



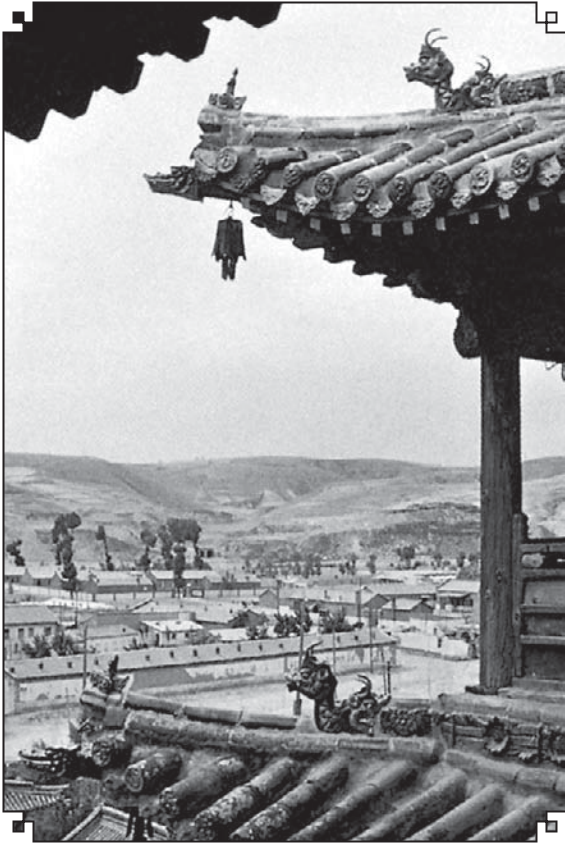
CHAPTER 10

CHINESE ARCHITECTURE

The first communities that can be identified culturally as Chinese were settled chiefly in the basin of the Huang He (Yellow River). Gradually they spread out, influencing other tribal cultures until, by the Han dynasty (206 BCE-220 CE), most of China was dominated by the culture that had been formed in the cradle of northern Chinese civilization. Over this area there slowly spread a common written language, a common belief in the power of heaven and the ancestral spirits to influence the living, and a common emphasis on the importance of ceremony and sacrifice to achieve harmony among heaven, nature, and humankind. These beliefs were to have a great influence on the character of Chinese art and architecture.

ELEMENTS OF TRADITIONAL CHINESE ARCHITECTURE

Because the Chinese built chiefly in timber, which is vulnerable to moisture, fire, insects, and the ravages of time, very little ancient architecture has survived. The oldest datable timber building is the small main hall of the Nanchan Temple, on Mount Wutai in Shanxi province, built sometime before 782 CE and restored in that year. Brick and stone are used for defensive walls, the arch for gates and bridges, and the vault for tombs. Only rarely has the corbeled dome (in which each successive course projects inward from the



Temple at Yungang near Datong, Shanxi province, China. Jorgen Bitsch—Black Star

course below it) been used for temples and tombs. Single-story architecture predominates throughout northern and much of eastern China, although multistory buildings constructed around a central earthen mound (*qiu*) date to the late Zhou dynasty (1046–256 BCE).

The basic elements in a Chinese timber building are the platform of pounded earth faced with stone or tile on which the building stands; the post-and-lintel frame (vertical posts topped by horizontal tie

beams); the roof-supporting brackets and truss; and the tiled roof itself. The walls between the posts, or columns, are not load-bearing, and the intercolumnar bays (odd-numbered along the front of the building) may be filled by doors (usually doubled in larger, institutional buildings) or by brick or material such as bamboo wattle faced with plaster, or the outermost bays may be left open to create peristyles. Typically, the intercolumnar filler of bricks or plaster leaves the structural wood exposed in a half-timber manner, turning function into visible geometry. The flexible triangular truss is placed transverse to the front side of the building and defines a gable-type roof by means of a stepped-up series of elevated tie beams (*tailiang*, “terraced beams,” for which this entire system of architecture is named; also known as *liangzhu*, or “beams-and-columns”); the gable-end beams are sequentially shortened and alternate with vertical struts that bear the roof purlins (horizontal timbers) and the main roof beam. The flexible proportions of the gable-end framework of struts and beams, vertical rise and horizontal span, permits the roof to take any profile desired, typically a low and rather straight silhouette in northern China before the Song dynasty (960–1279) and increasingly elevated and concave in the Song, Yuan (1206–1368), Ming (1368–1644), and Qing (1644–1911/12). The gable-end framework is typically moved inward in a prominent building and partially masked in a hip-and-gable (or half-hip) roof and completely masked

in a full-hipped roof. The timber building is limited in depth by the span of the truss, with the weight of the roof growing three times with every doubling of depth; structurally, however, the building might be of any length along the front, although in theory it ought not to exceed 13 bays and may never actually have exceeded 11 bays in the more recent dynasties.

A distinctively different engineering system for supporting the roof appears today mostly in the southwestern region of China, using tall, thin roof purlin-to-ground columns along the full length of the gable end and horizontal tie beams that penetrate these timber columns. Known as *chuandou*, this system allows for endless possibilities in the geometrical design upon the gable wall, unlike the more standardized *taijiang* system. In place of column-top bracketing, slanting wooden struts extend support for the eaves purlin diagonally downward to the columns. It is possible that *chuandou* architecture was once standard throughout much of China before the Han dynasty and that it retreated to that region with the disappearance of tall timber in the north and with the arrival of the timber-saving bracketing system that gradually came to characterize most traditional Chinese architecture.

The origin of the distinctive curve of the roof, which first appeared in China about the 6th century CE, is not fully understood, although a number of theories have been put forward. The most likely is that it was borrowed, for purely aesthetic reasons, from China's

Southeast Asian neighbours, who cover their houses with *atap* (leaves of the nipa palm [*Nypa*]) or split bamboo, which tend to sag naturally, presenting a picturesque effect. The upswept eaves at the corners of the Chinese roof, however, do have a structural function in reducing what would otherwise be an excessive overhang at that point.

In the "pavilion concept," whereby each building is conceived of as a free-standing rectilinear unit, flexibility in the overall design is achieved by increasing the number of such units, which are arranged together with open, connecting galleries skirting around rectilinear courtyards; diversity is achieved through design variations that individualize these courtyard complexes. In the private house or mansion, the grouping of halls and courtyards is informal, apart from the axial arrangement of the entrance court with its main hall facing the gateway; but in a palace, such as the gigantic Forbidden City in Beijing, the formal halls are ranged with their courtyards behind one another on a south-to-north axis, the state halls building up to a ceremonial climax and then receding toward more private courts and buildings to the north. Ancestral halls and temples follow the palatial arrangement. The scale of a building, the number of bays, the unit of measure used for the timbers, whether bracketing is included or not, and the type of roof (gabled, half- or full-hipped, with or without decorative pent roof and with or without prominent decorative ridge tiling and prominent overhang) all

accord with the placement and significance of the building within a courtyard arrangement, with the relative importance of that courtyard within a larger compound, and with the absolute status of the whole building complex. The entire system, therefore, is modular and highly standardized.

The domination of the roof allows little variation in the form of the individual building; thus, aesthetic subtlety is concentrated in pleasing proportions and in details such as the roof brackets or the plinths supporting the columns. Unused to any major variation, the Chinese became unusually sensitive to subtle architectural differentiation. Tang architecture achieved a “classic” standard, with massive proportions yet simple designs in which function and form were fully harmonized. Architects in the Song dynasty were much more adventurous in designing interlocking roofs and different roof levels than were their successors in later centuries. The beauty of the architecture of the Ming and Qing dynasties lies rather in the lightweight effect and the richness of painted decoration.

The radical standardization of Chinese architecture was best expressed in its system of measurement, which by the Song dynasty had developed eight different grades of measure, depending upon the status of the buildings and of individual buildings within a given compound. The unit of measure (a given inch) was larger for a more important building; the buildings flanking and facing it would use a slightly smaller unit, and

so forth. By that measure, as a building expanded in status and scale, each part of it expanded accordingly; the structure of a larger building was better supportive of the weight it had to carry, while visually and aesthetically, consistent proportions were maintained from one building to the next. Modular in the extreme, buildings were designed to persist through the repeated replacement of parts, so that any given building has not only an original construction date but may belong to many different periods in between.

This entire system of regularity produced an architecture that changed but little and therefore could be “read” with great clarity by all. It defined, with little ambiguity, who could go where and shaped a world that told everyone their place in it. On the one hand, its restrictiveness may account for why the names of so few traditional Chinese architects are known. On the other hand, a system so neatly integrated in all of its features from a very early time, from the Han period on, seems to have needed little improvement and never underwent periods of radical redefinition like that which left Europeans with Romanesque and Gothic, Renaissance and Baroque. The Chinese architectural system was not considered to have been man-made at all but essentially to have been revealed by heaven. With so little change being possible, and only slow, nearly invisible evolution taking place, with no one to take credit for it, it is understandable that until the late 1920s, with the research of Liang Sicheng (1901–72), Liang’s wife, Lin Huiyin

(1904–55), and Liu Dunzhen (1896–1968), no one even knew which buildings were truly old and which were new.

STYLISTIC AND HISTORICAL DEVELOPMENT

The best evidence for early architecture in northern China comes from Neolithic villages such as Banpo, near present-day Xi'an, discovered in 1953 and datable to the 5th–4th millennia BCE, revealing building systems not yet traditionally Chinese. Two types of buildings predominated within a village surrounded by a deeply dug moat: circular buildings with conical roofs that were built aboveground and square buildings with pyramidal roofs, which were semi-subterranean. Already, however, the thatched roofs were suspended by means of columns, beams, and rafters, while the wattle-and-daub walls were not weight-bearing, just as would be the case in later times. And, as at the Banshan Neolithic village in the 3rd millennium BCE, cemeteries were already located in south-facing foothills to the north of the village, as was the ideal throughout much of later Chinese history.

SHANG DYNASTY (c. 1600–1046 BCE)

Excavations of the Shang era at Luoyang, Zhengzhou, and Anyang have revealed an architecture that begins to take on traditional Chinese form: massive earthen walls surrounding emergent urban centres, rectilinear buildings

set up on rammed-earth foundations (layers of earth pounded to stonelike hardness and durability), and postholes of timber buildings with wattle-and-daub walls (woven rods and twigs covered and plastered with clay) and thatched roofs. The largest building yet traced at Anyang is a timber hall about 90 feet (30 m) long, the wooden pillars of which were set on stone socles, or bases, on a raised platform. Ordinary dwellings were partly sunk beneath ground level, as in Neolithic times, with deeper storage pits inside them. There is no sign of the structural use of brick or stone or of tile roofs in any of the Anyang sites. Along the banks of the Huan River to the northwest of modern Anyang, royal tombs consisted of huge, square, rammed-earth pits approached by two or four sloping ramps. Lined and roofed with timber, the tombs were sunk in the floor of the pit. Tomb walls and coloured impressions left on the earth by carved and painted timbers include zoomorphic motifs very similar to those on ritual bronze vessels. Traces of a painted clay wall found elsewhere at Anyang, in a royal stone- and jade-carving workshop, demonstrate that aboveground buildings were decorated with similar designs and indicate a uniformity of design principles and themes in virtually all media at that time, including ritual bronze decor.

ZHOU DYNASTY (1046–256 BCE)

Remains of a number of Zhou cities have been discovered, among them capitals

of the feudal states. They were irregular in shape and surrounded by walls of rammed earth. Some long defensive walls also have been located, the largest being one that protected the state of Qi from Lu to the south, stretching for more than 300 miles (500 km) from the Huang He to the sea. Chu had a similar wall along its northern frontier.

Foundations of a number of palace buildings have been found in the cities, including Fengchu and, at Huixian, the remains of a hall 85 feet (26 m) square, which was used for ancestral rites in connection with an adjacent tomb—an arrangement that became common in the Han dynasty. An important late Zhou structure used for a number of functions in the conduct of state rituals and incorporating a complex range of symbolic numerical systems was the Spirit Hall (Mingtang), discussed in a variety of Zhou literature but not yet known for that period through excavations. Late Zhou texts also describe platforms or towers, *tai*, made of rammed earth and timber and used as watchtowers, as treasuries, or for ritual sacrifices and feasts, while pictures engraved or inlaid on late Zhou bronze vessels show two-story buildings used for this type of ritual activity. Some of these multistory buildings are now understood, through modern excavations of two- and three-story Qin and Han palaces and of state ritual halls at Xianyang, Xi'an, and Luoyang, to have been constructed around a large, raised, pounded-earth core that structurally supported upper building levels and galleries and into

which surrounding lower-level chambers were inserted.

The origins of the Chinese bracketing system also are found on pictorial bronzes, showing a spreading block (*dou*) placed upon a column to support the beam above more broadly, and in depictions of curved arms (*gong*) attached near the top of the columns, parallel to the building wall, extending outward and up to help support the beam; however, the block and arms were not yet combined to create traditional Chinese brackets (*dougong*) or to achieve extension forward from the wall. Roof tiles replaced thatch before the end of the Western Zhou (771 BCE), and bricks have been found from early in the Eastern Zhou.

QIN (221–207 BCE) AND HAN (206 BCE–220 CE) DYNASTIES

In 221 Qin Shihuangdi (“the First Sovereign Emperor of Qin”) put in place the elements that provided the foundation for the succeeding Han dynasty: he centralized the Chinese state and its legal system and standardized the systems of weights and measures and the Chinese writing system. Further, he consolidated many of the walls of northern China into an architectural network of barriers and beacon towers for rapid communication. From these towers, watchmen could identify suspicious military movement and relay the information across the entire length of the wall across north China in a single day.

While little except walls and tombs remains of the architecture of either

the Qin or Han dynasties, much can be learned about Han architecture from historical writings and long descriptive poems, known as *fu*. Clearly this was an era of great palace building. Shihuangdi undertook the building of a vast palace, the Efang Gong or Ebang Gong, whose main hall was intended to accommodate 10,000 guests in its upper story. He also copied, probably at reduced scale, the palaces and pavilions of each of the feudal lords he had defeated; these buildings displayed an encyclopaedia of regional architectural styles, stretched more than 7 miles (11 km) along the Wei River, and were filled with local lords and ladies captured from the different states.

The first emperor's tomb was part of a city of the dead that covered nearly 0.75 square mile (2 square km) and was surrounded by double walls, with numerous gates, corner towers, and a ceremonial palace. The mausoleum itself was surmounted by an artificial mound, or tumulus, a feature not known in the Shang or early Zhou and first found among the tombs of the 4th–3rd centuries BCE near Jiangling in Hubei province. About 141 feet (43 m) high, this tumulus was shaped like a triple-layered truncated pyramid symbolizing heaven, man, and earth. The tomb, which has not yet been excavated, reportedly featured a large chart of the heavens painted on its domed vault and a three-dimensional representation of the earth below, with rivers of liquid mercury driven by mechanical contrivances. Excavations around the tomb have uncovered a large protective terra-cotta

“spirit army” of some 8,000 life-size warrior figures along with 400 horses and 100 chariots placed in battle formation in a series of pits beneath the nearby fields. Molded in separate sections, assembled, then fully painted, these warrior figures were executed in minute and realistic detail and provide evidence of an early naturalistic sculptural tradition that was scarcely imagined by scholars before their discovery in 1974. For the heads, some 30 different models were used, and each was hand-finished to give further variety. In 1982 a pair of precisely engineered bronze replicas (40 inches [104 cm] high) of the imperial chariot, with considerable gold and silver inlay, was excavated, each with a charioteer and four horses.

The main audience hall of the Western Han Weiyang palace was said to have been about 390 feet (120 m) long by 115 feet (35 m) deep, possibly smaller than its largest Qin predecessor yet much larger than its equivalents in the Beijing palace today. From the Zhou dynasty (1046–255 BCE) through the Yuan (1206–1368 CE), no architectural structure called forth more intense consideration than the Spirit Hall, or Mingtang, which was the predecessor of Beijing's Temple of Heaven. The site of the Han ritual hall, in the southern suburbs of Han dynasty Chang'an, was excavated in 1956–57. Translating traditional ritual values into symbolic architecture, the Mingtang was surrounded by an outer circular moat and set on a circular foundation (the two circles together forming a disk, or

bi, symbolic of heaven) that was further enclosed within an intermediate rectilinear colonnade (symbolic of earth). The three-story hall itself (the number three signifying heaven, man, and earth) was built around a raised earthen core. It is thought to have been a composite ritual structure that included a royal academy on the first floor; a second floor divided into nine zones, corresponding to the four seasons and the “five phases” theory of change, with five inner shrines and with outer spaces for monthly ritual offerings; and a third-floor central hall surrounded by a terrace (*lingtai*, or “spirit platform”) for observation of the heavens and regulation of the calendar.

The Han palaces were set about with tall timber towers (*lou*) and brick or stone towers (*tai*) used for a variety of purposes, including the display and storage of works of art. Ceramic representations of Han architecture provide the first direct evidence of true bracketing, with simple brackets projecting a single step forward from the wall (and sometimes several steps upward from the wall) in order to support the roof projection.

Han tombs are among the most elaborate ever constructed in China. In some localities they are of timber, but more often they are of brick or stone, divided into several chambers, and covered with a corbeled vault or, more rarely, a true arched vault. The tombs of the Han emperors were enclosed in gigantic earthen mounds that are still visible today, but some royal tombs began the later practice of burial in hollowed-out

natural hills. Many Han tombs were decorated with wall paintings, with more permanent and expensive stone reliefs, or with stamped or molded bricks.

The most remarkable excavated tomb of the period belonged to the wife of a mid-level aristocrat, one of three family tombs of the governor of Changsha found in a suburb of that southern city, Mawangdui, and dating from 168 BCE or shortly after. Small in scale but richly equipped and perfectly preserved, the wooden tomb consists of several outer compartments for grave goods tightly arranged around a set of four nested lacquered coffins. An outer layer of sticky white kaolin clay prevented moisture from penetrating the tomb, and an inner layer of charcoal fixed all the available oxygen within a day of burial, so the deceased (Xin Zhui, or Lady Dai, the governor’s wife) was found in a near-perfect state of preservation. Included among the grave goods, which came with a written inventory providing contemporaneous terminology, are the finest caches yet discovered of early Chinese silks (gauzes and damasks, twills and embroideries, including many whole garments) and lacquerware (including wood-, bamboo-, and cloth-cored examples), together with a remarkable painted banner that might have been carried by the shaman in the funerary procession.

THREE KINGDOMS (220–280) AND SIX DYNASTIES (220–589)

After the fall of Luoyang (311) and Chang’an (316) to the invading Xiongnu,

the building of great cities and palaces ceased until the Northern Wei moved their capital to Luoyang in 495. There they constructed a city of great magnificence (which was eventually sacked in 535). The main monuments of the 4th and 5th centuries were Buddhist temples and monasteries. By the mid-6th century there were some 500 religious establishments in and around Luoyang alone and about 30,000 in the whole of the northern realm.

Each Buddhist temple had a pagoda erected as a reliquary or memorial, and other pagodas dotted the city and the surrounding landscape. They have mostly disappeared, but one can get some idea of their form from reliefs at Yungang and from the earliest surviving pagodas at Nara in Japan. Based on an enlargement and refinement of the Han timber tower, or *lou*, they had up to 12 stories, with a projecting mast at the top ringed with metal disks. This mast was the only feature preserved from the Indian Buddhist burial or reliquary mound, the stupa, a hemispherical form that the Chinese rarely seem to have copied. The brick and stone pagodas, which were originally more Indian in form and were gradually Sinicized, are tiered structures with the stories marked by projecting string courses (horizontal bands) and architectural features borrowed from timberwork indicated in relief. The oldest surviving example is the Songyue Temple, a 12-sided stone pagoda on Mount Song (c. 520–525) that is Indian in its shape and detail.

SUI (581–618) AND TANG (618–907) DYNASTIES

The founding of the Sui dynasty reunited China after more than 300 years of fragmentation. The second Sui emperor engaged in unsuccessful wars and vast public works, such as the Grand Canal linking the north and south of China physically and economically. Work on these grand schemes exhausted the people and led them to revolt. The succeeding Tang dynasty built a more enduring state on the foundations the Sui rulers had laid, and the first 130 years of the Tang was one of the most prosperous and brilliant periods in the history of Chinese civilization. During this time, the empire was extended so far across Central Asia that for a while Bukhara and Samarkand (both now in Uzbekistan) were under Chinese control, the Central Asian kingdoms paid tribute to China, and Chinese cultural influence reached Korea and Japan. Chang'an became the greatest city in the world at that time; its streets were filled with foreigners, and foreign religions—including Zoroastrianism, Buddhism, Manichaeism, Nestorianism, Christianity, Judaism, and Islam—flourished. This confident cosmopolitanism is reflected in all the arts of the period.

The splendour of the dynasty reached its peak between 712 and 756 under the emperor Xuanzong (Minghuang), but before the end of his reign a disastrous defeat caused Central Asia to enter the control of the advancing Arabs, and the rebellion of General An Lushan in

755 almost brought down the dynasty. Although the Tang survived for another 150 years, its government and people largely turned against foreigners and foreign religions. In 845 all foreign religions were briefly but disastrously proscribed; temples and monasteries were destroyed or turned to secular use, and Buddhist bronze images were melted down.

Only the descriptions in literature and poetry, no doubt exaggerated, remain of the architecture of southern China from the Sui period. The great palaces, temples, and pagodas of 6th-century Nanjing have all disappeared. Evidence of wall paintings and reliefs suggests, however, that the curved roof was already beginning to make its appearance in the south, although it did not reach northern China until well into the Tang dynasty.

The Sui capital, Daxing (now Xi'an), was designed in 583 on imperial order by the great architect Yuwen Kai; renamed Chang'an, it was further developed by the Tang after 618. This vast city, six times the size of present-day Xi'an, was laid out in nine months on a grid plan, with eastern and western markets and the Imperial City placed in the north-central section, a plan later followed in the Ming dynasty rebuilding of Beijing. In 634 Tang Taizong built a new palace, the Daming Palace, on higher ground just outside the city to the northeast. The site of the Daming Palace, which became the centre of court life during the glittering reigns of Gaozong (649–683) and Xuanzong (712–756), was partly excavated. Remains were found of two great halls, Hanyuan Hall (reconstruction of

the foundation completed in 2003, now a UNESCO World Heritage site), with its elevated corridors extended like huge arms toward overlapping triple towers (foreshadowing the later Japanese Phoenix Hall at Uji and the Wu Gate at Beijing), and the Linde Hall; marble flagstones and bases of 164 columns of the latter give some indication of its splendour. Lost marvels of Sui Tang palace architecture include Yuwen Kai's rotating pavilion in the Sui palace, which could hold 200 guests, and the 295-foot-high (90 m) state Spirit Hall built for China's only reigning empress, the usurper Wuhou (or Wu Zetian, who changed the name of the dynasty from Tang to Zhou during her reign from 690 to 705). Surviving murals from Buddhist caves at Dunhuang and excavated royal tombs near Chang'an provide a graphic record of Tang architecture, its taste for multistory elevation, tall towers, and elaborate elevated walkways, its uncharacteristic use of brightly coloured tiles on the building surfaces, and its integration of architecture with gardens, ponds, and bridges.

The Sui-Tang period saw some of China's most lavish royal tomb building, before the onset of a relative modesty in the Song (960–1279) and a decline of qualitative standards in later periods. Excavated royal tombs at Changling, north of the capital, include three built for close relatives of Wuhou who were degraded or executed by her on her way to the throne; they were reburied amid much pomp and splendour in 706 after the restoration of the Tang royal lineage. In each, the

subterranean sepulchre is surmounted by a truncated pyramidal tumulus and is approached through a sculpture-lined “spirit way” (*lingdao*). Inside, painted corridors and incised stone sarcophagi provide a lingering record of Tang splendour, with colourful renderings of palatial settings, foreign diplomats, servants-in-waiting, and recreation at polo and the hunt. Along the corridor, niches that had served temporarily as ventilating shafts are stuffed with ceramic figurines—riders, entertainers, Tang horses, and other fabulous animals—mostly done in bold

tricolour glazes. The corridor leads to two domed vaults serving as an antechamber and burial hall. The tombs of some Tang rulers were so grand that artificial tomb mounds no longer sufficed, and funerary caverns were carved out beneath large mountains. The huge tomb of Emperor Gaozong and his empress, who later reigned as Wu Zetian (China’s only joint burial of rulers), at Changling, has yet to be excavated but appears to be intact.

The Sui and the first half of the Tang were great periods of temple building. The first Sui emperor distributed relics



The Chinese-inspired Great Buddha Hall (Daibutsu-den) of the Tōdai Temple, Nara, Japan. The original Late Nara building was completed in 752; the present hall is an 18th-century reconstruction. Orion Press—Scala/Art Resource, New York

throughout the country and ordered that pagodas and temples be built to house them, and the early Tang monarchs were equally lavish in their foundations. Apart from masonry pagodas, however, very few Tang temple buildings have survived. The oldest yet identified is the main hall of Nanchan Temple at Wutai in northern Shanxi (before 782); the largest is the main hall of nearby Foguang Temple (857). However, they are both small compared with the lost Tang temple halls of Luoyang and Chang'an.

Tang and later pagodas show little of the Indian influence that so marked the Songyue Temple pagoda. Tang wooden pagodas have all been destroyed, but graceful examples survive at Nara, Japan, notably at Hōryū Temple, Yakushi Temple, and Daigō Temple. Masonry pagodas include the seven-story, 190-foot-high (58 m) Dayan Ta, or Great Wild Goose Pagoda, of the Cī'en Temple in Chang'an, on which the successive stories are marked by corbeled cornices, and timber features are simulated in stone by flat columns, or pilasters, struts, and capitals.

Tang cave temples at Dunhuang were increasingly Sinicized, abandoning the Indianesque central pillar, the circum-ambulated focus of worship which in Six Dynasties caves was sculpted and painted on all four sides with Buddhist paradises. In the Tang, major Buddhist icons and paradise murals were moved to the rear of an open chamber and given elevated seating, much like an emperor enthroned in his palace or like any Chinese host.

FIVE DYNASTIES (907–960) AND TEN KINGDOMS (902–978)

By the end of the Tang, the traditional Chinese techniques of architectural siting had been synthesized into geomantic systems known as *fengshui* or *kanyu* (both designating the interactive forces of heaven and earth). These had origins reaching back at least to earliest Zhou times (1046–256 BCE) and were undertaken seriously by architects in all periods. Practiced by Daoist specialists, northern Chinese traditions emphasized the use of a magnetic compass and were especially concerned with the conjoining of astral and earthly principles according to months and seasons, stars and planets, the hexagrams of the *Yijing* divinatory text, and a “five phases” theory of fire, water, wood, metal, and earth that was first propagated in the Han dynasty (206 BCE–220 CE). In the south, where landscape features were more irregular, a “Form school” emphasized the proper relationship of protective mountains (the northern direction representing dark forces and requiring barriers, the south being benign and requiring openness) and a suitable flow of water. In later periods, elements of both schools were used throughout China.

China's *fengshui* masters and carpenters shaped a practice distinctively different from that of architects in the West, characterized by their ability to grace a building with auspicious good fortune or to curse it with ill fate. And so for the Chinese, siting and the proper timing

of events was a more critical feature than architectural engineering, the latter, after all, requiring good execution but allowing little innovation. Understanding the flow of the earth's vital energy (qi) and the relation of the stable earth to the ever-changing heavens, as known through astral charts and almanacs, provided these masters with an esoteric knowledge and authority that rivaled that of the emperor himself and brought it into the lives of every individual. Whether regarded, today, as superstition or as proto- or quasi-scientific knowledge, information about when to cut the first wood, how to position the building where the building materials would be stored, when to lay the threshold and build the hearth and marital bed or raise the main roof beam, were all matters of the utmost importance. Various charms, good or bad, might also be secreted away among the beams, and only certain numbers were used—all others avoided—in the measurement of parts, all of which made the *fengshui* masters and carpenters something like magicians or sorcerers, all-powerful in the lives of the people and as much to be feared as admired by their clientele.

**SONG (960–1279),
LIAO (907–1125), AND JIN
(1115–1234) DYNASTIES**

The Song capital, Bianliang or Bianjing (present-day Kaifeng), grew to be a great city, only to be burned by Juchen Tatars in 1127, just after the work was completed.

Nothing survives today, but some idea of the architecture of the city is suggested by a remarkably realistic hand scroll, *Going up the River at Qingming Festival Time*, painted by the 12th-century court artist Zhang Zeduan (whether painted before or after the sacking is uncertain). From contemporary accounts, Bianjing was a city of towers, the tallest being a pagoda 360 feet (110 m) high, built in 989 by the architect Yu Hao to house a relic of the Indian emperor Ashoka. Palaces and temples were at first designed in the Tang tradition, sturdy and relatively simple in detail though smaller in scale. The plan and grouping of the elements, however, became progressively more complex; temple halls were often built in two or three stories, and structural detail became more elaborate.

The style of the 10th century is exemplified in the Guanyin Hall of the Dule Temple at Jixian, Hebei province, built in 984 in Liao territory. A two-story structure with a mezzanine that projects to an outer balcony, the hall is effectively constructed of three tiers of supporting brackets. It houses a 52-foot-high (16 metre), 11-headed clay sculpture of the bodhisattva Guanyin, the largest of its kind in China, placed majestically beneath a central canopy. From the 11th century, the finest surviving buildings are the main hall and library of the Huayan Temple in the Liao capital at Datong (Shanxi), which was accorded the right to house images of the Liao emperors, installed in 1062. The library, perhaps the most intricate and perfectly preserved



Going up the River at Qingming Festival Time, *detail of an ink and colour on silk hand scroll by Zhang Zeduan, 12th century, Song dynasty; in the Palace Museum, Beijing. 24.8 cm × 528 cm. Wan-go H.C. Weng Photo Collection, New York*

example of the architecture of the period, was completed in 1038.

The new Song style is characterized by a number of distinct features. The line of the eaves, which in Tang architecture of northern China was still straight, now curves up at the corners, and the roof has

a pronounced sagging silhouette. The bracket cluster (*dougong*) has become more complex: not only is it continuous between the columns, often including doubled, or even false, cantilever arms (or “tail-rafters,” *xia’ang*), which slant down from the inner superstructure to

the bracket, but also a great variety of bracket types may be used in the same building (56 different types are found in the five-story wooden pagoda built in 1056 at the Fogong Temple in Yingxian, Shanxi province). The tail-rafter, hitherto anchored at the inner end to a crossbeam, now is freely balanced on the bracket cluster, supporting purlins at each end, thus giving the whole system something of the dynamic functionalism of High Gothic architecture. The interior is also much more elaborate. Richly detailed rounded vaults, or cupolas, are set in the ceiling over the principal images; baldachins (ornamental structures resembling canopies) and pavilions to house images or relics reproduce in miniature the intricate carpentry of full-scale buildings; and extremely complex bookcases, some of which, as at the Huayan Temple, were made to revolve, also assume the form of miniature buildings.

Upwards of 60 Song, Liao, and Jin pagodas survive, the latter built by Chinese master craftsmen for their barbarian overlords. These pagodas are generally six- or eight-sided and made of brick or wood. A tall and very slender “iron-coloured” brick pagoda of the 11th century survives at Kaifeng, and, like the seven-story White Pagoda at Qingzhou, near Chengde, it reproduces in brick an elaborate bracketing system copied from timber construction. The 13-story Tianning Temple pagoda in Beijing (11th or early 12th century) shows a subordination of rich detail to a simple outline that

is Song architecture at its most refined.

Practically nothing survives today of the Southern Song capital of Hangzhou, described as the greatest city in the world by the Venetian traveler Marco Polo, who spent much of the time from 1276 to 1292 in the city. The dense population and confined space of Hangzhou forced buildings upward, and many dwellings were in three to five stories. While palace buildings in the southern part of the city were probably crowded together, temples and high-platformed viewing pavilions overlooking West Lake were buildings of fairylike beauty. They survive today only in the work of such Southern Song landscape and architecture painters as Li Song.

The variety of form, structural technique, detail, and decoration in Song architecture reflects the sophistication of Song culture and a new intellectual interest in the art. Master builders such as Yu Hao and the state architect Li Jie were educated men. The latter is known today chiefly as the compiler of *Yingzao fashi* (“Building Standards”), which he presented to the throne in 1100. This illustrated work deals in encyclopaedic fashion with all branches of architecture: layout, construction, stonework, carpentry, bracketing, decoration, materials, and labour. The *Yingzao fashi* became a standard text, and, while it was influential in spreading the most advanced techniques of the time with its first publication in 1103, by codifying practice, it may also have inhibited further development and contributed to the conservatism of later techniques.

In contrast to the greater uniformity of later periods, Song architecture was experimental and increasingly diverse in nature. Two styles from the Southern Song period can be inferred from early Japanese buildings. One style is called by the Japanese name Tenjiku-yo, or “Indian style,” but it actually originated on the southeastern coast of China, centred in Ningbo, where tall stands of evergreens stood. It sometimes employed timber columns rising to about 65 feet (20 m), directly into which were inserted vertical tiers of up to 10 transverse bracket-arms. This stern and simple style is exemplified by the Great South Gate at Tōdai Temple, built in Nara, Japan, about 1199. Another style, dubbed by the Japanese Kara-yo (Chinese: “Tang”—i.e., Chinese—“style”), was brought by Chan (Zen) Buddhist priests from the Hangzhou area and south to the new shogunal capital at Kamakura, where it can be seen in the 13th-century Reliquary Hall of the Engaku Temple. It features unpainted wood siding with multilevel paneled walls (no plaster wall or lacquered columns) and much attention to elaborative detail. The effect is rich and dynamic and displays none of the simplicity one might expect of Chan architecture, so it is thought by some to represent more a Chinese regional style than anything specifically Chan.

YUAN DYNASTY (1206–1368)

Little remains of Yuan architecture today. The great palace of Kublai Khan in the

Yuan capital Dadu (“Great Capital”; now Beijing) was entirely rebuilt in the Ming dynasty (1368–1644). Excavations demonstrate that the Yuan city plan was largely retained in the plan of the Ming; originally conceived under the combined influence of Liu Bingzhong and non-Chinese Muslims such as Yeheidie’er, it appears to be thoroughly Chinese in concept. More detailed information survives only in first-generation Ming dynasty court records and in the somewhat exaggerated description of Marco Polo. This architecture was probably little advanced in point of building technique over those of the Liao and Jin palaces on which they were modeled. The ornate features of their roofs, their bracketing systems, the elevated terraces, and the tight juxtaposition of the buildings are reflected in architectural paintings of the period by such artists as Wang Zhenpeng, Xia Yong, and Li Rongjin. Perhaps the only original Yuan buildings in Beijing today are the Drum Tower to the north of the city and the White Pagoda built by Kublai in the stupa form most commonly seen today in the Tibetan chorten. The Mongols were ardent converts to Tibetan Buddhism and tolerant of the Daoists, but they seem to have found existing temples enough for their purposes, for they made few new foundations.

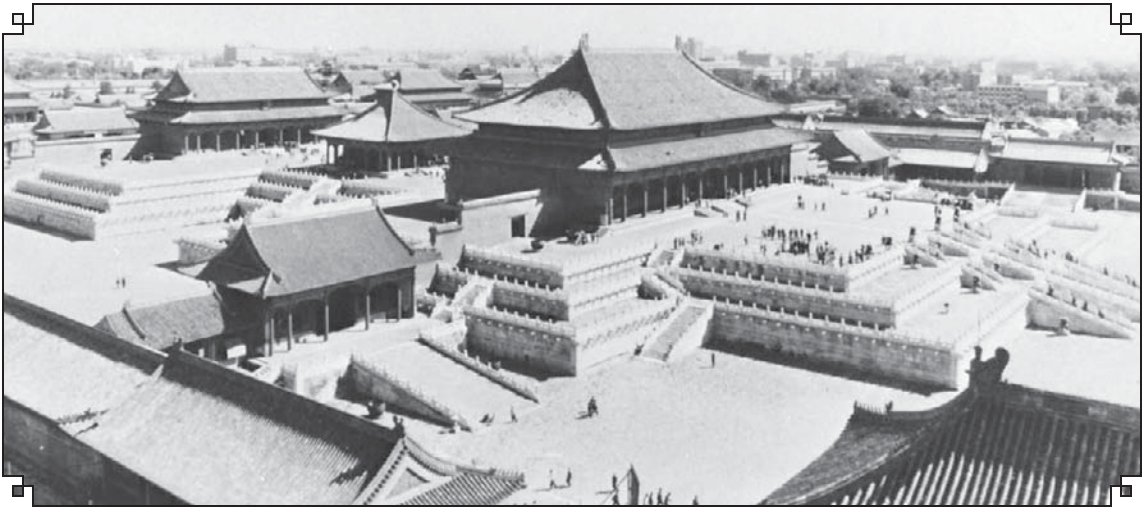
MING DYNASTY (1368–1644)

The first Ming emperor established his capital at Nanjing (“Southern Capital”),

surrounding it with a wall more than 16 miles (30 km) in length, one of the longest in the world. The palace he constructed no longer exists. In 1402 a son of the founding Ming emperor enfeoffed at the old Yuan capital usurped the throne from his nephew, the second Ming ruler, and installed himself as the Yongle emperor. He rebuilt the destroyed Mongol palaces and moved the Ming capital there in 1421, renaming the city Beijing (“Northern Capital”). His central palace cluster, the Forbidden City, is the foremost surviving Chinese palace compound, maintained and successively rebuilt over the centuries. In a strict hierarchical sequence, the palaces lie centred within the bureaucratic auspices of the imperial city, which is surrounded by the metropolis that came to be called the “inner city,” in contrast to the newer

(1556) walled southern suburbs, or “outer city.” A series of eight major state temples lay on the periphery in balanced symmetry, including temples to the sun (east) and moon (west) and, to the far south of the city, the huge matched temple grounds of heaven (east) and agriculture (west). Close adherence to the traditional principles of north-south axiality, walled enclosures and restrictive gateways, systematic compounding of courtyard structures, regimentation of scale, and a hierarchy of roofing types were all intended to satisfy classical architectural norms, displaying visually the renewed might of native rulers and their restoration of traditional order.

Central to this entire arrangement are three great halls of state, situated on a high, triple-level marble platform (the number three, here and elsewhere,

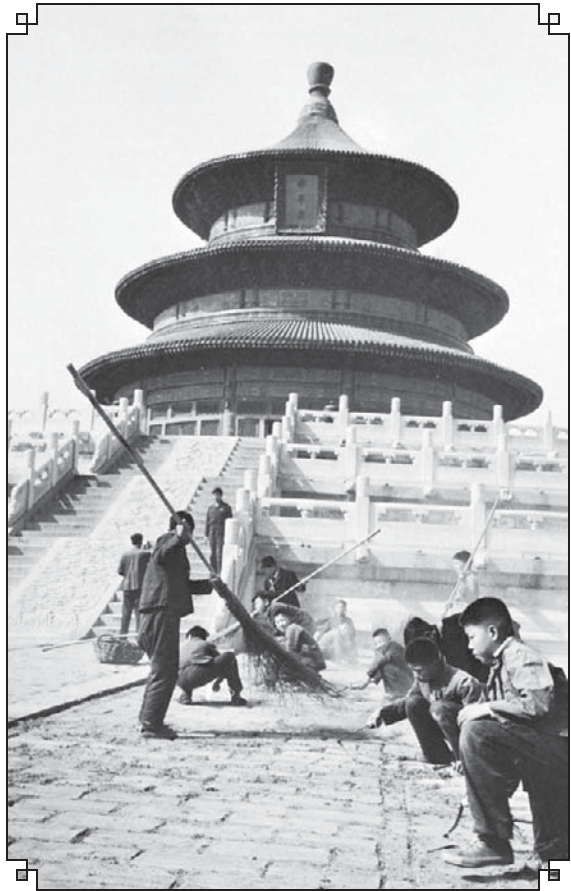


The Hall of Supreme Harmony (centre), one of the former Imperial Palaces, now part of the Palace Museum complex in the Forbidden City, Beijing. Xinhua News Agency

symbolic of heaven and of the imperial role as chief communicant between heaven and earth). The southernmost of these is the largest wooden building in China (roughly 215 by 115 feet [65 by 35 m]), known as the Hall of Supreme Harmony. (The names and specific functions of many of the main halls were changed several times during the Ming and Qing [1644-1911/12] dynasties.) To their north lies a smaller-scale trio, the main halls of the inner court, in which the emperor and his ladies resided. The entire complex now comprises some 9,000 rooms (of an intended 9,999, representing a perfect yang number). The grandeur of this palatial scheme was matched by the layout of a vast imperial burial ground on the southern slopes of the mountain range to the north of Beijing, not far from the Great Wall, which eventually came to house 13 Ming royal mausoleums, with an elaborate “spirit way” and accompanying ritual temple complexes.

In its colossal scale, the monumental sweep of its golden-tiled roofs, and its axial symmetry, the heart of the Forbidden City is unsurpassed as a symbol of imperial power. In architectural technique, however, the buildings may be considered a decline from the adventurous planning and construction of the Song period. Here the unit is a simple square or rectangular pavilion with few projections or none, and the bracketing system is reduced to a decorative frieze with little or no structural function. Instead, emphasis is placed upon carved balustrades, rich colour, and painted architectural

detail. This same lack of progress shows in Ming temples also. Exceptional is the Hall of Prayer for Good Harvests (Qiniandian) at the Temple of Heaven, a descendant of the ancient Mingtang state temple. It took its present circular form about 1530. Its three concentric circles of columns, which range up to



Children sweeping the steps at the Hall of Prayer for Good Harvests, central building of the Temple of Heaven, in the Forbidden City, Beijing. Emil Schulthess/Black Star

59 feet (18 m) in height, symbolize the 4 seasons, the 12 months, and the 12 daily hours; in a remarkable feat of engineering, they support the three roof levels (a yang number) and, in succession, a huge square brace representing earth, a massive circular architrave denoting heaven, and a vast interior cupola decorated with golden dragons among clouds. (In its final rebuilding, in the 1890s, its tall timbers had to be imported from the U.S. state of Oregon.)

QING DYNASTY (1644–1911/12)

The Manchus began imitating Chinese ways even before their conquest of China, and the Qing rulers, particularly Kangxi (1661–1722) and Qianlong (1735–96), were well-educated men who were eager to enlist the support of Chinese scholars. They were extremely conservative in their political and cultural attitudes; in artistic taste, their native love of extravagance (which the Chinese viewed as barbarous) was tempered, ironically, by an equally strong conservatism. The art of the Qing dynasty, even the painting of many of its finest eccentrics and the design of its best gardens, is at once characterized by lavish decoration and ornate effects as well as by superb technique and conservative taste.

Qing dynasty work in the Forbidden City was confined chiefly to the restoration or reconstruction of major Ming buildings, although the results were typically more ornate in detail and brighter in colour than at any time since the Tang.

The Manchu rulers were most lavish in their summer palaces, created to escape the heat of the city. In 1703 the Kangxi emperor began the construction, near the old Manchu capital, Zhengde, of a series of palaces and pavilions set in a natural landscape. Engravings of these made by the Jesuit father Matteo Ripa in 1712–13 and taken by him to London in 1724 are thought to have influenced the revolution in garden design that began in Europe at about this time. Near the Zhengde palace were built several imposing Buddhist temples in a mixed Sino-Tibetan style that reflects the Tibetan Buddhist leanings of the Kangxi, Yongzheng, and Qianlong emperors.

About 1687 the Kangxi emperor had begun to create another garden park northwest of Beijing, which grew under his successors into the enormous Yuanmingyuan (“Garden of Pure Light”). Here were scattered a great number of official and palace buildings, to which the Qianlong emperor moved his court semi-permanently. In the northern corners of the Yuanmingyuan, the Jesuit missionary and artist Giuseppe Castiglione (known in China as Lang Shining) designed for Qianlong a series of extraordinary Sino-Rococo buildings, set in Italianate gardens ornamented with mechanical fountains designed by the Jesuit priest Michel Benoist. Today the Yuanmingyuan has almost completely disappeared, as the foreign-style buildings were burned by the French and British in 1860. To replace it, the empress dowager Cixi greatly enlarged the new summer palace

(Yiheyuan) along the shore of Kunming Lake to the north of the city.

The finest architectural achievement of the period, however, occurred in private rather than institutional architecture—namely, in the scholars’ gardens of southeastern China, in such towns as Suzhou, Yangzhou, and Wuxi. As these often involved renovations carried out on Yuan and Ming dynasty foundations, it remains difficult to discern the precise outlines of their innovations. With the aid of paintings and Ji Cheng’s text *Yuanye* (1631–34; “Forging a Garden”), it

becomes evident that, as in the worst of Qing architecture, these gardens became ever more ornate. The best examples, however, remain well within the bounds of good taste because of the scholars’ cultivated sensibility, and they were distinguished by an inventive imagination lacking in Manchu court architecture. Such gardens were primarily Daoist in nature, intended as microcosms invested with the capacity to engender tranquillity and induce longevity in those who lodged there. The chief hallmark of these gardens was the combination of a central pond,



Garden of the Master of Nets (Wangshiyuan), Ming and Qing dynasties; at Suzhou, Jiangsu province, China. Caroline Courtauld

encompassing all the virtues of yin in the Chinese philosophical system, with the extensive use of rugged and convoluted rockery (yang), representing the Chinese adoration of great mountain systems that were thought to channel the vital energy of the earth. (The most precious rocks were harvested from the bottom of Lake Tai near Suzhou.) These rocks, which appear so natural, are actually composited and might be thought of as the leading products of the sculptor's craft in the last centuries of China's traditional period.

Throughout this urban garden tradition, where the scale was necessarily small and space was strictly confined, designers attempted to convey the sense of nature's vastness by breaking the limited available space into still smaller but ever-varied units. Among those gardens still preserved today, the Liu Garden in Suzhou offers the finest general design and the best examples of garden rockery and latticed windows, while the small and delicate Garden of the Master of Nets (Wangshi Yuan), also in Suzhou, provides knowledgeable viewers with a remarkable series of sophisticated visual surprises, typically only apparent on a third or fourth visit to the site.

INFLUENCE OF FOREIGN STYLES

Until the mid-1920s, official and commercial architectural commissions in China were chiefly designed in an eclectic European style popularized by such treaty ports as Guangzhou (Canton), Xiamen, Fuzhou, and Shanghai, much

of it designed by foreign architects. However, about 1925 Lü Yanzhi designed the Sun Yat-sen Mausoleum located in Nanjing, one of the first important constructions designed entirely by a Chinese architect in modern history. The building's comprehensive plan drew on the style of emperors' tombs of the Ming and Qing dynasties, a notion of historical reference that greatly inspired young Chinese architects. In 1925 a group of foreign-trained Chinese architects, including Zhuang Jun and Fan Wenzhao (Robert Fan), launched a renaissance movement to study and revive traditional Chinese architecture and to find ways of adapting it to modern needs and techniques. In 1930 they founded Zhongguo Yingzao Xueshe ("The Society for the Study of Chinese Architecture"). The following year Liang Sicheng joined the group; he would be the dominant figure in the movement for the next 30 years. The fruits of these architects' work can be seen in new universities and in major government and municipal buildings built in Beijing, Nanjing, and Shanghai during the 1930s, where they contended with the rise of Western-designed architecture such as the old Shanghai concert hall (formerly known as the Nanjing Theatre) and the Customs House along Shanghai's Bund. The war with Japan (1937-45) put an end to further developments along these lines for a time; however, this tradition was revived in the 1950s with buildings such as the National Art Gallery of China (1959) in Beijing and is still practiced to this day.

After 1949, the urgent need in China for housing and industrial building led to many examples of purely utilitarian architecture and to major construction projects such as dams and bridges. Beijing and other big cities were transformed by spectacular planning projects, but an awareness of the traditional role of symbolism in architecture was often retained and adapted. Indeed, much of the architecture in the 1950s was built in the Soviet style of imposing edifices centered on grand squares and axes. During this period, large portions of the Forbidden City in Beijing were restored and established as a public museum. Lamentably, most of the city's great outer walls were taken down in the name of modernization and to facilitate vehicular circulation. A new primary thoroughfare (Chang'an Boulevard), now symbolically on an east-west axis rather than traditionally oriented north-south, was also established there. In 1959 a vast square for public political activity was completed in front of the Tiananmen (Gate of Heavenly Peace, the entryway to the Imperial City), flanked on one side by the complex containing the Museum of Chinese History and the Museum of Chinese Revolution and on the other side by the Great Hall of the People. These dignified structures, part of the "Ten Grand Buildings" built from 1958 to 1959, were modeled after the Soviet style, with a hint of the Chinese vernacular in details such as a slight turn of a cornice.

Over the course of the Cultural Revolution (1966–76), many magnificent older buildings and their exquisite

decorations were seriously damaged or destroyed, as the new regime regarded them as emblems of decadence and moribundity. Most new commissions were monotonously imposing structures. The end of Cultural Revolution architecture was marked when the regime's founder, Mao Zedong, died in 1976 and was buried in a grand mausoleum, located at the south end of Tiananmen Square. Designed by a large team of architects that same year, the monument bears a resemblance to the Lincoln Memorial in Washington, D.C.

INTO THE 21ST CENTURY

After this rather fallow period in Chinese architecture, the Chinese building industry, beginning in the 1980s—with the implementation of China's new "opening up" economic and diplomatic policies—entered an unparalleled period of prosperity. This boom was in part a result of the new political structure, which provided sufficient funds for Chinese architects to explore different creative possibilities, and in part because China's economic development during this period created a need for an increased number of office towers, hotels, shopping spaces, and urban housing, accompanied by massive new roadway construction. All of this required the tearing down of older structures in the name of urban renewal, particularly of domestic urban housing, and the displacement and relocation of tens of millions of urban residents. Massive numbers of

migrant construction workers flooded China's cities to carry out this labour, which has put the Chinese social and natural ecologies under extraordinary stress. Beijing, Shanghai, Guangzhou, Tianjing, and other provincial capitals in the eastern part of China became rapidly modernized within the space of a decade and similar to one another in appearance through unified urban planning and massive construction. These urban examples were followed afterward by inland cities such as Xi'an, Chongqing, and Chengdu in Sichuan, and Wuhan in Hubei. Among the largest commissions at the time were the Beijing Xiang Shan Hotel designed by Chinese-born American architect I.M. Pei in 1982; the Shanghai Grand Theater designed by French architect Jean-Marie Charpentier in 1994; and the Shanghai Jin-Mao Tower in 1998 (until 2008 the tallest skyscraper in China), designed by the American firm of Skidmore, Owings, and Merrill. The diverse nationalities of these architects and architectural firms reflect the determination of the government and Chinese architectural community to cooperate with other countries.

In the face of such rapid change, some worried that this massive expansion would come at the cost of tradition, beauty, and a sense of humanity. Critics pointed out that many of these tall new structures were characterless concrete or glass towers that made many Chinese cities virtually indistinguishable from each other. Moreover, the inclusion of the Chinese vernacular in these structures often took on the form of empty

postmodern gestures, such as the inclusion of a pagoda on top of a glass skyscraper. Beyond issues involving the structures themselves, this rapid expansion posed serious problems in terms of congestion and pollution, a circumstance that became more problematic as the eyes of the world were turned toward Beijing, the site of the Summer Olympic Games in 2008. As a result of such concerns and as a result of the experiences and lessons of other industrial countries, architects and urban planners in China increasingly focused on issues such as preserving historical structures, controlling air pollution, creating public spaces, and creating "green" (energy-efficient, environmentally friendly) buildings.

At the turn of the 21st century, responding to the long-standing concern for preserving tradition as China entered deeper into the world economy and the accompanying effects of globalization, Chinese architects continued to search for a viable style of Chinese architecture for the new millennium. Some prominent architects as Zhang Bo, She Junnan, and Cheng Congzhou have continued to follow the pattern established earlier by Liang Sicheng. The large-scale Beijing Western Railway Station, designed by the Beijing Constructing and Designing Research Institute in 1995, reflects the continuation of this philosophy. The modern station, equipped with the newest forms of transportation technology, was executed with a combination of tradition and modernity that has continued to define much of Chinese architectural

production in the early 21st century. Critics, however, have chastened this as “big roof architecture,” traditional decoration on an essentially non-Chinese structure, and regard it as a dead-end hybrid product not likely to survive the forces of modernity.

With the Summer Olympic Games in 2008 came a group of internationally-renowned structures, together with a further demonstration of globalization in China’s architectural sphere. The Olympic Green was designed by Albert Speer, Jr., son of Nazi Germany’s leading architect; the genuinely original Olympic track and field stadium, the National Stadium popularly dubbed the “Bird’s Nest,” was designed by the Swiss firm of Herzog & de Meuron together with expatriate Chinese artistic consultant Ai Weiwei; the National Aquatics Centre, called the “Water Cube,” was designed by an Australian-Chinese consortium. At the same time, the face of central Beijing’s architecture was further altered by two massive and controversial constructions: the National Centre for the Performing Arts, called “The Egg” and contrasting with the rectilinear architecture of Tiananmen, which it adjoins, designed by French architect Paul Andreu; and the CCTV Headquarters, designed by Dutch architect Rem Koolhaas. As urban Chinese residents moved from small one- and two-story buildings into apartment blocks and condominiums more massive than any imagined by Maoist planners, some of the very wealthy were provided the opportunity to move into new

retro-style architectural gated communities being built in the outskirts of larger cities such as Beijing and Shanghai; avoiding the latest modernist trends, these protected communities mimicked Tudor-period English villages or German Bauhaus architectural schemes, designed by European firms such as that of Albert Speer, Jr., and providing city dwellers with free-standing single-family homes that feature all the amenities of the suburban European or American lifestyle.

While efforts have been made in cities such as Beijing to preserve something of China’s architectural heritage, the prime result has been to facilitate further replacement of the old by the new. How this rapid expansion of urban architecture will be resolved in terms of the congestion and pollution it generates, both in the city and in the rural areas that produce the raw materials for this explosive growth, remains to be seen.

CONCLUSION

The people of China can be compared to a mosaic, united by a common writing system. Although there can be tension between the dominant Han and non-Han minority groups, the non-Han groups are increasingly adding their unique contributions to the great body of Chinese culture.

One of the most accessible ways to approach a foreign culture is through its foods. Cuisine encompasses not only what people cultivate and raise as food, but how those products are cooked and

when and how they are eaten. The special preparation of food in China has deep and ancient roots. Much of Chinese history and ritual can be learned from the crispy skin of a Peking duck, the burn of a roasted Sichuan green bean, the comfort of a steamed pork dumpling, and a simple bowl of rice.

Perhaps second only to the appreciation of Chinese food is the appreciation of China's art. Whether it be the life-size terra-cotta warriors in Xi'an, the ritual bronze vessels of an early era, or the scroll paintings of emperors, Chinese art has been available to Western museumgoers for centuries. Though it may require some extra effort on the part of the Western viewer to understand the principles of artists who approach life and the world in a different manner, the effort is always rewarded many times over by expanded artistic horizons and by cultural growth.

In China and the countries most influenced by Chinese culture—Korea and Japan—calligraphy by long and exacting tradition is considered a major art, equal to sculpture or painting. It was said that Cangjie, the legendary inventor of Chinese writing, got his ideas from observing animals' footprints and birds' claw marks on the sand as well as from other natural phenomena. He then started to work out simple images from what he conceived as representing different

objects. The tools for Chinese calligraphy are few: an ink stick, an ink stone, a brush, and paper or silk. The calligrapher, using a combination of technical skill and imagination, must provide interesting shapes to the strokes and must compose beautiful structures from them without any retouching or shading and, most important of all, with well-balanced spaces between the strokes. This balance needs years of practice and training.

The music and performing arts of China, like the written language, are ancient. The archaeological resources go back to 3000 BCE, and extensive written documents refer to endless different forms of music in connection with folk festivals and religious events as well as in the courts of hundreds of emperors and princes in dozens of different provinces, dynasties, and periods. If a survey is carried forward from 3000 BCE, it becomes clear that the last brief segment of material, from the Song dynasty (960–1279 CE) to today, is equivalent to the entire major history of European music.

This volume gives ample evidence of the richness and depth of Chinese culture. While contemporary news relates the vitality of China's economic engine, it tends to minimize the incredible vibrancy of the country's ancient culture—its invention of paper, silk, movable type, and even fireworks.