscapes. They incorporated elements such as rocks, water features, pavilions, bridges, and plants, as exemplified by some of the more famous vignettes in Suzhou gardens: the main feature of the Canglang Pavilion (the garden is named after the main feature) (Fig. 8), a famous bridge in the Humble Administrator's Garden named after its rainbow-like shape, the "Little Flying Rainbow Bridge" (Fig. 9), and the "Little Flying Rainbow Bridge" (Fig. 9), which is the most famous bridge in the Humble Administrator's Garden. "(Fig. 9) and the poetic "Pavilion of the Moon and the Wind" (Fig. 10) in the Garden of the Master of

the Nets, which is located next to a pond, to evoke memories of the natural scenery and to evoke a specific mood or theme.



Figure 8 Suzhou Canglang Pavilion (Song Dynasty)

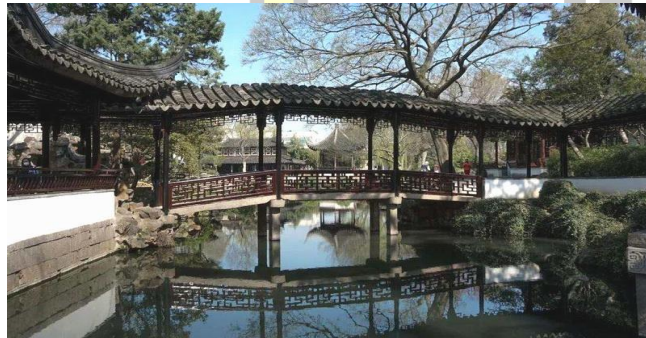


Figure 9 Small flying rainbow in Suzhou's Humble Administrator's Garden (Ming Dynasty)



Figure 10 Pavilion of the Moon and Wind in the Garden of the Master of the Nets, Suzhou (Qing Dynasty)

The gardens of this period continued to inherit architectural elements and gardening techniques, and always maintained the tradition of representation and symbolic reproduction of natural landscapes. Suzhou gardens in their heyday were famous for their borrowed landscape and opposite landscape techniques, which were still inherited in the Ming Dynasty, where natural landscapes outside the gardens were skilfully introduced into the gardens through the windows, door frames, and openings of the gardens to form visual extensions and fusions. The technique of borrowing scenery was further improved, making the garden and the surrounding environment to

achieve a higher degree of coordination. The technique of "seeing the big in the small", which emphasises the creation of a grand scene in a limited space, is one of the signature techniques of Suzhou gardens, and it is continued during the mature period, with the design of paths, the control of sight lines, and the staggered layout of the scenes, enabling people to feel the profoundness and change of the space in a limited space. The relationship between architecture and natural landscape is also highly harmonious, with pavilions, corridors, pavilions and other buildings paired with landscapes, flowers and trees to make the whole garden appear natural and orderly. The mature period continued this tradition, and the buildings were no longer isolated elements in the gardens, but were closely integrated with the surrounding scenery. Through rational layout, scale and choice of building materials, the buildings and nature together formed an organic whole. The diversity of plants and seasonal changes inherited from the heyday of the seasonal changes in the design, the selection of garden plants still take into account the changes of the four seasons, so that the garden can be viewed throughout the year. Different trees and flowers show different postures in different seasons, forming rich colours and layers and enhancing the ornamental nature of the garden.

The development of gardens in the Ming Dynasty benefited from the prosperity of the commodity economy, gardening activities from the court to the private sector, private gardens began to be built in large numbers in this period, especially in Suzhou and other places in the formation of the unique Jiangnan gardens. The function of gardens also gradually expanded from private space to a place for social and cultural activities. The garden is no longer just for individuals or a few people to appreciate the private space, more and more become the scholar, literati and elegant people's meeting place, and even the carrier of public cultural activities. This innovation changed the use of the garden, so that the garden is not only the embodiment of landscape art, or social interaction space. In its heyday, the garden design was complex, emphasising spatial levels and details, while in the mature period, the garden layout gradually developed towards simplicity. This simplicity is not to cut down the degree of design subtlety, but in the limited space and resources, the pursuit of more refined aesthetic performance. Especially in the context of accelerated urbanisation, garden design has shifted from the pursuit of grandeur to playing the ultimate effect in small spaces, emphasising the combination of functionality and artistry of space. And in the mature period of the garden, elements such as geometric layout and open lawn of western garden design began to be gradually integrated into classical gardens. Although the introduction of these elements did not completely change the basic structure of classical gardens, they enriched the expression of garden design. For example, the Yuanmingyuan, a representative of the royal gardens of the Qing Dynasty, contains the Western Tower Scenic Area, which is a typical Western architectural complex. This part was ordered to be built by Emperor Qianlong, and Western missionaries were involved in the design and construction, incorporating Baroque and Rococo style architecture (Fig. 11). The combination of Chinese and Western features, traditional landscape painting and Western symmetry, and open layout formed a new design style, but it was limited to a specific area or a specific building, and it did not affect the core design concept of the entire garden. The design principles of traditional Chinese gardens, especially for the combination of landscape, nature and artificial landscape, are still dominant. And

these introduced western design elements are mainly reflected in the architectural style and decoration, rather than the garden layout itself. It did not fundamentally change the overall layout and mood of the garden. And Suzhou Garden is different from the Royal Garden, and there is no obvious western garden layout or architectural integration, mainly to the literati private garden, focusing on landscape and nature, cultural mood and other traditional garden aesthetics, always maintains the Chinese style.



Figure 11 Ruins of the Western Building in the Yuanmingyuan

During this period, the integration of Western culture changed the architectural style of some areas of the royal gardens. Therefore, the traditional Chinese classical gardens are embodied by the private gardens in the south of the Yangtze River represented by Suzhou Garden, which inherited the artificial art of imitating the natural scenery, expanding the garden's meaning with a small view, as well as the management of water, superimposed mountains, and plant configurations, etc. In the design, not only did it continue the characteristics of the classical gardens, but it also renewed and created new design methods such as the holistic design, the design based on the location, the design of spatial guidance, and the design of continuity. Design Methodsผลิตผล! ไม่พบแหล่งการอ้างอิง In general, these periods are divided into two categories. Overall, the delineation of these periods is based on the interplay of historical, cultural and social factors that have shaped the evolution of classical Chinese gardens over the millennia, from their humble beginnings as functional spaces to their eventual emergence as masterpieces of art embodying the harmony and unity of nature and human creativity.

2.3 Analysis of the four major classical Chinese garden styles

Classical Chinese gardens are characterised by their origins in nature and their superiority to nature, the blending of architectural and natural beauty, and the poetic and pictorial mood and connotation. Collected from previous literature documenting the types of garden styles, the classical Chinese gardens are divided into four types according to their geographic location, historical background, design principles and intended functions, for the garden styles are divided into four types: the northern royal gardens, the south of the Yangtze River private gardens, the south of the Lingnan gardens and the temple gardens.

Each type of classical Chinese garden appeared in a different historical period and was influenced by the socio-cultural, political and economic conditions of the time. Northern royal gardens began to appear during the early imperial periods of Chinese history, especially during the Zhou Dynasty (c. 1046-256 BC), the Qin

Dynasty (221-206 BC), and the Han Dynasty (206 BC-220 BC). These gardens reached their zenith during the Tang (618-907) and Song (960-1279) dynasties, when emperors and courts invested heavily in the construction of gardens as symbols of imperial power and prosperity. Private gardens in the south emerged during the Eastern Jin Dynasty (317-420) and reached their peak during the Ming (1368-1644) and Qing (1644-1912) dynasties. Wealthy scholars, officials, and merchants in southern China, especially in the Suzhou, Hangzhou, and Shanghai areas, built these gardens as private hideaways for leisure, cultural pursuits, and social gatherings. Temple Gardens: Temple gardens slowly began to take shape after Buddhism was introduced to China during the Han Dynasty (220 BC). Buddhist monasteries and temples throughout China began to use gardens as an integral part of their complexes, as spaces for meditation, contemplation and religious practice. The design and development of temple gardens evolved over the centuries, reflecting the changing philosophical and cultural influences of Buddhism. Lingnan gardens appeared most recently during the Ming (1368-1644) and Qing (1644-1912) dynasties in the Lingnan region of southern China, including the provinces of Guangdong and Guangxi. Lingnan gardens are a distinctive style, reflecting the region's subtropical climate, cultural diversity, and aesthetic preferences. Lingnan gardens reached their peak in the late imperial period, and cities such as Guangzhou and Foshan were famous for their Lingnan gardens. **ผิดพลาด! ไม่พบแหล่งอ้างอิง .**

This stylistic categorisation is also based on cultural influences and the design principles that shape each type of garden. For example, royal gardens in the north usually reflect the grandeur and symmetry of royal architecture, while private gardens in the south focus on natural landscapes and intimate social spaces. And this categorisation also takes into account the intended function and purpose of each type of garden. Royal gardens were designed to meet the needs of the court and symbolised royal power and authority. Private gardens provided space for leisure, recreation and cultural pursuits for the wealthy and their guests. Temple gardens were built for religious practice, meditation and spiritual contemplation. The Lingnan gardens were designed to harmonise with the subtropical environment of southern China and reflect the cultural characteristics of the Lingnan region.

The classification of classical Chinese gardens into four major types - northern royal gardens, southern private gardens, temple gardens and Lingnan gardens - provides a framework for understanding the diversity of Chinese garden styles and traditions, each of which has its own distinctive characteristics, influences and cultural significance, and which appeared in different periods of history and developed under specific regional, cultural and social influences. Their emergence and evolution have contributed to the richness and colourfulness of Chinese garden design traditions.

2.3.1 Jiangnan Garden

Jiangnan gardens by the influence of poetry and painting, the pursuit of garden "poetry and painting". Mainly distributed in Jiangsu and Zhejiang, Jiangsu Suzhou area is the most famous, Suzhou classical gardens are now well-preserved and a large number of gardens, its gardening skills, cultural connotation is deep, is a typical representative of the Jiangnan garden. Jiangnan gardens have three distinctive features:

lit. stacking stones and clearing water (idiom); fig. geological strata prevailing over time

Jiangnan water town, good at water features, water and stone, constituting the main landscape of the garden. Taihu Lake produced strange stone, exquisite and colourful, planted in the garden, can be enjoyed. Song Huizong camp Burgundy, set up a flower and stone outline dedicated to carry Taihu Lake stone peaks, scattered relics still exist, such as Shanghai Yuyuan Yu Linglong, Hangzhou Botanical Garden Crepe Cloud Peak, Suzhou Ruiyun Peak. And the development of stacked stone for the mountain, in addition to the Taihu Lake stone, and with yellow stone, Xuan Shi, etc.. Ming and Qing dynasties, stacked stone celebrities, such as Zhou Bingzhong, calculated to become, Zhang Nangqi, Shi Tao, Go Yuliang, etc., activities in the south of the Yangtze River area, a great contribution to the art of gardening. Currently existing Yangzhou stone mountain house rockery, from Shi Tao's hand. Go Yuliang made folding mountain, represented by Suzhou Huanxiu Villa rockery, well-preserved to this day. Changshu Yanyuan Huangshihu stone rockery has been repaired and has lost its old appearance (Figure 12).



Figure 12 Suzhou Huanxiu Villa

Jiangnan private garden of stacked mountains and water skills is one of the core of the art of gardening, emphasising the reproduction and expression of natural landscape. Therefore, the design of Jiangnan private gardens of stacked mountains more imitation of natural mountains, the natural mountains and rivers scenery concentrated into the garden. Stacked mountain approach to pay attention to the height of the staggered, rich layers, emphasising the sense of nature and mobility. Stone mountain detailing, the southern gardens seek refinement. Through the selection of rocks, stacking methods and meticulous carving, presenting the effect of natural weathering, especially pay attention to the aesthetic standards of "thin, wrinkled, leakage, penetration", the use of natural texture of the stone to create changes. Stacked mountains are not only visual landscapes, but also combine with dynamic elements in the garden (such as water bodies) to form a dynamic and static complementary scenery. For example, the water flowing out from between the stones creates a dynamic visual effect and the sound of water, making the whole garden space more vivid. Stay in the garden in the "crown cloud peak" is the famous stacked mountain landscape, the main peak is tall and straight, lofty and magnificent. Rockery design pay attention to the relationship between the peaks, valleys, mountain winding, full of changes (Figure 13).



Figure 13 Crown Cloud Peak in Suzhou's Liyuan Garden

Water management is also one of the important design elements of private gardens in Jiangnan. Jiangnan gardens often use the original topography, the river and lake water system into the garden. Water in the garden can be lakes, ponds, streams or waterfalls, the speed of water flow, form are carefully designed. The design of Rishui focuses on the twists and turns of the water form, so that the water scene in the garden presents the effect of static water like a mirror and moving water like a belt. Visually, the water surface mirrors the rocks, buildings and plants, forming a variety of landscape levels. In Jiangnan gardens, water bodies are not only visual landscape elements, but also used to connect garden spaces. Through bridges, corridors, pavilions, etc. connected to the water, making the whole garden dynamic and static. The static beauty of water and dynamic beauty together to create the mood of the garden. The representative Neshi Garden has a water feature as its core (Figure 14), and the water runs through the whole garden, showing the layout of "water embracing the mountain ring". Although the area of the water body is small, but through careful design, making the water in the garden is rich in change, to achieve the effect of "small in the big".



Figure 14 Water scene of Suzhou Neshi Garden

Jiangnan garden in the stacking of mountains and water, pay attention to the organic combination of water and mountains, in the limited space to simulate the natural landscape, through the rocks and water with the matching, creating a combination of static and dynamic garden space. In the design, by comparing the height of the rocks with the openness of the water, creating a sense of hierarchy and depth of space, giving people the impression that "although made by man, just like heaven".

Plant species layout

The climate and soil of Jiangnan is suitable for the growth of flowers and trees. Suzhou gardens can be said to set the plants of the great, and more flowers and trees. Jiangnan garden according to the tradition of Chinese gardens, although the nature as the religion, but never a thicket, no rules. The principle of its arrangement is generally as follows: tree tall trees to shade the sun, planting simple or beautiful tree form tree (such as gnarled pine, soft willow) for appreciation, and then supplemented with flowers, fruits, leaves, colour and fragrance (such as Dan Gui, red maple, kumquat, wax plum, autumn chrysanthemums, etc.) ฝึกพลาต! ไม่พบแหล่งการอ้างอิง The colour and fragrance of flowers, fruits and leaves (e.g. danggui, red maple, golden orange, wax plum, autumn chrysanthemum, etc.). Pines, cypresses, bamboos and lotus flowers are also the most common plants in Suzhou gardens and are used in almost all gardens.

Pines and cypresses are common plant species in classical gardens. Both pines and cypresses are evergreen plants, evergreen in all seasons, symbolising longevity, eternity and immortality. They grow and flourish in harsh environments, demonstrating resilience, and have far-reaching symbolic meanings in traditional Chinese culture. In Feng Shui, pines and cypresses also have an important position. Pine and cypress is often regarded as an auspicious tree, with the function of driving away evil spirits and protecting the house. In many ancient gardens, pines and cypresses are not only landscape elements, but also an important part of feng shui layout. Ancient Pine Garden, also known as Cai Shaoyu's old residence, is located in Shantang Street, Mudu Ancient Town, Wuzhong District, Suzhou City, and was built in the Qing Dynasty. [Qing Dynasty](#) It was built in the Qing Dynasty in the style of mansion and garden. [Cai Shaoyu](#) It was built by Cai Shaoyu, a rich man in Mudu in the late Qing Dynasty. All the buildings in the mansion are simple and elegant, with very fine carvings, which have certain artistic and cultural values, and are now the cultural relics protection units of Jiangsu Province. There is a Ming Dynasty Luohan Pine in the back garden, verdant and gnarled, with a beautiful posture, the ancient Pine Garden is named for this pine, and the garden is also famous for its cypresses (Figure 15).



Figure 15 Ming Dynasty Luohan Pine in Suzhou Ancient Pine Garden

Jiangnan more bamboo, categories are also a variety of green all year round for the garden lining colour, or more planting of creepers, vines, to increase the interest of the mountains and forests. There are also appreciation of its sound, such as the rain in the lotus leaves, plantains, branches of birds, cicadas and so on. Cui Linglong Pavilion, a bamboo-themed building in Canglang Pavilion, is located in the Canglang Pavilion Garden and is famous for its unique bamboo scenery. This place is not only for its architectural aesthetic value, but also for the various kinds of bamboos planted around it, such as [Turtle Bamboo](#) , and [hemp bamboo](#) and [Anji Jingzhu Bamboo](#) [Purple Bamboo](#) Bamboo [Olive Bamboo](#) Bamboo [Gold and Jade Bamboo](#) Bamboo [Xiaoxiang Bamboo](#) etc., forming a sea of bamboo, which is one of the unmissable scenery of Canglang Pavilion (Figure 16).



Figure 16 Bamboo Scene in Canglang Pavilion, Cui Linglong Pavilion

Most gardens with ponds are planted with lotuses, which, as a beautiful aquatic plant, have multiple environmental benefits and ornamental value. Firstly, lotus can add colour and beauty to the pond, and the diversity and beauty of its flowers provide high ornamental value to the pond. Secondly, the lotus has a well-developed root system that absorbs nutrients and harmful substances in the water, reducing the growth of algae and improving water quality. In addition, the lotus also has a cooling and moisturising effect. The lotus leaves can cover the water surface, reduce water evaporation, maintain the stability of the water body, and cool down the surrounding environment in the hot summer. The central pond in the Lion's Grove Garden is the main planting place of lotus, and this pond not only covers an area of about 1,518 square metres, but also has bridges, pavilions, stone boats and other landscapes laid out around it as its centre, forming a typical garden landscape of the south of the Yangtze River. In order to beautify the water landscape and meet the demand for lotus appreciation, lotus is specially planted to create the elegant mood of a classical garden (Fig. 17).



Figure 17 Pool in the middle of the Lion Grove, Suzhou

architectural style

The architectural style of Jiangnan private gardens has a strong literati flavour, which seeks simplicity, nature and harmony, focusing on the integration of man and nature. Jiangnan garden architecture is not only a place to live and appreciate the natural landscape, but also has a strong cultural connotation and artistry.

Jiangnan garden buildings are mostly wood-based, beautifully modelled but not overly carved, simple and generous in appearance. The overall style of the building pursues nature, blending with the landscape and plants in the garden to form a harmonious whole. Instead of pursuing majestic and grandiose architecture, the buildings are meticulous and elegant, reflecting the owner's attention to life and taste. The architectural layout is flexible and varied, adapting to the local conditions and making good use of the limited space to create rich visual effects. Buildings and rocks, water features, plants and other landscape elements are interspersed with each other, borrowing scenery, forming a "step by step" effect, giving people a different viewing experience. Buildings often interact with the external landscape through doors, windows, corridors and other elements to form a "framed landscape" effect. For example, the Garden of the Master of the Nets is one of the smallest gardens in Suzhou, but its architectural style is exquisite and unique. The buildings in the garden, such as the "Dianchunyi" and the "Xiaoshan Conggui Xuan", complement the pond and the rocks, and the "framed landscape" design of the building's windows and doors allows people to enjoy the external landscape from indoors (Figure 18). The "framed view" design of the building's doors and windows allows people to enjoy the external landscape view from the interior (Figure 18). The architecture of the Garden is low-key and delicate, full of literati atmosphere.

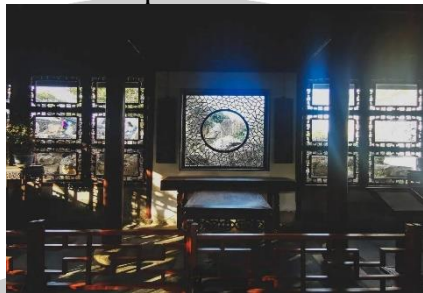


Figure 18 The Siu Shan Cong Gui Xuan in the Garden of the Master of the Nets in Suzhou

The windows and door frames of the classical garden buildings in Suzhou are often aligned with the landscape in the garden, so that people can also enjoy the external beauty indoors, achieving a deep integration of architecture and nature. And private gardens in the south of the river are rich and diverse types of buildings, including halls, pavilions, pavilions, corridors, pavilions, pavilions, and so on. Each type of building has its own unique function and aesthetic value, such as halls for reception of guests, Xuan for people to read and paint, pavilions is a place to view the rest. Although the architectural forms are different, all of them pursue the harmony and unity with the natural landscape. One of the representatives of Suzhou's classical gardens, the Liyuan Garden, is famous for its exquisite carvings and unique layout, such as the "Hanbi Villa" and "Listening to the Rain" and other buildings (Figure 19), through the unique design of the corridors and windows, the indoor and outdoor spaces are cleverly connected to form a garden effect of movement and tranquility.

The unique design of the corridors and windows connects the indoor and outdoor spaces, creating a garden effect that is both dynamic and static. The "Guanyun Tower" in the Liouyuan Garden is a rare tall building in private gardens in Jiangnan, demonstrating the dignity and grandeur of the owner of the garden.



Figure 19 Listening to the Rain Garden and Corridor, Suzhou, China

The architectural style of Jiangnan private gardens emphasises nature, simplicity and harmony, and pursues the perfect integration of architecture and natural landscape. Whether it is the sparseness and elegance of the Humble Administrator's Garden or the exquisite carvings of the Liouyuan Garden, the architecture in the Jiangnan gardens embodies the concept of "unity of heaven and mankind" in traditional culture, and is a concentrated manifestation of the lifestyle and aesthetic pursuits of the Jiangnan literati class. The application of this architectural style in gardens makes the private gardens in Jiangnan one of the masterpieces of Chinese classical gardens, and later also for the government offices, temples, guilds, academies attached to the gardens, and even the royal courts used. **ผิดพลาด! ไม่พบแหล่งอ้างอิง** Later, it was also used by government offices, temples, temples, academies and even royal courts.

2.3.2 Northern gardens

Northern gardens to bureaucrats, relatives, literati gardens for the mainstream, mainly distributed in Beijing, Hebei area, such as the King Gong's House Garden, Mi Wanzhong Spoon Garden (now within Peking University) and so on. Special human factors and natural conditions make the northern gardens formed different from the local style characteristics of Jiangnan, the planning and layout of the more use of the central axis, the scenic line, the more to give the garden to the gravity, rigorous style. The Prince Gong's Mansion occupies a very important position in the northern gardens, and can be regarded as one of the masterpieces of the northern private gardens. It is located in the Shichahai area of Beijing, and is one of the most luxurious, largest and best-preserved royal gardens of the Qing Dynasty. As a typical architectural complex combining royal residence and garden, the Prince Gong's Mansion not only has important historical value, but also shows the unique style of northern gardens in garden art. The architectural layout of Gongwangfu is centred on the central axis, with symmetry on the left and right, and clear hierarchy, showing the

[Chinese traditional architecture](#) aesthetic characteristics of traditional Chinese architecture. The whole mansion adopts [courtyard](#). The traditional form of courtyard creates a quiet and mysterious atmosphere. In terms of layout, the Gongwang Mansion is divided into three parts: the front part is the main building of the mansion, the middle part is the [garden](#) and [rockery area](#), and the rear is the logistic service area. This layout makes the Prince Gong's Mansion not only have the function of residence, but also have the function of viewing and entertainment. **การอ้างอิง** This layout makes the Palace both residential and ornamental and recreational. Architectural features on the stable, solid, with the beauty of robust; plants to evergreen and spring, autumn, summer changing shrubs constitute plant landscaping; stacked rockery scale is small, mainly for the North Taihu Lake stone and green stone; water due to the lack of water resources, more use of "dry garden" practice; planning layout to the central axis, more use of the scenic line, the style of the garden The layout of the plan is more in the central axis and the landscape line, and the style of the garden is heavy, rigorous, and strong overall (Fig. 20).



Figure 20 Gongwangfu, Beijing

As a representative of the royal gardens, the main attractions of the Summer Palace are roughly divided into three areas, namely, the Palace Area, the Front Lake Scenic Area on the Front Mountain and the Back Lake Scenic Area on the Back Mountain. The palace area is dominated by the solemn [Renshou Hall](#). It is the main place where Empress Dowager Cixi and Guangxu participated in domestic diplomatic and political activities during the late Qing Dynasty. The Front Mountain and Front Lake Area is the main part of the Summer Palace, occupying 88% of the entire park, while the Back Mountain and Back Lake Area is characterised by its quiet environment and Jiangnan garden interest, in contrast to the openness of the Front Mountain. The most prominent feature of the Summer Palace lies in the perfect combination of the natural landscape surrounded by mountains and water and the palace architecture of royal grandeur. The design of the attractions in the real mountains and water not only highlights the royal grandeur, but also embodies the harmony and unity of the gardens with the mountains and water; it is not only modelled on the nature but also higher than the nature, and it skillfully blends the beauty of nature with the man-made carvings. The garden landscaping of the Summer Palace integrates the moods of Chinese painting, poetry and literature, creating the grandeur of the Chinese royal gardens, the brilliant colours and their fully coordinated relationship with the landscape and green environment. The overall layout and artistic features of the Summer Palace embodies the essence of ancient Chinese garden

design, preserving the beauty of nature while incorporating artificial delicacy and ingenuity, making it a treasure of ancient Chinese garden art (Figure 21).



Figure 21 Summer Palace, Beijing

Relative to the south, this area has less rain, fewer lakes in northern China, not possible as Jiangnan both vast plains and longitudinal waterways, so, in the plains of the towering Mount Tai and Mount Yan became a symbol of the people's mind. Water sources and water limitations is the constraints of the northern garden. Local natural geography also has a very close relationship. In the Shandong area, because of its proximity to Jiangsu, the gardens show signs of imitation of the gardens of Jiangnan, such as the Garden of Ten Waters, which was built by the owner of the garden after travelling to Jiangnan (Figure 22).



Figure 22 Shikwuyuan, Weifang, Shandong

Beijing gardens in addition to the royal garden possession of lakes, the royal family and nobles can only get the royal scraps, the water is not big, some can only be flat to create a dry garden, even if the garden has water, but also the water is very small, the modern parks are also a lot of dry parks. Relative to the area of the whole garden, the ratio of water in northern gardens is very little. Northern gardens of the mountain performance in the garden of the mountain, garden mountain majestic, high, strong for the beauty. Mountain area is larger, higher height, of course, the Qing Dynasty royal and aristocratic also have the power, financial resources as well as manpower to create such a majestic mountain. Such as the Qionghua Island in the Beihai Sea, the Pile of Xiushan in the Imperial Garden, the Jingshan Mountain in the Jingshan Park, and the Wigwam in the Garden of the Prince Gong's House (Fig. 23), and so on. The most famous landscape effect of Mount Tai and the Great Wall are both mountain scenery. Mount Tai in Yue ranked first, Mount Tai Zen is the favourite of successive emperors, the garden of the isolated earth mountain is like Mount Tai. The Great Wall is famous for being located in Yanshan Mountain and connecting the passes, and there is often a view of the city pass in the garden, which is a reflection of the Great Wall.



Figure 23 Landscape of rockery in Gongwangfu, Beijing

The stone used in the garden around the north is mostly Fangshan stone, Taihu Lake stone, green stone, especially green stone with local characteristics, although Taihu Lake stone is the most favoured stone in the aesthetics, but it is not very common, because this place is far away from Jiangnan (Fig. 24). Thus, it was less common around Beijing and relatively more common around Shandong. Fangshan stone, which is similar to Taihu Lake stone, is known as Northern Taihu Lake stone, and is the most common because it is produced in Fangshan District of Beijing, which makes it easier to mine and transport, but it is not very common in Shandong. Green stone is more commonly used in Hebei and Beijing, both flat and vertical.

Figure 24 Taihu Lake Rock Landscape

In terms of plants, northern gardens in willow, acacia, pine, cypress, poplar, elm and other trees are used more species, of which the pine and cypress and willow most, because of cold hardiness, can over winter. Shrubs such as lilacs, begonias, peonies, peonies, peonies, lotus, most of which can not survive the winter, modern parks, many holly hedge shrubs are often used as boundary materials and winter scenery. ผิดพลาด! ไม่พบแหล่งอ้างอิง The main difference between the four seasons' scenery is that they are not the same as the others. The greatest difference in scenery between the four seasons is mainly manifested in the plants, with everything reviving in spring, trees spitting green, and a hundred flowers blooming at the beginning of mid-spring; willows shading in summer, and lotuses in full bloom; maple maples turning red in autumn, and mountains being dyed in full colour; and ten thousand trees withering in winter, and snowflakes flying in profusion (Fig. 25).



Figure 25 Landscape with plants in northern gardens

The structures of northern gardens have a close relationship with nature, which is mainly reflected in the relationship between temperature and wind direction and buildings. Cold in the north, cold is the most important function of the building, all six sides of the building show cold and snow characteristics. Such as four sides of the fence are used thick walls, small windows, is to reduce indoor heat loss. Whether it is a fence wall or a house wall, there are very few windows, and the sashes are made of glass, many of which are blind. The relationship between walls and columns is such that the columns are not as wide as the walls and are encased within the walls. Heating facilities such as underfloor heating and air conditioning are used not only for the interior of the building, but also for winterising the grass. The indoor and outdoor pools are kept from freezing in the winter, and in addition to floor heating, high-strength barge and pool bottom masonry means are used, such as high grade cement for materials and encryption of pool reinforcement to prevent freezing or expansion. Building roofs are used thick eaves, suspended ceilings, in the lookout brick lookout board on the mud plaster thicker, multi-layer, tile with thick tube tile, eaves are very shallow, mainly to prevent cold rather than to drain water. The beams are thicker, and one of the reasons for this is to prevent snow from accumulating in winter (Fig. 26). The orientation of buildings to the south and north was particularly important in northern gardens, where the long winters and the onset of cold spells in the north coincided with the hibernation of everything, and people used the buildings as the best shelters. Buildings orientated mainly to protect against the cold are orientated with the front façade facing south and the back facing north, with open doors and windows on the front and very few windows on the north side.

Figure 26 Architectural landscape of northern gardens

2.3.3 Lingnan Gardens

Lingnan Gardens are mainly located in Guangdong Province, such as: Qinghuiyuan in Shunde County, Yuyinshanfang in Panyu, and Keyuan in Dongguan. The scale is relatively small, and most of them are residential gardens, usually a combination of courtyards and gardens, with a greater proportion of architecture.

Dongguan Ke Yuan, located at [32 Ke Yuan Road, Guancheng, Dongguan City, Guangdong Province, China](#). It was first built in [Qing Dynasty in 1850](#). (1850), is one of the [one of the four major gardens in Lingnan](#). It is one of the four major gardens in Lingnan, together with [Qinghuiyuan](#) and the [Yuyin Mountain House](#) and [Liang Garden](#) are also known as the Liang Garden. Covering an area of 2,200 square metres and a floor area of 1,234 square metres, this garden shows the architectural style and garden art of the Lingnan region in the Qing Dynasty. The layout of the garden is staggered in height and twists and turns, with scenery in empty places and sparseness, fully reflecting the characteristics of Lingnan gardens (Fig. 27).



Figure 27 Plan of Dongguan Ke Yuan

Lingnan gardens are non-mountainous, and there are several kinds of garden mountains: first, cliffs in the Bureau of Cliffs and Waterfalls and Pools, such as the Nine Lions Mountain and Fenglai Peak in the Qinghui Garden (Fig. 28); second, drum stone islands in the Bureau of Drums and Pools, such as the Real Drum Stone in the Lake of Wanshi in Wanshi Botanical Gardens and the Plastic Drum Stone in the South Lake Park; third, reefs in the Bureau of Sea and Reefs, such as the Turtle Stone and the Lake Stone in the Liang Garden of Foshan; and, fourth, the general heap of mountains, such as the coral stone mountains in the Five Gongs Ancestral Shrine in Haikou. Lingnan gardens are less likely to pile up mountains with earth, even in modern parks, and are mostly made of water and mountains, such as the real mountains and waters in the gardens of Guilin, which are hardly transformed.



Figure 28 View of Fenglai Peak in Qinghui Garden

Lingnan gardens are water-based, water into a variety of patterns: First, the cliff waterfall pools and waterfalls in the Bureau, such as the White Swan Hotel in the hometown of the water and water pools as well as the Guangzhou Resort Hotel's Three Fold Springs; second is a lake, such as the West Lake in Huizhou, Chaozhou, Leizhou, Fuzhou, Quanzhou, Star Lake in Zhaoqing, Guangzhou, Liuhua Lake, East Mountain Lake, and Liwan Lake, etc.; third is the pools, and the cliff waterfalls and pools Bureau is different from the absence of waterfalls, the water surface is broad, such as the Dragon Lake and Lei Lake in the Longtan Park, Liuzhou Park's Longtan and Leitan, Taiwan's Sun Moon Lake; four is the flowing goblet of curved water, such as Guangzhou Sculpture Park in the Yunxi; five is the well spring, such as Guangzhou's Lianquan and Greed Spring, Liuzhou Yufeng Park, three sisters in the courtyard of the well bar, etc.; six is a boat pool.

Architecture from the type of view, there are towers, boat halls, corridor bridges, etc., towers originated from the bunker, such as the garden can be invited to the Mountain Pavilion, Qinghui Garden Liufen Pavilion and Liyuan Yupei building; invited to the Mountain Pavilion's design gives full consideration to the aesthetic principles of the classical gardens, although the volume of the larger, but through the careful layout and decoration, such as the front of the room with the double clearing of the bake, the side of the [Corridor](#) And the platform accompaniment, make the invitation to the pavilion appears both towering and harmonious, and the overall atmosphere of the garden complement each other. Yushan Pavilion is not only the visual focus of the garden, but also an important window to understand the architectural art of Lingnan gardens (Figure 29). Located in the centre of Qinghui Garden, the Liufang Pavilion is a three-storey pavilion with an elegant and luxurious architectural style and a complex and exquisite building structure. The name "Liufang Pavilion" comes from the fact that every spring, when the garden is full of flowers, the garden authorities set aside a flower bed in front of the pavilion for viewing and appreciation (Figure 30).



Figure 29 Ke Yuan Inviting the Mountain Pavilion



Figure 30 Liufen Pavilion in Qinghui Garden

Boat in addition to the Jiangnan garden-like stone boat, there are Lingnan boat, such as Baomo Garden of the purple hole boat, more distinctive boat hall, the living room combined with the building, slightly boat meaning, mostly for the Miss Qianjin with, so commonly known as the Miss building, such as Qinghuiyuan and Yuyinshanfang is also. Pavilion practice is very irregular, strange, or with the corridor, wall enclosure, or with the corner beams and square interspersed, or minority style, Russian style or Western European style. Bridges in classical gardens are mostly combined with the corridor to become a stone arch bridge on the roof of the corridor, such as Yuyinshanfang as a typical, and there are other minority wind and rain buildings and mountainous areas of the cable-stayed bridges. ผิดพลาด! ไม่พบ

แหล่งอ้างอิง The combination of the bridge is the same as that of the corridor, and the stone arch bridge. On the combination of ways to see, with "high walls and cold alleys" to the building compound for multi-in multi-courtyard combination, or with "even room Bo Xia" to the building and courtyard as one; on the monolithic form of the view, more high columns and bases, wide gable corridors, thick walls, green tile roofs, tiles, cocked ridge, flower glass windows, brick windows, and other features, such as the roof of the bridge, the roof of the bridge. Flower glass windows, brick windows, grey plastic doors; on the decorative point of view, the most typical is the "three carvings and three sculptures": wood carving, brick carving, stone carving, ceramic sculpture, clay sculpture, grey sculpture. Classical gardens in the three carvings and three plastic all over the garden, in the door, door couplets, window lintels, plinths, pedestals, gables, cornices, cornices, moon beams, melon pillars, bird for the bird, sitting on the leaning, balustrades, ridges, etc., which to grey and brick carvings of the most Lingnan taste (Figure 31), such as Qinghui Garden in the "Su Wu Mu sheep" in the grey and Panchiao Garden in the fruit and melons in the brick carvings of the leakage window.

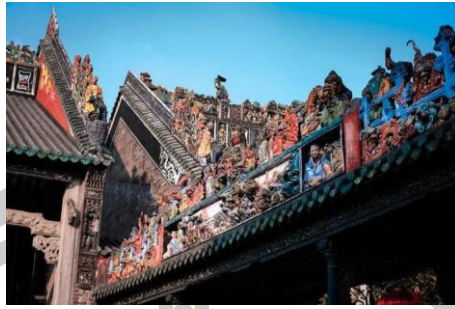


Fig. 31 Traditional grey sculpture buildings in Lingnan gardens

Plants are summarised in the phrase "four seasons of flowers, tropical scenery", with characteristic trees such as palm-like king coconut, false betel nut, king palm and bottle coconut; vine-like gunnera, nightshade, wisteria, cuspidata and greenery; shade-tolerant orchids, bananas, taro, ferns and anemones; and banyan and lychee trees.

Lingnan garden construction attaches importance to site selection, unlike the garden in the south of the Yangtze River, Lingnan garden tends to leave the downtown area, the garden house will be built in the natural environment of real mountains and water, and even the house garden into the nature and become part of it. This principle of site selection reflects the garden builder's reverence for nature and the pursuit of life, paying no attention to artificially created fake mountains and running water. The spatial characteristics of Lingnan garden is a combination of inward and diffusion type, the layout of the courtyard is roughly building around the court, the front courtyard, the backyard, the study side of the court, the front house and the backyard and other forms, and the scale of the garden is relatively small, most of the mansion garden, generally for the combination of courtyards and courtyards, and the weight of the building is larger. This layout of various forms, the combination of more dense and compact than the Jiangnan gardens, which is mainly to adapt to the hot climate, to achieve the effect of shade, but also to facilitate the rainy season of internal contact and defence against typhoon attacks. The architectural forms are light, transparent and simple, and beautifully decorated. The flat roofs of the buildings are often transformed into "rooftop gardens" to lower the indoor temperature and beautify the environment. The transparency and openness of the buildings are better than those in Jiangnan, and the appearance of the image is richer in light and lively interest. In terms of detail treatment, Lingnan gardens use a lot of wood carving, brick carving, ceramics, grey plastic and other folk crafts, door and window lattice fan, flower cover leakage window are carved in detail, and then inlaid with a set of colour glass made of patterns and motifs, showing compatibility between Chinese and Western Lingnan cultural characteristics.

Through the above analysis can be seen Lingnan garden has strong regional characteristics, its formation and development depends on the local topography and climate as well as the prosperous economic situation, the development of the Ming and Qing dynasties, Lingnan region's commodity economy is very developed, especially Guangzhou has become an important port for foreign trade, which has brought economic prosperity and cultural exchanges. Moreover, Lingnan region in history is the window of Sino-foreign exchanges, as early as after the Tang Dynasty and Southeast Asia and the rest of the world have frequent trade and commerce, the

influence of foreign culture is more obvious. The style of Lingnan gardens is therefore open and diverse, absorbing the essence of Chinese and Western cultures. And the Lingnan gardens built in modern times are not considered to be traditional Chinese classical gardens in the full sense of the word, but a product of the combination of Chinese classical culture and foreign culture based on the topography, climate and humanistic characteristics of the times.

2.3.4 Temple Gardens

Temple garden first arose in the Wei Jin and North and South Dynasties period, in the Eastern Jin Dynasty Taiyuan years (376 ~ 396), the monk Huiyuan in Mount Lu to create the East Forest Temple. According to huijiao "monks biography" said: "but negative incense burner of the peak, alongside with the waterfall of the ravine; still stone base, that is, the pine planting structure, clear springs around the steps, white clouds in the room. Rest in the temple in a separate Zen forest, Sen tree smoke condensation, stone path moss." This is already in the natural landscape environment set up artificial Zen forest pioneer. The Luoyang Galaxy Records describes many temples in and around the city of Luoyang in the Northern Wei Dynasty: "the halls are magnificent, the forests are lush"; "the courtyard is lined with bamboos, and the eaves are brushed with pines"; "the slanting peaks are entered, and the curved swamps are surrounded by the halls". The most famous of these temples is the White Horse Temple, which is located in [Henan Province](#). The most famous of them is the Baima Temple, located in Henan Province, by National Highway 310 in Baima Temple Town, Chanshuihe Hui District, Luoyang City, which is the birthplace of Buddhism in China. [Eastern Han Dynasty](#) It was built in the 11th year of Yongping (68 AD), and was the first government-run temple built after the introduction of Buddhism to China (Fig. 32). One can imagine the grandeur of the temple gardens in the city at that time. From the two Jin Dynasty, the North and South Dynasties to the Tang and Song Dynasties, with the prosperity of Buddhism and Taoism, the development of temple gardens is very considerable in terms of quantity and scale, and almost all famous mountains have such gardens.

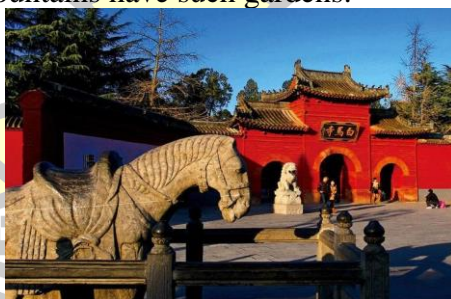


Figure 31 Baima Temple, Luoyang

The emergence and development of temple gardens has a number of factors:

- ① As the world palace of the "gods", the temple garden image depicts the Taoist "fairyland" and the Buddhist "world of bliss". The
- ② Taoism's metaphysical view and Buddhism's metaphysical, resulting in Taoist priests and monks worship nature. Temple site of famous mountain resorts, carefully create a garden landscape, both the needs of religious life, but also China's unique religious philosophical thinking product.
- ③ two Jin Dynasty, the North and South Dynasties of the aristocrats have "house for the temple" of the fashion. The first house containing the mansion was

transformed into a temple, which became a ready-made garden of the early temples. In ancient times, temples were not only places for religious activities, but also objects for viewing religious art. The development of temple gardens combined the pilgrimage to the mountains for incense with the sightseeing in the gardens, and played the role of attracting visitors with sightseeing. ⑤ The feudal ruling class made use of religion and financed it, and the believers tended to "spend all their money to go to the monks and go bankrupt to tend to the Buddha". Temples have strong economic power, with the material conditions for the development of the garden.

ผิดพลาด! ไม่พบแหล่งอ้างอิง The temple had strong economic power and possessed the material conditions to develop gardens.

Temple garden with the imperial courts, private gardens compared, there are a number of characteristics: ① it is different from the forbidden garden for the monarch's enjoyment and house garden belongs to the private sector, but for the majority of visitors, visitors, in addition to the dissemination of religion, with the nature of the public excursion. ② in the life of the garden, the imperial court often due to the change of dynasty and destroyed, private gardens are inevitably affected by the decline of the family business and loss. Relatively speaking, the temple garden has a more stable continuity. Some of the large gardens of the famous temples and monasteries often through a number of centuries of continuous development, constantly expanding the scale, landscaping, the accumulation of religious monuments, inscribed under the chanting of successive generations, comment. Natural landscape and human landscape intertwined, so that the temple garden contains historical and cultural values. Nanjing Qixia Temple was built in the period of the North and South Dynasties, and has a history of more than 1,500 years, and is one of the famous Buddhist temples in China. After many expansions and renovations, the scale of the temple has gradually expanded to become a large religious garden. Qixia Temple complements the natural landscape of Qixia Mountain, forming an organic combination of natural and humanistic landscapes, with both secluded garden scenery and rich religious and cultural connotations. Famous for its long Buddhist history and rich cultural deposits, the temple retains a large number of grottoes, statues, scriptures and inscriptions of great historical and cultural value. Such as [Qixia Temple Relic Pagoda](#) was built for the [South Tang Dynasty](#) It is one of the oldest stone pagodas south of the Yangtze River and the largest relic pagoda in China. Built in the Sui Dynasty, Sui Renshou two years (602), is the temple's most valuable ancient buildings (Figure 33). ③In terms of site selection and construction, palace gardens were mostly limited to the outskirts of Kyoto, private gardens were mostly adjacent to the mansions, while temples could be scattered over a wide area, which made temples have the conditions to select the famous mountain resorts with superior natural environments, and "monks occupying the famous mountains" became a regular phenomenon in the history of Buddhism in China. As the temple garden mainly relies on natural scenery to compose the landscape, the garden has accumulated a wealth of design techniques to deal with the relationship between the building and the natural environment. Traditional temple gardens are particularly good at grasping the architectural "artificial" and natural "natural interest" of the integration. Good at conforming to the topography of the foundation of the frame house; good at overlapping construction due to the situation of the mountain; good at controlling the scale of the building, to master the appropriate volume. Different

features of the landscape, to the temple garden provides different characteristics of the landscape materials and environmental implications. As one of the ten famous Buddhist holy places Emei Mountain Emei Mountain, located in Sichuan, is Puxian Bodhisattva It is famous for its beautiful scenery and rich Buddhist culture, and has many ancient temples, such as the Wannian Temple , and the Zhiguo Temple and Qingyin Pavilion etc. The terrain of Emei Mountain is steep, and its geomorphological features also influence the architectural style and layout of the temples. Due to the undulating terrain, the temples have a variety of architectural styles. The Temple of the Annunciation is located at the foot of Emei Mountain, where the terrain is relatively gentle, but the surrounding mountains gradually rise, creating a sense of encirclement. The layout of the temple follows the trend of the mountain and is built according to the mountain, so that the whole temple complex presents a sense of gradual elevation of the hierarchy. The main buildings of the temple are arranged along the mountain, starting from the main gate and going deeper and deeper, which not only conforms to the hierarchical sense of "entering the mountain gate" as preached by Buddhism, but also makes full use of the natural conditions of the mountain (Fig. 34).

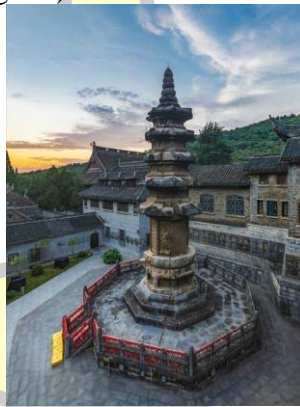


Figure 32 Nanjing Qixia Temple Relic Pagoda



Figure 33 Emeishan Reptory Temple

Temple garden has a very clear use and religious colours, so the attributes of the garden layout are distinct, the temple garden is generally divided into two parts, the first half of the religious buildings (religious activity space), first of all, to meet the exclusive use of the temple that is, the monks of the daily religious activities, practicing and eating and living, etc., the building is basically made up of the Buddha Hall, Dharma Hall, bells and drums, towers, pylons, pavilions, with a serious religious atmosphere; the second half of the garden landscape, mostly arranged in the back or on both sides to form a quiet environment for cultivation. The second half of the

building is the garden landscape, mostly arranged in the back or both sides, with natural landscape and vegetation to form a quiet environment for cultivation. This not only meets the functional needs of religion, but also creates a natural atmosphere suitable for meditation and cultivation, but the garden landscape is generally designed to match the layout and functional needs of the building, with a certain sense of aesthetics but the form is relatively simple, and more for the purpose of setting off the main scenery of the building. Influenced by religious colours and uses, the plants planted also have religious symbolism, for example, pine and cypress symbolise longevity and immortality, bamboo symbolises purity and modesty, and the lotus flower symbolises purity and immorality in Buddhism. Therefore, the temple garden in the choice of plants is also relatively single.

Each garden style has its own unique characteristics, reflecting the cultural, geographical and philosophical influences of its time and place. And features such as layout, spatial organisation, architectural elements, plant selection, symbolism and artistic themes in these gardens distinguish the different garden styles. By analysing the cultural connotations and gardening techniques used in the styles of China's four major garden types, it is possible to discover the craftsmanship, engineering and artistic skills used by ancient garden designers, whose techniques of landscaping, architecture, horticulture, water management and decorative arts were an indispensable part of classical Chinese garden design. By summarising and analysing the stylistic categories of gardens, we will gain a comprehensive understanding of garden design, sort out the historical and cultural background, and understand the techniques used in different garden styles. We will learn from their experiences, take their wisdom and essence, and master their design concepts, cultural connotations and gardening techniques.

2.4 Summary of the chapter

This chapter collates four major classical garden style types, namely, Jiangnan private gardens, northern royal gardens, Lingnan gardens and temple gardens, by summarising and analysing classical Chinese gardens. Through an in-depth analysis and summary of the origins of these four major types of gardens, the development history of each stage, cultural influences, as well as the gardening techniques, elements and innovations of each development stage, the following conclusions are drawn:

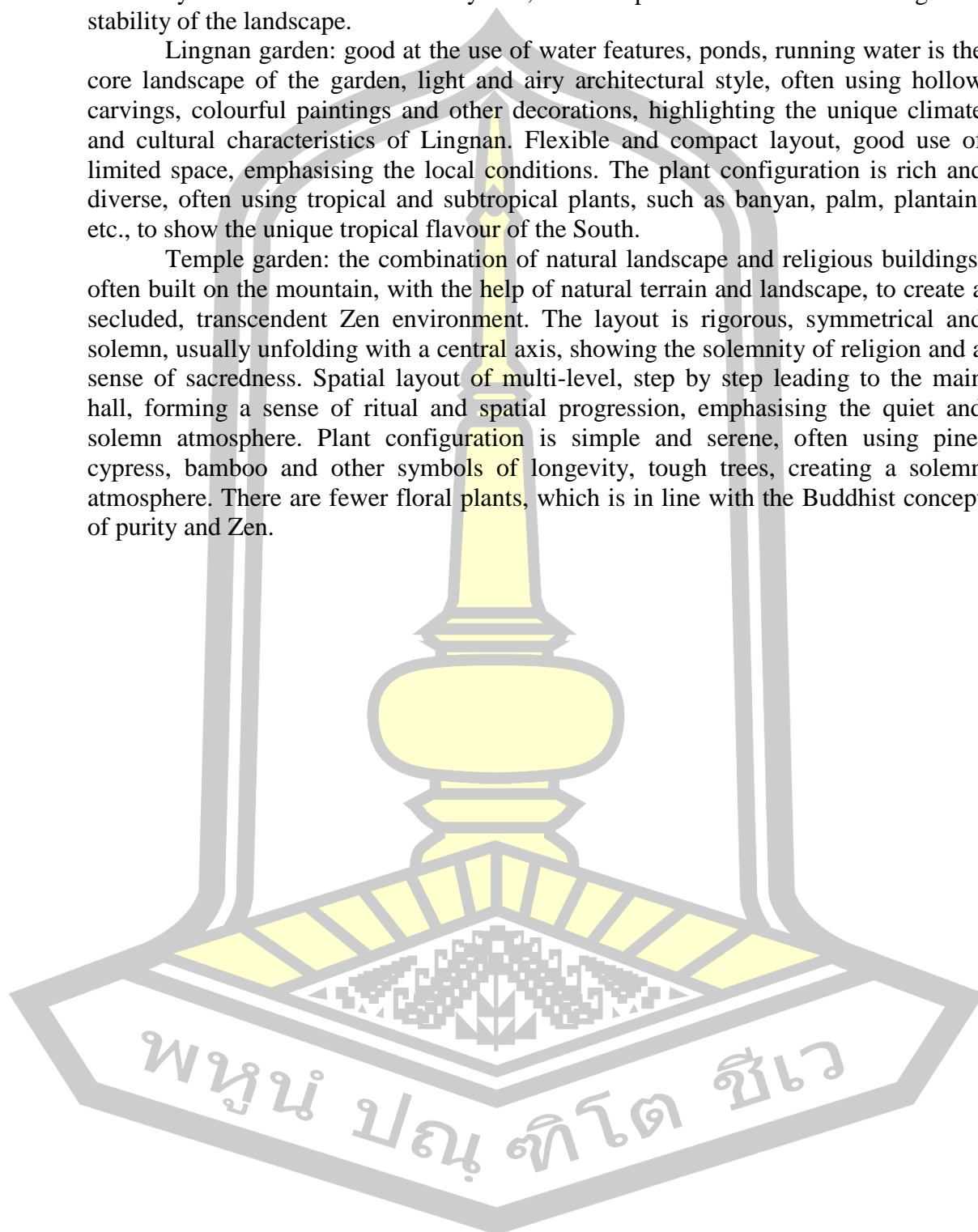
Jiangnan private home: good use of stacked stones, water, the combination of architectural techniques to create a natural landscape, focusing on the division of space and transition, the pursuit of "small in the big" effect, the layout is flexible, through the clever landscape arrangements, making the garden inside the winding paths, the formation of a rich landscape levels. The plant configuration is designed for seasonal changes and cultural symbolism.

Northern royal gardens: layout pay attention to symmetry and grandeur, often using a symmetrical design of the central axis, open space, the axis is obvious, focusing on the overall sense of atmosphere, stressing the order and hierarchy, in order to show the royal grandeur and majesty. Emphasis on the status and functionality of the building, the landscape in the garden is mostly artificial. Stacked mountains and water on a large scale, the rockery is mostly symbolic presence, water layout is based on large lakes, broad water surface, forming an open water effect. Plant configuration focuses on regularity and solemnity, often choose pine, cypress,

acacia and other hardy species, trees are neatly arranged, highlighting the sense of solemnity. Plant decorative relatively less, more emphasis on function and long-term stability of the landscape.

Lingnan garden: good at the use of water features, ponds, running water is the core landscape of the garden, light and airy architectural style, often using hollow carvings, colourful paintings and other decorations, highlighting the unique climate and cultural characteristics of Lingnan. Flexible and compact layout, good use of limited space, emphasising the local conditions. The plant configuration is rich and diverse, often using tropical and subtropical plants, such as banyan, palm, plantain, etc., to show the unique tropical flavour of the South.

Temple garden: the combination of natural landscape and religious buildings, often built on the mountain, with the help of natural terrain and landscape, to create a secluded, transcendent Zen environment. The layout is rigorous, symmetrical and solemn, usually unfolding with a central axis, showing the solemnity of religion and a sense of sacredness. Spatial layout of multi-level, step by step leading to the main hall, forming a sense of ritual and spatial progression, emphasising the quiet and solemn atmosphere. Plant configuration is simple and serene, often using pine, cypress, bamboo and other symbols of longevity, tough trees, creating a solemn atmosphere. There are fewer floral plants, which is in line with the Buddhist concept of purity and Zen.



Chapter III

Analysis of the similarities and differences between the four major classical gardens in Suzhou

Suzhou gardens are famous both at home and abroad. This is not only because there are many ancient gardens preserved in Suzhou today, but also because of its long history of gardening. As outstanding representatives of Suzhou classical gardens, the four major classical gardens of Suzhou embody the essence of Jiangnan gardens. They have similarities and characteristics in terms of gardening techniques, layout and cultural conception. The common point is that they all uphold the concept of "learning from nature" and create a unique spatial experience through the ingenious combination of mountains, rivers, buildings, plants and landscapes. At the same time, these four gardens are different in spatial layout, cultural connotation and specific design techniques. By analyzing their similarities and differences, we can deeply understand the design essence of Suzhou classical gardens and their important position in the history of Chinese gardens.

3.1 History of Suzhou Classical Gardens

As a carrier of culture, the generation and development of gardens require an economic and cultural environment that is compatible with them. From the history of the development of ancient gardens in my country, wherever gardening activities flourish, there are generally superior natural conditions, good material foundations and profound cultural roots. And this has never been absent in the social evolution of Suzhou. Since the Spring and Autumn Period, Suzhou was built as a city and capital by the State of Wu. The city's location and planning were reasonable, and the subsequent social development process was not affected by large-scale wars and declined or relocated and rebuilt. Therefore, in the long historical evolution, the city's location and pattern have basically not changed much. The superior natural environment and climatic conditions of the local area have enabled the economic level to continue to improve. Under such an economic and cultural background, the development of gardens has a stable and solid foundation. According to relevant historical records, since the construction of the palace gardens by the State of Wu in the Spring and Autumn Period, there have been thousands of famous gardens, which are widely distributed in the cities and towns of Wu. As for the mansions and courtyards with only a pool, a few peaks, and a few flowers and trees, there are countless. It is this extremely common gardening practice for thousands of years that has made Suzhou's garden art mature. Therefore, reviewing the history of the development of Suzhou gardens will be helpful in deepening our understanding of Suzhou classical garden art.

Suzhou gardens originated from the pre-Qin to Han dynasties (11th century BC-220 AD), during which Suzhou gardens were in their infancy. The earliest prototype of ancient Chinese gardens can be traced back to the Western Zhou Dynasty and the Spring and Autumn and Warring States Periods. During this period, gardens mostly existed in the form of "gardens" for princes and nobles, used as places for hunting, entertainment, and raising rare animals and plants. In the Han Dynasty, private gardens began to appear, especially some literati and scholars began to build small gardens around their residences, reflecting the early budding of garden art.

Representative gardens: Wu Wang Garden , a private garden for nobles, Wu Wang Garden of Wu State. According to "Wu Di Ji" (Figure 35) , King Fuchai of Wu built Gusu Terrace in Suzhou, with a wide garden under the terrace for hunting and entertainment.



Figure 34 Records of Wu"

According to the literature, the earliest hunting place of the King of Wu during the Spring and Autumn Period was Changzhou Garden, which can be traced back to the Spring and Autumn Period, specifically before the Common Era, and is located in the southwest of Suzhou City, Jiangsu Province, and north of Taihu Lake. This site is recorded in ancient literature, indicating that it is the earliest of these buildings (Figure 36).



Figure 35Current status of Changzhou Garden

Guanwa Palace is the most famous palace garden of the Wu Kingdom in the Spring and Autumn Period . It is located on [Lingyan Mountain](#) in Suzhou, Jiangsu [Province](#) . It was built by King Fuchai of Wu in the Spring and Autumn Period to favor [Xi Shi](#) (Figure 37). The remains and historical sites of the King of Wu that still exist in the garden include the King of Wu Well, the Dressing Table, the Flower [Pond](#) , [the Moon Pond](#) , the Zhiji Well, [the Longevity Pavilion](#) , the Yinghui Pavilion, etc.



Figure 36 Current status of Xishi Hall in Guanwa Palace, Lingyan Mountain, Suzhou

Gusu Terrace was built later. It was when Fu Chai was preparing to build Gusu Terrace that he got the best wood and needed to expand the size and scale of Gusu Terrace, which cost more resources and time to complete. Gusu Terrace finally took five years to complete, which shows the national strength of Wu at that time and Fu Chai's pursuit of pleasure (Figure 38).



Figure 37 Current status of Gusu Terrace

The gardens of this period were mainly for the exclusive use of the nobility, emphasizing large scale, used for hunting and cultivating rare plants and animals, and had certain functionality. The gardens were highly functional, mainly serving activities such as hunting and picking; the large scale of the venues was mainly to show power and wealth; the scenery was mainly natural landscapes, and complex gardening techniques had not yet developed.

During the Wei, Jin, Southern and Northern Dynasties (220-589), with the popularity of Wei and Jin metaphysics and Taoist thought, literati gardens gradually emerged. The "Gu Pijiang Garden" of the Eastern Jin Dynasty can be regarded as the most successful example of the practice of gardening in pursuit of nature during this period (Figure 39). The ancestors of the Gu family originally lived in Yue, and later moved to Wu. They were a prominent family in the local area during the Han Dynasty. During the Eastern Jin Dynasty, Gu Pijiang served as the county Gongcao and Pingbei Canjun, and was a local important figure with considerable status. His garden was famous for its bamboo trees and strange rocks at the time, and was known as "the best of the ponds, pavilions, forests and springs, and the best in Wuzhong". It is said that Wang Xianzhi, a famous calligrapher in the Eastern Jin Dynasty, went to Kuaiji and passed by Wumen. He visited the garden. Although he had never met the owner, he still entered the garden and "instructed the owner on likes and dislikes, as if no one was around." (Liu Yiqing's "Shishuo Xinyu") Given Wang Xianzhi's fame at the time, he was also attracted by it, which shows the reputation of "Pijiang Garden".



Figure 38 Photo of the Qing Dynasty edition of "Pijiangyuan Yiji"

As an important cultural and economic center in the southeast, Suzhou's garden art began to be favored by the literati class. Suzhou has superior geographical conditions, dense water networks, and beautiful mountains and rivers, making it an ideal place for garden construction. The literati class began to pursue a secluded life and expressed their yearning for nature and secluded life through gardens. The characteristics of gardens during this period are seclusion from nature, emphasizing returning to nature, and pursuing a transcendental artistic conception; small and exquisite, the area of literati gardens is relatively small, but more attention is paid to the combination of culture and nature; gardens are combined with poetry and painting, making gardens not only a place for sightseeing, but also a space for literati poetry creation and communication. It was also during this period that private gardens began to appear in Suzhou, and the prototype of literati gardens gradually took shape. Although there are few records of the actual garden sites of literati gardens in the Wei and Jin Dynasties, it can be inferred that the gardens of this period appeared in a simple and natural form, and the gardens also began to have a literati atmosphere.

The Tang Dynasty (618-907) was the initial development period of Suzhou gardens, especially temple gardens, which had an important influence on the development of Suzhou gardens. Temple gardens in Suzhou area formed a gardening style that was harmonious with nature by borrowing scenery and arranging them close to mountains and rivers.

Temple gardens in Suzhou began to develop, especially Tiger Hill, which became one of the famous garden attractions during this period (Figure 40). Tiger Hill is based on natural landscapes, and its garden style incorporates the characteristics of Tang Dynasty temple gardens. Temple gardens are not only places for religious activities, but also scenic spots for people to visit and relax. The characteristics of the gardens are that temples and landscapes are integrated. Temple gardens use natural landscapes, borrow mountains and waters, and form a natural style; the architectural layout in temple gardens is organically combined with landscapes to form a quiet environment for practice; temple gardens with a strong cultural atmosphere gradually become important places for cultural activities and sightseeing for scholars.



Figure 39 Suzhou Tiger Hill Park

During this period, Suzhou gardens were more of a place for temple monks and scholars to visit and meditate. Royal gardens entered a period of prosperity in the Tang Dynasty. Although Suzhou did not have direct royal gardens, the ideas and techniques of garden design during this period had a potential impact on Suzhou gardens, especially in terms of architectural layout and space treatment.

The Song Dynasty (960-1279) was the period when Suzhou gardens began to flourish. With the economic prosperity and cultural development, Suzhou became an

important cultural and economic center, and the lifestyle of literati and scholars profoundly influenced the direction of garden art. Private gardens in Suzhou during the Song Dynasty pursued natural interest in layout, focusing on the layering of landscapes and the fluidity of space.

The Song Dynasty was the initial prosperous period of Suzhou gardens. The rise of the literati class prompted the widespread construction of private gardens. One of the earliest existing gardens in Suzhou classical gardens is Canglang Pavilion, which was built by the Northern Song poet Su Shunqin in 1044 (Figure 41) . The scenery in the garden is quiet and secluded, with a vast water surface. It is dominated by natural mountains and waters, forming a poetic atmosphere of "sparse shadows slanting across the shallow water, and faint fragrance floating in the moonlight at dusk". The garden characteristics of Canglang Pavilion are the combination of nature and humanity . The gardens of the Song Dynasty emphasized the atmosphere of literati, and the combination of mountains, rivers, plants and poetic and painting artistic conception; the layout of the garden pays attention to the connection between internal and external spaces. At this time , the use of borrowed scenery techniques gradually matured , and the borrowed scenery techniques were used to integrate the landscape in the garden with the surrounding natural landscape ; the space in the garden is clearly layered , and multiple spatial senses are formed through mountains, rocks, waterscapes and buildings.



Figure 40 The gardening technique of Suzhou Canglang Pavilion using borrowed scenery

During this period, the concept of Suzhou garden construction gradually matured, and gardens were regarded as a kind of artistic creation, emphasizing the techniques of "borrowing scenery" and "stacking mountains and arranging water". The rise of literati gardens represented that gardens were not only a space for leisure and entertainment, but also a place for poetic life and spiritual expression.

The development of Suzhou gardens during the Yuan Dynasty (1271-1368) was rather special. Due to the influence of the Mongolian rulers of the Yuan Dynasty, many cultural activities were suppressed for a time, but garden art did not completely stagnate.

The Lion Grove Garden was built by Zen Master Tianru in 1342 and is the most representative Yuan Dynasty garden in Suzhou. The Lion Grove Garden is famous for its strange stones. A large number of Taihu stones of different shapes are stacked in the garden, forming a complex mountainous landscape. The stone scenery in the garden is intricate and gives people a labyrinth-like feeling, reflecting the Yuan Dynasty's abstraction of natural landscapes. and generalizations. The garden characteristics of the Lion Grove are reflected in the innovation of stone-laying techniques . The rockery stone-laying technique in the Lion Forest has reached an unprecedented height. Strange stones are scattered throughout the garden, becoming

an iconic feature of the Yuan Dynasty gardens ผิดพลาด! ไม่พบแหล่งอ้างอิง; secondly, the complex and exquisite stone-laying techniques The spatial layout makes the passages in the garden twist and turn, and the scenery changes with each step, paying attention to the diversity and change of the landscape; the Lion Grove is a Zen temple garden, and the religious atmosphere is influenced by the rulers. The layout of the garden implies religious symbols, especially the rockery, which symbolizes the lion in Buddhism. Metaphor (Figure 42).



Figure 41 The strange stone landscape of Suzhou Lion Grove

In the Suzhou gardens of the Yuan Dynasty, some more compact small gardens appeared, reflecting the highly developed and flexible application of the "borrowing scenery" technique. During this period, the design of gardens paid more attention to practical functions, and the spatial design of gardens tended to be more free and flexible , which laid the foundation for the prosperity of gardens in the Ming and Qing Dynasties.

The Ming Dynasty (1368-1644) was the heyday of Suzhou's classical gardens and a glorious period in the history of Suzhou gardens. The Ming Dynasty was a time of economic prosperity, the rise of the literati class, the peak of cultural and artistic development, and the large-scale development of garden art. A large number of private gardens were built in Suzhou, and typical literati gardens such as the Humble Administrator's Garden and the Lingering Garden were built during this period, becoming models for later generations to emulate.

The Ming Dynasty was the heyday of Suzhou gardens, and many famous private gardens were built during this period. The Humble Administrator's Garden is a representative work of Suzhou gardens, built by Wang Xianchen, a Ming Dynasty censor in 1509. The Humble Administrator 's Garden is dominated by natural landscapes, with a broad layout, integrating waterscapes, rockery, pavilions and towers, presenting an elegant Suzhou garden style. The garden features of the Humble Administrator's Garden : Because Ming Dynasty gardens pay attention to the creation of natural landscapes, the Humble Administrator's Garden imitates the beauty of nature through a large number of waterscapes, winding waterways and natural rocks ผิดพลาด! ไม่พบแหล่งอ้างอิง; the architecture and landscape are integrated , and the architectural layout is flexible and changeable, which complements the landscape in the garden; the spatial levels are diverse , and multiple levels are formed through buildings, courtyards and ponds, giving people a rich visual experience (Figure 43) .



Figure 42 Suzhou Humble Administrator's Garden Liuting Pavilion

The garden design of this period paid attention to delicacy and refinement, and waterscapes, rocks, plants, and buildings were cleverly combined to form a "landscape-in-one" layout. The maturity of gardening skills is reflected in the high level of generalization and abstraction of nature, and the philosophical thought of "the unity of nature and man" is demonstrated through gardens.

During the Qing Dynasty (1644-1912), Suzhou gardens reached a mature stage and further innovated and developed on this basis. During the heyday of Kangxi and Qianlong, Suzhou was an economically developed area, and the style of garden art tended to be refined and complex. Private gardens are still the main form, but the luxurious style of royal gardens also had a certain influence on Suzhou gardens.

Suzhou gardens entered a mature period in the Qing Dynasty. The Linger Garden is a typical representative of this period. It was built in the late Ming Dynasty and became one of the four famous gardens in Suzhou after being renovated in the Qing Dynasty. The Linger Garden is famous for its unique architectural layout and rockery art. The landscape in the garden is staggered, especially famous for its stone stacking skills and exquisite architecture. The garden features of the Linger Garden : exquisite details . The gardening skills of the Qing Dynasty tended to be refined. The architectural decorations, carvings, and window panes in the Linger Garden all showed a high level of art (Figure 44) ; the stacking of mountains and water also reached its peak . The layout of the rockery in the garden is intricate, and the waterscape is smart and beautiful ; the garden is also rich in cultural symbols . The gardens of the Qing Dynasty focused on cultural connotations. The landscape in the garden often has philosophical and poetic meanings, reflecting the cultural cultivation of scholars.



Figure 43 Architectural decoration and window panes in Suzhou Liuyuan Garden

The gardens of this period not only had more refined spatial layout, but also paid attention to the architecture, decoration and plant configuration in the gardens. Famous gardens such as the Master of the Nets Garden and the Art Garden were well preserved and developed during this period.

During the late Qing Dynasty (mid-to-late 19th century), Suzhou gardens experienced many upheavals, especially during the Taiping Rebellion (1850-1864).

As an important battlefield, Suzhou changed hands many times, and many gardens were severely damaged in the war. Due to the impact of the Taiping Rebellion, Suzhou's private gardens and public buildings were affected, and many gardens were destroyed or abandoned. Famous gardens such as Yiyuan and Humble Administrator's Garden were partially destroyed in the war. In addition, a large number of gardens were looted or converted to other uses, and some gardens were completely abandoned, and the buildings and garden landscapes were difficult to repair. In the Republic of China period (1912-1949), as China entered the warlord melee and the Anti-Japanese War, the situation of Suzhou gardens was still not optimistic. Later, the Japanese invaders launched the war of aggression against China. During the Anti-Japanese War (1937-1945), Suzhou was an important target of the Japanese invasion of China, and the garden architecture and landscape were destroyed again. The Japanese invaders not only occupied Suzhou, but also used some gardens as military garrisons and military purposes, resulting in increased damage. After the victory of the Anti-Japanese War, the civil war period (the Kuomintang-Communist War period, 1945-1949) began. The protection measures for gardens were weak, and many gardens were left unattended and further abandoned. Although the wars from the late Qing Dynasty to the Republic of China brought huge losses to Suzhou gardens, after the founding of New China, the government began to pay attention to the protection and restoration of classical gardens. Since the 1950s, gardens such as the Humble Administrator's Garden, the Lingering Garden, and the Master of the Nets Garden have been listed as cultural relics protection units. The government has invested funds and manpower to carry out restoration work and gradually restore their historical appearance. By the end of the 20th century, Suzhou gardens became a world cultural heritage and received more comprehensive protection and restoration, and finally restored their historical appearance. With the policy support of cultural heritage protection, Suzhou gardens have been further restored and protected. As a representative of Chinese classical gardens, Suzhou gardens are not only a witness to history and culture, but also an important reference for contemporary garden design. In the process of modernization and urbanization in China, the design concept and gardening techniques of Suzhou gardens still influence the design of modern public landscapes and living spaces.

The development of Suzhou gardens reflects the changes in Chinese society and culture. The representative gardens of each era have innovated on the basis of inheriting the gardening skills of their predecessors, showing a unique style of the times. Suzhou gardens began to sprout from the literati gardens of the Wei and Jin Dynasties, and then to the natural integration of temple gardens in the Tang Dynasty, and then to the prosperity and maturity of the Song, Ming and Qing Dynasties, forming a unique garden art. The development of Suzhou classical gardens has gone through the process of germination, prosperity, decline and revival. Suzhou gardens not only occupy an important position in traditional Chinese garden art, but the gardening skills and concepts of these gardens have profoundly influenced the development of Chinese classical gardens. They have also influenced the garden design in other parts of China through delicate gardening techniques and profound cultural connotations. Modern Suzhou gardens continue to play their unique cultural and artistic values in protection and innovation. And continue to play an important role in modern urban landscape design.

3.2 Gardening techniques and concepts of the four major classical gardens in Suzhou

3.2.1 Design Concepts and Philosophical Basis of Suzhou's Four Classical Gardens

Suzhou classical gardens have many common design concepts and philosophical foundations, but each garden also has its own unique features and individual characteristics. The concept of Suzhou classical gardens is deeply rooted in traditional Chinese aesthetics, culture and philosophical principles, especially Taoism, Confucianism, and sometimes Buddhism. The design of the garden is not only a physical space, but also a reflection of the idealized harmonious relationship between man and nature.

Taoist gardens emphasize natural beauty and create landscapes that mimic and idealize nature. Rocks, water, plants, and architecture are arranged into a harmonious and balanced whole. Inspired by Taoist thought, garden design embodies the concepts of flow and change. Winding paths, gurgling water, and changing seasons reflect the dynamic and ever-changing nature of the universe. Taoism values simplicity and tranquility, which is reflected in the garden's serene atmosphere and simple design elements. The garden provides a peaceful place for people to escape from the complexities of urban life.

Confucianism emphasizes self-cultivation and moral development. The garden is a space for reflection, learning, and personal growth, encouraging visitors to think about and cultivate their own virtues. The design of the garden also reflects the Confucian ideals of order and harmony in social relationships. Pavilions and gathering spaces facilitate social interaction and the exchange of knowledge. The garden incorporates traditional Chinese architectural styles, literary allusions, and artistic elements, reflecting respect for cultural heritage and continuity.

Specific plants in the garden have symbolic meanings. For example, bamboo represents tenacity and integrity, lotus symbolizes purity and enlightenment, and plum blossoms symbolize perseverance. Rocks often symbolize peaks and perseverance, while water represents fluidity, adaptability, and vitality. Together, they form a microcosm of balance in nature. Many of the landscapes in the garden are named after famous poems or historical events, making the entire space full of cultural and ideological connotations.

The layout of the garden follows the principles of balance and proportion, ensuring that no single element overwhelms the others. This creates a visually pleasing and harmonious environment. The use of borrowed scenery and careful composition on the frame reflects the tradition of Chinese art in capturing the essence of nature, guiding visitors to appreciate specific scenes and perspectives. Contrasting techniques such as light and shadow, reality and illusion, roughness and smoothness are used to enhance beauty and evoke deeper emotional resonance in people. In addition, the garden embodies the Chinese ideal of integrating art and nature. Poems, inscriptions and calligraphy can be seen everywhere in the garden, and the composition is imitated from traditional Chinese landscape paintings. The arrangement of various elements creates a poetic scene, evoking the same feelings of people to the scroll. It enhances the intellectual and artistic atmosphere in the garden.

Suzhou's classical gardens were originally built as an escape from the stress of official duties and city life. It provides a space for meditation, relaxation, and reconnection with the natural world. The gardens are also influenced by Buddhist principles. The gardens provide a space for quiet contemplation and the pursuit of enlightenment, encouraging a spiritual connection with nature. Overall, the concept of Suzhou's classical gardens is a Taoist harmony with nature, Confucian social order and personal cultivation, and a deep understanding of traditional Chinese aesthetics and cultural symbols. The Humble Administrator's Garden was designed as a peaceful and harmonious retreat that can both relax the body and enrich the spiritual world.

3.2.2 Analysis of gardening techniques of Suzhou's four major classical gardens

Suzhou's four great classical gardens, often referred to as the "Four Famous Gardens of Suzhou," are world-renowned for their exquisite beauty, historical significance, and cultural heritage. Each garden is a masterpiece of classical Chinese garden design, with unique characteristics, aesthetic principles, and historical background .

Prioritize guest and host : Garden landscaping must have main scenery and secondary scenery. Handling the relationship between main scenery and secondary scenery is a major focus of garden landscaping. The mountains have primary, secondary, secondary and secondary features, and the garden architecture also has a clear primary and secondary structure. The plant configuration should also match the main tree species with the secondary tree species. The main scenery is the end point of the landscape line, in terms of shape, size, height, color, location, etc. They are all relatively obvious and are generally placed at the focal point of people's sight in the garden. In addition to their own appreciation value, the secondary scenery's main function is to highlight the main scene. No matter what method is used, the key is to keep the priority clear and not to overwhelm the guest. In the Linger Garden, the primary and secondary relationship between buildings is very clear. The main buildings, such as "Yifengxuan" and "Hanbishanfang" are located in prominent positions in the garden, serving as the core landscape of the garden and echoing the landscape. Secondary buildings are distributed around each scenic spot , playing a supplementary and transitional role, making the main scenery more prominent. For example, the main hall "Linqun Yin Room" is tall and open, used for receiving guests and large-scale activities, while other small pavilions and pavilions are dotted in different scenic spots for people to take a rest and enjoy the garden view (Figure 45) .

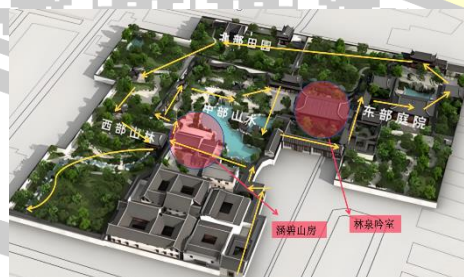


Figure 44 Analysis of the main and secondary aspects of Suzhou Liuyuan Garden

Comparison of the real and the virtual : real and virtual gardens or buildings often form people's visual clarity and blur through the enclosure of space and the virtual and real of the visual surface, and create rich visual experience through the contrast of virtual and real, the alternation of virtual and real, and the transition of virtual and real. In garden landscapes, the expression of virtual and real is diverse. The entity of the scenery occupies a certain space, such as trees, rocks, and halls. The empty space in the scenery, or even if there is scenery, it exists in a sparse or light state, such as an empty grassland, a wide water surface, and a clear railing, is virtual. The comparison of virtual and real will increase the beauty of the scenery and create a strong interest and charm. For example, the Master of Nets Garden highlights the water as the center, and the pavilions around the pool are also scattered with mountains and waters, forming a virtual and real contrast (Figure 46).

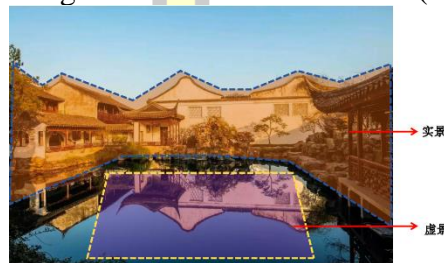


Figure 45 Comparative analysis of the virtual and real in Suzhou Wangshiyuan Garden

The depth of the arrangement of layers : Classical gardens pay attention to the height and depth of trees when planting them. Trees, shrubs, and grasses are planted from the back to the front, forming a staggered landscape. Layers refer to the order in which the scenery appears in front, behind, far, and near. This is a characteristic of the garden landscape that is different from the flat expression of the picture. The ancients worked hard on the arrangement of the layers of the scenery to make the three-dimensional sense more prominent. The plant configuration of the Liuyuan Garden pays the most attention to the sense of layering. It organically combines plants of different heights and types such as large trees, shrubs, and flowers through a rich combination of vegetation to create a multi-dimensional green space. In different scenic spots, the configuration of plants is closely integrated with buildings, rocks, and waterscapes, reflecting the layout characteristics of clear layers and alternating density (Figure 47).



Figure 46Table 1 Plant arrangement diagram of Suzhou Liuyuan Garden

Seeking changes in twists and turns : In landscape design, twists and turns contain changes and depth. If used properly, such as following the terrain and objects and coordinating with the evolution of the scenery, the twists and turns technique is to

arrange the shape of the scenery in a curved and changing manner, while also affecting the ups and downs of the surface of the scenery. This can effectively improve the quality of the layout and landscape design ผิดพลาด! ไม่พบแหล่งอ้างอิง. For example, the curved bridge in the Humble Administrator's Garden is an expression of seeking twists and turns (Figure 48) .



Figure 47 Curved Bridge in Suzhou's Humble Administrator's Garden

Located at No. 178 Dongbei Street, Suzhou City, the Humble Administrator's Garden covers an area of 78 mu (52,000 square meters) and is the largest and most prestigious of the four famous gardens . The garden is famous for its vast layout, tranquil ponds, winding paths, pavilions and diverse plants, and is a model of the art of harmony between architecture and nature. The Humble Administrator's Garden was first built during the Ming Dynasty (1368-1644) by former government official Wang Xianchen and has undergone several reconstructions and expansions over the centuries . In 1997, the Humble Administrator's Garden was designated as a World Cultural Heritage by UNESCO and is famous for its timeless beauty, poetic charm and cultural significance .

Garden is divided into three main parts in terms of garden layout and spatial design : the east, the middle and the west, each with different characteristics and themes (Figure 49) . This division creates a sense of diversity and progression as people travel through different areas. Walls, corridors and windows are used to create a balance between enclosed, private spaces and open, wide views. This approach ensures a dynamic, immersive experience.

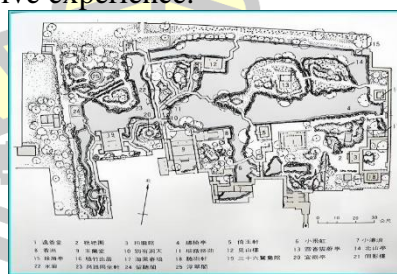


Figure 48 Plan of the Humble Administrator's Garden

Water is a central element of the garden, with ponds and streams running through it. The largest pond in the central section becomes the focal point, reflecting the surrounding buildings and vegetation. The water features are designed to mimic natural landscapes, with irregular shapes and varying depths. This approach enhances the organic feel of the garden.

the gardens symbolizes mountains and rugged terrain. These rockery stones are made of Taihu stone, which is known for its unique shapes and textures (Figure

50) . The rocks are stacked on top of each other to create depth and dimension, and are often paired with plants to soften the hardscape and increase the natural beauty.



Figure 49 Small rockery scene in Suzhou Humble Administrator's Garden

There is also a wide variety of plants to provide visual interest throughout the year. Deciduous trees, evergreens, flowering plants, and bamboo were carefully selected to ensure seasonal changes and year-round beauty. Many plants have symbolic meanings. For example, bamboo represents integrity, plum blossoms symbolize tenacity, and lotus flowers symbolize purity (Figure 51) . Plants are also placed strategically to set off the scenery, create depth, and highlight architectural features. The arrangement of trees, shrubs, and flowers follows the principles of balance and harmony.



Figure 50 Lotus Fragrance Pavilion in the East Garden of the Humble Administrator's Garden

the garden , each with a unique architectural style. These buildings serve as viewing points, resting places and focal elements (Figure 52) . The buildings are harmoniously integrated with nature. The location of the buildings can maximize the view of the landscape, and their design often uses natural patterns and materials.



Figure 51 Water Corridor in the West Garden of Humble Administrator's Garden

The paths meander through a succession of scenes, creating a sense of discovery. Various bridges span the ponds, adding architectural interest and providing different perspectives on the water features and surrounding landscape. The design style of the bridges often complements the overall aesthetic of the garden (Figure 53) .



Figure 52 Jianshan Tower in the Humble Administrator's Garden

The Humble Administrator's Garden uses the technique of borrowing scenery to frame the distant view outside the garden and integrate it into the visual experience of the garden. This technique expands the perceptual boundaries of the garden. The garden design is influenced by Chinese literature, painting and poetry. Many landscapes are named after famous poems or historical figures, adding to their cultural connotations. Calligraphy steles, poetry inscriptions and couplets are cleverly placed in the garden, enhancing the intellectual and artistic atmosphere of the garden.

The Humble Administrator's Garden embodies the exquisite gardening skills of Chinese classical gardens, integrating the beauty of nature with cultural depth. Its design embodies the principles of harmony, balance and tranquility, creating an idealized reproduction of nature and a peaceful paradise away from the outside world. The Lingering Garden , located in the northeast corner of Suzhou, is famous for its elegant design, exquisite art and tranquil atmosphere (Figure 54) . The garden features well-arranged rockeries, winding corridors, pavilions and towers, and lush plants, reflecting the classical beauty of Suzhou garden design. The Lingyin Garden was built in the Ming Dynasty and has undergone large-scale repairs and improvements over hundreds of years, retaining its status as a cultural treasure. As one of the best classical gardens in China, the Lingyin Garden is highly regarded for its architectural beauty, historical significance and cultural heritage

พิศพลาด! ไม่พบแหล่งการอ้างอิง.

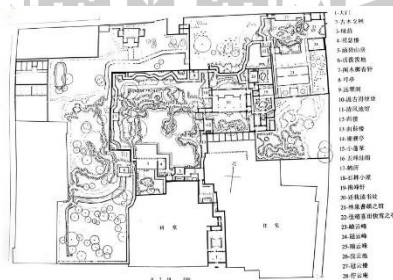


Figure 53 Floor plan of the Lingering Garden

Suzhou classical gardens is to create space to express ideas, emphasizing the use of rich techniques to show the changing characteristics of mountains and rivers.

Garden designers understand the charm of various famous mountains and rivers, and then shape and display their essence in a limited garden, resulting in the complex and varied spatial structure of classical gardens. It is precisely because of the variability and complexity of its spatial structure that people often ignore its spatial structure and focus on the rich and varied garden elements and exquisite garden attractions.

The spatial composition of a large private garden like the Liuyuan Garden is extremely complex, so it is usually divided into several sub-sequences. The Liuyuan Garden adopts a comprehensive spatial sequence, including the serial sequence of its population part, the ring sequence of the central part, the serial sequence of the eastern part, and the central radiation sequence (Figure 55) .



Figure 54 Regional distribution of Suzhou Humble Administrator's Garden

the entrance of the Liuyuan Garden is a unique one. The unusually tortuous, narrow and closed entrance compresses the visual field of visitors and creates a dull and depressing feeling (Figure 56) . However, when you reach the end and the ancient trees, your vision is slightly expanded; and when you reach the green shade to the west, the view of the central area to the north suddenly becomes clear, and you are already in the garden . This spatial contrast strongly impacts the visitors' visual experience and gives them a better psychological pleasure.



Figure 55 Entrance to Suzhou Liuyuan Garden

"Zang" is an extension of the implicit expression of beauty. The idea of implicitness first originated from the philosophy of Lao-Zhuang. Lao-Zhuang's philosophy advocated keeping one's meaning in the relationship between words and meaning, believing that things have essence and roughness. Words can only convey the roughness, and meaning can lead to the fineness. This is true great skill. Keep it in your chest . Looking at the Quxi Tower from the depths of the water valley in the middle of the Liuyuan Garden is the so-called "hidden". Most of the central area has a pool dug in the southeast and a rockery built in the northwest. This is a larger

landscape scenic spot in the Liuyuan Garden. The rockery near the pool is made of Taihu stones and yellow stones piled up to form an earth-rock mountain. A stream breaks out of the mountain and looks like a source of living water. A stone bridge spans the stream to connect the mountain path. From the back of the mountain, through the rocks on the bank of the stream, you can vaguely see the building on the east bank of the pond, namely the Quxi Tower, which forms a scene .

The Garden of the Master of the Nets (Wanshi Garden) , located in the southeast corner of Suzhou, is famous for its intimate scale, elegant artistic style and tranquil atmosphere . It is characterized by its compact layout, exquisite pavilions, well-arranged rockery and tranquil waterscape, and is a model of the art of miniaturization in garden design (Figure 57) . The Garden of the Master of the Nets was first built in the Song Dynasty (960-1279) and later rebuilt in the Qing Dynasty (1644-1912). It is one of the oldest and best-preserved gardens in Suzhou. The Garden of the Master of the Nets has also been designated as a World Cultural Heritage by UNESCO, and its architectural craftsmanship, cultural symbolism and historical importance are amazing.



Figure 56 Plan of the Master of Nets Garden

The Master of Nets Garden is divided into two parts: the residence and the garden. It is a typical residential garden in the south of the Yangtze River. As a typical example of the layout of the residence and garden of the ancient Suzhou family, the Master of Nets Garden has the residence in the east and the garden in the west, which are well integrated. With the pond as the center, it consists of five parts: the residential area in the east, the banquet area in the south, the pond area in the middle, the inner garden of the west, and the study area in the north . ผิดพลาด! ไม่พบแหล่งการอ้างอิงThe layout of the whole garden is neat and balanced in appearance, and the interior is divided into different areas according to the scenery. The landscape area in the middle of the garden highlights the theme of water as the center. The water surface gathers but does not separate. The stone slab curved bridge in the northwest of the pond is low and close to the water, and the Yinjing Bridge in the southeast is slightly arched and exposed. The yellow stone rockery built around the pond is uneven in height and tortuous, making the surface of the pond look like a vast expanse of water and an endless source (Figure 58) .



Figure 57 Aerial view of Master of the Nets Garden

The buildings in the garden are beautiful, exquisite and compact, especially the pavilions around the pool, which are small, low and transparent, and the interior furniture is also exquisitely decorated. The central part is the main garden, named "Net Master's House" (Figure 59) , with the pool Caixia Pool as the center of the whole garden, covering an area of about half an acre. There is a water bay at the northwest and southeast corners of the pool bank, which is tortuous and profound, giving a sense of endless origin. Stone reefs, rockery, flowers and trees, and pavilions are arranged along the pool. The Huangshi rockery "Yungang" is not large in size, but its position and shape are appropriate. Because the pool bank is low, the buildings near the pool are close to the water surface, and the rocks, flowers and trees are not tall, making the water surface appear open. The water here is clear, fish swim in the water, and flowers and trees compete for beauty. There are corridors, pavilions and pavilions around the pool, and there are stacked stones and curved bridges on both sides of the bank, which are well-proportioned and complement each other. The main hall in the south of the pond, Xiaoshan Conggui Pavilion, is located between the peaks, rocks and osmanthus trees. There is a corridor on the left leading to the sedan chair hall of the residence and on the right to the pavilion on the west. The Zhuoying Water Pavilion on the southwest side and the Zhuwaiyizhi Pavilion on the northeast bank face each other across the water, and the Sheya Gallery on the east side and the Yuedaofenglai Pavilion on the west side face each other from a distance. These buildings have different shapes and are beautifully decorated. Their reflections are reflected in the blue waves with the skylight and floating clouds, adding to the beautiful scenery in the garden. Further north are the Jixuzhai, Wufeng Book House and Dianchun Pavilion (Figure 60) , all of which were places where the former owner of the garden read and painted. They are spacious and quiet.



Figure 58 Master of the Nets Villa in Suzhou Master of the Nets Garden



Figure 59 Spring Pavilion in Wangshi Garden

Canglang Pavilion, also known as Bi Bo Pavilion or Yong Lang Pavilion, is located at No. 3 Canglangting Street, Canglang District, Suzhou City. It is one of the oldest gardens in Suzhou, with a history of more than a thousand years. Canglang Pavilion was first built during the Northern Song Dynasty (960-1127) and has undergone many renovations and expansions over the centuries (Figure 61) . Canglang Pavilion is set in a landscape consisting of tranquil ponds, winding paths, lush vegetation and decorative rockery. The layout of Canglang Pavilion embodies the principles of classical Chinese garden design, and the carefully arranged elements are intended to evoke a sense of harmony, balance and tranquility. The pavilion itself is an architectural wonder, characterized by its elegant design, complex woodwork and graceful curves (Figure 62) . It is a focal point in the garden, offering a panoramic view of the surrounding landscape . Canglang Pavilion has inspired generations of poets, scholars and artists with its picturesque scenery and poetic atmosphere. Canglang Pavilion is inextricably linked to the famous poet Su Shi (also known as Su Dongpo), who visited Canglang Pavilion during the Song Dynasty and was inspired by the surroundings to write Red Cliff Fu .



Figure 60 Plan of Suzhou Canglang Pavilion



Figure 61 Canglang Pavilion

The artistic concept of Canglang Pavilion's landscape composition comes from the craftsman's idea of "suppressing before exalting, hiding before revealing", which plays the role of a barrier scenery that suppresses sight and makes the vista turn. It is mostly set at the entrance or the turning point of the spatial sequence. The treatment should be dynamic, higher than people's sight, vivid, and free in composition. There should be enough space in front of the scenery to accommodate the gathering flow of people, and there should be an inducing landscape to indicate and guide the direction of the flow of people. The treatment of the barrier scenery at the entrance of Suzhou classical gardens includes rocks, plants, landscape walls, etc., which has become one of the most commonly used techniques for gardening in Suzhou classical gardens (Figure 63). The layout of the Canglang Pavilion is dominated by mountains. As soon as you enter the door, you can see the yellow stone as the main feature, the rockery with alternating soil and stones, the old trees and new branches on the mountain, full of vitality, the green bamboo swaying in the middle, and the vines hanging on it, which has its own wildness of the mountains and forests. It is the main scenery and also plays the role of a barrier scenery. The scenery of the whole garden is simple and simple, and generous. It does not win by craftsmanship, but by natural beauty, just like natural scenery. Most of the buildings are surrounded by mountains and connected by long corridors. So a corridor was built along the pond, winding and twisting, which not only connected the pavilions built by the pond into one piece, so that they would not be lonely, but also through more than 100 lattice windows with different patterns on the corridor, the scenery outside the garden and the mountains inside the garden complement each other and blend naturally. Through the clever organization of viewpoints and sights, the scenery outside the space is included in the viewing sight, so as to expand the sense of space in a limited space. This can be regarded as a model of borrowing scenery. There are often door openings on the walls of Chinese gardens. Through the door openings, the scenery can be seen through, forming a framed view with a prominent focus. The bottle-shaped door openings on the west corridor of Mingdao Hall in Canglang Pavilion and the autumn leaf door view are all manifestations of framed scenery. Through the flower walls and corridor walls of various shapes of flower windows, lattice screens, tree branches and leaf gaps, and tree gaps, the beautiful scenery inside and outside the courtyard, inside and outside the corridor walls, and inside and outside the forest gaps is combined to construct a technique of looming, elegant and blurred scenery. There are 108 types of lattice windows in the whole garden (Figure 64). The patterns and designs are varied and no two of them are the same. The construction is exquisite. There are 59 windows around the mountain, which is unique among the classical water houses in Suzhou. The lattice windows are made of water-polished bricks. The shapes are different. The patterns of the window cores are ever-changing and the themes are varied. Through the various lattice windows, you can see the mountains and waters in the garden. They are looming, subtle and elegant, intersecting with the real and the unreal. The scenery changes with every step, like smoke and clouds, but nothing is unbroken . ผิดพลาด! ไม่

พบแหล่งการอ้างอิง Opposite scenery refers to the composition method of two scenes facing each other, which can be viewed from each other. It is widely used in Chinese gardens. Because China is a natural landscape garden, it is accustomed to spreading

water surfaces in the main parts of the garden. In this way, the flat water surface forms a good viewing space. The scenery around the water naturally forms opposite scenery. Mountains, trees, bamboo, stones, pavilions, bridges, towers, halls, corridors, etc. can all become opposite scenery. The Canglang Pavilion is a large waterscape. Whether it is the waterscape outside the garden or inside the garden, it forms a contrast with the buildings around the waterscape. For example, the waterside buildings such as the Waterside Pavilion and the Fish Viewing Platform can form a contrast with other waterside buildings. Another example is the famous Canglang Pavilion in Shandong, which is connected to the mountains, forests, ponds, halls and pavilions through corridors. It is an ideal viewing route and forms a contrast.



Figure 62 Inner courtyard of Suzhou Canglang Pavilion



Figure 63 The lattice windows of Suzhou Canglang Pavilion

Suzhou's four major classical gardens, the Humble Administrator's Garden, the Lingering Garden, the Master of the Nets Garden, and the Canglang Pavilion, are all respected cultural treasures that embody the eternal beauty, artistic beauty, and cultural beauty of Chinese classical garden design. Each garden presents Suzhou's rich history, philosophy, and aesthetics from a unique perspective. They are important heritage of human civilization and are universally recognized as the mother of world gardens and a wonder of world art. ผลิตผล! ไม่พบแหล่งการอ้างอิง They are deeply imbued with the connotation of Chinese culture and are artistic treasures created by China's 5,000-year cultural history. They are a vivid portrayal of a nation's inner spiritual character. The landscape art of Suzhou's classical gardens is a magnificent cause that we need to inherit and develop today.

3.3 The value and influence of Suzhou classical gardens

Chen Congzhou, a Chinese garden architecture expert, praised Suzhou gardens, saying that "Chinese gardens are the best in the world, and Suzhou gardens are the best in the south of the Yangtze River." As a brilliant flower in the history of world gardens that reflects the ancient charm of Chinese culture, Suzhou classical private gardens have their own unique aesthetic application value. In order to endow the gardens with aesthetic characteristics extracted from people's sensory impressions

of nature and humanities, the garden designers of Chinese classical gardens have exhausted their efforts and used all possible garden design elements to meet the needs of expression, creating private gardens that are well-known and have Chinese national characteristics ผิดพลาด! ไม่พบแหล่งอ้างอิง.

3.3.1 Artistic value

Suzhou gardens were developed in a rich and prosperous cultural soil. Its garden architecture is "subtle and profound" throughout, and uses borrowing, leading, and leaking scenery to create a garden artistic conception. Suzhou gardens are typical urban gardens. Reclusive literati built gardens in deep alleys and narrow roads. The high character of the garden owner can be seen only from the site selection and entrance design of the garden. For example, Canglang Pavilion was built on the northern hills and waterside, with the Fengxi River forming a strip-shaped architectural sequence to the south, so that people can look across the water and have endless thoughts before entering the garden. The winding water also achieved the purpose of "separating from the dust" of the reclusive literati, which is consistent with the noble and clear inner pursuit expressed by the source of the garden name "The water of Canglang is clear, and it can wash my tassels; the water of Canglang is turbid, and it can wash my feet." The Humble Administrator's Garden is also surrounded by high walls, showing the mentality of "screening off the vulgar." The builder of the garden did not write a word, but it has revealed deep meaning. Suzhou's literati gardens grew up in a rich and prosperous cultural soil. Their garden architecture is characterized by "subtlety and profoundness", and they use techniques such as borrowing scenery, introducing scenery, and releasing scenery to create garden artistic conception.

The beauty of Suzhou gardens lies first in their poetic spatial design. Different from the "hard and strong" architectural lines in the north, Suzhou gardens are dominated by water. Regardless of the size of the courtyard, they are all surrounded by water. Water is an important part of the Jiangnan cultural psychology of traditional Chinese culture. The small pond in the garden, as a poetic reproduction of natural water bodies, provides a material basis for residents to observe everything quietly and indulge in their thoughts. In addition, Suzhou gardens are characterized by complex corridors. There are lattice windows on a white wall. Walking in the corridor, the scenery outside the corridor is leaking inside. If there is a glimmer of light reflected on the corridor wall, the water will sparkle, the shadows of flowers will be heavy, and they will be painted without a pen. "White is colorless, but the color is self-generated; the pool water is colorless, but the color is the richest." Although these gardens are man-made, they follow the characteristics of the original white walls and black tiles of the building and use natural light materials to render the texture of "although it is man-made, it seems to be natural." Since the construction of a garden does not rely solely on the craftsmanship of the craftsmen, but is also designed by the garden owner and his literary friends, the owner's unique ideas and artistic style are also reflected in the finished product. Therefore, Suzhou gardens are supported by the unity of aesthetics and ideology. While giving visitors sensory enjoyment, they also have the effect of soothing the mind and cultivating the spirit ผิดพลาด! ไม่พบแหล่งอ้างอิง

Suzhou classical gardens use four elements, architecture, mountains, water and plants, in a small world, with ponds, mountains along the coast, flowers and trees, and

pavilions. This creates a diverse and beautiful picture, allowing people to enjoy "the pleasure of mountains and forests without leaving the city". This is the biggest feature of Suzhou classical gardens. In terms of structural layout, they are good at cleverly forming ever-changing scenery in limited space. For example, corridors, bridges, and lattice windows are used to divide the space and form scenic areas. But they are divided but continuous and shade each other. They are also good at borrowing scenery, often organically combining the scenery outside the wall through lattice windows, giving the limited space an infinite extension. For example, Canglang Pavilion is an excellent masterpiece of borrowing scenery. It also uses famous poets' poems, couplets and other literary means to inspire the imagination of tourists and make the gardens poetic and picturesque. Mr. Ye Shengtao, a Suzhou native, once said: When visitors come to Suzhou, no matter where they stand, there is always a beautiful picture in front of them, and no one does not think and say "as if in a picture" in their hearts. This is true. Suzhou classical gardens are a natural picture that integrates natural beauty, architectural beauty and humanistic beauty. The artistic appeal of Suzhou classical gardens comes from the natural beauty of mountains, water, plants and other humanities, the relationship between architecture and the environment, and the humanistic beauty of garden art and literature. It is itself a rich art complex. It integrates literature, painting, sculpture, arts and crafts and even calligraphy art into itself, creating a three-dimensional, dynamic and dazzling art world. Like classical poetry, what is pursued in creation is artistic conception, taste, and the spiritual world in the material world. In the aesthetics of gardens, what is emphasized is sustenance and the blending of emotions. "Poetic and picturesque" is the special artistic pursuit of Suzhou classical gardens.

3.3.2 Social Value

With the accelerated development of social, political, economic and cultural aspects in the transition stage, "fast pace" has become the living state of most people. China's first mental health blue book "China National Mental Health Development Report (2017-2018)" explores the mental health status and psychological development trends of different groups in China based on the mental health survey in China in the past three years. The report points out that 11% to 15% of people have poor mental health, and different groups and ages have mental health problems. And people generally have a high demand for psychological counseling, but there is often a large gap between the demand for counseling and mental health services, which makes it difficult for people to adjust in time. Therefore, in the "fast-paced state", the leisure time away from the study and work state, the cultivation of temperament and the comfortable and healthy "slow life" have become an important way to relieve people's tense and anxious emotional state.

Suzhou classical gardens, such as the Confucian ideas of "the doctrine of the mean" and "harmony is the most precious", the Taoist ideas of "rule by inaction" and "harmony between man and nature", and the Buddhist "enlightenment", have a profound impact on modern garden design. When designing modern gardens, we pay attention to integrating these concepts into landscape design to achieve the effect of resonating with the audience. Reference to gardening techniques. The gardening techniques of Suzhou classical gardens, such as moving one scene at a time, separation without blocking, suppressing before promoting, twists and turns, proper scale, endless meaning, and borrowing from the distant and the neighbor, have an

important guiding role in the design of modern gardens. When designing modern gardens, we not only pursue natural beauty, but also pay attention to the harmonious unity of man and nature, as well as the principles of ecology and sustainable development. Inheritance of aesthetic ideas. The aesthetic ideas of Chinese classical gardens, such as "learning from nature outside and getting the source of the heart inside" and "harmony between man and nature", have an important influence on the development of modern gardens. When designing modern gardens, people focus on drawing inspiration from nature, combining natural beauty with modern design language to create garden landscapes with a modern feel ผิดพลาด! ไม่พบแหล่งการอ้างอิง.

3.3.3 Economic value

It is actually very difficult to measure the economic value of Suzhou's classical gardens. Some people have found that the construction cost of the Humble Administrator's Garden was about one million taels of gold. Now, rebuilding a classical garden of the same level as the Humble Administrator's Garden with one million taels of gold is not only difficult to achieve in terms of artistic value, but also impossible to match in terms of historical value, because "long history" itself contains incalculable value. Su Shunqin, a poet of the Northern Song Dynasty, once bought the Canglang Pavilion for 40,000 coins, but Ouyang Xiu once expressed his opinion that "the breeze and the bright moon are priceless, but it's a pity that it's only sold for 40,000 coins." It can be seen that even at that time, some people realized that garden art (including beautiful environment) was difficult to measure with money. After more than a thousand years, the artistic value of the Canglang Pavilion has developed again, and its historical value has increased day by day, which can be said to be a priceless treasure.

The charm of Suzhou gardens lies in their exquisite layout and embellishment, the spatial aesthetics, garden poetry and other elements it embodies, as well as its profound cultural heritage. Suzhou's garden landscapes are generally based on mountains and waters, among which mountains are created by garden architecture, and waters are embellished by ponds, rivers, waterside pavilions, covered bridges, etc. The entire garden layout usually follows the rules of entering and exiting the pass, with layers of mountains and waters and rich architectural landscapes as the main axis. The various scenic spots are like playing a piece of music, bringing tourists into a fairyland-like Zen world. At the same time, the spatial aesthetics embodied in Suzhou gardens is also one of the reasons why they are highly praised. Garden architecture is beautiful in its exquisiteness, regularity, symmetry and balance, and these characteristics are fully reflected in the design. Among them, the so-called "combination of virtual and real" is one of the characteristics of Suzhou gardens, that is, in a limited space, through the combination of virtual and real scenery, a broad and profound vision and a strong sense of space are created, which improves the environmental quality and aesthetic value of the garden.

The cultural heritage of Suzhou gardens is also worth exploring in depth. Many elements of traditional Chinese culture are incorporated into the design of garden architecture, such as classical poetry, paintings and porcelain. For example, in the Humble Administrator's Garden, many garden buildings are themed "poetry, calligraphy and painting". The stone carvings, brackets, double eaves, pavilions and

other garden landscapes in the garden are based on poetry, stories and legends as the background and theme, which embodies the designer's love and understanding of the mountains and rivers, history and culture of the motherland. Therefore, Suzhou gardens are not only a representative of Chinese garden art, but also one of the treasures of Chinese traditional culture. This is the unique charm of Suzhou gardens. In today's urbanization process, garden architecture has gradually become one of the living concepts that people pursue. Suzhou gardens are not only a cultural phenomenon, but also a replicable and popularizable artistic means and urban construction model. In today's vision of increasing environmental awareness, Suzhou gardens have become a model of green architecture and have a positive effect on the development of sustainable cities.

3.3.4 Humanistic Value

Suzhou gardens pay attention to respecting nature in their design and emphasize the harmonious coexistence of man and nature. They do not simply suppress or transform nature, but adopt an eclectic approach to combine natural landscapes with cultural landscapes to create a garden style full of artistic conception. Such design embodies the concept of "harmony between man and nature" in traditional Chinese culture.

The architectural design of Suzhou gardens emphasizes the aesthetic concept of "empty and quiet beauty". They adhere to the principle of "not winning by quantity, winning by clarity", minimizing the interference of building volume on the natural landscape of the garden as much as possible, creating a quiet and simple atmosphere. In terms of layout, these gardens often use elements such as "tricky streams" of waterscapes, winding paths and moss-covered stones to express a simple and natural beauty.

The architectural design of Suzhou gardens not only achieves a harmonious effect in terms of vision and space, but also conveys the humanistic spirit of Chinese civilization. From the names of the gardens, we can see that the creators of these gardens attach great importance to emotion and imagination. "Lingering Garden", "Humble Administrator's Garden", "Lion Grove", "Yuanyuan Garden" and so on all contain rich humanistic artistic conception and emotion.

Suzhou gardens are based on nature and focus on combining natural scenery with humanistic art. Through unique garden layout and landscape construction, they create an ideal natural environment in a limited space. For example, Suzhou gardens often use elements such as "through halls", "passing corridors" and "corridors" to integrate buildings and gardens, so that buildings and natural landscapes complement each other. This fusion of nature and humanity reflects the integration of Confucianism, Buddhism and Taoism in Chinese traditional culture, and emphasizes the harmonious unity of man and nature.

Traditional culture and art are also reflected in Suzhou gardens. For example, in the Humble Administrator's Garden, we can enjoy the various rockeries, the theater for performing traditional operas, the bamboo forest teahouse, and so on. These elements not only provide a space for sightseeing and appreciation, but also allow visitors to feel the value of historical culture. The humanistic spirit of Suzhou gardens is not only reflected in the design, but also in the management and maintenance. Suzhou gardens have always adhered to the principle of "unreliable modification, reliable inheritance", and are committed to protecting the unique charm of traditional

garden culture. At the same time, they continue to innovate and introduce new technologies, allowing Suzhou gardens to stand out in the ever-changing era.

In general, the design and management of Suzhou gardens reflect a rich humanistic spirit, which is based on the values and aesthetics of traditional Chinese culture, emphasizing the harmony and balance between nature and humanity. It advocates a simple and fresh garden aesthetic, which makes people immersed in it and feel the pursuit of emotion and thinking.

3.3.5 Historical Value

Suzhou classical gardens are not only beautiful, but also have many cultural relics and historical sites. From the ruins of ancient cities to some buildings left over from wars of past dynasties, from various ancestral halls, archways to inscriptions, former residences and tombs of historical celebrities, etc., they are rich in content and diverse in form, and all have high historical value. Panmen was built in the first year of King Helu of Wu in the Spring and Autumn Period. Its location has remained basically unchanged to this day, and it still preserves the water and land gates. Some architectural experts have given it a high evaluation and believe that it is a valuable physical material for studying ancient Chinese fortifications. Tiger Hill Yunyan Temple Pagoda was built in the Five Dynasties and completed in the Northern Song Dynasty. It has a history of more than a thousand years and has great value in the history of Chinese architecture. It is of the same type as the Leifeng Pagoda in West Lake, Hangzhou. After the collapse of the Leifeng Pagoda, the Tiger Hill Pagoda has become more precious. The Zhongwang Mansion is the most complete building left by the Taiping Heavenly Kingdom in China. It is also the only site of the peasant revolution in history that has been preserved intact like this. In terms of inscriptions, Suzhou's inscriptions are well-known at home and abroad in terms of content and quantity. The earliest one is a stele inscribed by Wang Yicheng of the Sui Dynasty in the pagoda of Shangfangshan Temple. The stele after the Tang and Song dynasties is even more common. The Han Shizhong Merit Stele at the foot of Lingyan Mountain is 36 feet 7 inches high. It has ten large characters written by Emperor Xiaozong of Song Dynasty. Each character is 1 foot 2 inches in diameter. Such a huge stele is rare in China. The 569 stone carvings of famous figures in Canglang Pavilion depict portraits of historical figures related to Suzhou from the Spring and Autumn Period to the Qing Dynasty. The information is extremely rich. The portraits of Shen Zhou and Wen Zhengming in the Humble Administrator's Garden and the Canglang Pavilion Garden in Canglang Pavilion are all rare masterpieces. ผลิตพลาด! ไม่พบแหล่งการอ้างอิง

3. 4 Chapter Summary

By analyzing and summarizing the development history of Suzhou classical gardens and the gardening techniques and elements of the four major gardens, as well as the artistic value, social value, humanistic value and historical value of Suzhou classical gardens, we can have a clearer and more comprehensive understanding of the profound influence of Suzhou classical gardens. This includes the use of balance and integration between different elements (such as plants, rocks, water and architecture) in design principles and techniques to create visually pleasing and harmonious designs. In terms of spatial dynamics, the use of spatial illusion techniques such as "seeing the big in the small" and "borrowing scenery" can effectively utilize space and create a sense of larger area in a compact environment.

The selection and arrangement of plants ensures year -round beauty, improves the ability of space to be suitable for all seasons, promotes a deeper connection with nature , and also promotes the sustainability and biodiversity of urban landscapes and improves the quality of life. In the green space of social interaction, mental health and cultural participation , artistic, social, humanistic and historical values are integrated . By inheriting and developing these values and continuously recreating them, it not only protects the cultural heritage environment to a certain extent, inherits classical gardening techniques, but also serves as the cornerstone of traditional cultural innovation.



Chapter IV

Discussion on the Relationship between Suzhou Gardens and Modern Public Landscape Space and Its Application Strategies

The relationship between "classic" and "modern" has always been a topic of discussion. Inheriting and innovating "classic" and applying it to "modern", extracting the effective and referenceable parts of the inherent culture, and combining the requirements and planning of modern urban development with the effective inherent culture in today's urbanization process, avoiding the infiltration of foreign design styles, concepts, and elements that neglects traditional classical culture. Nowadays, in landscape design, people gradually realize that good design is not about completely advocating modern and foreign design or fully retaining traditional classical elements. Let "classic" and "modern" be closely linked. Through in-depth research on the relationship between the two, the elements and concepts that can be combined and applied in the two can be perfectly integrated, which can not only reflect the charm and artistic conception of classical culture, but also present the essence of modern aesthetics. Design and creation ผลิต! ไม่พบแหล่งอ้างอิง. In the process of urbanization, public landscape design has gradually become an important part of building a beautiful and livable city. Traditional landscape design mainly focuses on environmental beautification and greening. With the continuous expansion of urbanization, people's needs for urban environment have gradually become more diversified and complex. Public landscape design based on user experience is gaining more and more attention. It emphasizes putting residents' needs and experiences at the core of design to create public spaces that better meet residents' expectations. The planning adjustment of the community sports park plot in the central urban area of Luoyang City marks another improvement in urban public service facilities. With the acceleration of [urbanization](#), residents' demand for leisure and fitness facilities is also increasing. Community sports parks can not only provide residents with a place to exercise and relax, but also promote community exchanges and enhance residents' sense of belonging and happiness. This chapter will discuss the generation and development of public garden landscape space itself, the problems it faces, the differences and connections with Suzhou classical gardens, and the value and significance of inheriting the internal construction methods.

4.1 Current status and development trend of garden landscape

The process of urbanization is an inevitable trend of social development and an important symbol of a country's modernization. In the previous chapter, we have studied the origin and development of classical gardens in depth. Since 2000, both the central and local governments have attached great importance to urban development issues. Real estate development, new district construction and other "driving" land urbanization development have become the first choice. The rapid development of land urbanization poses a threat to the security of land resources in China, where the population is dense and land resources are limited. Due to the continuous increase in residential buildings, which accounts for a large proportion of urban building land, the proportion of regional public space has been greatly compressed. In addition, the use of increasing floor height to meet the housing needs

of more people within a limited land area has greatly increased the number of people using public space in a region. In the cramped environment of small land and large population, how to reasonably use land to create public landscape space suitable for more groups of people to use has many practical problems to be optimized and solved ผิดพลาด! ไม่พบแหล่งอ้างอิง.

This section discusses the current status and development of gardens , and seeks to understand the development planning and strategies of public landscape spaces under China's urbanization process, in order to provide new guidance for the design of public landscape spaces in China.

4.1.1 Current status of garden landscape

With China's rapid urbanization, the demand for urban construction has continued to increase, and the space for traditional gardens has been compressed. In addition, while retaining local cultural elements , modern Chinese garden design has gradually introduced Western design concepts, such as geometric composition and the use of simple styles. This fusion of Chinese and Western cultures has made garden design more diversified, but at the same time, the development of modern architecture and infrastructure has had a certain impact on the garden environment, and some gardens have gradually lost their original cultural and ecological functions . Although some newly built garden landscapes imitate traditional garden elements in form, they lack a deep understanding of cultural connotations, resulting in some designs being formalized and lacking spiritual connotations and a sense of historical weight. This phenomenon is more common in the process of modernization ผิดพลาด! ไม่พบแหล่งอ้างอิงอ้างอิง.

[The garden landscape design](#) industry is in a stage of rapid development. Benefiting from the promotion of [new urbanization](#) and [ecological civilization construction](#) , the market space continues to expand and the industry status is gradually improving. The trend of globalization has enabled various design styles to be reflected in the planning and design of garden plant landscapes. Both traditional oriental gardens and modern western gardens have been fully reflected in the design. The green concept has been deeply rooted in the hearts of the people. With the popularization of the concept of environmental protection, green and sustainable design has become the main trend of garden plant landscape planning and design.

4.1.2 Development trend and application analysis of garden landscape

The rapid advancement of China's urbanization process has brought threats to land resources under the national conditions of dense population and limited land resources. Due to the continuous increase in residential construction and the large proportion of residential buildings in urban construction land, the proportion of public space in the region has been greatly compressed. The insufficient area of public landscape space in the city is an inevitable trend. Therefore, creating an infinite sense of space in a limited land area and satisfying the use of people of different ages is the top priority of garden landscape design. The layout of Suzhou gardens emphasizes the diversity and layering of space. With the help of techniques such as "borrowing scenery" , a visual sense of breadth is created through careful layout and clever use of landscape elements in a limited space, thus achieving the effect of "seeing the big from the small". This technique emphasizes the detailed division of space, the shaping of layering, and the clever combination of landscape elements, so that people can feel

rich changes and extensions in a small space , and introduce external scenery into the garden through windows, door frames, corridors and other framed scenes, forming a virtual and real effect, as if there is no boundary between man and nature . This not only solves the problem of limited space, but also provides more possibilities for modern public space, so that it has the artistic conception of traditional gardens and the functionality of modern design.

The future planning and design of garden plant landscape will pay more attention to the harmonious coexistence of man and nature. While fully considering the needs of people , the natural environment should be respected and protected as much as possible, so that human activities can promote each other with the natural environment and achieve a state of harmonious coexistence between man and nature. The design concept of Suzhou gardens emphasizes the harmonious relationship between man and nature. Through ingenious design techniques, a lifestyle that can both appreciate the natural beauty and integrate into nature is created . Therefore, the layout and design of the garden can draw on the pursuit of the "harmony between man and nature" of Suzhou gardens , and adapt to local conditions according to actual terrain, climate, vegetation and other natural conditions to avoid excessive artificiality. For example, in the design of waterscape, Suzhou gardens use the combination of natural water bodies and artificial water diversion to take water bodies as the soul of the garden, so that the garden looks integrated with the natural environment , and by using the techniques of borrowing scenery and framing scenery in Suzhou gardens, a rich visual effect is created, and the external natural scenery is introduced into the garden, so that the scenery inside and outside the garden is integrated. This design emphasizes the interconnection between the natural environment and the garden space, and enhances the sense of integration between man and nature.

With the diversification of people's aesthetic concepts, gardening design will pay more attention to personalization and innovation , and create distinctive and innovative garden spaces according to different environments and needs to meet people's pursuit of a better life. The gardening aesthetics contained in Suzhou classical gardens are profound and functional, and have been passed down for thousands of years and are enduring, which can be called classics. Suzhou gardens often create natural scenes that are "made by man, but seem to be created by nature" through techniques such as stacking mountains, managing water, planting trees, and laying stones, creating a poetic and aesthetic artistic conception. For example, in the Wangshi Garden, the landscape layout is often combined with literary artistic conception, making the garden not only a visual enjoyment, but also an emotional sustenance. Not only that, in this artistic aesthetics of blending artistic conception , multiple functional spaces are also taken into account, such as living, meeting guests, reading, and viewing areas, which fully reflects the life concept of "home and garden integration". This design not only meets the functional needs of daily life, but also allows residents to resonate spiritually with nature through the landscape design of the garden.

In the design of urban public spaces, the key to the design of urban public spaces is to emphasize the "people-oriented" design principle, fully meet people's own needs, and emphasize the harmonious unity of man and nature. "People-oriented" means to fully consider people's emotions, psychology and physiological needs.

Space serves people. Architecture provides the necessary living environment and place for human activities . On the contrary, without such an environment and place , many human behaviors will not occur. In other words, human behavior and activities directly affect the design of space . Talents are the main body of the city, and only human activities and behaviors are the fundamental starting point of design. For example: the layout and scale of public facilities must conform to people's visual position. Angle and ergonomic requirements. The placement of seats must take into account people's needs for private space. In the layout design of urban public spaces, it is necessary to base it on the behavioral and psychological characteristics of people of all ages . As the largest group of people using gardens, the elderly, their first need is health preservation and self-cultivation.

the pavilions, terraces, towers, and pavilions in Suzhou gardens, as well as stone carvings, inscriptions, poems, and paintings , are imitating the symbolic meaning of Confucian culture , making this public space not only a living space, but also a cultural place for people to cultivate their character. Through the cultural symbols in the garden, it expresses the thinking about the way of heaven and the way of man. This is also applicable to the young and middle-aged people who are under great pressure to survive in the contemporary world ผิดพลาด! ไม่พบแหล่งการอ้างอิง. In addition, the special needs of special groups (disabled people and blind people) for the public space environment must be fully considered , and this must be implemented in the planning and design of facilities such as seat size, sidewalks, ramps, blind paths, Braille signs, and special toilets.

With the development of economy and the continuous improvement of people's life , the planning and construction of urban public space has become more urgent and important in the new century. While increasing the requirements of quantity, we should also pay attention to the improvement of quality. It is not feasible to pursue a principle of function first in design. From large-scale pilot projects and small-scale practices, it is predicted that the design of modern public landscape space should not only consider functionality and environmental beauty, but also pay attention to the dual care of people's psychological level and indoor level under the heavy pressure of social survival. This requires us to pay attention to people's psychology and physiology while paying attention to physical level care . Public space should consider factors such as sunshine, sunshade , ventilation, shelter from wind, and rest , so that the space can maintain people's psychological and physiological comfort while also configuring various facilities to meet people's complex activity needs. For example, waterscape , an important part of Suzhou gardens , still water like a mirror and gurgling water, all show the tranquility and detachment pursued by Buddhists. Waterscape not only helps to regulate the climate and humidity of the garden, but also implies the spiritual realm of "emptiness" and "quietness" through its fluidity and tranquility. Buddhism emphasizes "purity and inaction" and inner peace. Suzhou gardens also express a concept of pursuing inner peace and getting rid of worldly constraints . The gardens are usually designed to be tortuous and changeable, with different scenery at every step. This design not only increases the sense of layering of the landscape, but also allows people to experience a sense of seclusion and exploration during the garden tour. Through the seclusion of this space, the garden allows visitors to temporarily get rid of the troubles of the world and achieve a spiritual detachment and tranquility . By creating this tranquil

environment, people can feel the tranquility and detachment of the soul when viewing the garden .

4.2 Problems in modern gardens

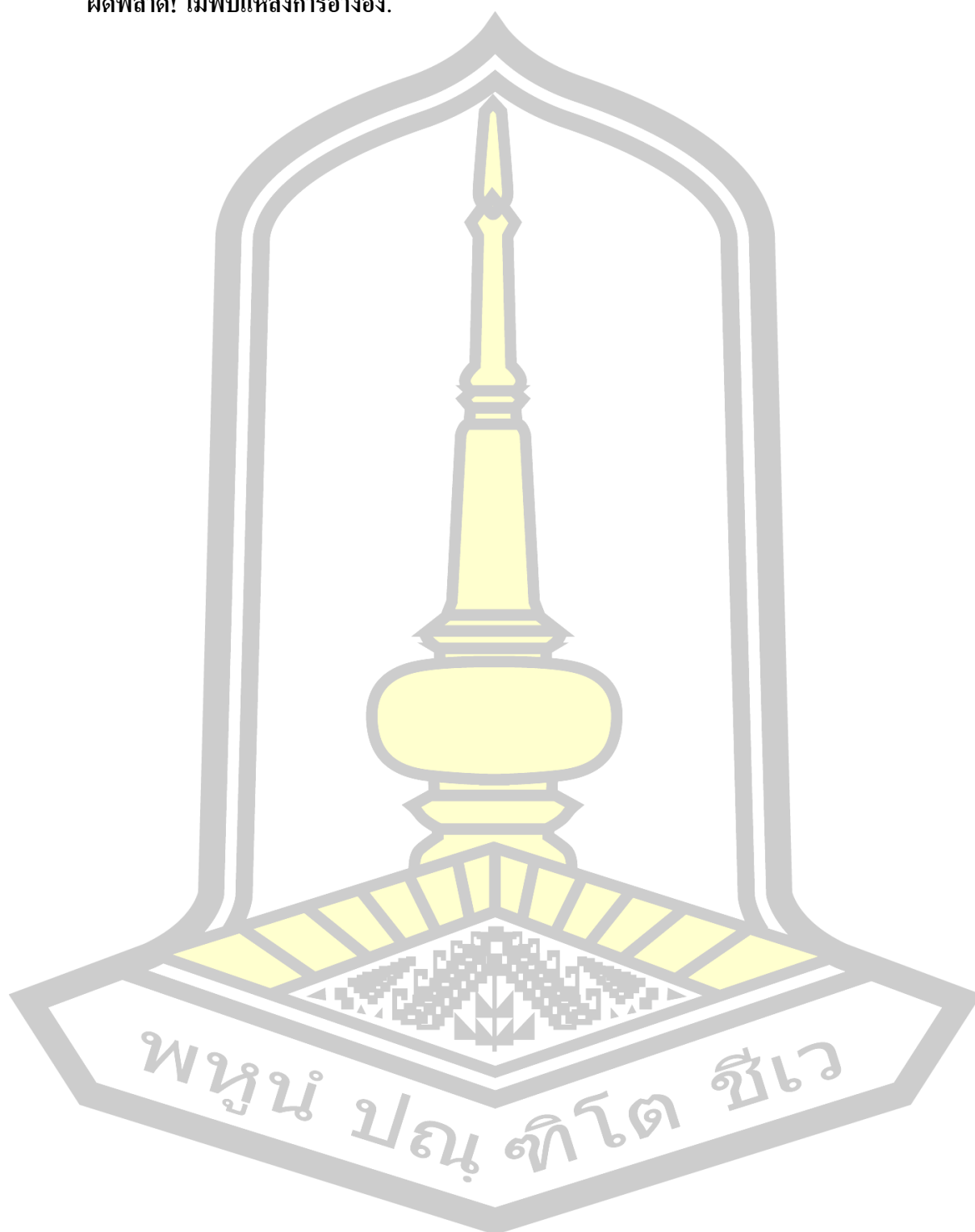
4.2.1 Insufficient space utilization and lack of overall planning

The construction of garden landscape should make full use of space resources and maximize the use of land. However, some garden landscapes are insufficient in space utilization, resulting in serious waste of land resources. For example, some places over-pursue large areas of lawns and green belts in garden landscape design, ignoring the full use of space and functional division. Therefore, in garden landscape design, attention should be paid to the rational use of space and functional division to maximize the use of land and optimize the landscape effect. Suzhou gardens are known for their fine spatial division, achieving a balance between function and aesthetics through multi-level and staggered layouts in a limited space. Each local space is both independent and interconnected. Different functional areas avoid overly straightforward visual displays through clever transitions and metaphorical designs, creating a coherent and rich spatial experience. Modern gardens can be divided into different functional areas through zoning design , such as sitting and rest areas, children's play areas, green landscape areas, etc., to avoid a single function occupying the entire space ; staggered layout , using walls, hedges, plant barriers, etc. to separate the functional areas, while connecting them through landscape nodes (such as doorways, corridors, and winding paths) ; reuse of space , designing landscape sketches in high-rise terrain or corners, and using vertical greening and vegetation layers to extend the sense of space, so as to "make the best use of everything" ผิดพลาด! ไม่พบแหล่งการอ้างอิง.

4.2.2 Ecological environment destruction and unreasonable plant configuration

The construction of garden landscape should focus on protecting the ecological environment, but there are often some problems in actual operation. Some garden landscapes will cause damage and pollution to the surrounding ecological environment during the construction process, such as arbitrarily cutting down trees and polluting water sources . These problems not only affect the ecological balance and environmental quality, but also have a negative impact on human health and quality of life. Therefore , in the construction of garden landscape, attention should be paid to the protection of the ecological environment and the maintenance of ecological balance and sustainable development. Plants are an important part of garden landscapes, but often the landscape effect is not good due to unreasonable plant configuration. Suzhou gardens pay attention to the level and matching of plants, and create rich landscape levels through plant groups of different heights, forms and colors. In modern gardens, single plant configuration often leads to a lack of variability in space and low ecological value. Modern gardens can be achieved through: clearly layered vegetation design , drawing on the "triple greening" method of Suzhou gardens, that is, matching trees, shrubs and ground cover plants to enhance the depth and three-dimensional sense of space and improve biodiversity ; seasonal changes and plant colors , selecting plants that bloom and bear fruit in different seasons, creating a dynamic beauty of seasonal changes, and at the same time enriching the visual experience of space through reasonable color matching . The combination of plants and landscape , with plant-related landscape pieces designed next to functional areas, such as flower beds in the courtyard and stone benches under

trees, not only increases the aesthetic appeal but also makes full use of the space
ผิดพลาด! ไม่พบแหล่งอ้างอิง.



4.2.3 Lack of cultural connotation and insufficient humanization of design

As an important part of urban culture, garden landscapes should have certain cultural connotations. However, many garden landscapes lack consideration and reflection of cultural connotations during the design process, which makes the landscape lack soul and characteristics. Therefore, in garden landscape design, we should focus on integrating local cultural elements and historical background to enhance the cultural connotation and characteristic value of the landscape. Suzhou gardens embody strong cultural connotations with their rich cultural images and poetic expressions. By drawing on this design idea, modern gardens can enhance the cultural connotation of gardens through cultural artistic conception and historical heritage ผิดพลาด! ไม่พบแหล่งอ้างอิง. In modern gardens, historical culture and poetic expression are integrated, the poetic and pictorial context of Suzhou gardens is learned, combined with local cultural history, and the artistic conception of literati is injected. By adding culturally meaningful details such as carvings and reliefs to the gardens, and by modernizing traditional symbols such as window lattices and tiles, the cultural heritage is maintained while conforming to modern aesthetics.

In terms of humanized design, it is mainly reflected in the deep understanding of human behavior, psychology and needs, creating spaces suitable for different groups of people. The diversified space design in Suzhou gardens takes into account different usage needs, including leisure, entertainment, meditation, etc. Modern gardens can set up functional areas suitable for different groups of people, such as meditation areas, interactive areas, activity areas, etc., by refining spatial functions to meet people's diverse needs. Gardens pay attention to humanization in spatial scale and streamline design to ensure a comfortable experience for people when walking in the garden. Modern garden design can optimize path streamlines and set up suitable seats and rest areas so that users can get a comfortable experience and psychological relaxation in the garden. Drawing on the microclimate regulation of Suzhou gardens, through the ingenious layout of waterscapes, vegetation, and buildings, a pleasant microclimate is created to enhance the comfort level in the garden. For example, combining design elements such as water cooling and green shade to escape the heat can enhance the practicality and humanized experience of the garden.

4.2.4 Landscape space design

Through field investigation, questionnaire survey, resident interview and other research methods, the problems existing in some landscape space design in Luoyang City were sorted out, and the most urgent problems currently faced were summarized, mainly in the following aspects:

- (1) The design lacks overall layout planning and space utilization is inadequate.
- (2) The landscape space design has a single level and weak correlation.
- (3) The space design lacks functionality and does not consider the actual needs, such as its compatibility with the surrounding environment and the needs of people of different age groups.
- (4) There is insufficient control over the details of the design, and the settings for signs, guide signs and trash cans are relatively lacking.
- (5) There is no design theme or center, and the design of each landscape space is too popular and stereotyped.

4.3 The relationship between modern people and public space

Under different historical backgrounds, due to differences in social environment, ideology and culture, production and living style, and technical level, there are different functional needs, aesthetic needs, and service objects. From classical gardens to modern gardens, China has experienced a transformation from private ownership to public ownership and from agricultural society to industrial age. The garden landscape has changed from private property used only by the royal family and bureaucratic capitalism to open shared space for all social classes. The emergence and gradual development of any kind of art is closely related to the social and cultural background in which it exists. The birth of Suzhou gardens was in a feudal society dominated by agriculture. The development of economy, culture, society and other aspects was largely based on agriculture, and nature was one of the most important factors affecting agricultural development. Therefore, the ancients had extremely respectful emotions and attitudes towards nature, and attached more importance to the harmonious coexistence of man and nature. Suzhou is located in the Jiangnan area, with lakes and rivers and ports, which can be said to be unique. For example, the biography of Dai Yong in "Song Shu" said: Yong "lived in Wuxia, and the scholars of Wuxia built houses together, gathered stones to divert water, planted forests and opened streams. It was dense and natural when it was young", which is the best witness.

4.3.1 Functional demands of modern people for public space

In order to further understand the functional needs of users of Luoyang Huayang Sports Park for this public space, a field survey was conducted on Huayang Sports Park to collect demand information through observation records and user interviews. The purpose of this survey is to analyze the current status of garden landscape, understand users' needs and satisfaction with garden landscape, and provide reference for further improvement and optimization of garden landscape.

4.3.1.1 Research Purpose and Methods

This survey adopts the method of field observation and user interview. The survey subjects are residents and daily users around Luoyang Huayang Sports Park. Through user interviews with these users, we can understand their most real evaluation and demand for garden landscape. At the same time, through field observation and record, we compare and analyze the garden landscape with the four major classical gardens in Suzhou to find out the shortcomings.

4.3.1.2 Survey Results

According to the results of the interview survey, the overall evaluation of Luoyang Huayang Sports Park shows that the largest group of users is the elderly, followed by children, and young people use it less frequently. Most users have a general evaluation of the garden landscape, of which 45% of users are relatively satisfied with the park, 35% of users feel that the use of the park is relatively general, and only 20% of users are completely dissatisfied with the park. Users believe that the design and construction of the public space barely meet their needs, but the facilities are not perfect, and the landscape is relatively single during the tour, lacking a certain degree of appreciation. For the elderly and young people with children, they generally believe that the park lacks fitness equipment and venues, and there is no venue for children to play and play.

(1) Through the investigation of users' demand for park functions, it was found

that users' demands for park landscapes are mainly concentrated in the following aspects: more activity venues, such as fitness equipment, badminton courts, ping-pong tables, etc., more reasonable area distribution, more green plants and roads, more rest facilities, and more ornamental landscape settings.

(2) the shortcomings of the park are as follows : inadequate landscape maintenance, insufficient maintenance of green plants, aging and lack of innovation in facilities, and lack of support from relevant policies for environmental protection.

(3) Through this survey and analysis, we can draw the following conclusions : Luoyang Huayang Sports Park is still relatively unsatisfactory in meeting the needs of users, and there is still room for improvement. In the next park landscape design, we should strengthen the optimization of landscape planning and layout, strengthen environmental protection measures to increase biodiversity, and innovate to increase recreational facilities. Strengthen daily landscape maintenance and upkeep, increase the number of green plants, flower beds and small scenes. Only through continuous improvement and optimization can we further improve the quality of garden landscape and user satisfaction.

According to the survey results, the following improvement suggestions are put forward for the existing problems of garden landscape:

(1) The first principle of public space design is to have multiple functions and flexibility. Different groups of people have different needs, so Huayang Sports Park should be able to adapt to various activities and needs. For example, open areas suitable for group activities can be set up, and independent seats for individual rest can be configured. Such design skills can meet people's social needs and provide space for personal solitude. Update and innovate recreational facilities to provide more diverse recreational functions and services.

(2) Greening and landscape are one of the important factors in public space design. They can not only provide a comfortable environment, but also bring a pleasant visual experience. Flowers, trees and beautiful landscape design in public spaces can attract people's attention and make them feel the beauty of nature. People are more likely to communicate and socialize with others in such an environment. Therefore, in the design of Huayang Sports Park, we should pay attention to the planning of greening and landscape, increase the number of green plants and flower beds, enhance the ecological effect of garden landscape, and create a pleasant space atmosphere.

(3) Different functional spaces are set up in the park according to the activity needs of different groups of people, such as children's area, elderly activity area, morning exercise area, rest area, communication area, etc. According to the service population structure and activity type setting, attention is paid to the diversity of space excavation, with multiple functions and value systems, and at the same time, there is more diversified development in terms of space layout and organization.

(4) In public space design, unique and creative elements can attract people's attention and stimulate their desire to socialize. A unique art installation, a unique seat design, or even a signboard can attract people's attention and trigger communication and discussion. In this way, the design of Huayang Sports Park creates a good social atmosphere, making people more willing to communicate with each other in this space.

4.3.2 Aesthetic needs

Garden landscape is the embodiment of spiritual meaning . It not only shows interest, but also highlights cultural ideas. It is the carrier of the user's lifestyle and attitude towards life. Suzhou classical gardens, with the aesthetic conception of "man-made, but natural", show the Chinese classical philosophical concept of harmony between man and nature. Suzhou gardens not only advocate nature, but also combine the unique culture of the Chinese nation while pursuing the harmonious coexistence of man and nature, integrating natural landscapes with cultural landscapes to create a fascinating and gorgeous artistic conception . Through the design of the garden, it expresses the pursuit and yearning for nature and artistic conception , and formed its own unique garden aesthetics in the social period at that time .

Suzhou classical gardens advocate " natural interest " at the level of spatial layout , are good at using the natural environment, and use clever landscape settings to create and enhance the beauty of artistic conception. At the level of humanistic connotations , they inject emotions into the scenes , express emotions in the scenery and emotions in the scenery, and personify the scenery, expressing the ancients' pursuit of nature, freedom, and connotation.

Nowadays, modern public spaces are in a period of rapid economic development and social and cultural diversification . Faced with such a large environment and growing user needs, different pursuits have emerged from the relatively simple emphasis on poetry and painting and the pursuit of the beauty of artistic conception in Suzhou classical gardens . There are new goals and pursuits in terms of culture, personality, function , spirit of the times, regional culture, etc. , especially in terms of space layout, full utilization and rationalization of space. Local customs and cultural symbols formed through long-term life activities and external influences need to be included as factors to be considered in the design of modern public landscape spaces , in line with the current aesthetic needs of the Chinese people and the cultural connotations they pursue. When classical and contemporary design thinking, concepts, techniques and other aspects blend and collide with each other, it can optimize the rationality and practicality of space while inheriting traditional culture to the greatest extent , and dialogue with the times with the spirit and characteristics of the times.

4.3.3 Service Target

Suzhou classical gardens belong to the residences of the scholar-official class and are a symbol of social status and power. Most of the garden designers are poets, painters, and craftsmen who are knowledgeable and have profound artistic accomplishments. The objects served by the gardens are officials with power and status or wealthy families with great wealth . In the feudal society at that time, ordinary families and ordinary people could not enjoy the use of them. Therefore, the groups served by Suzhou classical gardens are relatively single and the number of people is small. Therefore , the spatial layout and functionality designed in the gardens are also based on the daily life needs and emotional pursuits of the people using them. As an important part of urban planning under the urbanization process , sports parks are public spaces . Therefore, as a public place that serves and radiates surrounding residents , the people it serves cover all ages and classes , such as the elderly , children , young and middle-aged people , students, workers, intellectuals, etc. It is an open activity space. In addition , due to the population needs of today's society, at the moment when high-density residential buildings are produced, the area,

nature , and population of the park itself are relatively large , which is very different from the objects and population served by Suzhou classical gardens at the beginning of their construction .

4.4 Analysis of the composition of Suzhou classical gardens

4.4.1 Contradictory contrast of space

In Jiangnan gardens, the scale of space varies in various ways. By comparing spaces, people can have contradictory psychological cognition. For example, the techniques of "first suppressing to praise" and "framing the scenery" are to make contradictory contrasts in the scale of garden space. Since most traditional Jiangnan gardens are located in cities, the garden land is relatively cramped and usually small in area. If the "small" space is handled too monotonously, it is easy for people to see the end at a glance, making people feel bored during the garden tour. However, the use of "contradictory contrast of space" in Jiangnan gardens solves this problem very well. Gardeners use the size contrast between spaces to create an illusion of spatial scale, which can highlight the main space from a smaller space and achieve the purpose of broadening the field of vision.

“To promote, one must first suppress”

"To promote, first suppress" means to "suppress" before "promoting". In Jiangnan gardens, the "suppress" design technique is usually used to divide the garden space before reaching the main space, and the smaller spaces are set appropriately. The "suppressed" small space is contrasted with the overall space to highlight the "promoting" large space, thereby creating a contradiction between the size of the space and achieving the visual effect of "seeing the big in the small" (Figure 65).



Figure 64 Spatial composition of first suppressing and then promoting

The contradictory contrast of space is the construction technique of "seeing the big in the small". For example, Tao Yuanming wrote in his poem: "There is a small opening in the mountain, as if there is light. We leave the boat and enter through the opening. At first it is very narrow, but it is just passable. After walking a few dozen steps, it suddenly becomes clear. " ผิดพลาด! ไม่พบแหล่งการอ้างอิง For example, the mountain path in Suzhou's Humble Administrator's Garden is like this poem. It is a typical example of "first suppressing and then highlighting". It uses the contrast between "small" space and "large" space to create the illusion of spatial contradiction. In order to highlight the main area behind the bamboo forest, a rockery path is set up before entering the main area in the center. The height of the mountain is used to create a tortuous and narrow small space. Bamboo is used as decoration, so that the viewer will feel compressed in his vision when entering, and have a sense of oppression. When the viewer follows the guidance of the narrow mountain path and finally arrives at the main Tianquan Pavilion, he will immediately have a visual illusion of spaciousness, brightness and a broad vision, which deepens the viewer's impression of the "highlighted" main area (Figure 65).



Figure 65 Mountain Path in Suzhou's Humble Administrator's Garden

Frame and Scenery

"Frame and place scenery" refers to the traditional gardening technique of framing scenery in Jiangnan gardens, which uses "frames" to fix the scenery within door frames or window frames. In "Yuan Ye" written by the famous garden designer Ji Cheng, it is mentioned that gardening should "screen out the vulgar and contain the good" 剔出庸俗! 不漏含光. The phenomenon mentioned here is to use the "frame scenery" in Jiangnan gardens to contain the scenery, thus forming an illusion of scale by contrasting spaces. In the process of garden design and layout, gardeners selectively set "frames" and use "frames" to open up the sight of the space in which they are located, contrasting the "large" space outside the frame scenery with the "small" space where the viewpoint is located, and combining them for use. This encourages the viewer's sight to focus on the scenery in the frame, forgetting the "smallness" of the environment they are in, thus creating a contradictory contrast between the "small" space and the "large" space, and creating a sense of visual expansion of space (Figure 67).

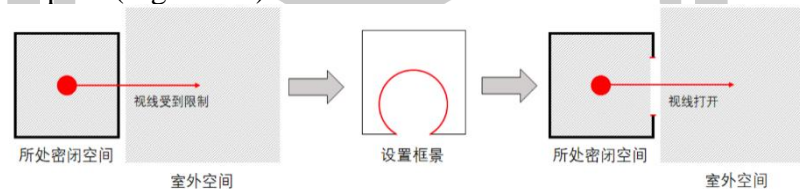


Figure 66 Contradictory composition of the frame

For example, the framed scenery of the "Hibiscus Pavilion" in Suzhou's Humble Administrator's Garden has a door within a door, and scenery within scenery. Due to the different shapes of the doors and the angles of sight, what visitors can see may be a square frame "within" a round frame, or a round frame "within" a square frame. The sight line continuously runs through several boundaries, from the wide outdoor space to the cramped indoor space, allowing the viewer's visual perception of the scenery inside and outside the door frame to be infinitely magnified, forming a contradiction between the indoor space and the outdoor space, thereby expanding the sight range (Figure 68).



Figure 67 Framed view of the "Hibiscus Pavilion" in Suzhou's Humble Administrator's Garden

4.4.2 Contradictory contrast between scenery and space

In addition to the contradiction between spaces, gardeners often use the landscape to compare the overall space environment, forming a scale illusion. This kind of visual illusion of landscape and space is mostly due to the use of "small" volume landscape elements to compare with space, such as using small volume garden elements such as rocks and plants to make psychological matching cognition, and then contrast with the overall space and architectural space in the garden, so that the visually presented "spatial environment" is larger than the actual spatial environment scale (Figure 69) .

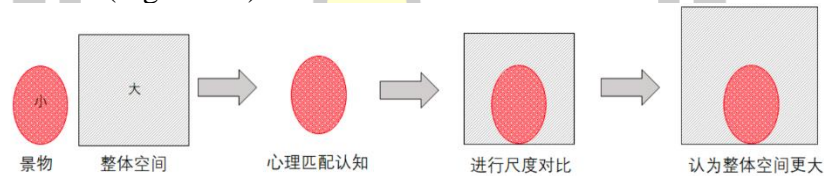


Figure 68 The contradiction between shrinking and expanding the scene

Ming Dynasty gardener Wen Zhenheng said in "Records of Superfluous Things" that "a fist can represent the majestic Taihua Mountain, and a spoon can represent the vastness of the rivers and lakes." This means that a small stone or peak can express the majesty of the mountain, and a small pool of water can express the vastness of the lake. This technique of using "small" scenery to express "large" spatial images is used in Jiangnan gardens through clever stacking of mountains and water, so that specific gardening elements such as stones, mountains, and water can arouse the viewer's association with mountains and waterfalls, and then conflict with the size of the actual space. Using limited space to derive infinite artistic conception, people feel that they are in the garden, and it is as if they are in the illusion of appreciating the vastness of mountains and rivers in nature. For example, the placement of many rocks in the Humble Administrator's Garden has a special purpose. This intention is to show the epitome of nature, so that the viewer will think that the rocks are huge in their inherent cognition. So when they see this stone from a distance, they will compare the "stone" in their mind with the volume of the surrounding space, thus creating a contradiction in scale, making people think that the space is wider than the natural rocks. This illusion phenomenon caused by the contrast between scenery and space is also a manifestation of "seeing the big in the small" that is common in gardens (Figure 70) .



Figure 69 Small stone and plant scene in Suzhou Humble Administrator's Garden

4.4.3 Contradictory contrasts between scenes

The contrast between the "small" volume of the scenery and the "large" volume of the scenery creates a contradiction that constitutes an illusion. This technique is similar to the contradiction between scenery and space. It relies on the cognitive scale to match the scenery A with psychological constancy, and then compares it with the size of the actual surrounding garden scenery to highlight the volume of the main scenery B (Figure 71).

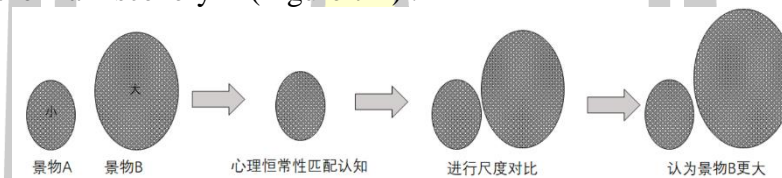


Figure 70 Contradictory composition between scenes

Since most Jiangnan gardens are built in cities, there are few hills, so gardeners build artificial hills in the garden to imitate real mountains in nature. In the process of arranging the artificial hills with the surrounding scenery, the contrast between the real-scale "mountains" and the surrounding scenery is associated with the volume, forming an illusion that the surrounding scenery is larger in scale. For example, there is such a soil hill with more soil and less stones in the Wangshi Garden. In order to pursue "spiritual resemblance", the configuration position of plants will change with the increase of altitude. Shrubs, bamboos and other plants are mostly planted at the foot of the mountain, just like the shape of real hills, giving people an illusion of realism. The artificial hills are built next to the buildings, so that people mistakenly think that the artificial hills are real mountains during the viewing process, because the real mountains are tall in scale, and the surrounding buildings are taller than the mountains from a distance, thus highlighting the sense of volume of the buildings, giving people a contradictory psychology that the buildings are taller than the mountains, thus forming a scale illusion phenomenon (Figure 72).



Figure 71 A corner of Suzhou Nets Master Garden

4.4.4 Spatial changes created by landscape elements

Perspective: Near is big and far is small

The phenomenon of creating a far-near illusion by forming perspective not only frequently appears in painting composition, but is also a common landscaping technique in traditional Jiangnan gardens. In traditional gardens, "graphic repetition" is often used to create a sense of perspective, allowing viewers to see the change in the graphics from near to far. The more graphics are repeated in the same space, the stronger the sense of perspective. Visually, it makes people feel that the "small" in the distance becomes "smaller", thus creating a far-near illusion phenomenon of near being big and far being small (Figure 73).

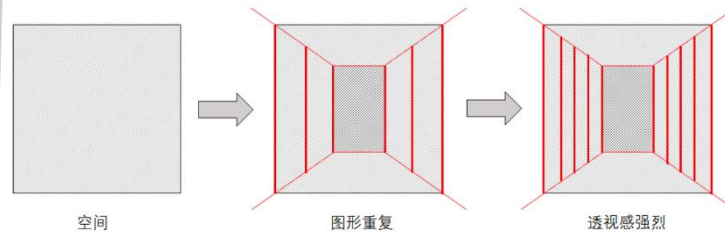


Figure 72 Graphic repeated changes

Orderly spatial levels can produce perspective changes, thus making the landscape space more profound. In order to create a deeper sense of space and layers in a garden space with a smaller area, the gardener often deliberately reduces the width of the road in the design of the garden path, and forms a perspective to increase the sense of depth by repeating graphics and scenery. The purpose of this is to attract people's attention to the end of the road, and use the principle of perspective change to make people feel that the layers in the distance are more profound. For example, there are a large number of narrow and quiet corridors in the Liuyuan Garden, which give people a sense of depth in space. However, where does this sense of depth come from? The reason is that most of the corridors in the Liuyuan Garden are zigzag-shaped, and the width of the corridors surrounding the external space of the garden is relatively narrow. Such a width compared to the length of the depth makes the corridor feel more profound. In addition, the repeated arrangement of columns in the corridor has a certain sense of orderly perspective, which visually creates a far-sighted illusion that the columns in the distance are smaller (Figure 74).



Figure 73 Lingering Garden Corridor

The nearness and depth of the scenery

The change of the depth and lightness of the scenery is also one of the main ways to form the illusion of distance. This change is often used in the landscaping of Jiangnan gardens. The application of plant configuration is particularly obvious. The change of the depth of plants creates the illusion of distance that blurs the actual distance. The depth of color in our cognition is the change of the brightness. In vision, the brightness of color has a greater impact on the distance: the lighter the color, the higher the brightness, the closer the scenery appears, and the darker the color, the lower the brightness, the farther the plant appears. This is also the reason why the group plants set in traditional Jiangnan gardens always appear in various shades of color. This change not only shows the primary and secondary of the plants, but also highlights the front and back layers of the space through the change of depth and distance in a limited space, while widening the spatial distance between the scenery, thus forming the illusion of distance (Figure 74).



Figure 74 Enhanced brightness contrast changes

For example, the arrangement of plants in Suzhou's Liuyuan Garden uses the changes in the depth of the plants to create a changing distance relationship, thus forming an illusion of distance. From the perspective of the viewing point, the low plants in the front row are the lightest in color and the brightest in brightness, and the viewer visually feels the closest. The plants in the back row are darker in color and lower in brightness, and appear to be farther away. Through this treatment of changes in depth, the original spatial distance is visually enlarged, thus creating a psychological illusion of distance that dark objects are farther away (Figure 76).



Figure 75 Plant arrangement in Suzhou Liuyuan Garden

4.4.5 Composition of the multiplicity illusion phenomenon

Things themselves contain multiple ways of understanding. Different people look at things from different angles and have different understandings. Moreover, when facing the same thing, when a person changes his or her perspective, the understanding will also become multiple. Therefore, graphics and space themselves also have multiple meanings. The visual illusion phenomenon in traditional Jiangnan gardens is mainly caused by the associative effect of graphics and the virtual and real penetration of space, which makes graphics or space have multiple understandings. In gardens, multiple illusion phenomena are mainly formed through the association of flowing water, the association of floor paving and window hole patterns, the borrowing of distant scenery, and the extension of mirror images ผิดพลาด! ไม่พบแหล่งการอ้างอิง.

Graphic polysemy

The polysemy of graphics is based on the basic associative function of the brain. The association in the brain comes from our memory or the accumulation of experience. The moment a person sees something, the brain automatically turns on the associative function. For example, the story of "Once bitten by a snake, you will be afraid of the rope for ten years" tells that after a person is bitten by a snake, he will associate the rope with the snake, thus creating the illusion that he sees a real snake. Some common things are more likely to make us associate, such as when we see a yellow five-pointed star, we will associate it with the national flag, etc. This polysemy of graphics constitutes the phenomenon of multiple illusion.

Flowing Water Association

In Jiangnan gardens, gardeners often use different ways of dealing with flowing water to reflect the multiple meanings of flowing water, and associate the speed of flowing water with the change of time, thus forming a multiple illusion phenomenon. The main ways of dealing with flowing water in Jiangnan gardens are: waterfalls, streams, and pools. These three methods are distinguished by the amount of water flow and the speed of flow. Through the speed of the flowing water, the speed of time passing is matched psychologically, thus creating the illusion phenomenon of flowing water (Figure 76).

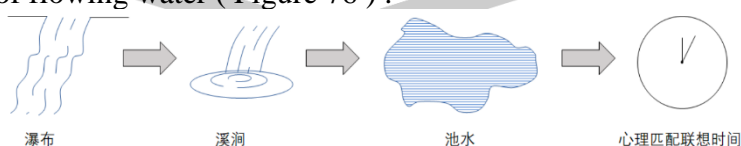


Figure 76 The polysemous composition of flowing water association

In Jiangnan gardens, the speed of the waterfall is faster than that of the stream, while the pool water is presented in a static manner. In daily life, people usually compare the speed of time passing by the speed of the water. Therefore, seeing waterfalls, streams, and pool water and feeling different water speeds will produce different associations with time. Static pool water reminds people of the illusion of time standing still; slow streams remind people of the passage of time; and fast waterfalls remind people of the rapid passage of time. Compared with the speed of water flow, this association produces a psychological change in the perception of the speed of time passing, thus producing a multiple illusion phenomenon (Figure 77).

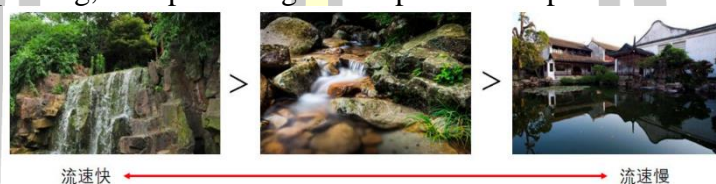


Figure 77 Comparison of waterfalls, streams, and pools

Floor and window lattice patterns

The symbolic forms of common gardening elements in Jiangnan gardens are also easy to make people associate, thus forming a multiple illusion phenomenon. For example, the rich and diverse patterns of ground paving and window lattices in Jiangnan gardens, with profound meanings, have the phenomenon of multiple illusions. These paving and window lattices use a variety of patterns, among which the auspicious animal patterns are animal forms extracted from nature by gardeners, and are processed in a planar form to form patterns that conform to aesthetic consciousness. Through these patterns, viewers psychologically match and recognize real animals, generate associations with beautiful symbolic meanings, and thus form a multiple illusion phenomenon for these patterns (Figure 78).

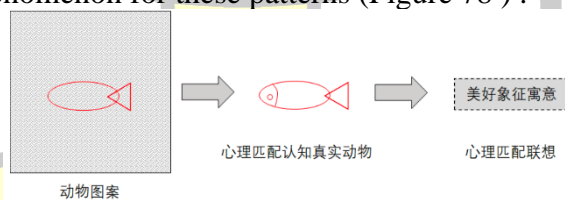


Figure 78 The associative and polysemous composition of floor and window lattice patterns

The patterns used for garden paving include cranes, fish, phoenixes, monkeys, deer, etc. Most of these patterns have symbolic meanings such as longevity, happiness, reunion, and wealth, implying auspiciousness. When people see these patterns, they not only think that these patterns are the paving under their feet, but also match them with the inherent cognition in their brains, deriving multiple meanings for the same pattern, thus forming a multiple illusion phenomenon. In addition to these auspicious animal patterns, there are also many kinds of geometric symbolic patterns in Jiangnan gardens, which are often used for paving or window lattices. The "Yuan Ye" includes herringbone patterns, bucket patterns, six-way patterns, long eight-way patterns, eight-way patterns, six-

way patterns, crabapple patterns, etc. They are all one or more patterns that use different composition methods to form a repeated and continuous pattern effect. These patterns are the materialization of the beautiful meanings of the garden designers, giving the viewers a multiple illusion experience from the pattern itself to the artistic conception association. This combines the concept, emotion and specific patterns and scenes in the garden, achieving an artistic state of blending emotions and scenes, and embodying the interesting "optical illusion" of Jiangnan garden landscape (Figure 80)



Figure 79 Symbolic patterns on the floor and window lattices of Jiangnan gardens

4.4.6 Multiple penetration of space

In addition to the virtuality and reality of the depth of field, traditional Jiangnan gardens also pay attention to the virtuality and reality changes of space. Many spaces in the garden are mutually infiltrated between the virtual and the real, allowing people to achieve a visual experience of multiple spaces in one space, thus forming a multi-dimensional illusion phenomenon. "The virtual and the real are born together, and the unpainted places are all wonderful" describes the virtuality and reality penetration of the garden space. This mutual conversion of virtuality and reality makes people visually have no clear spatial boundaries. There is virtuality outside the real, and there is reality outside the virtual. The virtuality and the real are born together, so that one space produces multiple spaces in the sense of penetration. Therefore, the common spatial penetration techniques in Jiangnan gardens can form a multi-dimensional illusion phenomenon. Among them, borrowing scenery is a more obvious spatial penetration technique, which uses the changes of virtuality and reality to make people feel the illusion of multi-dimensional space.

Borrowed Space

The virtual and real changes between spaces are relatively independent and extend to each other, which is the reason why space penetration leads to spatial multiplicity. "Yuan Ye" mentioned: "Borrowing scenery is the most important thing in forests and gardens" ผิดพลาด! ไม่พบแหล่งอ้างอิง. Due to the spatial limitations of Jiangnan gardens, it is necessary to create infinite natural scenery in a limited environment. Therefore, garden designers often use borrowing scenery between different spaces to form the virtual and real penetration of space, so that people can see the scenery of another space in the distance in one space, thus forming a multi-dimensional illusion phenomenon. As shown in the figure below, space A and space B are two independent and closed spaces, but space A is lower than space B, so that people's sight can penetrate from space A to space B in the distance, expanding the viewing field, thus visually creating a double space (Figure 80)

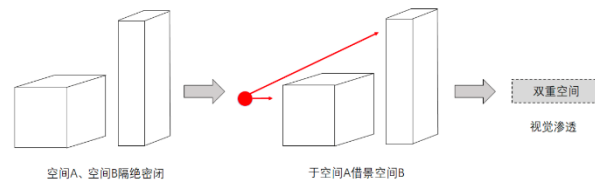


Figure 80 The multi-meaning composition of distant borrowing

For example, the most famous borrowed scenery technique in Jiangnan gardens is the borrowed scenery of the Humble Administrator's Garden and the North Temple Pagoda. Although the distance between the North Temple Pagoda and the Humble Administrator's Garden is relatively far, viewers can enjoy the distant pagoda scenery from the Humble Administrator's Garden . ผิดพลาด! ไม่พบแหล่งการอ้างอิง This borrowed scenery from a distance allows people's vision to be not limited to the spatial scope of the viewpoint, thus extending the vision to the distant pagoda, allowing the pagoda scenery to merge with the garden scenery, creating a spatial multi-dimensional illusion phenomenon (Figure 81) .



Figure 81 The Humble Administrator's Garden borrows the scenery of Beisi Pagoda

Mirror extension

In addition to borrowing from afar, Jiangnan gardens often use the physical characteristics of mirror or water reflection to create borrowing from near. By adding mirrors or water around the garden elements or environment, they form a mirror image on the mirror or water surface. In terms of sight, it triggers multiple penetrations between the actual space and the mirror space, thus producing a multiple illusion phenomenon and enhancing the visual experience of the space (Figure 82) .

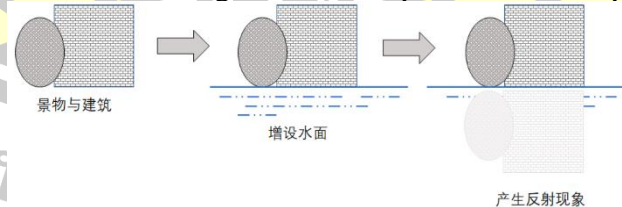


Figure 82 Mirror image extension of the ambiguous structure

For example, there is a mirror in the pavilion of the Wangshi Garden, which uses the mirror's reflection to create a horizontal space. Due to the reflection effect of the mirror, people visually mistakenly believe that there is a "vast world" in the mirror, thus forming a multi-dimensional visual illusion (Figure 84) . The borrowed scenery of the water surface in the garden is borrowed scenery in the vertical space. The water surface itself also has the characteristic of reflecting images. The gardener

sets up the water surface around the building or scenery, so that these garden elements form reflections on the water surface, expanding the visual scale of the water surface space, and penetrating the vertical space to the bottom of the water, thus forming a multi-dimensional illusion and enriching the sense of hierarchy of the vertical space of the garden (Figure 83).



Figure 83 Mirror of Wangshiyuan Garden Figure 85 Water surface of Wangshiyuan Garden

4.5 Application strategies of Suzhou classical gardens in modern public landscape space

The connection between "tradition" and "modernity" and what kind of sparks can be generated have always been what contemporary landscape design seeks to explore. Even though the two words "tradition" and "modernity" are opposite and contradictory , a large number of application strategies suitable for modern landscape design can still be extracted from the traditional Suzhou classical gardens . As a traditional cultural art, the design techniques of Suzhou gardens have great reference significance for solving the design of small-area public landscape spaces . At the same time, it is also a protection and re-exploration of traditional cultural arts, and a restoration of confidence in local culture. As the essence of Jiangnan gardens and the concentration of garden culture, Suzhou gardens have great exploration significance in terms of garden construction techniques and the inheritance of artistic conception in the gardens ผิดพลาด! ไม่พบแหล่งอ้างอิง.

4.5.1 Overall design

Modern public landscape spaces share the same characteristics as Suzhou gardens, namely, small-scale units. Rapid socio-economic development and urbanization have led to a situation in which available land resources are extremely scarce. The available area is small. Under the constraints of the land, how to meet the needs of users as much as possible in a limited space and create a good landscape environment in such a small space and expand the sense of landscape space have become key points to be considered in the design of ผิดพลาด! ไม่พบแหล่งอ้างอิง.

The "mountains and forests within easy reach" is used to reproduce the scenery of nature. In landscaping, various techniques such as contrast, foil, scale, level, opposite view, and borrowed view are used to make the garden landscape achieve the goal of seeing the big in the small, winning more with less, and obtaining rich scenery in a limited space. The solution is to increase the tour time in terms of sensory and actual tour routes to expand the usable area on limited land , and at the same time increase the functionality of the space to serve different user groups, such as elderly activity areas, children's play areas, sports and leisure areas, etc., and combine the wisdom of classical gardens with the characteristics of modern gardens to create more functional small spaces in these partitions. These small spaces are connected in series through

the artistic conception of poetic and picturesque landscapes in classical gardens, making them more beautiful while being functional and overall meeting the needs of more users. The landscape creation method in the small space unit of Suzhou Garden is a very good way to solve the problem of small space creation, which has a very important reference significance for the design of public landscape spaces with smaller areas .

4.5.2 Design according to local conditions

Adapting measures to local conditions is one of the main construction techniques of Suzhou classical gardens. For example, the construction foundation of the Humble Administrator's Garden is a water depression, which can not only realize the effective application of natural landscapes, but also reduce the cost of garden construction, which is conducive to strengthening the overall artistic effect of garden construction; combined with the original terrain conditions and design requirements, choose the appropriate architectural form, rather than using a unified architectural form, to achieve absolute unity and coordination with the natural landscape. In modern landscape design, there are often situations where targeted construction materials and construction processes are selected in order to achieve a certain construction effect, such as hollowing out mountains and filling rivers and lakes. These behaviors will not only destroy the original ecological environment and terrain, but also increase the design and construction costs. It can be seen that it is necessary to apply the design method of adapting measures to local conditions in modern landscape design to realize the reasonable application of the original natural landscape and natural materials, which can not only achieve a state of natural beauty, but also reduce construction costs.

4.5.3 Space guidance design

Spatial guidance design is a common modern landscape design method, including extending roads, setting up guide systems, paving road patterns to form virtual space , etc. "Framed scenery" is a spatial guidance method originated from Suzhou classical gardens. Specifically, when visitors visit the gardens, if they find that there is no obvious landscape in front of them, but a landscape wall with a circular opening appears, they can effectively guide the landscape on the other side through the landscape wall. Changing scenery with every step is also a common spatial guidance method for Suzhou classical gardens. The winding roads can enrich the visual experience and garden space of visitors. It should be noted that spatial guidance design needs to be moderate and reasonable. Designers can minimize the application of forced guidance techniques and choose to design different tour routes, such as direct crossing routes and winding crossing routes, and provide appropriate guidance at the entrance and exit positions to meet the tour needs of different visitors and provide visitors with more opportunities to choose tour routes, which can not only increase the fun of the space, but also improve the interaction with visitors.

4.5.4 Continuity design

Continuity is a prominent feature of Suzhou classical garden construction. This is because Chinese works of art are often long and narrow, and continuous works that produce changes in the picture through the movement of viewpoints. Compared with Western three-dimensional and three-dimensional works of art , Chinese works of art are more suitable for use in landscape expressions. They can show the randomness, abstraction, and continuity of natural landscapes, and further express the

creator's pursuit and imagination of the artistic realm. Modern landscape design can still apply continuity design techniques, so that the design work can maintain an overall and continuous space, and achieve the effective interweaving of natural landscape and cultural landscape, which can not only increase the layering of the space, but also improve the fluidity of the space. . In addition, continuity design is also reflected in the spatial pattern. In the design process , it is necessary to abandon the introverted and one-way spatial pattern to achieve an effective connection between the external space and the internal space.

4.5.5 Design combining classical culture and modern culture

With the improvement of economic ability and living standards, people have higher requirements for living quality, and modern landscape design has played an increasingly important role. The combination of classical culture and modern culture in modern landscape design can not only highlight the unique artistic value of Suzhou classical gardens, but also highlight the humanistic characteristics of modern civilization, which is conducive to building a harmonious situation of common development between man and nature. In order to accurately apply the construction concepts and techniques of Suzhou classical gardens, designers need to fully understand the relevant construction concepts and techniques. For example, pavilions often appear in Suzhou classical gardens, and plaques appear in the pavilions. Plaques can also be used in modern landscape design, but attention should be paid to the specific production materials and display content of the plaques, so as to achieve an organic combination of classical culture and modern culture.

4.6 Chapter Summary

This chapter makes an in-depth analysis of the current status, development trends and existing deficiencies of modern gardens, and gives application strategies one by one based on the functional and emotional needs of modern people for space, combined with the gardening techniques, elements and concepts of Suzhou classical gardens:

(1)In the design of modern small public landscape space, the "borrowed scenery" of Suzhou classical gardens and the " framed scenery " techniques of windows, door frames, corridors, etc. are used to introduce the external scenery into the garden, forming an effect of virtual and real coexistence , creating the versatility and spatial hierarchy of "seeing the big in the small" and "a scene at every step", and reasonable zoning allows people to feel rich changes and a sense of extension in a small space, thereby maximizing the space.

(2)In modern garden design where unreasonable plant configuration leads to a lack of spatial variability , this paper draws on the “triple greening” technique of Suzhou gardens, based on the levels and matching of Suzhou garden plants, that is, matching trees, shrubs and ground cover plants to enhance the sense of depth and three-dimensionality of the space, improve biodiversity , and select plants that bloom and bear fruit in different seasons to create a dynamic beauty that changes with the four seasons. At the same time, through reasonable color matching, the visual experience of the space is enriched .

(3)At a time when the elderly population is increasing and the survival pressure of young and middle-aged people is increasing day by day, we should learn from the Suzhou gardens' design concept of emphasizing the harmony between man and nature , avoiding excessive artificiality, and taking appropriate measures according to

the actual terrain, climate, vegetation and other natural conditions to create a state of "harmony between man and nature" and artistic expression of harmonious coexistence where man and nature are integrated to relax the body and mind and seek inner peace.

(4) In setting up small scenes, the layout of Suzhou gardens is used for reference. Through stacking mountains, arranging water, planting trees, and arranging stones, a natural scene that "although made by man, seems created by nature" is created, creating a poetic and picturesque aesthetic conception, fully embodying the life concept of "house and garden as one", and integrating poetic and picturesque conception into modern garden design.

According to the needs of the development of the new era, we extract traditional culture, transform the concept of Suzhou classical garden design from concrete to abstract and reasonably apply it in the modern public space landscape, provide new ideas and directions for modern landscape design, and create greater glory.



Chapter V

Design practice: space use analysis based on the example of Huayang Sports Park in Luoyang

5.1 Overview of Design Practice

5.1.1 Park Background

This project is the renovation project of Luoyang Huayang Sports Park. In recent years, in order to better meet the leisure and fitness needs of surrounding residents, create a safe, civilized and harmonious public environment for leisure and fitness, and strive to improve service functions and urban quality. According to the deployment of the city's community sports park construction work, the Jianxi District Committee and District Government included Huayang Sports Park in the Xiyuan District Urban Organic Renewal Project. Focusing on the public service needs of "one old, one young and one young and strong", in accordance with the construction standards of Class C sports parks, by optimizing the spatial layout, improving service facilities, and strengthening the functions of the venue, the road surface and green area of 8,000 square meters were renovated, and 4 badminton courts, 4 table tennis tables, 3 basketball courts, fitness equipment and children's play areas and other sports facilities were added to effectively improve the participation and experience of mass sports fitness, entertainment and leisure, and actively create a humane, diversified and vibrant urban public space to meet the people's yearning for a better life.

5.1.2 Location conditions

Huayang Sports Park is located at the intersection of Jiudu Road and Lixin Road in Jianxi District, covering an area of 10,000 square meters. As a relatively small community park, it is located in the bustling Huayang Community of Zhujiang Road Street, serving more than 100,000 people in the surrounding area. It is a typical public landscape space with a large population and limited land (Figure 84).



Figure 84 Location analysis of Luoyang Huayang Sports Park

5.1.3 Preliminary analysis

After field investigation, it was found that the original site of the public space of Luoyang Huayang Sports Park had many problems: 1. The overall area is small, the spatial layout is unreasonable, and there is a lack of master-slave relationship; 2. The space is single and lacks functionality; 3. The sightline is cluttered and the focus is unclear; 4. The park route planning is poor; 5. There is a lack of cultural heritage; 6. The facilities are aging and lack safety protection and first aid facilities. The overall space layout is unreasonable and the space is single

Luoyang Huayang Sports Park covers a relatively small area, including a total building area of about 10,000 square meters. The original landscape space was open and integrated, lacking spatial divisions, and had relatively simple functions. At the same time, it is located in a residential downtown area, with residential buildings in Huayang Community to the north and east, Jiudu Road and Lixin Road to the south and west respectively. The surrounding environment is simple, and some shops have a certain degree of obstruction to the outer landscape (Figure 85) .



Figure 85 Entrance to Huayang Sports Park, Luoyang

No partitioning, lack of functionality

The external space of the original site landscape area is a public road, with large traffic and pedestrian flow, and it is relatively noisy. However, the site is only separated from the external road by a railing, which cannot play the role of dividing the space. The transparent sight makes tourists lack privacy and sense of boundaries during the garden tour. There are only a few corridors, pavilions, stone tables and stone benches, and an outdoor basketball court in the garden. There is no spatial area division, and there are no other facilities to assist performance (Figure 86) .



Figure 86 The entrance corridor and pavilion of Luoyang Huayang Sports Park

Disorganized vision and unclear focus

The plant configuration of the entire landscape space is chaotic, with no main building and no hierarchical arrangement. At a glance, only the trees and grass as background can be seen. The trees blend into the surrounding environment and are of a single type, making it difficult for people to find a focus while viewing, thus losing their visual sense of direction (Figure 89) .



Figure 87 Waterscape and rockery in Huayang Sports Park, Luoyang

Poor park route planning

The original entrance area is a wooden bridge over the water, connected to a small circular square. The roads in the entire landscape space are all pebbled and slab roads, with no main road and lack of planning. Visitors' vision is too empty and monotonous during the entry process. In addition, there is no fitness trail, and all the roads in the landscape space are walking trails, which makes the already small space even less visually lingering (Figure 90) .



Figure 88 Ground paving of Huayang Sports Park in Luoyang

The facilities are aging and lack safety protection and emergency facilities. Looking at the overall landscape space, there is a lack of reasonable distribution and division, the site areas are integrated, there are no facilities such as road signs and signs in the overall space, and there is only an outdoor basketball court as the only functionality. In addition, the corridors, pavilions, stone tables and stone benches and other facilities are aging. The overall space has no safety protection and first aid facilities and cannot meet the needs of modern people visiting the park.

5.2 Design Concept

Huayang Sports Park is a community sports park located in Jianxi District, Luoyang City. It is an open street park with old residential buildings to the south and Century Huayang residential complex to the north. It is close to Wanda and Changshen business districts . Considering that Huayang Sports Park is located in the prime area of a prosperous commercial district and in a downtown area with limited space, we considered how to maximize the utilization of this limited space and incorporate the design concept of Suzhou classical gardens and its gardening techniques such as " seeing the big in the small " to optimize the spatial layout, improve service facilities, strengthen the site function, etc., and combined with its design concepts of calligraphy and painting and landscape artistic conception , it is divided into the following ideas:

(1)The gardening technique of "seeing the big in the small"

Huayang Sports Park is located in a downtown area with limited land area. Therefore, the gardening technique of "seeing the big in the small" in Suzhou classical gardens is adopted in the design and renovation project. First, the spatial level is increased, and some "obstacles" are added between people and the scenery to enhance the depth of the scenery. Most obstacles are semi-transparent, such as corridors , lattice windows, plants, rocks, etc. , which can suppress the sight of tourists and guide the direction of the route, and then blur the boundary of the park by "borrowing scenery" to achieve the feeling of infinite space. Secondly, the space utilization rate is improved by twists and turns. For the same distance, the winding road is longer than the straight road, and the long road gives people the feeling that the place passed by is larger than the short road. More importantly, there are many things to see on the

winding route, and the changes are great, which actually improves the utilization efficiency of limited space. "Different scenery with every step" is also achieved on this basis. By integrating the above gardening techniques into Huayang Sports Park, it is intended to achieve the effect of visually expanding the limited space.

(2) Garden Painting and Landscape Artistic Conception

Suzhou gardens are influenced by literature and painting. Garden design, especially classical garden design, attaches great importance to artistic conception. Artistic conception is the image derived from the landscape, and the deeper feelings generated from it, such as the feeling of objects and the emotion of the scene. In garden design, space covers not only the physical space level in vision, but also the spiritual level. As the carrier of this project, Huayang Sports Park carries multiple functions such as cultural education, leisure and entertainment, and enhancing the connotation and image of the city. Spiritually, it contains many factors such as ideology, cultural connotation, and subjective emotions of people. Therefore, with the application effect of calligraphy and painting and landscape artistic conception in Suzhou gardens, the spiritual consciousness contained in the Huayang Sports Park venue can be reflected to the greatest extent.

(3) Local cultural integration

The cultural connotation of Suzhou Garden is rich and profound. It is unique in its integration of nature and humanity, exquisite construction techniques, rich garden elements and unique artistic conception. It represents the artistic achievements of traditional Chinese gardens and is also an important embodiment of the natural concept, aesthetic concept and cultural values in traditional Chinese culture. Whether for artists or tourists, Suzhou Garden is a unique place that can touch the soul and settle the state of mind. Its application is reflected in: after analyzing the local culture and living habits, design elements are extracted from them and applied to the project, and the multiple illusion phenomenon is used, so that visually, people can intuitively draw the shadow of culture and life from the project site, thus generating a sense of familiarity. The above relationships are combined through the integration of local culture, and interactive spaces are added in design practice to promote the interaction between people, environment and culture.

5.3 Project Design Description

The gardening techniques, elements and concepts of Suzhou classical gardens are combined with the landscape space renovation project of Luoyang Huayang Sports Park, which is divided into 6 areas: entrance leisure area, children's play area, elderly activity area, rest and viewing area, landscape corridor area, and outdoor activity area. Through the dynamic and static zoning method, visitors can have a rhythmic visual experience of viewing and participating in the process of entering the park. The gardening concepts and design rules of Suzhou classical gardens are fully applied, combined with modern artistic techniques and user needs, visually breaking away from the limitations of space, achieving a scene at every step, and using the zoning functionality to increase the time visitors stay while having a view everywhere, increasing the fun and participation of the venue, and thus visually increasing the space.

5.4 Project floor plan analysis

The renovation project of the landscape public space of Luoyang Huayang Sports Park started from the perspective of spatial vision, drawing on the spatial organization structure layout of Suzhou classical gardens, and adopting a structure of seeing the big in the small, and interweaving the big and the small, to rationally divide the space into the above six functional areas, among which the main areas are: children's play area and elderly activity area. The secondary areas are: entrance leisure area, rest and viewing area, landscape corridor area, and outdoor activity area (Figure 89).



Figure 89 Huayang Sports Park design plan (drawn by the author)

5.5 Analysis of the application effect of the project's visual illusion phenomenon

(1) Entrance leisure area

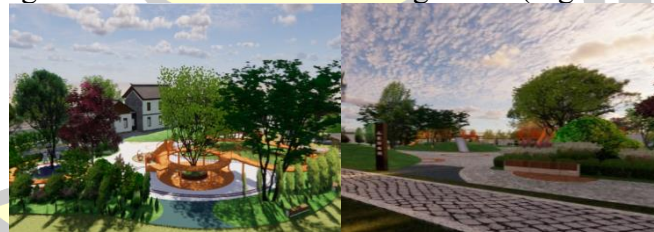
The entrance design of "first suppressing and then promoting" is widely used in Suzhou classical gardens and has extremely important application value. In order to make tourists feel unknown and curious before entering the park, the design uses bamboo to separate the entrance area. The height of the bamboo can naturally block the user's direct line of sight, forming a natural barrier, prompting people to want to enter and explore. At the same time, a tea house and coffee shop are set up at the entrance to meet modern needs. The coffee shop with Hui-style architecture also plays a role in blocking the line of sight to a certain extent. When tourists pass through the coffee shop and the bamboo forest path, they enter the large space. At this time, the small space at the entrance and the large space after entering are contradictory and contrasted. The line of sight changes from the narrow entrance to the large space that is suddenly open, creating a feeling that is wider than the actual space, and there is a sense of expansion in visual and psychological scales. The design of the open space in front of the entrance incorporates Chinese character culture and pine and cypress landscape, which not only inherits the profound Chinese character culture, but also creates a multi-level visual phenomenon. Thereby enhancing the sense of spatial hierarchy. By integrating large glass windows with traditional Hui-style architecture in the coffee shop design, the framed scenery and opposite scenery commonly seen in Suzhou classical gardens are created. The reflections of bamboo at different angles under the sun are then used to create the illusion of multiple virtual and real spaces, expanding the ground space and the interior space (Figure 90).



Figure 90 Design drawing of the entrance to Huayang Sports Park (drawn by the author)

(2) Children's Play Area

As a sports park, the most important audience groups are children and the elderly. It can be said that these two groups of people use this public space for the longest time. Therefore, in addition to being ornamental, the setting of children's play areas and elderly activity areas is particularly important. The design concept of the children's park is to meet the needs of children's growth and development as the core, provide a variety of games and entertainment projects, and give children the opportunity to explore themselves, create and interact socially, so as to promote the healthy development of body and mind. The primary consideration of the design concept is the safety and reliability of children. All amusement facilities should meet safety standards, and the equipment materials should be non-toxic and harmless, avoiding sharp or sharp edges and components to reduce the risk of accidental injury. The spatial layout adopts irregular shapes, and uses arcs to outline the spatial terrain. While increasing the division and fun, it can also extend the walking time. Plants are used as partitions to block the line of sight, which can also play a role in shading and avoiding the sun, which is consistent with the design concept of "seeing the big in the small" and "moving a scene" in Suzhou classical gardens (Figure 91).



Angle 1 Angle 2

Figure 91 Design drawing of children's play area (drawn by the author)

(3) Elderly Activity Area

As the second largest user group of sports parks, the design of the elderly activity area should focus on creating a warm, comfortable, safe and convenient environment to meet the special needs of the elderly.

With the aging of the population, the design of outdoor activity space for the elderly has become increasingly important. Good design can meet the physiological and psychological needs of the elderly and improve their quality of life. Safety is the primary principle of outdoor activity space design for the elderly. Therefore, first of all, the ground material should be flat and barrier-free, and the edges and corners should be rounded, such as plastic, stone or wood, and materials of different colors and textures should be selected to increase the visual effect of the ground and provide

different walking experiences. In addition, the sign system should be clear and easy to read, so that the elderly can easily identify the direction. In terms of comfort, it mainly depends on the impact of environmental factors on the activities of the elderly. Sufficient sunshade facilities and windbreaks need to be set up to ensure that the microclimate in the activity space is suitable. While the basic conditions and facilities are available, it echoes the gardening style of Suzhou classical gardens, emphasizes the aesthetic and ecological value of public landscape activity space in terms of landscape, makes full use of natural landscapes, such as mountains, rivers, plants and other elements, and combines artificial landscapes such as waterscapes, sculptures and architectural sketches with the surrounding environment. In the selection of plants, priority should be given to plants that are beneficial to the health of the elderly, such as camphor trees and pine and cypress trees that have antibacterial and blood pressure-lowering effects. The seasonal changes and hierarchical structure of plants should also be considered, and plants with four-season ornamental value, such as shrubs such as evergreens and bamboo, should be added to increase the diversity and visual effect of the space (Figure 92).



Figure 92 Design of the elderly activity area (drawn by the author)

(4) Rest and viewing area

This area is located on the east and north sides of the park, close to the residential area, so it is set up as a relatively quiet rest and viewing area. Visitors standing here have the most open vision, and can fully take in the scenery to the greatest extent, which is visually widened, thus creating an illusion that the visual range is larger than the actual space. The partition design treatment is added to the original single path, making the space tortuous and diverse, enriching the spatial level. In addition, pavilions, seats, etc. are set up in this area by taking advantage of the terrain, giving the venue a rest function, providing a place for people to communicate with each other, allowing visitors to enter this quiet area from the children's play area and the elderly activity area, avoiding visual fatigue and helping to relax their body and mind. Suzhou gardens also often construct space by combining virtual and real techniques. In a limited space, through the scattered buildings, lakes, rockery, stone bridges and other elements, the virtual and real worlds are set off and alternating, so that visitors will feel that the artistic conception is missing and the self and the object are forgotten when visiting the garden. Therefore, in the design of the rest and viewing area, "framed view", "leaked view" and light and shadow are used to create a feeling of paintings with the lattice windows and barriers in the pavilion, and then the shadows of the trees are projected onto the wall through the light of the setting sun to form a beautiful picture. This scene not only shows the warmth and beauty of the setting sun, but also adds a tranquil atmosphere to the wall. The shadows of the trees form mottled shadows on the wall, which move with the position of the sun, adding a dynamic beauty to the environment. In addition, this scene can also trigger people's emotional

resonance, making people feel the beauty of life and the quiet years, as if time is also solidified by this beautiful scenery, making people intoxicated and unwilling to leave (Figure 93) .



Figure 93 Design drawing of rest and viewing area (drawn by the author)

(5)Landscape Corridor Area

This area is a special area in the park. Due to the original terrain factors, there is a non-flowing water source and it is close to the shops on the southwest side. Therefore, corridors, lake views and landscape sculptures are mainly set up. The corridor is in a broken line shape and attached to the outside of the shop building. The southwest side forms the inner and outer contours of the park. The north and east sides are virtual partitions of the landscape site, which puts visitors between open and closed spaces and makes the vision flow. Visitors are located at different positions in the corridor, and the scenery they see changes accordingly, echoing the spatial effect of changing scenery with each step, so that people can feel the visual experience of expanding the space from multiple landscape perspectives in a limited space, thus creating a visual illusion that they can neither see enough nor see through. When visitors walk and flow in the corridor, the point, line and surface space are combined, which can maximize the maximum flow in a limited space and extend the multi-level visual space effect and tour experience.

The rockery sculptures and the lake are surrounded by the corridor, and are decorated with plants with modern minimalist garden characteristics. They stand out in the surrounding environment, attracting visitors' attention inadvertently, thus creating a multiple illusion phenomenon. In addition, the soft curves of the floor in the corridor and the treatment of the lake view seem to present a painting on the ground. Looking at it as a whole, it seems as if you are in an ink landscape painting. Suzhou gardens pay attention to the treatment of details and exquisite decoration, such as the stones in the courtyard, the railings of the stone bridge, and the landscape paintings in the scrolls, which all reflect the keen touch and taste of the garden owner for details. Therefore, there are usually elements such as a clear lake, lush vegetation, and quiet pavilions and towers, creating a tranquil and pleasant atmosphere. In the design, the landscape corridor area is built to imitate the feeling of real natural landscape to create such a pleasant environment, which can make people relax, express their emotions, and experience tranquility and peace (Figure 94)

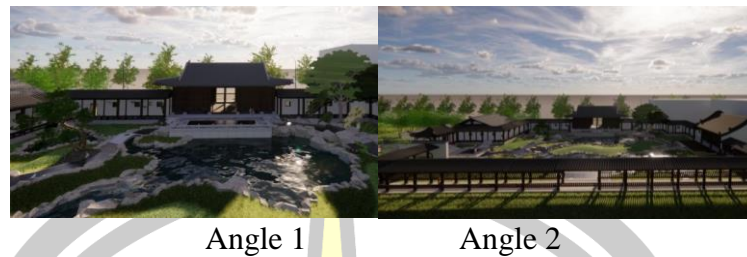


Figure 94 Design drawing of the landscape corridor (drawn by the author)

(6) Outdoor activity area

This area is an outdoor court area. As a sports park construction project in Luoyang City, the necessity of arranging a court is to meet the citizens' growing demand for physical exercise and leisure and entertainment, strengthen their bodies, encourage national sports, improve urban infrastructure, and enhance the quality of the city. Therefore, an outdoor court area is set up to provide ball fitness venues for surrounding residents and tourists.

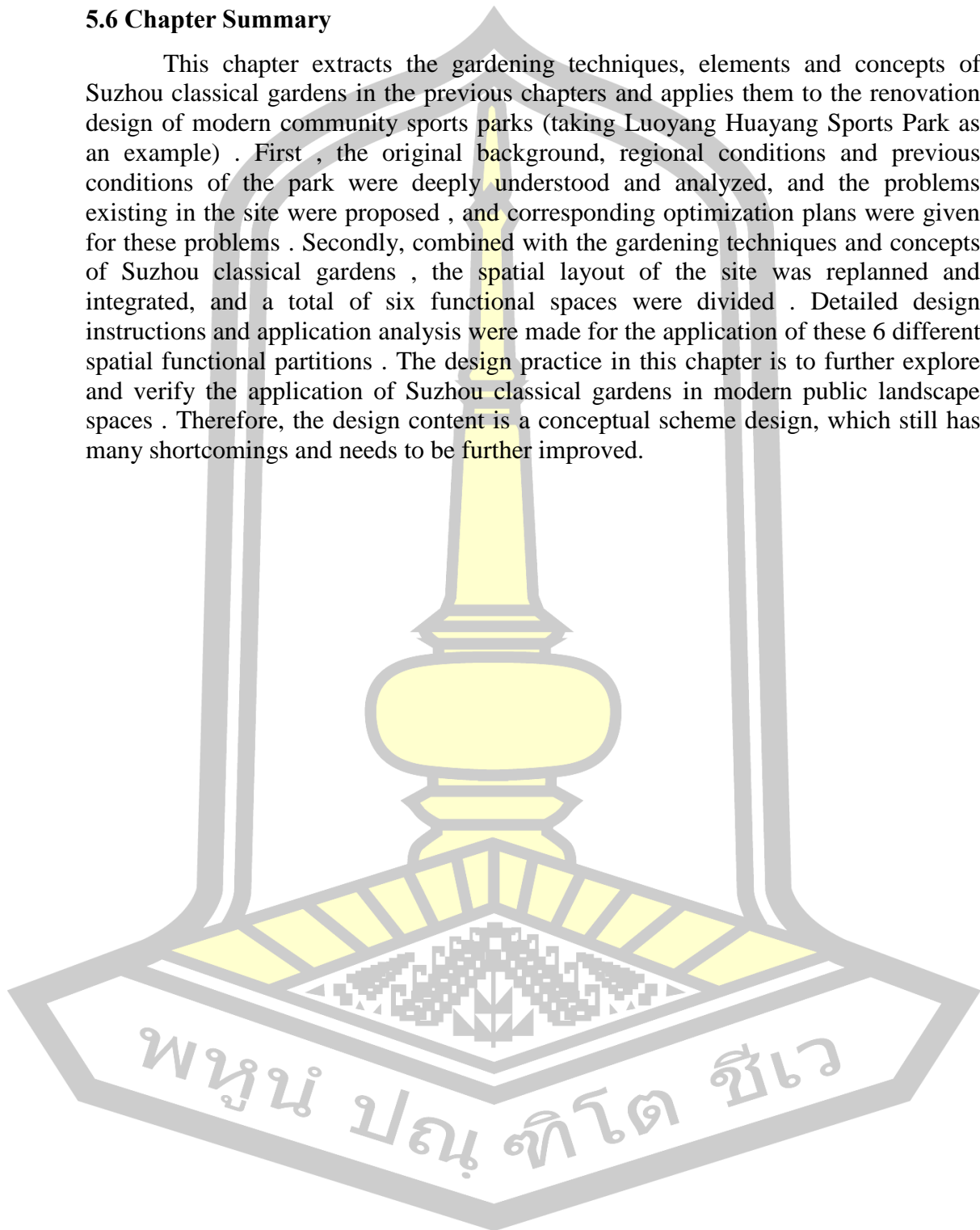
With the improvement of people's living standards, citizens' demand for physical exercise and leisure and entertainment is increasing. Sports parks meet citizens' fitness needs by providing a variety of sports venues and facilities, and promote the development of national fitness activities. Therefore, 3 standard basketball courts, 4 badminton courts, and 4 table tennis tables are set up to basically meet the needs of users for ball sports. Perfect sports facilities not only enrich the functional attributes of the park, but also promote economic development. Sports parks can enrich citizens' cultural and sports life by hosting various events, such as the National Fitness "Fun Challenge" and basketball leagues, and promote the healthy development of the city's economy and improve the overall quality of the city. By integrating resources according to local conditions, promoting the deep integration of sports, culture, and health, and improving the quality of life of the masses, the construction and management of sports parks have become a new business card for improving the city's style and taste. Through high-standard and fully functional sports facilities, the city's modernization level and cultural atmosphere are displayed, and the city's attractiveness is enhanced (Figure 95).



Figure 95 Design drawing of outdoor activity area (drawn by the author)

5.6 Chapter Summary

This chapter extracts the gardening techniques, elements and concepts of Suzhou classical gardens in the previous chapters and applies them to the renovation design of modern community sports parks (taking Luoyang Huayang Sports Park as an example) . First , the original background, regional conditions and previous conditions of the park were deeply understood and analyzed, and the problems existing in the site were proposed , and corresponding optimization plans were given for these problems . Secondly, combined with the gardening techniques and concepts of Suzhou classical gardens , the spatial layout of the site was replanned and integrated, and a total of six functional spaces were divided . Detailed design instructions and application analysis were made for the application of these 6 different spatial functional partitions . The design practice in this chapter is to further explore and verify the application of Suzhou classical gardens in modern public landscape spaces . Therefore, the design content is a conceptual scheme design, which still has many shortcomings and needs to be further improved.



Chapter VI

Summary, discussion and recommendations

6.1 Research Conclusion

This study takes the gardening techniques and concepts of Suzhou classical gardens as the research basis, and matches and analyzes the gardening techniques such as "seeing the big in the small" in Suzhou classical gardens with modern micro-small garden landscape renovation and upgrading projects. In-depth analysis of the design techniques and elements such as framed scenery, opposite scenery, and step-by-step scenery in Suzhou classical gardens is used as the research object. Through reading literature, historical data query, field investigation, graphic analysis and other methods, its composition mechanism is discovered, and its application rules in modern public landscape space design are sorted out and summarized, and solutions are proposed and applied to design practice. To summarize the results of this study, there are mainly the following points:

supplements the application of Suzhou classical garden gardening techniques and concepts in modern public landscape spaces, conducts a detailed study and analysis of the design techniques and constituent elements of Suzhou classical gardens, and summarizes them. Through literature review, diagrams, and field investigations, this paper summarizes the gardening techniques used in Suzhou's four major classical gardens, including: "seeing the big in the small", "a scene with every step", "leaking scenery", "sandwiching scenery", "borrowing scenery", "framing scenery", "opposing scenery", and "dividing scenery". On this basis, it also combines the changing, contrasting, and prominent composition methods in the optical illusion angle with the zoning composition of the garden landscape.

Based on the gardening techniques and design concepts of Suzhou gardens, with reference to the application techniques of design elements used in traditional Suzhou classical gardens, combined with the case analysis of visual illusions applied to modern gardens, this paper constructs a design that combines the design techniques and elements of Suzhou classical gardens with visual illusions and applies them to modern public landscape spaces. From the three levels of spatial layout, character behavior and character psychology, this paper proposes design strategies for maximizing space expansion, guiding character behavior and creating artistic conception.

By studying the impact of the traditional aesthetics and design principles of Suzhou classical gardens on modern projects and their integration into urban areas, we summarize alternative urban development methods that prioritize green space, traditional Chinese aesthetics and cultural significance. Design practice not only reflects the aesthetic, philosophical and cultural values of ancient China, but also protects and promotes cultural heritage. It also draws on its inner soul and essence through the study of inheritance and connectivity, adopts sustainable and eco-friendly design principles, adopts green infrastructure, improves biodiversity, and reduces the urban heat island effect, thereby promoting environmental sustainability.

Based on the application principles and application strategy framework of Suzhou classical gardens and visual illusion phenomena, a design scheme is proposed for the optimization project of modern public landscape space, and the effect of its

application is elaborated in detail. This provides practical reference value for the design of public landscape spaces with smaller areas in the future , and provides a new direction for the development and construction of modern garden landscape in China.

6.2 Research Innovations

The innovations of this paper are concentrated in the following three aspects:

By combing and summarizing previous research, the historical development, cultural connotation, garden construction techniques and design concepts of the four major classical gardens in Suzhou are integrated and sorted out, and the definitions are supplemented to a certain extent. Combined with the theory of visual phenomena, the matching points between the overall layout of Suzhou classical gardens and visual phenomena are explored , providing theoretical support for the study of Suzhou classical gardens under the visual theory.

The theoretical framework and application strategies for combining Suzhou classical gardens with visual phenomena in the design of modern public landscape spaces have been added .

Through a variety of research methods, the feasibility and user satisfaction of Suzhou classical gardens in the design of modern public landscape spaces were systematically studied .

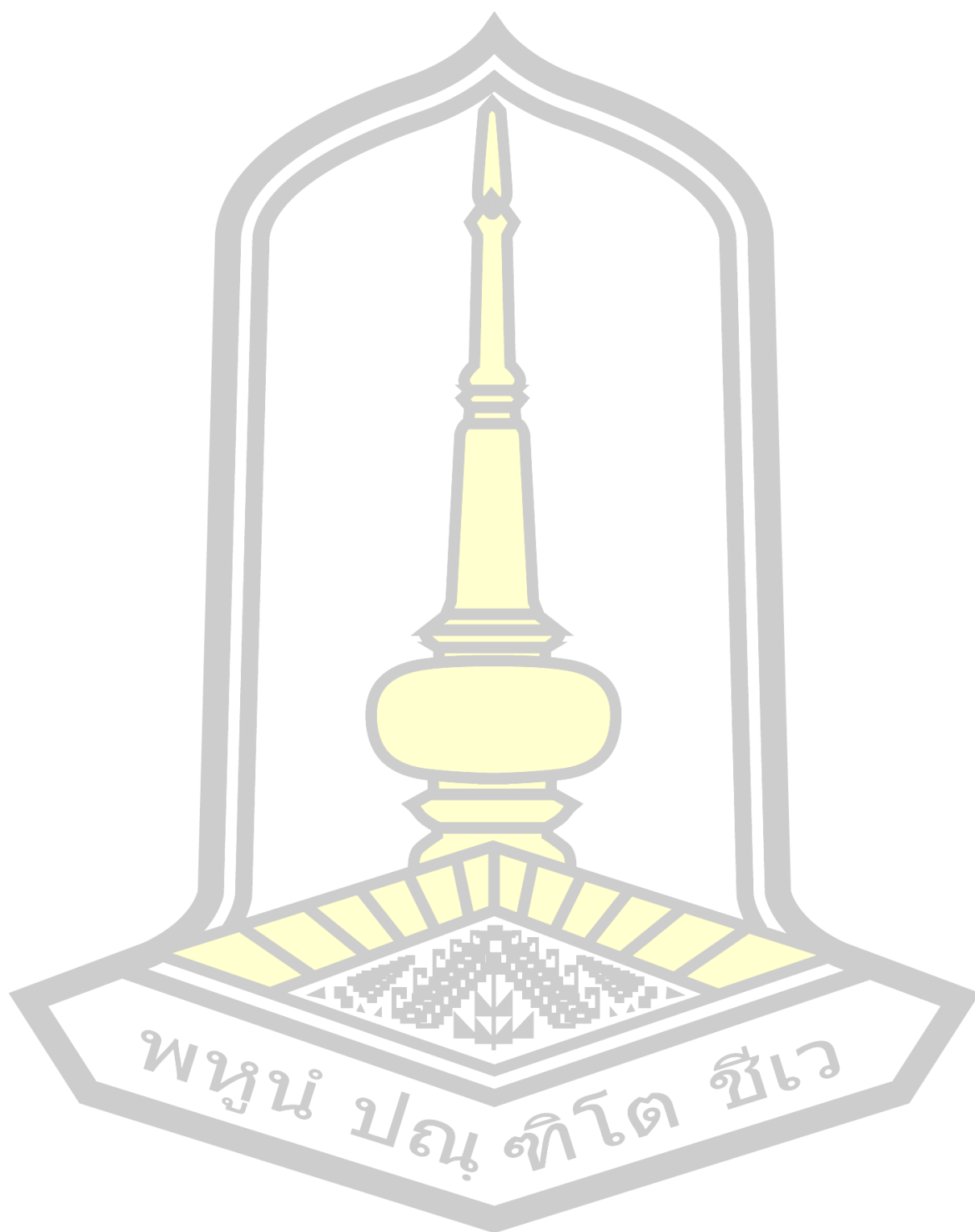
6.3 Limitations and Prospects

This paper systematically studies the gardening techniques and concepts of Suzhou classical gardens , and proposes design strategies for modern garden design. However, due to various restrictions, this paper still has many limitations and needs further research.

By establishing a landscape model, we analyze the garden from a three-dimensional spatial perspective . However, the project designed in this study is a public landscape space with a small area. Therefore, the sample is relatively single and has a certain one-sidedness. It is hoped that subsequent research can further apply and explore factors such as different types, area sizes and natural environments .

Due to the huge system of Suzhou classical gardens, it is not possible to conduct in-depth research and analysis on all the gardens . In addition, due to the limited knowledge and energy of the author, it is not possible to carry out a large amount of field research. Only the four most representative gardens in Suzhou can be selected for investigation and research as a reference to support the final design practice . In the research, the psychological perception of space is not fully and deeply considered. Due to the limitation of knowledge, the depth and breadth of the discussion are still lacking , so some of the contents in the article need to be further explored in terms of scope and depth . However, the starting point of the research content in this article and the issues discussed throughout the article are to provide new ideas and design inspiration for the design and transformation of public landscape space under the process of urbanization development in modern China . It is hoped that Suzhou classical gardens will be integrated with urbanization development, so that the wisdom of the ancients can be perfectly combined with modern development. While retaining the traditional Chinese cultural concepts, its influence on the design of modern public landscape space will be paid more attention and attention .

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