

Chapter 2

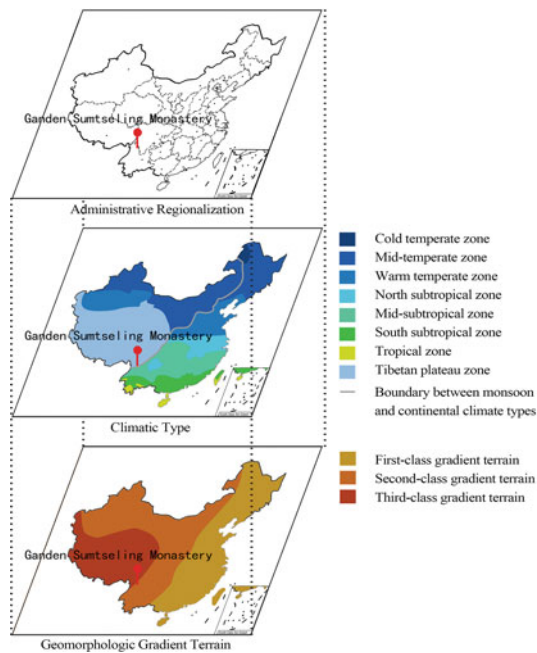
“Conversation” Cases

2.1 Ganden Sumtseling Monastery: Conversing with the First and the Last Sunlight of Day

Location: Shangri-la, Yunnan Province

Key Geographical Concept: Architecture, terrain and sunlight

The Ganden Sumtseling Monastery conforms to the mountain slope and harmonies with site. The main shrine is located on a mountain peak, first to greet the light of day and last to bid farewell to the sun as it sets.



Note The base maps in the location map are from the websites of the National Administration of Surveying, Mapping and Geoinformation. (See <http://unn.people.com.cn/mediafile/200607/14/F200607141610331489926345.jpg>, <http://unn.people.com.cn/mediafile/200607/14/F200607141540432633643981.jpg>). The same base maps are also used in the following location maps for other cases.

Geomorphologic Features

The Gaden Sumtse Ling Monastery is located on the top of a hill in northeast Shangri-la in Yunnan Province. Shangri-la County is seated at the foot of the mountains. At the moment when the sun rises, the monastery is the first place to be touched by sunlight because of its location and orientation (Fig. 2.1).

Fig. 2.1 Encircled by mountains, the Gaden Sumtse Ling Monastery basks in the first light of day. The monastery has its back to lofty mountains, with gentle slopes to the south. The entire monastery sits on a hill top; the building presides majestically over an otherwise flat expanse. *Source* Photograph by Fan Yin



Climatic Features

Shangri-la falls within the plateau humid climate zone. Temperatures vary greatly over the four seasons. As in all other plateau regions, night and day temperatures can be drastically different. Built under these conditions, the architecture of the Ganden Sumtseling Monastery takes on a very typical Tibetan style (Fig. 2.2).

Fig. 2.2 Trapezoidal windows at the Sumtseling in classic Tibetan style. Mullions are engraved with an elegant pattern of flowers. Frames are painted with beautiful colored drawings. *Source* Photograph by Bihu Wu



Vegetation Features

The mountains and plains around the monastery are covered with short alpine meadows. The green grass forms a charming contrast with the monastery's red and white walls (Fig. 2.3).

Fig. 2.3 The monastery is surrounded by alpine meadows. The white lamasery dorms set off a pleasant contrast to the verdant grass.
Source Photograph by Bihu Wu



Cultural Features

The Ganden Sumtseling Monastery belongs to the Gelugpa Sect (the Yellow Hat Sect), currently the largest sect of Tibetan Buddhism. The name Ganden Sumtseling was given by the Fifth Dalai Lama. “Ganden” means that the place is connected to the Gelugpa’s earliest monastery, Ganden Monastery. “Sumtseling” is a reference to the playground of three Tibetan Deities. Emperor Kangxi (reign 1662–1722) would later officially rename it Guihua Monastery. The local Tibetan people, however, used the name “Salkun”, which means “monastery of sacred land” (Gyalthang Sherab Gyatso 1994). Of the so-called “Thirteen -lings (lit. happy paradise) Monasteries” that the Fifth Dalai Lama asked Emperor Kangxi to build, Sumtseling is the first Gelugpa lamasery in Yunnan Province. After its construction, property and ritual implements from the surrounding monasteries were transferred to the Sumtseling Monastery, making Sumtseling the largest monastery in Yunnan Province, a political and religious epicenter of the province (Xu 2002) (Fig. 2.4).

Fig. 2.4 As the regional religious center, the Sumtseling and its surroundings are decked with colorful flags and other Buddhist decorations. *Source* Photograph by Mingming Li, provided by Lin Yan



Because the Ganden Sumtseling Monastery was to be an important regional political and religious center, a site of great significance was chosen for its construction. The monastery is seated on the top of Pingshan Hill, which overlooks Shangri-la Town. It enjoys the first rays of Shangri-la's morning sun and the last glimmers of its sunset. Spring water at the foot of the Pingshan Hill, which block the northern winds. The Sumtseling sits high above Shangri-la Town; Pilgrims must climb a steep flight of stairs to reach the monastery (Fig. 2.5). The ascent enhances the overall feeling of entering sacred ground (Fig. 2.6).

The nearly 500 mu¹ (approximately 0.3 km²) that belong to the Ganden Sumtseling Monastery include a Dratsang (Scripture Hall) and its two directly affiliated institutions, Xisu and Juexia, as well as Badakang Village, over 100 lamasery dormitories and walled enclosures. There are five gates in the monastery's oval-shaped wall. Dratsang, the core of the monastery, is located on the highest point of the hill (Fig. 2.7). The entire monastery is built directly in front of a

Fig. 2.5 Ascending the monastery steps, pilgrims approach the final destination of their religious journey. *Source* Photograph by Bihu Wu



¹**Mu** is a traditional Chinese unit of area. 1 mu \approx 667 m².



Fig. 2.6 Looking out from the Sumtseling over the surrounding area, one can see Shangri-la Town, which sits on smooth terrain five kilometers to the south. In this photograph, Shangri-la is the town *on the left*. *Source* Photograph by Bihu Wu

Fig. 2.7 Front view of the Ganden Sumtseling Monastery. The major structure of architectural complex, Dratsang (Scripture Hall), features *red, white and gold colors*. With its backdrop of mountains, the building appears imposing and magnificent. *Source* Photograph by Ling Xue



Fig. 2.8 Side view of the Ganden Sumtseling Monastery. The huge Sumtseling Monastery is built on a slope. Each level of buildings is stacked upon the previous level. *Source* Drawing by Kun Gao



mountain range. The mountain backdrop gives the monastery a sense of grandeur and forms a style similar to that of the Potala Palace (Fig. 2.8). For this reason, the Ganden Sumtseling Monastery is also known as the “little Potala Palace”.

The Ganden Sumtseling Monastery architecture is constructed in typical Tibetan style. Buildings feature high walls and rectangular windows, red and white walls and black window frames. The monastery's status is manifested in its gold roof (Figs. 2.9, 2.10, 2.11 and 2.12). The south-facing Dratsang (Scripture Hall) has five stories, among which Main Hall can hold up to 2,000 monks chanting sutras simultaneously (Fig. 2.13).

Fig. 2.9 A gilded roof manifests the primacy of this building among surrounding lamasery buildings. *Source* Photograph by Bihu Wu



Fig. 2.10 The Dharmacakra and the pair of deer both serve to represent the lamasery's status. *Source* Photograph by Bihu Wu



Fig. 2.11 Adorning the corner of the roof, a bell hangs from the mouth of a dragon-crane. *Source* Photograph by Bihu Wu



Fig. 2.12 The political and religious supremacy of the Ganden Sumtseling Monastery is reflected in the Kundikas made from gilded copper, which are found on the ridges of the roofs. *Source* Photograph by Fan Yin



Fig. 2.13 Side view of Dratsang (Scripture Hall). Dratsang was built, in accordance with the monastery as a whole, conforming to the mountain ridge behind and sitting in an elevated northern position facing to the lower south. *Source* Photograph by Fan Yin



As the first Gelugpa lamasery, the Ganden Sumtseling Monastery holds a great number of precious religious texts, *thang-ga*,² as well as a large number of ritual implements, Buddha statues, relics including the Buddhārūpa of the Fifth and Seventh Dalai Lamas and the Kasaya of the successive Dalai Lamas and the Panchen Lamas, all of great cultural and religious value.

²**Thang-ga** is a unique painting form in Tibetan culture, which is a religious scroll painting that is suspended and has a consecrated mounting with colored satin.

Extended Reading: Gelugpa of Tibetan Buddhism

The Gelugpa, or Gelug, is the largest sect of Tibetan Buddhism. The Gelug sect was founded in 1409 AD with the establishment of the Gandan Monastery in Lhasa by the Tibetan Master Je Tsongkhapa (1357–1419). The Gelug monks customarily wear yellow hats. Thus, the Gelug sect is also known as the Yellow Hat Sect. The Gelug is a relatively new form of Buddhism. The Gelug monks are required to be extremely self-disciplined and well organized. The Gelug Buddhism encourages strict observance of religious discipline, in opposition to the type of depravity that had been practiced by many previous monks who sought pleasure, fought for power and generally acted without concern for the common people. This positive standard brought the Gelug sect great popularity among the common people. Between 1409 and 1419, the Gelug sect established three monasteries in Lhasa: the Ganden, Drepung and Sera Monasteries (Khedrup Chosphe 2009). An additional three monasteries were built after this period, namely the Tashilhunpo Monastery in Shigatse, an area of Tibet; the Kumbum in Xining, Qinghai Province; and the Labrang in Xiahe, Gansu Province. Together, these are known as the “Six Monasteries” of Gelug Buddhism. There is also the Ganden Sumtseling Monastery in Diqing, Yunnan Province, which is the largest Tibetan Buddhism monastery in this province (Fig. 2.14). Although founded more recently than any other sects of Tibetan Buddhism, the Gelug quickly replaced the position of many others and became the predominant sect. The Dalai Lama and Panchen Lama reincarnations were both selected with the approval of the Qing Dynasty (1644–1911).



Fig. 2.14 The Gelugpa Ganden Sumtseling Monastery. The Gelugpa lamaseries generally feature grand Scripture Halls. In the Ganden Sumtseling Monastery, the largest building, at its center, is Scripture Hall. Only especially important buildings in a Gelugpa lamasery may be painted with red, yellow and dark brown colors and feature a golden roof with gilded copper decorations. Common dorms are painted white. Source Photograph by Mingming Li, provided by Lin Yan

Geographical Interpretation

The Ganden Sumtseling Monastery stands built by the mountains, surrounded by meadows. Layers of architecture pile upon one another; the gilded copper roof shines under the sun. Ingenious site selection amid a complex microtopography has ensured that the monastery enjoys the first rays of sunrise and the last glimmers of sunset. The imposing and grand architectural layout and palpable religious atmosphere at the Ganden Sumtseling Monastery have enabled the monastery to become a religious epicenter for Tibetan Buddhism (Fig. 2.15).

Fig. 2.15 Surrounded by mist and light, the Ganden Sumtseling Monastery embodies holiness. *Source* Photograph by Fan Yin

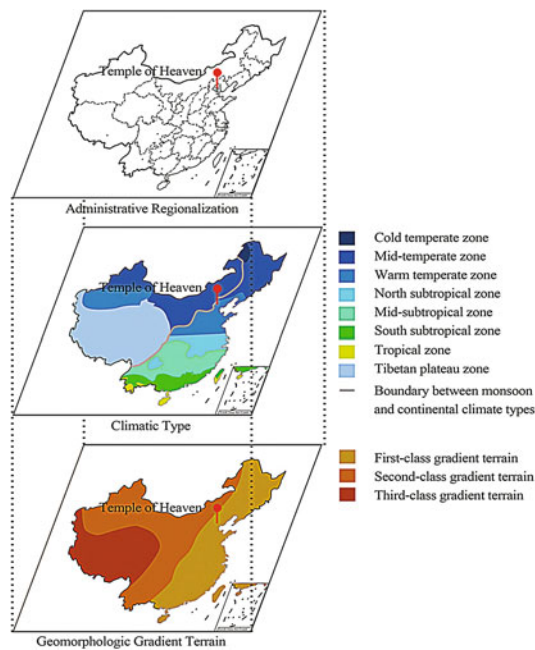


2.2 Temple of Heaven: Worshipping to Heaven and Praying for Good Harvest

Location: Beijing

Key Geographical Concept: Round heaven and square earth

The Temple of Heaven, which served as the main location for the imperial heaven worshipping ceremony in the capital city during both the Ming (1368–1644) and Qing (1644–1911) Dynasties, exhibits the cosmology of “round heaven and square earth” in various aspects, including architectural layout, form and details.



Geomorphologic Features

The Temple of Heaven, located near the southeastern corner of the external city wall of Beijing, sits on the alluvial plain surrounded by low, flat land. A main goal of any architecture used in conjunction with the heaven worshipping ceremony is to emphasize the vast majesty of heaven; thus the main buildings of the Temple of Heaven, namely the Circular Mound Altar and the Hall of Prayer for Good Harvest, are both elevated above their surroundings (Fig. 2.16). The Danbi Bridge, which lies along the central axis of Temple of Heaven, is also raised to a height of four meters aboveground. Standing on the Circular Mound Altar or at the Hall of Prayer

Fig. 2.16 Hall of prayer for good harvest. From a distance, the hall, which is built on the Altar of Prayer for Bountiful Harvests, appears even more sublime, rising from flat, low surroundings. *Source* Photograph by Wang Xinyuan, provided by Fan Yin



for Good Harvest, one occupies the highest point amid low-lying surroundings. This endows the worshipper with a feeling of close proximity to heaven.

Climatic Features

Beijing, where the Temple of Heaven is located, is within the warm temperate continental monsoon climate zone. There are four distinct seasons in the area: The weather is dry in spring, warm and humid in summer, cool and clear in autumn, cold and dry in winter. In the context of such seasonal changes, Chinese emperors would enter the Hall of Prayer for Good Harvest and pray for a bumper grain harvest each year on Shangxin Day (usually between the first and 10th days of the first Chinese lunar month), a practice that dates back to the Ming Dynasty Emperor Yongle’s reign (1403–1424). Emperors entered the Circular Mound Altar on the summer solstice to pray for rain and, at the same Altar, on the winter solstice to hold the heaven worshipping ceremony showing that year’s harvest.

Vegetation Features

The Temple of Heaven is surrounded by cypress trees. The upright stance and muted colors of the cypress trees embody a solemnity that has made the tree species a common choice for such places as mausoleums and shrine sacrificial architecture. Whether one walks on the emperor’s road inside the western gate or on the Danbi Bridge, one sees the verdant cypress trees everywhere. The trees create a solemn atmosphere.

Cultural Features

Ancient Chinese emperors called themselves “the sons of Heaven”. Therefore, the heaven worshipping ceremony had political implications suggesting that “imperial power was granted by heaven”, as well as adoration for heaven. Every emperor in history considered this worship ceremony to be an extremely important political activity. Thus, sites where the ceremony took place possess a distinctly royal

atmosphere. The Temple of Heaven was used throughout the Ming and Qing Dynasties as the location for the worship of heaven and the prayer for good harvest. It is the most representative work among Chinese temples used for worship ceremonial offerings.

This site was chosen for the Temple of Heaven according to the ideal form for capital cities as laid out in the book *Rites of Zhou*³: *Kao Gong Ji*.⁴ This classical work included a stipulation dating from the Han Dynasty (202 BC–220 AD) that the heaven worshipping ceremony should be performed on the southern outskirts of a city. Thus, when the Temple of Heaven was built in the Ming Dynasty, a location was chosen in the south of the capital city as it existed then. When the city was expanded in the 16th century, the Temple of Heaven was included within the new city walls. The Temple of Heaven and the Temple of Agriculture flank Beijing's north-south central axis on its eastern and western sides. Together with the Temple of the Sun to the east, the Temple of the Moon to the west and the Temple of Earth to the north, these buildings constituted a holistic network of temples for imperial worship activities in the capital (Figs. 2.17 and 2.18).

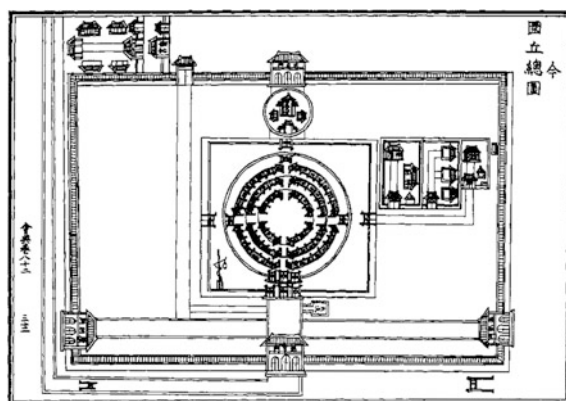


Fig. 2.17 The Temple of Heaven realized its current form in the ninth year (1530) of the Ming Dynasty Emperor Jiajing's reign. The above plan for the Circular Mound Altar from the book *Statutes of the Ming Dynasty*. Depicts an altar similar in size to the Altar that exists today. *Source* Pan (2001c: 122) *Note Statutes of the Ming Dynasty* (Mandarin: *da ming hui dian*) was compiled in the Ming Dynasty (1368–1644)

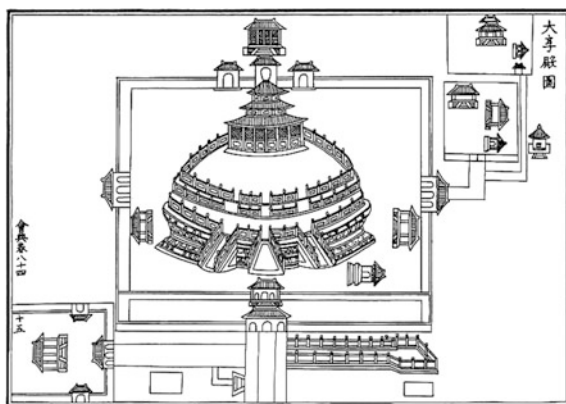
³*Rites of Zhou* (Mandarin: *zhou li*), an ancient ritual text, was supposedly written by the Duke of Zhou in the Western Zhou Dynasty (the 11th century–771 BC).

⁴*Kao Gong Ji*, literally *The Records of Examination of Craftsman*, was compiled in the Spring and Autumn periods (770–476 BC). There were originally six parts in *Rites of Zhou*; however, the sixth part was lost, and later *Kao Gong Ji* was added as a replacement.

The Temple of Heaven is primarily made up of four buildings: the Circular Mound Altar, the Hall of Prayer for Good Harvest, the Hall of Abstinence, and the Bureau of Divine Music. The two main buildings on the site are the Circular Mound Altar, which was used for the worship of heaven, and the Hall of Prayer for Good Harvest, which was used to pray for a bountiful harvest. These two buildings sit on the temple complex's central axis, connected by the Danbi Bridge (Figs. 2.19 and 2.20). The Hall of Abstinence, where emperors fasted before ceremonies, and the Bureau of Divine Music, where ancient music was played during ceremonies, are both located to the west of the Temple.

The Temple of Heaven was constructed in strict accordance with the Ancient Chinese cosmology “round heaven and square earth”. As the largest temple complex in the world dedicated to the worship of heaven, the temple grounds cover some 272 hectares. Double walls enclose the complex roughly in the shape of a square; the two northern corners of the wall are curvilinear, whereas the southern corners are square. Paired with the notion that north is up and south is down, the curvilinear and sharp corners closely parallel the concept of “round heaven and square earth”. The most important architectures, including the Hall of Prayer for Good Harvest (Fig. 2.21), the Circular Mound Altar (Fig. 2.22) and the Imperial Vault of Heaven (Figs. 2.23 and 2.24), are all circular structures. However, the foundations of the Hall of Prayer for Good Harvest and the Circular Mound Altar are both square. The choice of these shapes and their juxtaposition within different structures are both reflections of “round heaven and square earth”.

Fig. 2.20 Drawing produced during Emperor Jiajing's reign (1522–1566) from *Statutes of the Ming Dynasty* depicts the Hall of Prayer for Good Harvest with its affiliated gate and the Hall of Imperial Zenith. The overall form of the temple complex is similar to that of today's temple. Source Pan (2001c: 123)



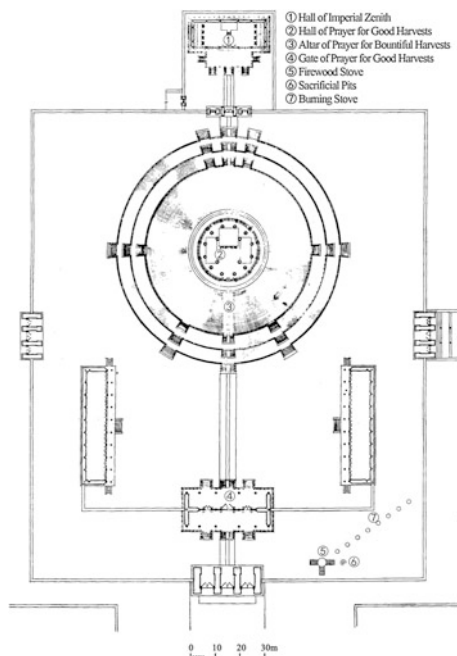


Fig. 2.21 Site plan of the Hall of Prayer for Good Harvest. The primary structure of the hall is circular, whereas the foundation is square. The Hall of Prayer architectural complex consists of, from south to north, the Gate of Prayer, the Hall of Prayer for Good Harvest and the Hall of Imperial Zenith. The Gate of Prayer and the Hall of Imperial Zenith are both highly valuable cultural relics from the Ming Dynasty. Both retain their original appearance, and neither has been reconstructed. The Hall of Prayer was reconstructed in the 15th year (1889) of the Qing Dynasty Emperor Guangxu’s reign (1875–1908), after lightning and fire had destroyed the original structure. *Source* Liu (1984: 354)

Fig. 2.22 Floor plans of the Circular Mound Altar and the Imperial Vault of Heaven. The structures currently standing, shown in the plans above, are similar in layout and scale to those depicted in the record of the Ming Dynasty. The Circular Mound Altar is enclosed by double short walls, the inner circular and the outer square, indicating the “round heaven and square earth” motif. The shortness of the walls helps allow the platform space to extend beyond, causing the Altar to appear larger than it actually is. This effect accentuates a worshipper’s sense of proximity to heaven above. *Source* Liu (1984: 352)

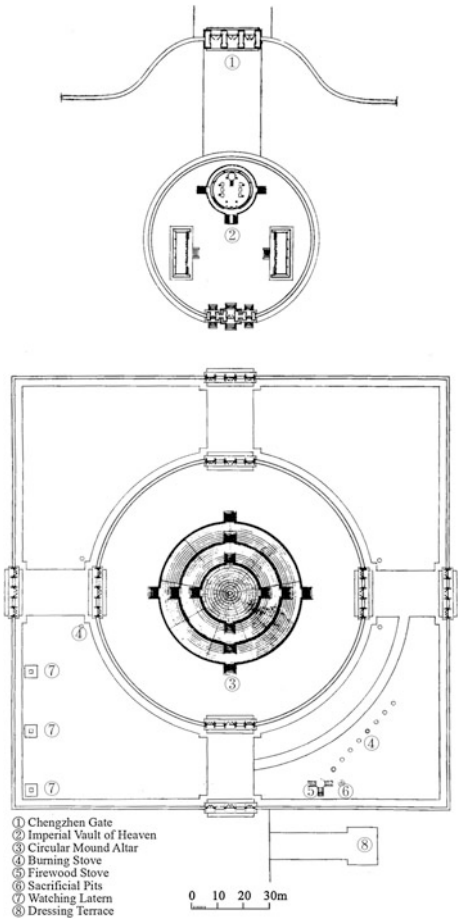


Fig. 2.23 Plan drawing of the Imperial Vault of Heaven inside the Circular Mound Altar produced during the Ming Dynasty Emperor Jiajing’s reign (1522–1566) from *Statutes of the Ming Dynasty*. The current structure differs from the one in the plan. The older structure featured two-layer double-eaved roof. However, the layout of the two tiny square palaces that sit on either side of the central structure and the circular walls shown in the plan is similar to the layout we see today. *Source* Pan (2001c: 123)

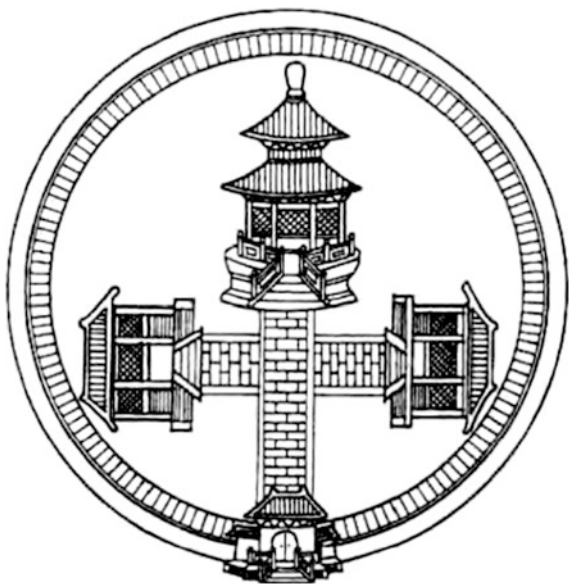


Fig. 2.24 The Imperial Vault of Heaven as it stands today. The original two-layer double-eaved roof structure was remodeled in the beginning of the 18th century. *Source* Photograph by Yu Zhou, provided by Ming Jiang



Extended Reading: Round Heaven and Square Earth

The notion of “round heaven and square earth” constituted the Ancient Chinese people’s earliest conception of the universe and originated from a rationalistic philosophy of the relationship between heaven and earth—heaven was dynamic and earth static. The classic work, *Zhou Bi Suan Jing*, claims that this view appeared no later than the 11th century BC at the transition from the Shang to the Zhou Dynasty. The same opinion was also

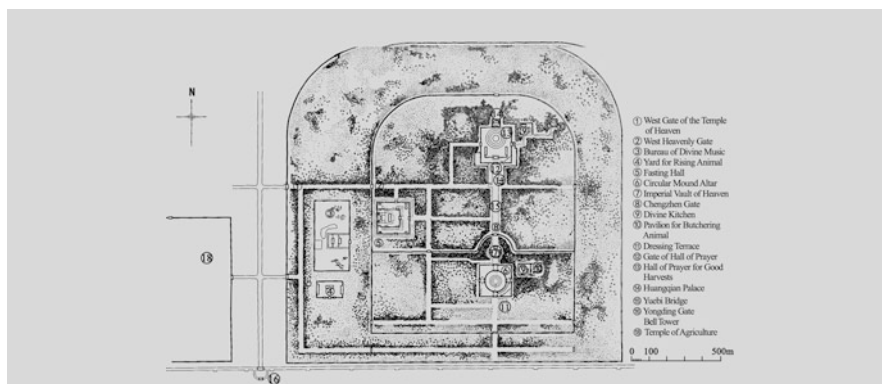


Fig. 2.25 Site plan of the Temple of Heaven. Double walls surround the temple complex, with curvilinear corners in the north and sharp corners in the south reflecting the “round heaven and square earth”. The temple complex consists of four main buildings: the Circular Mound Altar, which sits on the southern end of the main axis; the Bureau of Divine Music, outside the western inner wall; and the Hall of Abstinence, inside the inner wall. *Source* Liu (1984: 351)

shown in the book *Bai Hu Tong*.⁵ According to this philosophy, heaven above, spherical, covered the entire earth, whereas earth below, square, supported all things (Xie 2006). This deeply rooted belief prevailed for over 2,000 years, from the Qin (221–207 BC) to Qing Dynasty (1644–1911). Emperors throughout the dynasties each built temples for the worship of heaven and earth according to the circle-square motif: a circular platform for heaven and a square platform for earth. These were called the Circular Mound Altar and square mound, respectively (Wang 2003) (Fig. 2.25). After centuries of use, the notion of “round heaven and square earth” is no longer merely a geographic mindset but has evolved into an important socio-political concept with implications for the relationship between the central government and outlying lands.

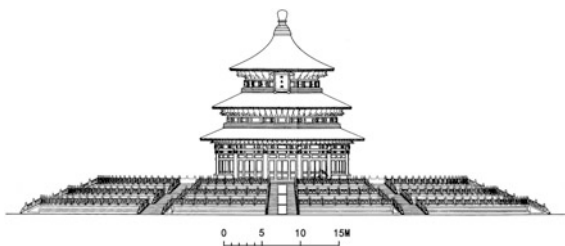
In addition to reflecting the notion of “round heaven and square earth”, the layout in the Temple of Heaven complex also communicated the supremacy and sanctity of “heaven” through the use of the number nine as a multiplication factor for a number of key design elements. The Circular Mound Altar features three, stepped-down platforms, which measure 9 *zhang*,⁶ 15 *zhang* and 21 *zhang* in diameter, respectively. The platform is paved with nine concentric rings of

⁵*Bai Hu Tong*, a Chinese classical Confucian book, was compiled in the Eastern Han Dynasty (25–220).

⁶*Zhang*, *chi* and *cun* are traditional Ancient Chinese units of length. 1 m \approx 3 *chi*, 1 m \approx 0.3 *zhang*, 3.33 cm \approx 1 *cun*.

Fig. 2.26 Elevation of the Hall of Prayer for Good Harvest. The tri-level platform and three-layer double-eaved roof reflect the sanctity of the building.

Source Liu (1984: 354–355)



fan-shaped stones. The first ring is made up of nine stones, the second ring 18 stones and so on, each successive ring containing an additional nine stones, with the ninth and final ring made up of 81 stones. Complementing the tri-level platform of the Circular Mound Altar is the three-layer double-eaved roof that tops the Hall of Prayer for Good Harvest (Fig. 2.26). In the hall, 12 peripheral columns representing the 12 *shichen*,⁷ 12 golden interior columns representing the 12 months, and four central dragon-spiral columns representing the four seasons together support the lofty hall structure.

In addition, the Temple of Heaven complex’s design cleverly incorporates the use of echo, further enhancing the divine quality of both emperor, son of heaven, and heaven expressed by the site. If one makes a sound while standing on the round stone at the center of the Circular Mound Altar, the sound is diffracted by the rounded surface of the stone piece, reverberates off of the surrounding circular wall and returns to the speaker from all sides at once. Emperors interpreted this echo as the voice of heaven, an imperial decree passed down from the sky, and cited this heavenly edict as proof of the close relationship between themselves and heaven.

Geographical Interpretation

The Temple of Heaven rises from low, flat surroundings in the embrace of cypress trees hundreds of years old to achieve an atmosphere of infinite proximity to heaven above. The complex’s overall layout and the architectural design of individual buildings both thoroughly incorporate the cosmology of a “round heaven and square earth”. The holiness of the site also serves to communicate the supremacy of imperial power.

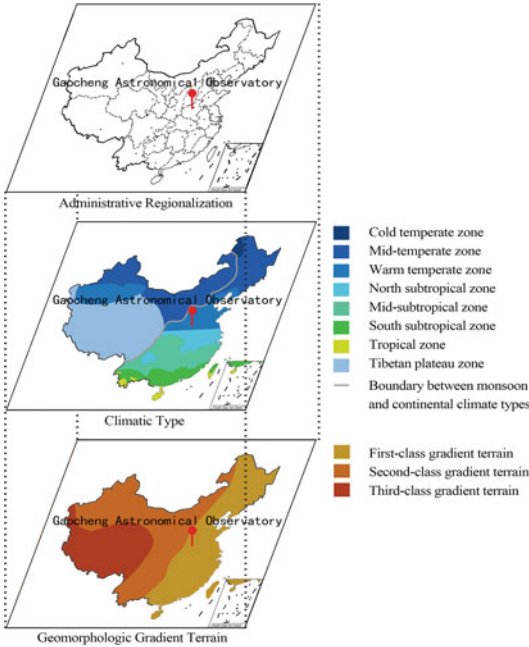
⁷*Shichen* is an Ancient Chinese unit of time. One *shichen* is equal to two hours.

2.3 Gaocheng Astronomical Observatory: Speaking with the Sun in the Daytime and the Stars at Night

Location: Dengfeng, Henan Province

Key Geographical Concept: Earth’s core in the notion of round heaven and square earth

The idea of “the earth’s core” was a part of the Ancient Chinese world view. The Gaocheng Astronomical Observatory was the most important location for observing celestial events in Ancient China. The observatory was built in Gaocheng County of Dengfeng City, the so-called “earth’s core” of Ancient Chinese celestial theory.



Geomorphologic Features

The Gaocheng Astronomical Observatory is located in Gaocheng County of Dengfeng City, on a plain, at the intersection of the Linying and Wudu Rivers. Broad and open, this location is very suitable for making celestial observations.

Climatic Features

Dengfeng falls within the warm temperate continental monsoon climate zone. Summers are typically muggy and rainy; winters are dry and rarely snowy. The weather is often sunny, with clear nights, making this location ideal for a celestial observatory.

Cultural Features

The Gaocheng Astronomical Observatory is currently the oldest one in China (Fig. 2.27). The main parts of the structure were built during the Yuan Dynasty (1271–1368). After the establishment of the Yuan Empire, the central government appointed Guo Shoujing (1231–1316) and Wang Xun (1235–1281) to institute a series of Calendar Reforms. In addition to constitutional reform, these officials were also charged with organizing orderly celestial observation for the establishment of a calendar to be standardized nationwide. To this end, officials commissioned the construction of 27 observatories and so-called “observation stations” across the country. Gaocheng County in Dengfeng, known as Yangcheng in ancient times, had been the site of the ancient Xia Dynasty (around the 21st to 16th centuries BC) Capital. For this reason, Gaocheng Country was determined to be the earth’s core—the most central point on the surface of the earth. The Gaocheng Astronomical Observatory located in Gaocheng County was therefore the most important of the 27 observatories (Guan 2005).

Every important city, every important work of architecture that has been preserved throughout China’s extended history reflects the Ancient Chinese people’s interest in the celestial universe, as well as their beliefs and philosophies regarding the universe. These works, though on different scales, all embody a great amount of celestial and terrestrial information. Thus, they form a unified cultural system composed of heaven, earth, and humankind. Architecture was viewed as a metaphor for the universe: Heaven and earth were one enormous house, whereas the dwellings of human residence were themselves tiny universes. However, the notion that architectural layout and form resembled that of heaven and earth was not merely a simple metaphor; it was the way in which Ancient Chinese people comprehended what they perceived as parallels between nature, society and mankind. The Gaocheng Astronomical Observatory architecture reflects Ancient Chinese scientific development, but it also reflects the philosophical ways in which the Ancient Chinese people understood the universe.

Fig. 2.27 Built in 1276, the Gaocheng Astronomical Observatory in Dengfeng is currently the oldest observatory in China. *Source* Photograph by Bihu Wu



Fig. 2.28 Elevation and plan drawings show that the Duke of Zhou Shadow Measuring Platform was carefully calibrated. *Source* Pan (2001c: 409)

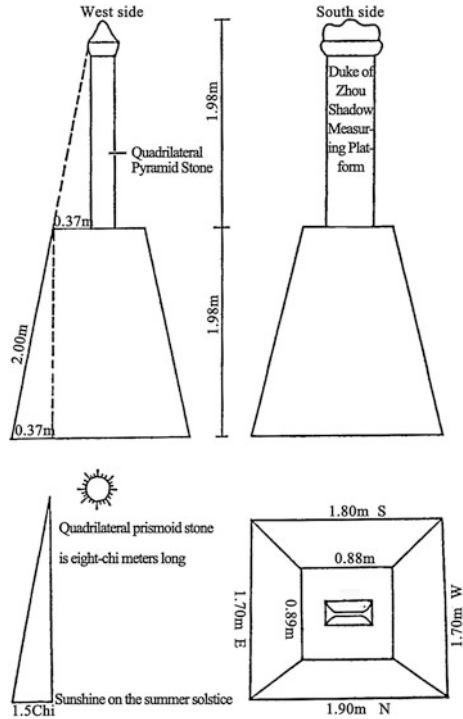
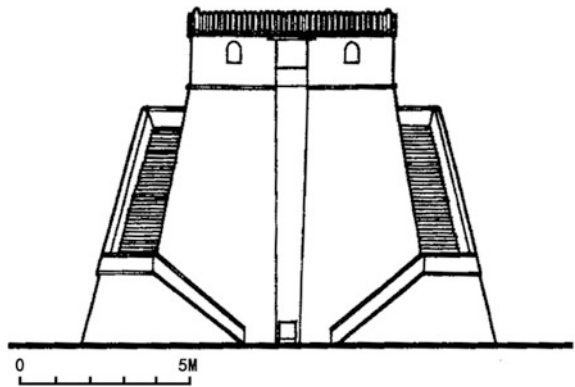


Fig. 2.29 This elevation drawing depicts the Gaocheng Astronomical Observatory's trapezoidal shape. The sides taper inward to meet the observation platform. *Source* Pan (2001c: 410)



The Gaocheng Astronomical Observatory consists primarily of the Duke of Zhou⁸ Shadow Measuring Platform, the Astronomical Observatory and the Duke of Zhou Temple. The Duke of Zhou Shadow Measuring Platform (Fig. 2.28) was built by the Court Historian Nangong Yue in the 11th Kaiyuan year (723) of the Tang

⁸**Duke of Zhou**, personal name Ji Dan, was a politician, militarist, thinker, educator in the Zhou Dynasty (1046–256 BC).

Fig. 2.30 The plan drawing of the Gaocheng Astronomical Observatory is trapezoidal as well. In the north is the “heaven-measuring ruler”, which protrudes through a notch in the middle of the northern wall. Two small rooms flank the ruler on its eastern and western sides, respectively. *Source* Pan (2001c: 410)

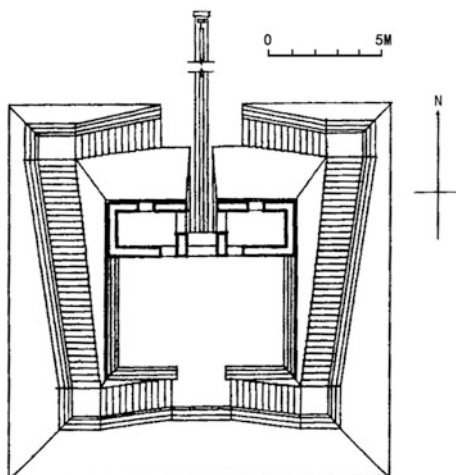
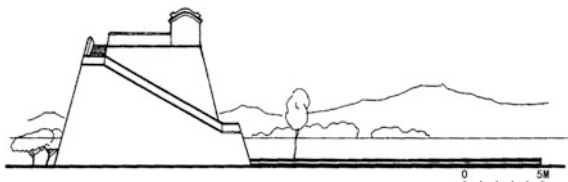


Fig. 2.31 Side elevation drawing of the Gaocheng Astronomical Observatory. The relative size difference between the observatory and the ruler is apparent. *Source* Pan (2001c: 410)



Dynasty; the Astronomical Observatory (Figs. 2.29, 2.30 and 2.31) was built by Guo Shoujing (1231–1316) in 1276, the 13th Zhiyuan year of the Yuan Dynasty; and the Duke of Zhou Temple was built during the Ming Dynasty (1368–1644) to commemorate the Duke of Zhou’s great achievements in clarifying the place of the earth’s core by shadow measurement.

Extended Reading: Yangcheng, the Earth’s Core

The notion of “round heaven and square earth” was the foundation of the ancient Chinese cosmology. According to this theory, because earth was flat and of quantifiable size, it therefore had to have a quantifiable center. The earth’s core was considered a significant component within the structure of the universe. A number of theories posit different locations for the earth’s core. Among these theories, the most influential is the theory of a canopy heaven, which asserts, “the point below the North Pole is the center of the earth and sky,” and the theory of a spherical heaven, which places the center of the earth in either Luoyi (now Louyang City) or Yangcheng (now Gaocheng County). The Yangcheng-centric theory is especially widely held (Guan 2000). One work, *Rites of Zhou*, tells us, “the earth’s core is where the

shadow of the sun measures five *cun*⁹ long, where earth and sky, the four seasons, wind and rain and *yin* and *yang*¹⁰ all meet. Build the kingdom's capital there, and there shall be peace and an abundance of all things." It was using this standard of the five-inch shadow that the Duke of Zhou, a politician, militarist, thinker, educator in the Zhou Dynasty (1046–256 BC), determined the location of the earth's core to be in Gaocheng and established *Yangcheng* (lit. Sun City) there. The Duke of Zhou Shadow Measuring Platform of the Tang Dynasty (618–907) in the Gaocheng Astronomical Observatory commemorates the Duke of Zhou's far-reaching influence (Zhao



Fig. 2.32 The Duke of Zhou Shadow Measuring Platform. By using a pile of earth and a wooden pole, the Duke of Zhou, the fourth son of Emperor Wenwang (1152–1056 BC) of the Western Zhou Dynasty (the 11th century–771 BC), also named Ji Dan, measured shadows to find the earth's core and quantify seasonal variation in Yangcheng (now Gaocheng County) during the construction of the Eastern Capital Luoyi (now Louyang City). In the 11th Kaiyuan year (723) of the Tang Dynasty (618–907), the Court Historian Nangong Yue created the Shadow Measuring Platform in the likeness of that used by the Duke of Zhou. *Source* Photograph by Ying Li

⁹*Cun*, *chi* and *zhang* are traditional Ancient Chinese units of length. 1 m \approx 3 *chi*, 1 m \approx 0.3 *zhang*, 3.33 cm \approx 1 *cun*.

¹⁰*Yin* and *yang* are a pair of traditional Chinese philosophical concepts that represent the two opposite or contrary principles in nature and how they give rise to each other as they interrelate to one another. They are used in various fields of traditional Chinese culture, including religion, philosophy, calendar, *fengshui*, etc.

2009) (Fig. 2.32). The earth’s core was considered to be the ideal location for making those celestial observations necessary for the establishment of a standard calendar. Thus, in dynasty after dynasty, Yangcheng consistently served as the most important location for celestial observation.

The main structure of the Gaocheng Astronomical Observatory architectural complex, the celestial observatory, is constructed of a mixture of brick and stone and could be used to make round-the-clock observations of the sun and the stars. The observatory structure as a whole is trapezoidal; the structure tapers as it ascends to the observation platform. The groove in the middle of the northern wall, which measures four *zhang* high, is called the “Tall Ruler”, and a stone tablet called the “heaven-measuring ruler” under the northern wall, perpendicular to the groove and built of 36 square bluestones, extends directly northward from the south wall. Below the heaven-measuring ruler, the brick foundation corresponds to the orientation of the planetary meridian line. The grooves on the south and north were designed for pouring and draining water, respectively; twin channels stretch the length of the device, linking the pouring and draining grooves. When water is poured into the channels, the device can be used to determine the orientation of the horizon (Fig. 2.33).

In addition to functioning as a complex sundial mechanism, the Gaocheng Astronomical Observatory is considered to have also been a significant site for celestial observation. Observations of Polaris, the North Star, made at the



Fig. 2.33 Northern facade of the Gaocheng Astronomical Observatory platform structure and the heaven-measuring ruler. There is a groove in the middle of the northern wall and a stone tablet called “the heaven-measuring ruler” under the northern wall, perpendicular to the groove. This photograph also illustrates that the heaven-measuring ruler is built of bluestone over a brick foundation. On it, the draining groove in the north and the twin channels were designed to connect to the pouring groove. *Source* Photograph by Songtao Gong, provided by Jun Hu

observatory date back to at least the early Yuan Dynasty period of land surveying. Indeed, there is mention of Polaris in *History of the Yuan Dynasty*¹¹; Polaris also appears in an inscription of *Chong Xiu Yuan Sheng Zhou Gong Ci Ji*¹² carved by Sun Chengji in the 10th year (1582) of the Ming Dynasty Emperor Wanli's reign. From these references we can infer that the Gaocheng Astronomical Observatory was a multi-function complex that afforded shadow measurement, celestial observation and highly accurate time telling (Figs. 2.34 and 2.35).

Fig. 2.34 Close-up photograph of the stairway of the Gaocheng Astronomical Observatory. *Source* Photograph by Changsong Wang



¹¹*History of the Yuan Dynasty* (Mandarin: *yuan shi*), a historical work that consists of 210 chapters chronicling the history from 1162 to 1227, was edited chiefly by Song Lian and Wang Wei and composed in 1370, during the early Ming Dynasty.

¹²Literally, *Record of the Duke of Zhou Temple Renovation*.

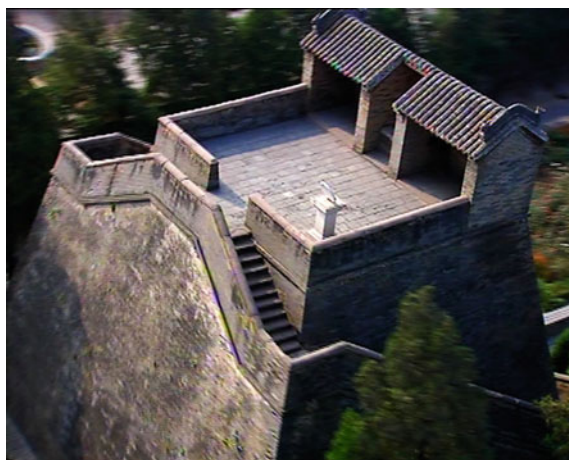


Fig. 2.35 Viewing the observatory from the south, two small rooms that were used for storing observation equipment are visible on the east and west sides of the platform. *Source* Photograph by Songtao Gong, provided by Jun Hu



Fig. 2.36 The Direction Determining Board is a device used for establishing directional orientation. Invented by Guo Shoujing (1231–1316), the device was originally of wooden construction, but in later times copper was used instead. The square board measures four *chi* to a side. *Source* Photograph by Changsong Wang. *Note Chi, cun and zhang* are traditional Ancient Chinese units of length. 1 m \approx 3 chi, 1 m \approx 0.3 zhang, 3.33 cm \approx 1 cun.

Currently, a variety of observation tools are preserved in the Gaocheng Astronomical Observatory, including the Direction Determining Board (Fig. 2.36), the Scaphe (Fig. 2.37), the Tall Ruler (Figs. 2.38 and 2.39), and the Shen Kuo



Fig. 2.37 This Scaphe is a one-fourth-scale replica of the original created by Guo Shoujing (1231–1316). It is actually a spherical sundial composed of an upward-looking cauldron, two crosses, and a silhouette aspheric board. The device was used to determine the sun's spherical location; it could also be used to measure solar displacement throughout the year and observe solar eclipses. *Source* Photograph by Changsong Wang

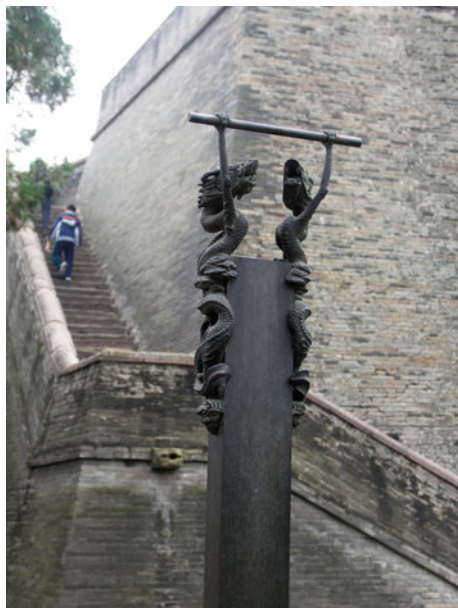
Fig. 2.38 A scaled-down replica of the Tall Ruler. This replica is one-fifth the size of the original. In most of the 27 observation stations in the early Yuan Dynasty (1271–1368), the Tall Rulers measure eight *chi* long; only the ones of the observatories in Beijing and Gaocheng measure four *zhang* long. *Source* Photograph by Ying Li



Clepsydra, most of which feature sophisticated design. It was with these tools that Guo Shoujing (1231–1316) organized the most advanced calendar, named the Shoushi Calendar,¹³ in his time. The location, architectural design and interior facilities of the Gaocheng Astronomical Observatory all reflect the wisdom of the Ancient Chinese people in the field of scientific observation.

¹³**Shoushi Calendar**, a calendar system, was implemented in the year 1281 during the Yuan Dynasty (1271–1368).

Fig. 2.39 Partial view of the scaled-down replica of the Tall Ruler. At the top of the Tall Ruler, two dragons support a horizontal beam, which was used to ensure that the ruler stood perfectly vertical. *Source* Photograph by Ying Li



Geographical Interpretation

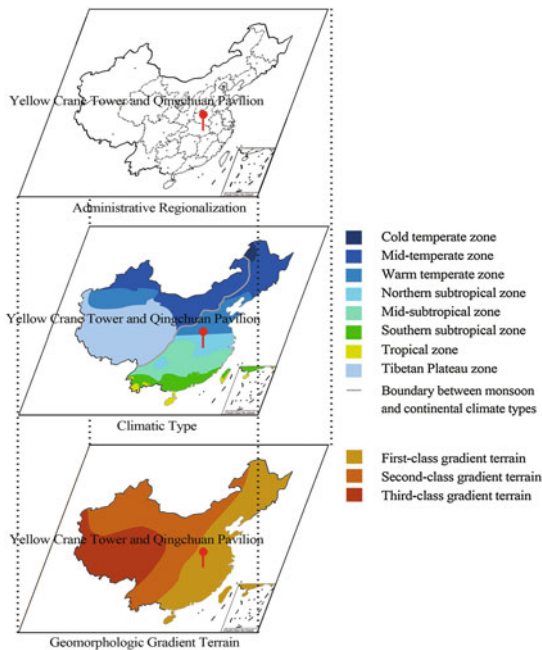
The Gaocheng Astronomical Observatory is the oldest observatory remaining in China and one of the earliest built works of architecture worldwide related to celestial observation. The observatory reveals a relatively high level of scientific observation on the part of the Ancient Chinese. However, scientific observation was not free from the influence of contemporary ideology. Indeed, the Ancient Chinese people's limited notions regarding the nature of the universe, among which “round heaven and square earth” and “the earth's core” were particularly significant, played a prominent role in the site selection process for the observatory.

2.4 Yellow Crane Tower and Qingchuan Pavilion: Facing Each Other Across the Yangtze River

Location: Wuhan, Hubei Province

Key Geographical Concept: Architecture closely related to ancient poetry

The Yellow Crane Tower and the Qingchuan Pavilion were both built by the water’s edge, a traditional location for the composition of poetry in China. A great number of famous poetic works have been composed in the two buildings.



Geomorphologic Features

The Yellow Crane Tower stands on a small hill on the bank of the Yangtze River, in Wuhan City of Hubei Province. The Qingchuan Pavilion is within sight across the Yangtze River. Ancient Chinese Poets liked to look out across a body of water from a high vantage point as they composed; the Yellow Crane Tower and the Qingchuan Pavilion were ideal for this purpose, for they were both surrounded by low-lying flat ground. Destroyed and rebuilt numerous times throughout history, these two buildings have become famous landmarks for looking far into the distance (Fig. 2.40).

Fig. 2.40 Bird’s eye view of the Yellow Crane Tower. The tower adjoins a hill, facing the Yangtze River. *Source* Drawing by Wen Zhang, provided by Yaogen Peng



Climatic Features

Wuhan area falls within the subtropical humid monsoon climate zone; the city enjoys abundant rainfall and ample sunshine. Because of its climate and low-lying terrain, Wuhan is known as the city of numerous lakes. The Yellow Crane Tower and the Qingchuan Pavilion are built along the river and joined by the Yangtze River Bridge. The tops of the two buildings afford grand views of the Yangtze River, a vast expanse of misty, rolling waters that merge with the distant sky (Figs. 2.41 and 2.42).

Fig. 2.41 Looking over the Yangtze River from the fifth floor of the *Yellow Crane Tower*, tourists can see the Yangtze River Bridge extending out to the other side of the river, where it connects with the Qingchuan Pavilion. *Source* Photograph by Fang Wang



Fig. 2.42 View of the *Yellow Crane Tower* from the *Qingchuan Pavilion*. *Source* Photograph by Fang Wang



Cultural Features

Chinese poets often sought high places from which to better appreciate natural scenery. These poets expressed a wide range of emotions in terms of the natural landscape they saw—a landscape that often included or was afforded viewing by architecture. Through its association with poetry, architecture was imbued with great cultural significance and treated as a component of the Chinese cultural landscape. A great number of famous inscriptions take the Yellow Crane Tower as their subject of interest, establishing the tower's dual significance as a part of both natural and cultural landscapes. The Qingchuan Pavilion, which stands opposite the Yellow Crane Tower, takes its name from a poem by Cui Hao (approximately 704–754), a poet in the Tang Dynasty (618–907), entitled *Yellow Crane Tower*,¹⁴ which reads: “the Qingchuan River reflects each tree in Hanyang.” The two buildings appear as if calling to one another from opposite sides of the river.

Over the course of the past 2,000 years, the Yellow Crane Tower has been destroyed and rebuilt numerous times. The original tower was built in the second year (223) of the Wu State King Huangwu during the Three Kingdoms period (220–280). The tower was located on the Yellow Swan Rock, on the bank of the Yangtze River, in the strategic city of Xiakou (now Wuchang). There, the tower served sentry purposes and formed a crucial military outpost in the flow of river traffic. The tower later became a riverside inn, reaching the height of its popularity

¹⁴*Yellow Crane Tower* is a poem written by Cui Hao (approximately 704–754) during the Tang Dynasty (618–907). It is the most important poem among others like it on the topic of Yellow Crane Tower.

during the Tang Dynasty (618–907). During the Ming (1368–1644) and Qing (1644–1911) Dynasties the tower was destroyed and rebuilt a total of seven times. At one point in the Qing Dynasty, a large fire reduced the tower to rubble. The tower that stands today was rebuilt in 1985, stepped back from the bank, up against Sheshan Mountain.

The Yellow Crane Tower does not reflect a traditional, official architectural style. Thus, the layout and structure of the tower have not been restricted in form to any of China’s traditional governmental architectural styles. Indeed, the tower has taken on a range of layouts and structures throughout the course of its many reconstructions. A description of the Yellow Crane Tower as it stood in the Tang Dynasty (618–907) is found in a poem that reads “the tower stands high up to the sky, down to the river, its double-eaved roof resemble a crane, its gates open to four directions, sitting on the tower people can look over the towns far away and touch the steams close by” (Gao, 1996). In the Song Dynasty (960–1279), the Yellow Crane Tower featured a single-layer double-eaved roof and the entire structure closely hugged Yellow Swan Rock (Fig. 2.43). In the Ming Dynasty (1368–1644), the roof was two-layer double-eaved and featured a four-directional pediment (Fig. 2.44). During the Qing Dynasty Emperor Tongzhi’s reign (1862–1874), the tower was

Fig. 2.43 The Yellow Crane Tower in the Song Dynasty (960–1279). The Song drawing *Yellow Crane Tower* depicts a relatively short tower that stands close to the riverbank. Source Cheng (2005: 67)

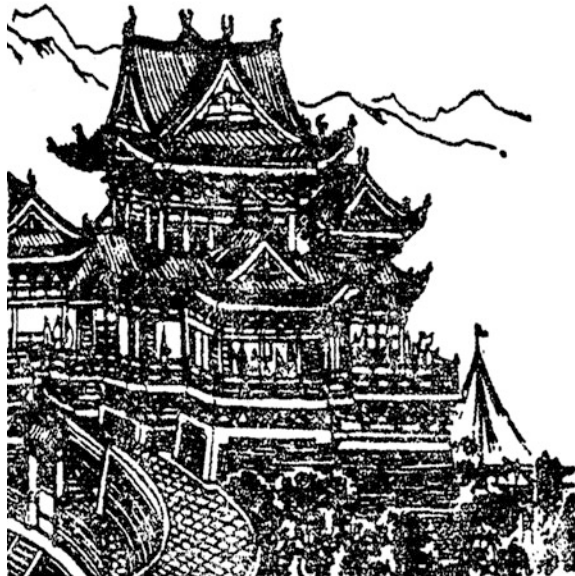
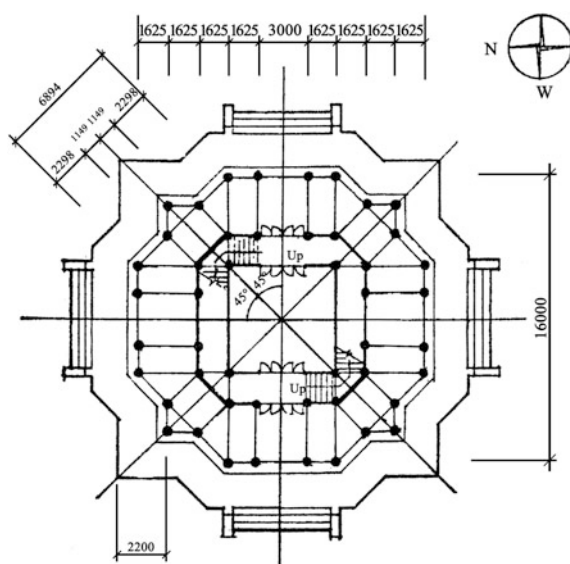


Fig. 2.44 The Yellow Crane Tower in the Ming Dynasty (1368–1644). The Ming drawing *Yellow Crane Tower in Snow* by An Zhengwen depicts a *paifang* standing on the approach to the tower, which has two-layer double-eaved roof and four-directional pediments. Source Cheng (2005: 68)
Note *Paifang* (lit. memorial gate), one type of monument in the form of gates and arches, is used to commemorate the merit or worship the ancestor.

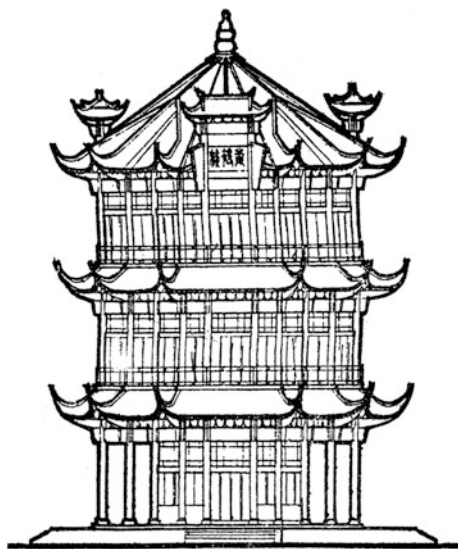


Fig. 2.45 First-floor plan drawing of the *Yellow Crane Tower* as it stood during the Qing Dynasty Emperor Tongzhi's reign exhibits the tower's octagonal symmetry and depicts a central stairway. Source Cheng (2005: 69)



three stories tall and had a square shape (Figs. 2.45 and 2.46). In plain view, today's tower is a square enclosed by an octagon, which signifies the notion of "everywhere" (from the Mandarin idiom meaning *four sides and eight directions*).

Fig. 2.46 This elevation drawing of the *Yellow Crane Tower* as it stood during the Qing Dynasty Emperor Tongzhi’s reign depicts the tower with three floors and the appearance of a pagoda.
 Source Cheng (2005: 70)



In elevation, the eaves appear to resemble yellow cranes setting flight, hence the origin of the tower’s name, the Yellow Crane Tower. The building is powerful yet elegant, consistent in form yet not lacking in variation (Figs. 2.47 and 2.48).

The Qingchuan Pavilion, which stands on the opposite side of the Yangtze River, takes its name from Cui Hao’s poem *Yellow Crane Tower*, but the pavilion, first constructed during Emperor Jiajing’s reign (1522–1566) of the Ming Dynasty (1368–1644), has a shorter history than its neighbor. The Qingchuan Pavilion has been renovated many times and was twice entirely rebuilt. The pavilion that exists today was rebuilt in 1983 in a manner similar to that of the Yellow Crane Tower based on

Fig. 2.47 The *Yellow Crane Tower* as it stands today. The rebuilt architectural complex maintains an elegant atmosphere, despite a powerful appearance. Source Provided by Yaogen Peng & Hubei Tourism Bureau



Fig. 2.48 Elevation drawing of the current *Yellow Crane Tower*. The newly built tower, heightened to five floors, is similar to the one that stood during the Qing Dynasty Emperor Tongzhi's reign. Source Cheng (2005: 57)



historical images. The pavilion is very delicate in appearance; with only two floors, it appears less imposing than its counterpart across the river (Figs. 2.49, 2.50 and 2.51).

Whereas the Qingchuan Pavilion derives its name in close relationship with the poem *Yellow Crane Tower* by Cui Hao (approximately 704–754), the Yellow Crane Tower draws its own name from a legend. According to the legend, a Taoist priest

Fig. 2.49 The Qingchuan Pavilion appears refined in comparison with the imposing *Yellow Crane Tower*. Flexible and steadfast, one building complements the other in style. Source Provided by Yaogen Peng & Hubei Tourism Bureau



Fig. 2.50 Close-up of the Qingchuan Pavilion. *Source* Photograph by Jing Jin



Fig. 2.51 Sunset over the Qingchuan Pavilion. *Source* Photograph by Jing Jin



once stayed at the as yet un-named Yellow Crane Tower inn. To express his appreciation for the innkeeper’s hospitality, the Taoist priest drew a yellow crane on the inn wall. To everyone’s surprise, the crane came to life and flew away. It is said that thereafter the building was named the Yellow Crane Tower. An alternative explanation holds that the tower was named for the Yellow Swan Rock (modern-day Sheshan Mountain) upon which it sits (Fig. 2.52).

Facing each other across the rolling waters of the Yangtze River, the Yellow Crane Tower and the Qingchuan Pavilion both afford incredible views to those who venture to ascend their steps. The remarkable view has drawn countless poets

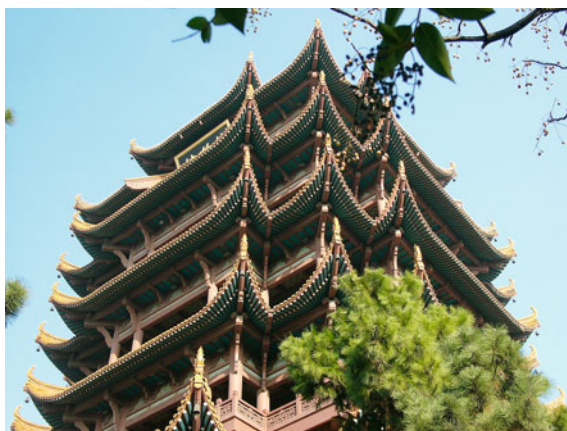
Fig. 2.52 The crane is an animal of special significance in Chinese culture. The *Yellow Crane Tower* is closely related to cranes because of its name. *Source* Provided by Yaogen Peng & Hubei Tourism Bureau



Fig. 2.53 The Yellow Crane Tower remains a widely known tourist attraction. This photograph depicts a performance of ancient music in front of the tower. *Source* Provided by Yaogen Peng & Hubei Tourism Bureau



Fig. 2.54 The rebuilt Yellow Crane Tower retains its original elegant appearance. *Source* Photograph by Jing Jin



throughout history to the two buildings. Thus, the buildings have become an important site where traditional Chinese culture is passed down from generation to generation (Figs. 2.53 and 2.54).

Extended Reading: Poetry about the Yellow Crane Tower

Numerous poems speak of the Yellow Crane Tower. The great poet Li Bai (701–762) of the Tang Dynasty (618–907) once wrote: “My old friends said goodbye to the west, here at Yellow Crane Tower; in the third month’s cloud of willow blossoms, he departs for Yangzhou.” Many of China’s most famous poets, the likes of Song Zhiwen (660–712), Meng Haoran (691–740), Wang Changling (698–756), Wang Wei (698–756), Gu Kuang (725–814), Bai Juyi (772–846), Liu Yuxi (772–842), Jia Dao (779–843), Du Mu (803–852), among others, have composed words about the site. However, of the countless literary works that mention the Yellow Crane Tower, Cui Hao’s *Yellow Crane Tower* is by far the most widely renowned. *Yellow Crane Tower* is a Qilü style poem, meaning it was written with a total of eight lines, with seven characters per line. In its time, the poem earned the admiration of Li Bai, and in more recent years, it has become the most eminent of all Qilü poems. Cui Hao composed the poem at the age of 30, when he was traveling in Hubei Province. In the poem’s first sentence, which reads, “Long ago the immortal rode off on a yellow crane; all that remains here is the Yellow Crane Tower,” Cui Hao borrows the opening of the legend of the Yellow Crane Immortal (Fig. 2.55). In this manner, he evokes emotion from his reader, with

Fig. 2.55 “Long ago a man rode off on a yellow crane, all that remains here is the Yellow Crane Tower”; this scene is described in the poem *Yellow Crane Tower* by Cui Hao (approximately 704–754).
Source Provided by Yaogen Peng & Hubei Tourism Bureau



the emotion inseparably tied to the scenery. The immortal's sudden mounted departure, which leaves the tower standing empty and alone on the cloudy horizon, suggests the passage of time that flies away without return. We are left also with a faint impression of a tower's majestic stance amid misty surroundings (Pan 2008). The poem's third sentence, which reads, "the clear river reflects each trees of Hanyang City; fragrant grasses grow lush on Parrot Island," transitions from the imagery of the legend to the reality of the beautiful Hanyang trees and fragrant grasses that surround the sun-shining plain (Mandarin: *qingchuan*), the clear river, next to the Yellow Crane Tower (Yang 2005). This description later inspired the construction of the Qingchuan Pavilion across the Yangtze River. This cycle is typical of Chinese architecture throughout its history: Architecture inspires poetry; poetry in turn inspires architecture.

Geographical Interpretation

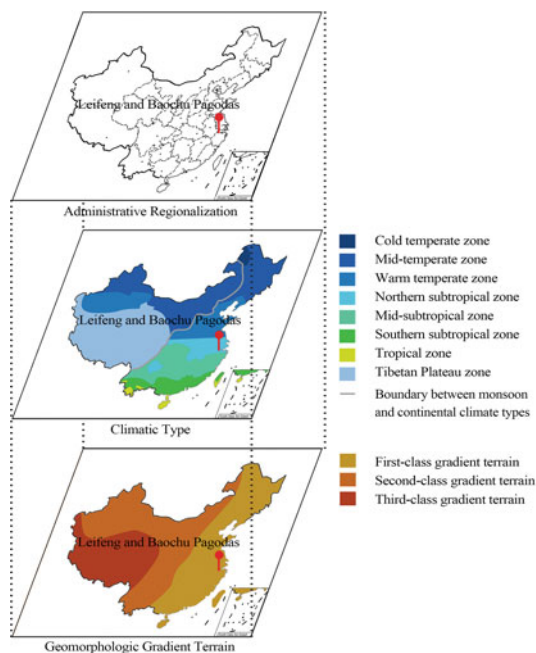
Seated beside the Guishan and Sheshan Mountains, where mountains and water meet, the Yellow Crane Tower and the Qingchuan Pavilion face each other across the Yangtze River. The two structures have been rebuilt many times; indeed, they are no longer the same buildings that the famous poets ascended to compose their great works. Yet, even today, the two buildings continue to illustrate for us the capacity for architecture to convey profound connotation as a physical embodiment of culture.

2.5 Leifeng and Baochu Pagodas: Two Pagodas Opposite to Each Other in One Lake

Location: Hangzhou, Zhejiang Province

Key Geographical Concept: Evolution of the cultural significance in architecture over time

The Leifeng and Baochu Pagodas were stupas, both built during the Wuyue Kingdom (907–978), during the Five Dynasties period. In the thousands of years since their construction, the two pagodas have accumulated a great deal of cultural significance, from their early mention in *Legend of the White Snake* to their redefinition in the modern essay, *Comment on the Collapse of the Leifeng Pagoda*.



Geomorphologic Features

Hangzhou's West Lake is surrounded by a ring of low mountains. East of the lake is the urban district of Hangzhou. West of the lake is a range of hills. The Baochu Pagoda, located upon the ridge of Baoshi Hill, faces the lake from the north (Fig. 2.56). The Leifeng Pagoda, seated on Xizhao Hill, south of the lake, faces the lake from the south (Figs. 2.57 and 2.58). Together, these hills and the lake form a picturesque setting.

Fig. 2.56 The magnificent Baochu Pagoda was constructed on the ridge of Baoshi Hill. *Source* Photograph by Yi Chen, provided by Yiwen Xu

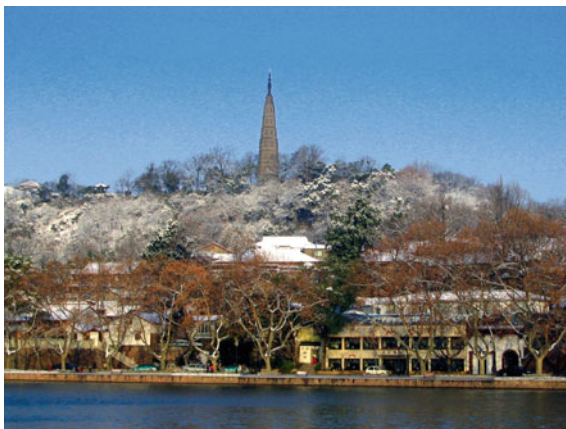


Fig. 2.57 The Leifeng Pagoda is located on a flat area of land, east of Xizhao Hill, at thirty meters above sea level. *Source* Photograph by Mingming Li, provided by Lin Yan





Fig. 2.58 The Leifeng Pagoda affords a grand view of West Lake. Tourists can look out from balconies on the second through the fifth floors. *Source* Photograph by Bihu Wu

Climatic Features

Hangzhou, which falls within the mid-northern subtropical transitional district, experiences four distinct seasons. Hangzhou has a warm, humid climate, sufficient rainfall and plentiful sunshine. The weather is rainy in spring, muggy in summer, cool in fall and cold in winter, generating many different beautiful scenes for West Lake throughout the year.

Cultural Features

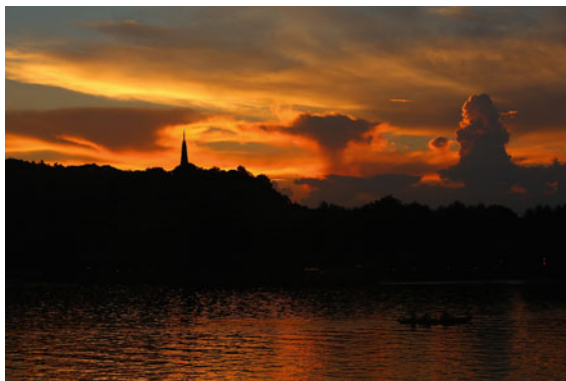
Over the several thousand years during which the Leifeng and Baochu Pagodas have stood, the two structures have come to signify a number of different ideas in different eras. The original purpose of the two pagodas, at the time of their construction during the Wuyue Kingdom (907–978) of the Five Dynasties period, was the enshrinement and worship of Buddhist texts. Over the following years, the pagodas were drawn into the surrounding warfare, during the course of which they were destroyed and rebuilt several times. Through this cyclical process, the pagodas slowly shed their cultural and religious significance. From the writing of *Legend of the White Snake* to the publication of *Comment on the Collapse of the Leifeng Pagoda*, the two pagodas represented the oppression of Confucian ritualism. Today, the two pagodas serve a largely aesthetic role as part of two famous vistas: “Twilight at the Leifeng Tower” and “Rosy Clouds of Sunset at the Baochu Pagoda

Fig. 2.59 The Twilight at the Leifeng Tower is one of the renowned Ten Scenic Landscapes of West Lake in Hangzhou. *Source* Photograph by Mingming Li, provided by Lin Yan



Fig. 2.60 Rosy Clouds of Sunset at the Baochu Pagoda on Baoshi Hill is one of the new Ten Scenic Landscapes of West Lake in Hangzhou.

Source Photograph by Zhihua Chen, provided by Jianqiang Jia and Yunwen Chen



of Baoshi Hill” (Figs. 2.59 and 2.60); the pagodas have contributed a great deal to the fame of Hangzhou’s West Lake scenic area.

The Leifeng and Baochu Pagodas were both built during the Five Dynasties period (907–960), under the rule of the Wuyue Kingdom (Zhejiang Cultural Relics and Archaeology Research Institute 2002). The Wuyue King, a devout Buddhist, commissioned a large number of monasteries and pagodas, including the Leifeng and Baochu Pagodas, to be built in the Hangzhou area.

Extended Reading: Kingdom of Wuyue and Buddhism

The Kingdom of Wuyue was one of 10 kingdoms that existed during China’s Five Dynasties period (907–960). Founded in the year of 907, the Wuyue was ruled by a succession of five kings before it was finally annexed into the Song Dynasty (960–1279) in the year 978. With its capital city of Hangzhou, the Kingdom of Wuyue ruled over an area comprised of today’s Zhejiang Province, Shanghai, Suzhou (in the southeast of Jiangsu Province) and Fuzhou (in the north of Fujian Province), all of which belong to the prosperous *Jiangnan*¹⁵ region along the southern bank of the Yangtze River. Under the Wuyue policy of internal stability and avoidance of war, Zhejiang prospered economically, and Hangzhou became a regional and cultural epicenter (Zhejiang Cultural Relics and Archaeology Research Institute 2002).

As devout Buddhists, the Wuyue kings helped to foster the development of Buddhism within their realm. Under their rule, Buddhism flourished, so much so that the Wuyue gained the title, “Southeastern Realm of Buddhism”. Prior to this period, Buddhism had enjoyed very little support; construction of

¹⁵*Jiangnan* refers to the region to the south of the Yangtze River.



Fig. 2.61 The Leifeng Pagoda sitting behind the greenery contributes greatly to the fame of Hangzhou's West Lake. *Source* Photograph by Haoyang Dou, provided by Ming Jiang

Buddhist monasteries, pagodas and sculptures, carvings of scriptures, and sponsorship of monks were all relatively rare practices until the Wuyue period (907–978) (Ni 1989). In the period of the Kingdom of Wuyue, more than 150 monasteries and dozens of pagodas were constructed, including famous monasteries such as the Xianyan, Zhaoqing, Jingci and Lingfeng Monasteries, and renowned pagodas as well, such as the Leifeng, Baochu, and Liuhe Pagodas. These prominent monasteries and pagodas infused Hangzhou's West Lake scenic area with Buddhist culture and contributed greatly to the lake's fame (Fig. 2.61).

The Leifeng Pagoda, which is located south of West Lake atop Xizhao Hill, was used in the past to store the Buddha's hair and Buddhist holy relics and scriptures. First constructed between 976 and 977 under the Northern Song Dynasty, the original seven-story, brick-wood structure had an octagonal shape and was called the Xiguan Brick Pagoda (another name of the Leifeng Pagoda). When the Leifeng Pagoda was rebuilt in 2002, a number of Buddhist historical relics, including the Ashoka Tower (an intricate gold-silver box) with the “Buddha's Hair” inside, and ancient Buddhist scriptures were found in the basement of the pagoda. The presence of these relics illustrates the importance of the Leifeng Pagoda as a stupa in the Wuyue period (Figs. 2.62 and 2.63).

The Baochu Pagoda is also closely linked to Buddhism. It is unknown when exactly the Baochu Pagoda was first constructed; however, the pagoda is generally considered to have been erected immediately after the Wuyue King Qian Chu

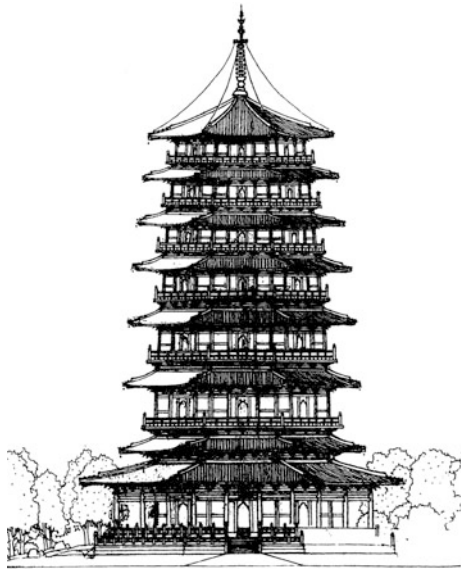


Fig. 2.62 Front elevation drawing of the restoration image of the Leifeng Pagoda during the Wuyue period. The original seven-story, octagonal pagoda burned to the ground during the Fangla Peasant Uprising (1120–1121). Its replacement, built after Hangzhou became the capital of the Southern Song Dynasty (1127–1279), was a squat, five-story tower. The current pagoda was built in the likeness of the tower from the Southern Song Dynasty era. *Source* Yang (2002: 18)

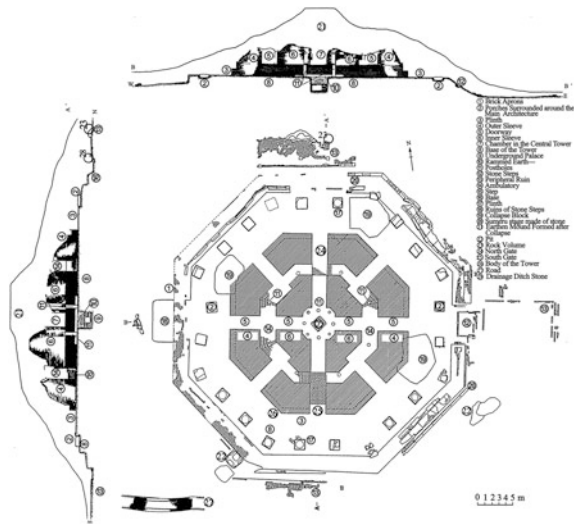


Fig. 2.63 Plan and section drawings of the Leifeng Pagoda archeological site. After the pagoda collapsed, it was covered by soil, which formed an earthen mound, within which were contained preserved relics such as the Ashoka Tower and ancient Buddhist texts. *Source* Zhejiang Cultural Relics and Archaeology Research Institute, 2005: the illustration between pages 16 and 17



Fig. 2.64 A panorama of Baoshi Hill. The Baochu Pagoda sits on the crest of the hill. *Source* Photograph by Fang Wang

Fig. 2.65 Beili Lake in snow, with the Baochu Pagoda in the background. *Source* Photograph by Yi Chen, provided by Yiwen Xu



named Baoshi Hill, on which the tower stands (Figs. 2.64 and 2.65). According to the *Xianchun Lin'an Records*¹⁶ from the Southern Song Dynasty (1127–1279) and *Rebuilding Chongshou Monastery on Baoshi Hill*¹⁷ from the Ming Dynasty (1368–1644), a monk named Yongbao raised funds for the pagoda's reconstruction during the Northern Song Dynasty (960–1127). The pagoda was named “Baoshu”, as a combination of the monk's name “Yongbao” and title “Shishu”. The name “Baoshu” was later renamed “Baochu”.

Over time, the integration between Buddhism and the Leifeng and Baochu Pagodas was replaced by a new significance in a number of other capacities, aesthetic, cultural, superstitious and socio-political. From the establishment of the Southern Song Dynasty (1127–1279) forward, “Twilight at the Leifeng Tower” became one of the Ten Scenic Landscapes in West Lake. The pagoda was also universally known for its role in *Legend of the White Snake*, one of China's most famous legends. In the 33rd year (1554) of the Ming Dynasty Emperor Jiajing's

¹⁶Literally, *Lin'an Records in the Southern Song Dynasty*.

¹⁷*Rebuilding Chongshou Monastery on Baoshi Hill* (Mandarin: *chong jian bao shi shan chong shou yuan ji*), an essay, was written by Xu Yikui during the early Ming Dynasty (approximately the 14th century).

reign, Japanese pirates invaded Hangzhou and destroyed it. With only the structure's brick core still standing amid the ashes, the building lost all its capacity as a Buddhist pagoda. Yet, the pagoda's fate and religion were still intertwined. In later years, a superstition arose that pagoda bricks could ward off evil spirits and cause mothers to give birth to male children. This led to a large-scale pillaging of tower materials that eventually resulted in the pagoda's thunderous collapse in the 13th year (1924) of the Republic Era (Shi and Hangzhou Garden and Cultural Relics Administration 1995). At that time, Lu Xun (1881–1936) wrote an essay, *Comment on the Collapse of the Leifeng Pagoda*, as society had already begun to endow the tower with a new socio-political significance, and the pagoda's former function within Buddhism was gradually forgotten.

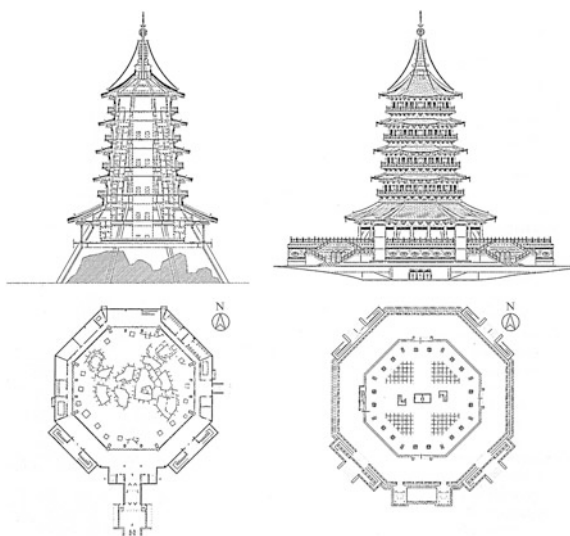
The Leifeng Pagoda that stands today was built in 2002 as a tourist attraction. The design is based upon a number of the Song Dynasty era (960–1279) pagodas, including the twin stone pagodas that stand in front of the Lingyin Temple's main hall and the White Pagoda at Zhaokou, as well as an image of the Leifeng Pagoda from Li Song (1166–1243)'s painting *West Lake* during the Song Dynasty (Guo and Li 2003). Built in the likeness of the Song Dynasty Leifeng Pagoda, the tower is octagonal and has five stories; balconies on the second through fifth floors afford views of the surrounding landscape (Figs. 2.66 and 2.67).

Similar to the Leifeng Pagoda, the Baochu Pagoda has also been destroyed and rebuilt a number of times. Its original religious significance has also gradually diminished; it is now only known as one of West Lake's great vistas. The Baochu Pagoda owes its reconstruction largely to the collapse of the Leifeng Pagoda. When the Leifeng Pagoda collapsed in the 13th year (1924) of the Republic Era, a portion of the funds allocated for its reconstruction were used to rebuild the Baochu Pagoda as well. The rebuilt Baochu Pagoda is octagonal and features a solid-brick core.

Fig. 2.66 The rebuilt Leifeng Pagoda was built in the shape and structure of a typical Southern Song Dynasty pagoda at the same scale. The pagoda's somewhat squat stature has been likened to that of an old monk. *Source* Photograph by Yu Zhou, provided by Ming Jiang



Fig. 2.67 Planning, elevation and section drawings of the new Leifeng Pagoda: (*upper left*) section drawing, (*upper right*) southern elevation, (*bottom left*) plan drawing at an elevation of -9.920 m, and (*bottom right*) at -0.045 m. The new pagoda was rebuilt on the original site. Efforts were made to protect the remains of the original tower. *Source* Guo and Li (2003: 52)



At seven stories, the pagoda has a height of 45.3 m, rising above a foundation that measures 3.26 m on each side. The structure's iron components are relics from the Ming Dynasty (Shi 1995) (Fig. 2.68).

Today, the Leifeng and Baochu Pagodas are important parts of West Lake's scenery. "Twilight at the Leifeng Tower" has traditionally enjoyed renown as one of West Lake's famed "Ten Scenic Landscape in West Lake". The "Rosy Clouds of

Fig. 2.68 The Baochu Pagoda has been destroyed and rebuilt many times. The current pagoda features iron structural components that date from the Ming Dynasty (1368–1644). The Baochu pagoda is tall and slight in contrast to the short and thick Leifeng Pagoda that stands across the lake. *Source* Photograph by Ziqi Tian, provided by Jing Liu



Fig. 2.69 From a distance, the Leifeng Pagoda stands somewhat squat and simple, like an old monk. *Source* Photograph by Yi Chen, provided by Yiwen Xu



Fig. 2.70 Viewed from afar, the Baochu Pagoda on Baoshi Hill stands thin and elegant, like a beautiful maiden. *Source* Photograph by Yi Chen, provided by Yiwen Xu



Sunset at the Baochu Pagoda of Baoshi Hill” is listed as one of the New Ten Vistas. Because the Leifeng Pagoda stands relatively short and squat whereas the Baochu Pagoda stands tall and slight, the two pagodas have been compared to an old monk and a beautiful maiden (Figs. [2.69](#) and [2.70](#)).

Geographical Interpretation

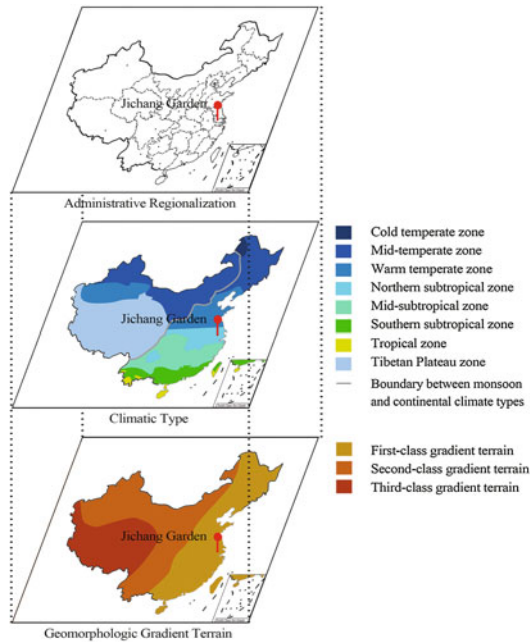
The Leifeng and Baochu Pagodas always appear prominently in famous depictions of Hangzhou’s West Lake. Although the two pagodas have long since lost their religious significance, they have become an integral part of the stunning beauty of West Lake.

2.6 Jichang Garden: A Dialogue with Fish

Location: Wuxi, Jiangsu Province

Key Geographical Concept: Architecture is closely related to ancient poetry

The notion of combining emotion into landscape and expressing emotion through landscape is fairly central to traditional Chinese landscape architecture. As a private garden, the Jichang Garden reflects at every turn both the philosophies and the emotions of its owner.



Geomorphologic Features

The Jichang Garden is located in Wuxi City, in an area predominantly made up of flatlands. The terrain is interrupted briefly west of the city by Huishan Mountain. Located in the east of Huishan Mountain, the Jichang Garden subtly incorporates the distant mountain peaks into its own scenery.

Climatic Features

Wuxi lies in the northern subtropical humid zone and is periodically influenced by monsoon circulation. Seasons in Wuxi are distinct, though the weather is generally warm, with plentiful rain, sunshine and a long, frost-free period in a year. Wuxi,



Fig. 2.71 Site plan of the Jichang Garden. The garden, which measures one hectare in area, stretches a long distance from north to south, but it is narrow in its east–west dimension. The garden is comprised of two parts: on the eastern end are a number of ponds and on the western end is a rockery. The focuses of the garden are the water and the rockeries. Water covers a third of the garden; there are few structures. *Source* Pan (2001a: 172)

which sits by the northern edge of Lake Taihu, enjoys abundant surface water and extraneous water supplies: 3,100 river channels criss-cross the city limits with a total length of 150 km and a water capacity of eight million cubic meters (Editorial Committee on the Wuxi Municipal Records 1995). Convenient access to water due to Wuxi’s humid climate and dense network of waterways are the main factors that enable the Jichang Garden to include such a vast number of water landscapes (Fig. 2.71).

Cultural Features

The Jichang Garden was constructed during the Ming Dynasty Emperor Zhengde’s reign (1506–1521). For over 500 years, each successive owner endowed the garden with his own emotions, in turn producing scenery that could intimately move those who came to see the garden. Visitors also expressed their own emotions as well by describing the beautiful scenery before them. In this way, many famed poems came to be written about the garden.

The Jichang Garden takes its name from a verse composed by China’s most renowned early calligrapher, Wang Xizhi. The verse reads, “take joy in *ren*,¹⁸ *zhi*,¹⁹ and *le*,²⁰ place your happiness (Mandarin: *ji chang*) amongst the mountains and the waters”.

¹⁸Literally, benevolence.

¹⁹Literally, wisdom.

²⁰Literally, happiness.

After the garden’s owner Qin Yao was dismissed from imperial office, he returned to Wuxi. Placing his emotions into the landscape around him, he rebuilt his garden and named it the Jichang Garden. The concept of *ren*, *zhi* and *le* mentioned in Wang Xizhi’s verse refers to the pleasure of traveling amidst mountains and waters. Qin Yao’s choice of the name “Jichang Garden” expressed his feeling of hopelessness towards imperial politics and his determination to seclude himself within nature. Nearly every name that appears in the garden is a literary reference that ties back either to this despondence or to Wang Wei’s verse in his painting of *Wangchuan Garden*²¹: the Yupan Corridor is a clever play on a single word that can mean “winding and enchanting” in reference to nature but also “melancholy basin” if taken out of context; the Zhiyujian²² Pavilion plays on a verse by Zhuangzi (369–286 BC), an influential Taoist philosopher during the Warring States period (475–221 BC), that famously asks “You are not I. How do you know that I do not know what constitutes the enjoyment of fishes?”²³ (Fig. 2.72) Visitors to the garden were moved and expressed their emotions through the garden as well. Often, visitors composed poetry about the garden; in one famous example, standing on the Seven Stars Bridge beside Jinhuiyi Pond, the Qing Dynasty Emperor Qianlong (reign 1736–1795) chanted, “a bridge flies over glazed roof tile” (Fig. 2.73).



Fig. 2.72 Approximately twenty meters in length and 8 m in width, Jinhuiyi Pond is the largest water feature in the Jichang Garden. The Yupan Corridor, the Zhiyujian Pavilion and the Seven Stars Bridge are all located near the pond. *Source* Photograph by Bo Zhang, provided by Wuxi Landscape Bureau

²¹ *Wangchuan Garden* (Mandarin: *wang chuan yuan tu*), is a painting drawn by Wang Wei (699–759), a prominent poet, musician, painter, and statesman during the Tang Dynasty (618–907).

²² Literally, the name of the Pavilion means “understanding fish as the fish’s friend”.

²³ Translated by James Legge (1815–1897), who was a noted Scottish sinologist.



Fig. 2.73 The buildings in the Jichang Garden appear even more exquisite against a backdrop of beautiful trees. With the beautiful scenery of mountains and lakes in the distance, the garden makes one feel completely immersed in nature. The Seven Stars Bridge is located above Jinhuiyi Pond, in such a way as to make the water appear deeper and more expansive. *Source* Photograph by Bo Zhang, provided by Wuxi Landscape Bureau

Extended Reading: Zhiyujian Pavilion

The Zhiyujian Pavilion is located at the center of Jinhuiyi Pond. The name Zhiyujian is derived from the story of a conversation between ancient Chinese philosophers Zhuangzi and Huizi. In the story, Zhuangzi states, “The fishes come out and play about at their ease; that is the enjoyment of fishes.” The other said, “You are not a fish; how do you know what constitutes the enjoyment of fishes?” Zhuangzi rejoined, “You are not I. How do you know that I do not know what constitutes the enjoyment of fishes?”²⁴ This famous dialogue, simple, yet dialectically ingenious, has been passed down for thousands of years. In his poem *Zhiyujian Pavilion*, the Jichang Garden’s owner Qin Yao writes, “Water flows under the pavilion, knowing I am not the fish, but the thinking just reminds me of Zhuangzi.” In the Jichang Garden, the fish is not only a design element but also an indispensable medium for the creation of landscape architecture’s aestheticism and frame of mind (Guo 2008). Representing a high level of aesthetic understanding with regards to landscape architecture, Zhuangzi’s statements have been reflected in a number of garden works. The Zhiyujian Pavilion in the Jichang Garden is one such example (Fig. 2.74).

²⁴Translated by James Legge (1815–1897), who was a noted Scottish sinologist.



Fig. 2.74 The Zhiyu Jian Pavilion, a waterside pavilion, sits above Jinhuiyi Pond at the heart of the Jichang Garden. *Source* Photograph by Chunhua Yan

The Jichang Garden was, for many years, the private property of an aristocrat. Landscape, rather than architecture, is the focus of the garden. Originally, the garden was owned by Qin Jin, a Minister of War in the Ming Dynasty (1368–1644). The garden was initially named *Feng Gu Xing Wo* Garden (lit. Phoenix Nestle Garden) in relation to Qin Jin’s other name, Feng Shan (Pan 2001a). His nephew Qin Yao inherited the garden. Disappointed in politics, Qin Yao invested his emotions into landscape architecture. Qin Yao focused primarily on the construction of his garden’s landscape elements. As Wang Zhideng (1535–1612) documented in his *Jichang Garden Records*, the garden was famous for its water, stone, then vegetation and lastly architecture (Zhou 1990).

The Jichang Garden features a design style typical among gardens in the *Jiangnan* region—a style characterized by a focus on borrowing elements skillfully and keeping in perfect scale. Primarily, the aim of this type of design is to realize a fusion of the outside and the inside or to draw the surrounding natural landscape into a man-made area by means of borrowing forms from the surrounding landscape (Fig. 2.75). The rockeries in the Jichang Garden, for example, are an extension of Huishan Mountain. Made from local yellow stone,²⁵ the garden rockeries form a simple and unsophisticated natural landscape (Huang 1994). The garden, which covers around one hectare in area, is long in its north-south dimension and short in its east-west dimension. It consists of two components: Jinhuiyi Pond and surrounding pools in the east, with rockeries and trees in the west. At 80 m in length

²⁵**Yellow stone** is a type of sedimentary rock that serves as the main stone material in the uplands area beside Lake Taihu. It features a broad stone face, large size and well-defined shape.



Fig. 2.75 Section drawing of the Jichang Garden. The garden primarily features natural landscape elements including mountains, water and trees. The relatively few architectural works appear more elegant and delicate amidst the surrounding garden landscape. *Source* Feng (2000: 88)

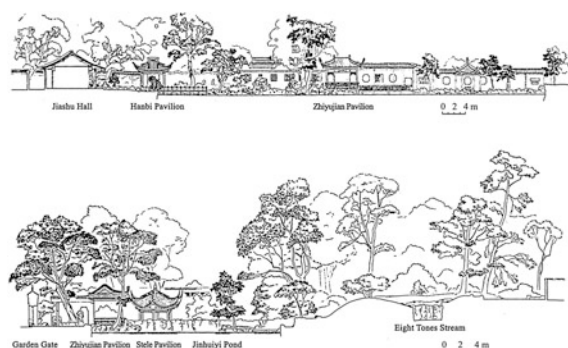


Fig. 2.76 Section drawings of the Jichang Garden from the eastern (*above*) and southern perspectives (*bottom*). The eastern side section drawing illustrates a series of pavilions on the east bank of Jinhuiyi Pond with the Zhiyujian Pavilion in the center. The Southern side section drawing depicts the garden gate, the Zhiyujian Pavilion, the Stele Pavilion, Jinhuiyi Pond and the Eight Tones Stream. The stream carries water from Huishan Mountain. *Source* Pan (2001a: 173)

and 20 m in width, Jinhuiyi Pond is the largest body of water in the garden. Water in the pond comes from Huishan Mountain (Fig. 2.76).

The Zhiyujian Pavilion is named from the book *zhuang zi*.²⁶ On the east side of Jinhuiyi Pond is a row of pavilions and galleries. The Zhiyujian Pavilion sits in the center, protruding out over the surface of the pond and is square in shape (Fig. 2.77). Originally, the Zhiyujian Pavilion was built as a covered bridge, connecting the Qingyu Pavilion and the Yupan Corridor. In 1883, during the Qing Dynasty, the bridge was rebuilt as a waterside pavilion with a gable-and-hip roof²⁷

²⁶*Zhuang zi*, a famous ancient Taoist book, is named after Zhuangzi (369–286 BC), an influential philosopher during the Warring States period (475–221 BC), and consists of three parts but actually only some contents finished by Zhuangzi and his students.

²⁷**Gable-and-hip roof** is a typical roof style in traditional Chinese architecture, usually comprising four sloping roofs with two large roof sections in the front and back, whereas on each of the other two sides is a smaller roof section with a gable.

Fig. 2.77 The Zhiyujian Pavilion, which extends out across the surface of Jinhuiyi Pond, is the centerpiece of the architecture east of the pond. *Source* Photograph by Bo Zhang, provided by Wuxi Landscape Bureau



Fig. 2.78 The Zhiyujian Pavilion, a square waterside pavilion with a gable-and-hip roof, faces water on three sides. *Source* Photograph by Bo Zhang, provided by Wuxi Landscape Bureau



(Sha 2007). Surrounded on three sides by water, the pavilion affords an excellent view of Jinhuiyi Pond’s many fishes. In this unique setting, where the worlds of man and fish meld for a moment, one cannot help but envy the carefree fish that swim lazily below the water’s surface and recall Zhuangzi’s timeless retort, “How do you know that I do not know what constitutes the enjoyment of fishes?” (Fig. 2.78).

As the property of imperial politicians in high position, the Jichang Garden gained considerable fame over time because of the multiple royal visits by the Kangxi (reign 1662–1722) and Qianlong (reign 1736–1795) Emperors (Fig. 2.79). Indeed, Emperor Qianlong admired the design of the Jichang Garden so much that he had an imperial garden constructed on a similar layout named the Huishan Garden, now the Xiequ Garden in the Summer Palace. Among the thousands of beautiful vistas that dot the Chinese landscape, the Jichang Garden is unique: the clever integration of poetic elements into the Jichang Garden’s design infuses the garden with a cultural significance that augments the garden’s aesthetic appearance. It is this quality that captured such great interests from the Kangxi and Qianlong Emperors.



Fig. 2.79 Illustration of the Jichang Garden from the book *Nan Xun Sheng Dian*. The illustration shows that in the Qing Dynasty Emperor Qianlong's reign, the Jichang Garden had already reached considerable size. Source Feng (2000: 20) Note *Nan Xun Sheng Dian*, an official record during one of Emperor Qianlong's southern tours in the Qing Dynasty (1644–1911), was literally named *Pomp and Ceremony in the Southern Tour*

Geographical Interpretation

Settled in the midst of a beautiful natural environment, the Jichang Garden takes advantage of its topology to blend itself into the surroundings. Following the principle that scenery should change with movement of steps, the garden boasts stunning rock formations, a beautiful array of sparkling ponds and intricately constructed pavilions. Poetic elements embedded within the garden's landscape contribute cultural significance to the overall aesthetic experience.

References

- Bai, C. X. (2004). *A harmony between nature and human beings: From philosophy to architecture: [Dissertation for Doctorate]*. Beijing: Chinese Academy of Social Sciences. (in Chinese).
- Chen, W., Feng, W., & Jiao, Z. Y. (2001). Riverside landscape study and virtual reality technology. *Architectural Journal*, (6), 9–12. (in Chinese).
- Cheng, J. J. (2005). *Tempering Ying and Yang: Traditional Chinese architecture and the philosophy in Zhouyi*. Beijing: China Film Press. (in Chinese).
- Editorial Committee on the Hangzhou Municipal Records. (1995). *Hangzhou municipal records* (Vol. I). Beijing: Zhonghua Book Company. (in Chinese).
- Editorial Committee on the Vegetation Maps, Chinese Academy of Sciences. (2007a). *Vegetation map of China and its geographic pattern: Illustration of the vegetation map of the People's Republic of China (1: 1,000,000) (Vol. I)*. Beijing: Geological Publishing House, (in Chinese).
- Editorial Committee on the Vegetation Maps, Chinese Academy of Sciences. (2007b). *Vegetation map of China and its geographic pattern: Illustration of the vegetation map of the People's Republic of China (1: 1,000,000) (Vol. II)*. Beijing: Geological Publishing House, (in Chinese).

- Editorial Committee on the Vegetation Maps, Chinese Academy of Sciences. (2007c). *Vegetation map of the People's Republic of China (1: 1,000,000)*. Beijing: Geological Publishing House, (in Chinese).
- Editorial Committee on the Wuxi Municipal Records. (1995). *Wuxi municipal records*. Nanjing: Jiangsu People's Publishing House. (in Chinese).
- Feng, Z. (1994). Features and origin of the history of the Tibetan nationality in Yunnan. *Tibetan Studies*, (1), 75–81. (in Chinese).
- Feng, Z. P. (2000). *Chinese garden architecture* (2nd ed.). Beijing: Tsinghua University Press. (in Chinese).
- Gao, J. H. (1996). Yellow Crane Tower. *Huazhong Architecture*, 14(1), 58–61. (in Chinese).
- Guan, Z. J. (1998). Dengfengtai observatory and the improvement of shadow measuring method by Guo Shoujing. *Journal of Zhengzhou University (Philosophy and Social Sciences Edition)*, 31(2), 63–67. (in Chinese).
- Guan, Z. J. (2000). The concept of the earth's core in Chinese astronomical history. *Studies in the History of Natural Sciences*, (3), 251–263. (in Chinese).
- Guan, Z.J. (2005). The historical and cultural value of Dengfengtai Observatory. *Journal of Dialectics of Nature*, (6), 82–87, 114. (in Chinese).
- Guo, F. (2008). *Fish philosophy in Chinese classical garden landscape: (Dissertation for Master)*. Tianjin: Tianjin University. (in Chinese).
- Guo, D. H., & Li, H. D. (2003). The new Leifeng Pagoda by West Lake in Hangzhou. *Architectural Journal*, (9), 50–53. (in Chinese).
- Gyalthang Sherab Gyatso. (1994). A brief history of Ganden Sumtseling Monastery. *China Tibetology*, (1), 104–115. (in Chinese).
- Hou, Y. B., & Li, W. Z. (2002). *A pictorial history of ancient Chinese architecture*. Beijing: China Architecture & Building Press. (in Chinese).
- Huang, M. R. (1994). *Jichang garden of Wuxi*. Beijing: People's Daily Press. (in Chinese).
- Khedrup Choshpel. (2009). *History of Tibetan Buddhism*. Beijing: China Religious and Culture Publisher. (in Chinese).
- Lin, Y. L. (1999). Researches of public image in Wuhan City. *New Architecture*, (1), 41–43. (in Chinese).
- Liu, D. Z. (1984). *History of ancient Chinese architecture* (2nd ed.). Beijing: China Architecture & Building Press. (in Chinese).
- Liu, Z. P. (1990). *A brief history of Chinese residential architecture—City, house, garden*. Beijing: China Architecture & Building Press. (in Chinese).
- Ni, S. Y. (1989). The buddhism culture of Wuyue Kingdom in the Five Dynasties period. *Southeast Culture*, (6), 160–164. (in Chinese).
- Pan, G. X. (2001a). *The art of arranging the sceneries in Jiangnan*. Nanjing: Southeast University Press. (in Chinese).
- Pan, G. X. (2001b). *A history of Chinese architecture* (4th ed.). Beijing: China Architecture & Building Press. (in Chinese).
- Pan, G. X. (2001c). *History of ancient Chinese architecture (Vol. IV): Architecture in Yuan and Ming Dynasties*. Beijing: China Architecture & Building Press. (in Chinese).
- Pan, Y. Y. (2008). Phoenix Tai, yellow crane tower: Li Bai and Cui Hao. *Jiangnan Forum*, (2), 60–61. (in Chinese).
- Peng, Y. G. (1986). *Analysis of the traditional Chinese garden*. Beijing: China Architecture & Building Press. (in Chinese).
- Sha, W. G. (2007). *Jichang garden in Huishan Mountain: Brilliant scenery in four seasons*. Suzhou: Guwuxuan Publishing House. (in Chinese).
- Shag Dri Doeje. (2006). *Tibetan Buddhism of Gelukpa*. Tibet: Tibetan People's Publishing House. (in Chinese).
- Shi, D. D., & Hangzhou Garden and Cultural Relics Administration. (1995). *The West Lake records*. Shanghai: Shanghai Ancient Books Press. (in Chinese).
- Sun, Z. W. (2000). *Chinese architecture and philosophy*. Nanjing: Jiangsu Science Publishing House. (in Chinese).

- Wang, S. Z. (1999). *Chinese vernacular architecture* (Vol. IV). Nanjing: Jiangsu Science and Technology Press. (in Chinese).
- Wang, S. L. (2003). Origin of round heaven and square earth. *Jiangnan Forum*, (11), 75–79. (in Chinese).
- Xie, M. Y. (2006). Ancient Chinese concept of space from “er ya”. *Social Science Front*, (5), 274–276. (in Chinese).
- Xu, L. H. (2002). Survey on classic Tibetan books in Yunnan. *China Tibetology*, (2), 90–96. (in Chinese).
- Yang, H. X. (2002). Research on the renovation of Leifeng pagoda in Hangzhou. *Journal of National Museum of China*, (5), 13–22. (in Chinese).
- Yang, Y. S. (2003). *A tour to ancient Chinese architecture*. Beijing: China Architecture & Building Press. (in Chinese).
- Yang, Y. S. (2005). Difference in similarity with distinctive greatness: Comparison between Cui Hao’s “Yellow Crane Tower” and Li Bai’s “Mounting Jinling Phoenix Tai”. *Masterpieces Review*, (11), 91–93. (in Chinese).
- Zeng, Y. H., & Cai, S. M. (2005). Influence of the geographical environment on Wuhan’s urban economic development in modern time. *Resources and Environment in the Yangtze Basin*, 11 (4), 358–362. (in Chinese).
- Zhang, Y., & Deng, H. B. (2005). Discussion of the evolution and use of the lakes in Wuhan. *Journal of Huazhong*, 39(4), 559–563. (in Chinese).
- Zhao, Y. H. (2009). Zhou Bi Suan Jing and Yangcheng. *The Chinese Journal for the History of Science and Technology*, (1), 102–109. (in Chinese).
- Zhejiang Cultural Relics and Archaeology Research Institute. (2005). *The historic site of Leifeng Pagoda*. Beijing: Cultural Relic Publishing House. (in Chinese).
- Zhejiang Cultural Relics and Archaeology Research Institute. (2002). *Treasures of Leifeng Pagoda*. Beijing: Culture Relics Publishing House. (in Chinese).
- Zhou, W. Q. (1990). *History of traditional Chinese garden*. Beijing: Tsinghua University Press. (in Chinese).

Geo-Architecture and Landscape in China's Geographic
and Historic Context

Volume 1 Geo-Architecture Wandering in the
Landscape

Wang, F.

2016, XXXI, 297 p. 338 illus., 260 illus. in color.,

Hardcover

ISBN: 978-981-10-0481-0