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The Eleventh-century Daxiongbaodian of Kaihuasi and Architectural Style in Southern Shanxi's Shangdang Region¹

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In the generations of High Antiquity [people] excavated caves and piled timber [to make] nests for their dwellings, while “sages of later generations” established a system, with “a roof ridge above and eaves below thereby [providing] shelter from the wind and rain.”² In the variety of “palaces, mansions, terraces, and pavilions,”³ and in the masses of peasant cottages and village houses—together with the degree of craft or extravagance [displayed in them]—are revealed local customs (*fengsu*).⁴—*Xuanhe huapu*

The Daxiongbaodian of Kaihuasi 開化寺大雄寶殿 (Treasure Hall of the Great Hero [Mahāvīra]; 1073/1092–1096) is one of four Buddhist image hall buildings of virtually the same architectural style in the Shangdang 上黨 region of southeastern Shanxi Province, and one of three buildings in this area that have been firmly dated to the late eleventh and early twelfth centuries. By comparing these four buildings that were constructed at the height of Song-dynasty rule, with each other and with counterparts elsewhere in the Song empire, this article shows that different areas within the empire retained and expressed regional identity in their monumental timber buildings, even while ruled by a stable imperial power. Furthermore, these four buildings, relics of both time and place, were preserved and became the cores of Buddhist monastic complexes that were expanded during later periods, some quite substantially. The willingness to retain these four worship hall buildings, while adding increasingly different new ritual halls and residential quarters around them, reveals a respect for these historic buildings and the local culture that they represented.

In the present-day study of Chinese architecture periodization has primarily followed traditional dynastic categories. We can understand this as a necessary evil: dynastic periodization is easy to teach, and also allows easy interdisciplinary access to colleagues who might be interested in imagining the built environment of a particular polity. Yet dynastic periodization has well-known dangers; in particular, it promotes the idea that an overarching “dynastic style” actually existed.⁵ The limited number of extant pre-eighth-century wooden religious or palatial structures in China contributes to the

difficulty of tracking stylistic developments within dynastic categories. (Only the Main Hall of Nanchansi 南禪寺 can be confidently dated before the year 800 CE.) But, enough timber-frame buildings from across China have survived since the tenth century to permit the tracking of stylistic developments within the larger dynastic categories. Even the few structures from about the tenth century reveal dramatic differences between building styles in the present-day provinces of Hebei and Shanxi and those in more southern areas.⁶ Extant buildings from the eleventh century provide something more—a clearly developed local idiom within larger North China regional styles. These buildings prove that regional styles existed within the boundaries of Northern Song (960–1127) a full century after the empire had reached its territorial peak. In short, there was no single “Song-dynasty” style during the Song.

I wish to emphasize the implications of this conclusion for our understanding of the building projects of the Song court and the appearance of China’s built environment during the eleventh and early twelfth centuries. That the group of ritual buildings in Shangdang was visually distinctive from neighbors only one hundred miles away in present-day Henan Province, where the Song-dynasty capital of Bianliang (present-day Kaifeng) was located, suggests that Song-dynasty emperors or bureaucrats did not endeavor to homogenize ritual architecture at the local level, or at least were not successful in their attempts to do so. That these buildings were preserved to the twentieth century, within complexes of buildings obviously from later times, bespeaks an awareness of, and pride in, both regional and historical distinctions within an overarching Sinitic mode of monumental timber-frame building.

This article is part of a larger project on the timber architecture of North China from the tenth through the thirteenth century. The project aims to describe the regional distinctions in monumental timber buildings in the tenth century and examine possible reasons for stylistic developments among these buildings over the course of the following two centuries. With this article I hope to show that the local idiom, of which the Daxiongbaodian

dian of Kaihuasi was a part, would have been perceived as such to observers who travelled through the region on trade or pilgrimage. The Daxiongbaodian of Kaihuasi only remotely resembles the buildings described in the *Yingzao fashi*, the famous carpentry manual sponsored by the Northern Song court and first published in 1103—a stylistic divergence unlikely to have been accidental. Eleventh-century builders and patrons were making choices about the look of a building—a worship hall could either look the same as the local architecture or it could look like the architecture of elsewhere. A thick description of these buildings can reveal the subtlety of regional distinctions within the timber-architecture tradition, ultimately allowing for a more nuanced understanding of the selections made in creating the architecture of the Song-dynasty capital, Bianliang, as represented in the *Yingzao fashi*. Below, I first describe the region in question and sketch its history. Then I describe the Daxiongbaodian within the context of the larger building complex of Kaihuasi, of which it is the oldest building. Finally, through comparisons with other buildings in both space and time, I show how Daxiongbaodian was not only part of a late eleventh-

and early twelfth-century North China regional style, a style distinct from contemporary architecture near the Song capital, but within that regional style also representative of the local idiom of Shangdang.

Southeastern Shanxi: Shangdang, Luzhou, and Zezhou

Kaihuasi's Daxiongbaodian, Qingliansi's Shijia (Śākya-muni) Hall 青連寺釋迦殿 (1076–1102 are the dates inscribed on various of its pillars), and the Main Hall of Zishengsi 資聖寺 (11th c.) are among the seventy-three examples of ancient timber architecture included in a 1956 survey of this section of Shanxi, an area framed by the Taihang Mountains 太行山 to the east and south, and the Zhongtiao 中條山 and Wuling Mountains 烏嶺山 to the west and southwest, respectively (Figs. 1, 2).⁷ A fourth building, the Daxiongbaodian of Longmensi 龍門寺大雄寶殿 (1098 [also inscribed on a pillar]) at the eastern edge of Pingshun County near the Shanxi-Henan border, is geographically remote from the other three but stylistically consistent with them. This region has been called Southeastern Jin (Jin

FIG. 1. Map of China ca. 1100. Showing the location of the Shangdang region relative to other areas of preserved Song-period architecture, as discussed in the text. After Fredrick W. Mote, *Imperial China: 900–1800* (Cambridge, MA: Harvard University Press, 1999), p. 58.

FIG. 2. Map of Shangdang region. Showing locations of Kaihuasi, Qingliansi, Longmensi, and Zishengsi relative to major cities and rivers in southeastern Shanxi Province. After "Jin dongnan," p. 26.

Dongnan 晉東南) or Shangdang in secondary scholarship on its architecture. The name Southeastern Jin refers to its inclusion in the Jin state (Jinguo 晉國) during the Eastern Zhou period (770–221 BCE). When the Jin was divided into Han 韓, Zhao 趙, and Wei 魏 kingdoms during the Warring States period (580–221 BCE), Shangdang (at present-day Zhangzi 長子 or Changzhi 長治) was an alternate capital first of the Han and then of the Zhao.⁸ The Qin conquered Shangdang in the famous Battle of Changping (Changping Zhizhan 長平之戰) circa 260 BCE.⁹ The Qin, after unifying Bronze Age China in 221 BCE, established Shangdang Commandery, with its capital of the same name near present-day Zhangzi. Qin Shangdang extended from the Taihang Mountains south of present-day Jincheng through Xiyang in the north.

Although during the Song the region was linked to important capital cities such as Taiyuan and Luoyang by major roadways, and to cities to the northeast by canals, the mountain ranges made travel difficult. The major transportation route through this area was along the Dan River 丹河, which leads through the southern portion of the Taihang Mountains to the Qin River 沁水 and ultimately empties into the Yellow River. The digging of the Yongji Canal 永濟渠 at the beginning of the seventh century linked the Dan and Qin rivers to areas east of the Taihang Mountains and north of the Yellow River.¹⁰ After the Tang dynasty was established in 618 CE, the primary route from the eastern capital at Luoyang to the northern capital at Taiyuan followed the Dan River valley.¹¹ During the eleventh century the area was subdivided into two districts: Luzhou 潞州 (with Shangdang as its capital) and Zezhou 澤州 (with its capital near present-day Jincheng 晉城).¹² But the mountainous territory administered through Zezhou and Luzhou was not the only route from the Northern Song capital to more northern locations in Shanxi. Because of Bianliang's (Kaifeng's) eastern location, travellers headed north from there could conveniently travel over the plains east of the Taihang Mountains and then cut across the range to larger cities such as Taiyuan.¹³ Additionally, pilgrimage routes to the famous home of the bodhisattva Mañjuśrī, Mt. Wutai, located in northern Shanxi, had long been established along the eastern side of the Taihang range.¹⁴

An idiosyncratic style developed within this territory that was contained by mountains yet connected by rivers. The following features of Kaihuasi's Daxiongbaodian, Qingliansi's Shijia Hall, the Daxiongbaodian of Longmensi, and the Main Hall of Zishengsi are characteristic of the late eleventh-century southeastern Shanxi regional style: five *puzuo* 鋪作 layers (filled-heart eaves-

bracket sets on column tops only); bevelled bracket-arms; and lute-face/split-bamboo-styled descending cantilever and *shuatou* 耍頭 (see Fig. 32). Four details found in some but not all of these buildings—stone eaves columns that are square with bevelled edges, chamfered bracket-arm ends in the corner sets, the extension of the architrave (*lan'e* 闌額) through the column top at the corner, and, particularly idiosyncratic, the locust-head-style (*mazhaxing* 螞蚱形) finishing of the corner *guazigong* 瓜子拱—exist in other structures across the region. Both the regional style and the local idiom within the regional style recognizably pertain to the Shangdang area, but these were not something to which craftsmen or their patrons adhered rigidly, neither during the Song nor the succeeding Jin dynasty. These buildings from the late eleventh and early twelfth centuries were maintained as artifacts in complexes that today contain buildings from later times. These later buildings evidence that funds were available to replace or update the old structures if that had been desired, and the existence of the older structures suggests that they were valued for what they were, perhaps as markers of the long histories of their monasteries or of a specific local or regional building tradition.

Kaihuasi and its Daxiongbaodian

Nestled into the western foothills of the Taihang range, situated on the southern flank of Sheli Mountain 舍利山, and located approximately seventeen kilometers northeast of present-day Gaoping Municipality 高平市, stands Kaihuasi Monastery complex (Fig. 3). According to one stele inscription within the complex, Buddhists established a monastery there first in 571 CE, when the Northern Qi (550–577) held the territory. Two other inscriptions indicate that the monastery was expanded under the supervision of the Chan Master Dayu 大愚禪師 (d. 925 CE) in the late ninth or early tenth century (889–892 or 925) and named the Pure and Cool Monastery (Qingliang lanruo 清涼蘭若). The name of the monastery was changed to Kaihua chanlin 開化禪林 prior to 1030.¹⁵ None of the extant buildings are from this period, and we can only imagine how the complex would have originally appeared. But the existence of an eleventh-century building, retained as the centerpiece of a large complex of later buildings, does reveal an interest in preserving relics of the monastery's past, although not quite of its origin. Here and in the other mountain complexes, stone was used not only for foundations but also for columns, which elsewhere were more commonly fabricated from wood.¹⁶

Presently the monastery has two parallel com-

FIG. 3. *Kaihuasi*. Gaoping Municipality, Shanxi Province. Extant buildings of 11th–18th c. View from the south. Photograph by author.

plexes, a group of largely residential buildings on the east (seen on the right side of the tower in *Fig. 3*), and the major ritual axis, which is entered through the tower, as shown in the plan (*Fig. 4*). Access to the monastery is from a winding path that leads you around first to the door into the residential complex and then to the ritual axis. Originally a bell tower stood at the southern end of the axis, but in 1600 the tower was rebuilt and converted into a Storied Pavilion of Great Pity (Dabeige 大悲閣, or Mahākarunā Pavilion) dedicated to Guanyin (*Fig. 5*).¹⁷ There is no clear documentation of the earliest construction of this building, yet Chai Zejun and his survey team note that a tower at the front of a ritual axis was popular in Buddhist monastery complexes from the Period of Disunion (220–589) through the Tang dynasty (618–907). Thus, building a storied pavilion in this location would have been in keeping with tradition.¹⁸ According to the early survey teams, two-story entry-gate towers continued to be popular in the Shangdang region throughout the imperial period. The Ming- and Qing-

dynasty gatehouses (*shanmen* 山門) documented in the 1956 survey were almost always two-story structures like the one at Kaihuasi, frequently having a stage for ritual opera configured into the second story.¹⁹

The next building on axis, which visually divides the space behind the tower into two courtyards, is the Daxiongbaodian (*Fig. 6*). The building is roughly square in plan, three bays wide by three bays deep, with the exterior of the front and side façades each measuring approximately 12.5 meters. Both wood and stone columns form the major structural support for the single-eaves hip-and-gable roof. This is apparently original construction because the building's present style is consistent with the style about 1073, the date inscribed on the building's stone columns.²⁰ According to a stele (dated to 1110) that details the hall's construction, this hall was completed in 1092.²¹ At that point the hall would have been ready for the addition of interior wall paintings. Two more inscriptions by the local artist Guo Fa 郭發 were found on the wall paintings, indicating that their

FIG. 4. *Kaihuasi*. Plan of ritual axis. After "Taihang gujianzhu," p. 142, pl. 12.

FIG. 5. *Kaihuasi Dabeige*. Rebuilt 1600. View from south. Photograph by author.

FIG. 6. *Kaihuasi Daxiongbaodian*. Dated to 1073. Front façade. Photograph by author.

outline was completed in 1096.²² I shall return to the details of the date and style of this hall below.

The front courtyard was framed to the east and west by ten bays of subsidiary buildings. According to Chai Zejun's team, the buildings on the east side were Halls for Ritual Purification of the Heart/Mind (*zhaixintang* 齋心堂; Fig. 7), and those on the west side were Reception Halls (*kezuotang* 客座堂; Fig. 8).²³ These buildings have simple gabled roofs and front verandas. Only five bays of the reception halls on the west side are extant, but those eaves columns that remain show carefully carved stone bases. By contrast, the eaves columns on the *Zhaixintang* are placed directly on the floor sill. This difference could reflect different dates of construction, or, more likely, the original east side columns also had carved bases that were stolen and replaced with a simpler substitute.²⁴

Flanking the back courtyard of the ritual axis were two three-bay side halls—an extant Guest Hostel (*yanbinshe* 延賓舍) on the east (Fig. 9), and, originally, a

Recitation Hall (*jiangyitang* 講肄堂) on the west. North of these two buildings were two small storage towers. Chai Zejun's team believes that the Guest Room, Recitation Hall, and storage towers date stylistically from the Yuan dynasty, and were likely part of a restoration of the monastery that took place in 1330.²⁵

The north end of the complex originally consisted of a central Hall for Discoursing on the Law (*Yanfadian* 演法殿) flanked by storied buildings.²⁶ All that now remains of the *Yanfadian* are the square stone columns that once supported the eaves (Fig. 10). Because ritual halls were so commonly framed of timber, one expects, when encountering a building as ruinous as this *Yanfadian*, to see only stone column bases and a few scattered roof tiles, which make the columns standing here visually startling until one recalls the widespread substitution of stone for timber in this area. Flanking the *Yanfadian* was once a Pure Quarters of Vimalakīrti (*Weimojingshi* 維摩淨室) on the west, and, on the east, still extant, a Guanyin Storied Pavilion (*Guanyingge* 觀音閣,

FIG. 7. Kaihuasi Heart/Mind Purification Halls (*Zhaixintang*). Repaired 1645. Front façade. Photograph by author.

also in *Fig. 10*). The Guanyin Pavilion is dated to 1212 by an inscription on an interior timber. This building was repaired in 1582 and again in 1692. Underneath it is a spring that would have provided drinking water for the residents of the monastery.

The Eastern Monastic Compound

One can access the eastern complex from the narrow passage between the Heart/Mind Purification Halls and the Guest Hostel. Here are a number of buildings with more mundane functions. The abbot's quarters, meditation halls, monks' cells, dining halls, and further storage facilities would all have been located in this section of the complex (*Fig. 11*). The buildings in the eastern complex have brick structural walls with timber-frame roofs supporting ceramic tiles. These buildings were likely added or rebuilt during the Ming-Qing dynasties, most of them at the height of the monastery's construction during the seventeenth and eighteenth cen-

turies. According to Chai Zejun's analysis of the stela inscriptions extant at the site, Kaihuasi Monastery has undergone thirteen major repairs or restorations since the end of the Tang dynasty (889–891, 925, 1030, 1073–1110, 1212, 1330, 1582, 1600, 1643, 1645, 1654, 1692, and 1784). During this time, the ritual complex was expanded (1330), the Dabei Storied Pavilion was rebuilt (1600), and images gilded (1643).²⁷ Timber was primarily used for the complex bracketing in the Dabei Storied Pavilion and Daxiongbaodian, and for the roof frames of more modest structures, such as the side halls. Additionally, the large-scale, complex bracketing of the Daxiongbaodian would have required larger, higher-quality timbers than those adequate for the roof rafters of subsidiary structures. Since the other buildings in the complex are themselves an indication that funds were available for large-scale construction during the Ming and Qing, how do we know that the Daxiongbaodian, in the *style* of the Song dynasty, is indeed an ancient building? In the following section I

FIG. 8. Kaihuasi Reception Halls (Kezuotang). Repaired 1654. Front façade. Photograph by author.

shall describe the structure of Kaihuasi's Daxiongbaodian and discuss it as an example of a particular late eleventh-century style specific to the Shangdang region.

Structure of the Daxiongbaodian

As noted above, the Daxiongbaodian is a three-bay-square building, roughly 12.5 meters on a side.²⁸ The building has two large prism-lattice windows in the front façade and doorways in the central bays of both front and back façades. In this building some of the eaves columns are of wood, others of stone—the stone ones being rectangular with bevelled corners and the wooden ones cylindrical, but having flat tops without any chamfering (*juansha* 卷殺). The columns incline a bit toward the center of the building (batter [*cejiao* 側腳]) and the corner columns are slightly taller than the central bay columns (rise [*shengqi* 升起]). These features—a near-square plan, prism-lattice windows, and the increased height of the corner columns—distinguish

Tang-Song buildings from those of the Ming and Qing dynasties.

The building frame consists of a four-rafter beam facing a *rufu* 乳栿 tie beam, with three columns in cross section supporting a six-rafter depth from front to back (Fig. 12). The ceiling is open-frame, but presently there are the remnants of a suspended ceiling and wooden statuary niche in the central bay, which is framed by two small nonstructural columns at the front. Two construction techniques maximized the amount of interior space. The first is the reduction of interior structural columns to two framing the back of the central bay. This freed the patron to add statuary or niches at will. The second is the use of *touxin* 偷心 (stolen-heart, i.e., empty-center) *huagong* bracket arms on interior bracket clusters. These are steps of bracket arms that extend exclusively perpendicular to the wall plane. They allow the physicality of the roof frame to dissolve into intersecting planes of space, which become the ceiling structure (Fig. 13).

FIG. 9. *Kaihuasi Guest Hostel (Yanbinshe)*. 1330. Front façade. Photograph by author.

The interior would have been divided into two visual spheres, the central bay, almost certainly for statuary, enveloped by space one bay in width, which was focused on the wall-painting program. Not only are the walls covered with narrative wall paintings but the interior beams and bracketing are also brightly decorated. Because the wall paintings have been preserved from the eleventh century, it is possible that the decorative program of the wooden structure has also been preserved from that time.²⁹ Although the statuary is no longer extant, the central bay of the building is architecturally defined in such a way as to suggest that sculpted images would have been contained within this space (Fig. 14). Two narrow nonstructural columns, located directly across from their structural counterparts at the south end of the side façades' central bay, are linked by a square-lattice screen crowned with an arching beam and framed on either side by small bracket clusters atop short columns. A similar screen or solid panel may have originally been present on the east and west sides, suggested by the pronounced groove in the bracket arms

of the cluster atop the back central bay column, creating something of a lattice canopy around the space. The original hung ceiling would have contrasted palpably with the open-frame ceiling of the surrounding areas. Thus, the central bay of the building as a whole was a separate, contained visual sphere for individuals focusing on the primary icon.

Bracketing of the Daxiongbaodian

The most unmistakable feature by which the Daxiongbaodian expresses its Song-dynasty identity is its eaves bracketing. Particularly noteworthy is the exclusive use of column-top bracket sets—very distinct from Song-dynasty architecture outside of this area, where intercolumnar bracketing had become common. The structure of the bracketing itself is also distinctive. Supported by a column-top tie beam (*pubofang* 普柏枋), the five-*puzuo* bracket sets of the Daxiongbaodian begin with a large bearing block (*ludou* 櫨料) on top of the column and tie beam.³⁰ The first outward step consists

FIG. 10. *Kaihuasi, ruins of the Hall for Discoursing on the Law (Yanfadian) and the Guanyin Storied Pavilion (Guanyinge). Rebuilt 1212. Photograph by author.*

of a filled-heart *huagong* 華栱 supporting a *guazigong* 瓜子栱 and *mangong* 慢栱, which are bevelled rather than squared off at the sides, with chamfering used to create the curve at the “elbow” of the bracket arm. The second step holds a filled-heart descending cantilever, beveled *linggong* 令栱, intermediary timber (*timu* 替木), and eaves purlin. A descending cantilever-shaped *shuatou* 耍頭 extends through the *linggong*, and the *linggong* supports the intermediary timber without the use of a central block. Both *shuatou* and descending cantilever are finished in a straight profile pointed at the tips (Fig. 15). This treatment was called lute-face/split-bamboo style by architectural historian Liang Sicheng and his team of researchers in the early twentieth century, and is stylistically consistent with some of the bracket sets used in the Sage Mother Hall (Shengmudian, 1038–1087; Figs. 16, 17) at Jinci 晉祠, near Taiyuan, approximately 217 kilometers (135 miles) to the northwest of Kaihuasi.³¹

Corner bracket sets follow the filled-heart pattern,

which gives them a complex, decorative appearance (Fig. 18). The timber support for the corner of the building’s eaves consists of a filled-heart *huagong*, filled-heart descending cantilever, and *you’ang* 由昂. The first step of *huagong* supports the locust-head-style end of the *guazigong* and the filled-heart of the descending cantilever supports the end of a mandarin ducks-style *linggong* as it crosses the corner. Additionally, the architrave extends through the corner of the column, further emphasizing it as a point of crossing.

A Contrasting Style: The Case of the Chuzu’an Main Hall, 1125

Comparison with a contemporary building of similar size and function on the south side of the Yellow River valley is helpful in demonstrating just how distinctive the architecture of Kaihuasi’s Daxiongbaodian, and that of the Shangdang region, truly is. Whereas the style of the Daxiongbaodian’s eaves bracketing is consistent with

FIG. 11. *Kaihuasi Abbot's Quarters*. 16th–18th c. (?). Photograph by author.

FIG. 12. *Kaihuasi Daxiongbaodian*. Dated to 1073. Section drawing. After “Shanxi jichu zhongyao gujianzhu shili,” p. 165, pl. 87.

FIG. 13. *Kaihuasi Daxiongbaodian*. Dated to 1073. Detail of interior, east side, showing “stolen-heart” *huagong* bracket arms. Photograph by author.

buildings found farther north in Shanxi, such as the Sage Mother Hall, that of the Main Hall of Chuzu'an 初祖庵 (Hermitage of the First Patriarch) at Shaolinsi (dated to 1125), on Song Shan, Henan, is surprisingly different (Fig. 19). The Hermitage of the First Patriarch stands approximately 160 kilometers (100 miles) south of Kaihuasi, as the crow flies, and south across the Yellow River. As in the buildings of Shangdang's Taihang Mountain monasteries, stone is used for the columns. In this case, all sixteen of the columns are stone. The four eaves columns, framing the back bay on the east and west sides of the building, are contained within the exterior wall and are square with bevelled edges in the manner we see at Kaihuasi. The remaining twelve columns are all regular octagons and are all at least partially exposed, revealing their shape as well as carved surface decoration.³² Additionally, the style of the bracketing is quite different from what appears farther north. The descending cantilevers are not in lute-face/split-bamboo style but are curved in profile,

with a rounded or slightly pentagonal tip, consistent with the simple lute-face (*qinmian* 琴面) descending cantilever tips described in the *Yingzao fashi* (Fig. 20).³³

The similarities to the metropolitan style, and differences from the Shangdang style, do not end there. Note the use of intercolumnar bracket sets between the columns. Whereas Kaihuasi's Daxiongbaodian employs no bracket sets between the columns, on the side façade of Chuzu'an's Main Hall (shown in Fig. 20) we see single intercolumnar bracket sets of precisely the same configuration as the column-top sets. On the front façade two intercolumnar sets, again of the same appearance, appear in the central bay (Fig. 19). Furthermore, no column-top tie beam supports the large bearing blocks holding the bracket clusters. Instead, the large bearing blocks rest directly on the columns and, in the intercolumnar position, on the architrave. This positioning appears slightly awkward, as the bottom of the bearing block is greater in depth than the architrave and thus projects outward over the edge of the lower

FIG. 14. *Kaihuasi Daxiongbaodian*. Dated to 1073. Interior central bay. Photograph by author.

timber. Yet this too was standard practice in the capital by the end of the eleventh century, as stipulated in the *Yingzao fashi*. In the section on the order of the elements in a bracket cluster (*puzuo*), the *Yingzao fashi* specifies that two intercolumnar bracket sets be used in the central bay and one in the side bays, and that large bearing blocks supporting the bracket clusters be placed either directly on columns or, for intercolumnar bracket sets, on the architrave.³⁴ The column-top tie beam used in the Kaihuasi hall is discussed in the *Yingzao fashi*, but in the context of balconies or platforms (*pingzuo* 平座) supported by bracket sets.³⁵

Although differing styles of descending cantilever tip and the use or nonuse of intercolumnar bracket sets and column-top tie beams may seem minutiae to the modern reader, the *Yingzao fashi*, in describing these elements, is an indication that Song-period craftsmen and patrons would have been sensitive to these distinctions and would have been making conscious decisions as to which type to employ on a given project. These stipulations were evidently not imposed on the architecture of the provinces; rather, they may have had specific regional associations. In his study of the *Yingzao fashi*, Pan Guxi suggests that the architecture of the Northern Song court described in the manual was heavily influenced by the regional architecture of southeastern coastal China. He notes that numerous elements specific to Song-period remains in the Yangzi Delta area figure prominently in this building manual but are not commonly seen north of Kaifeng.³⁶

Elsewhere I discuss reasons why the Northern Song court may have wished to remake its capital in an archi-

FIG. 15. *Kaihuasi Daxiongbaodian*. Dated to 1073. Detail of column-top bracket set. Photograph by author.

FIG. 16. *Sage Mother Hall (Shengmudian)*. 1038–1087. Jinci, Taiyuan, Shanxi Province. Detail of intercolumnar eaves bracketing on lower eaves. Photograph by author.

FIG. 17. *Lower eaves intercolumnar bracket set*. 1038–1087. Sage Mother Hall, Jinci, Taiyuan, Shanxi Province. Line drawing. After Peng Hai, *Jinci wenwu toushi* (Taiyuan: Shanxi renmin chubanshe, 1997), p. 179.

rectural style known to be of the Yangzi Delta. For purposes of this article one example will help to show how similar is the Main Hall of Chuzu'an, only a hundred miles from the Shangdang region, to the earlier architectural tradition of the southeast that was incorporated

into the official building style of the Northern Song capital.³⁷ The Daxiongbaodian of Baoguoqi 保國寺 in Yuyao 餘姚, Ningbo 寧波, Zhejiang Province, dating from 1013 (Fig. 21), is the architectural antecedent to the Main Hall of Chuzu'an. Although enclosed with a

FIG. 18. *Kaihuasi Daxiongbaodian*. Dated to 1073. Detail of corner bracket set. Photograph by author.

second set of eaves in 1684, the building was originally constructed as a three-by-three-bay hall, and at 11.91×13.35 meters is comparable in size to the Daxiongbaodian of Kaihuasi and the Chuzu'an Main Hall.³⁸ The detail of the original eaves bracketing shown in Figure 21 reveals comparably larger bracket sets, here seven rather than five *puzuo* layers, but a similar use of simple lute-face descending cantilever tips, *shuatou*, chamfered bracket arms, and lack of column-top tie beam that we see at Chuzu'an.

Notwithstanding the style of architecture that had been legitimized by use in the Northern Song capital, builders working in the Shangdang region continued a distinctive style of their own. The comparison between Chuzu'an's Main Hall and the Daxiongbaodian of Kaihuasi suggests that the Yellow River was a dividing line between northern and southern styles of ritual architecture in late eleventh- and early twelfth-century China. Yet, the material evidence of southern Shanxi is rich enough to place Kaihuasi's Daxiongbaodian into a more narrowly defined context, a local architectural idiom specific to the Shangdang region. In the following, I describe those buildings and the complexes within which they were preserved as overt relics of the past surrounded by later worship halls consistent with stylistic trends of their own times.

Evidences of Regional Identity in Late Eleventh-Century Shangdang

Qingliansi and Its Shijia Hall 青連寺釋迦殿

Qingliansi is situated in a magnificent setting approximately 22 kilometers southeast of modern Jincheng City (Fig. 22). Built on the south side of Xiashi Shan 峽石山,³⁹ overlooking the Dan River 丹河, the site is divided into upper and lower complexes. The history of the lower complex can be traced back to the Northern Qi (550–577), when it was named Xiashi Monastery, after the mountain. Tang Yizong officially named it Qingliansi in 867.

The upper monastery was given the title Fuyan chanyuan 福嚴禪院 in 978,⁴⁰ but the name was eventually changed to Qingliansi, following that of the lower complex.⁴¹ Today the upper complex consists of four axial buildings—the Celestial Kings Hall (Tianwangdian 天王殿), Sutra Repository, Shijia Hall, and Daxiong Hall—as well as side halls framing the courtyards, all set into the steep mountainside. Subsidiary structures around the ritual axis include a pavilion located atop a ridge east of the complex, where the sixth-century monk Huiyuan 慧遠 is said to have written the *Daban niepanjing yiji* 大般涅槃經義記 (*Commentary on Mahāpa-*

FIG. 19. *Shaolinsi Chuzu'an Main Hall*. Dated to 1125. Dengfeng County, Henan Province. Front façade. After Laurence G. Liu, *Chinese Architecture* (New York: Rizzoli, 1989), p. 106.

rinirvāṇa Sūtra). As at Kaihuasi, the central axial halls in the Qingliansi complex are the earliest structures. The oldest building in the complex is the Shijia Hall (Fig. 23). It is dated to an expansion of the monastery that occurred in the late eleventh–early twelfth century, both because its stone columns are inscribed with a range of dates equivalent to 1076 through 1102 and be-

cause the building is so stylistically similar to the Kaihuasi Daxiongbaodian.⁴²

The Structure of the Shijia Hall

Although Qingliansi's Shijia Hall, like Kaihuasi's Daxiongbaodian, is three bays wide and three bays

FIG. 20. *Shaolinsi Chuzu'an Main Hall*. Dated to 1125. Detail of eaves bracketing showing simple lute-face descending cantilevers in both column-top and intercolumnar positions. Photograph by author.

FIG. 21. *Baoguoji Daxiongbaodian*. Dated to 1013. Yuyao, Zhejiang Province. Detail of original eaves bracket sets. Photograph by author.

FIG. 22. *Qingliansi*. Extant buildings dating from 11th c. through modern reconstructions. Jincheng Municipality, Shanxi Province. View of complex from the rear, looking southeast toward the Dan River. Photograph by author.

FIG. 23. *Qingliansi Shijia Hall*. Dated to 1076–1102. Front façade. Photograph by author.

deep, with a single-eaves hip-and-gable roof, it is significantly larger (Fig. 24). Its front façade measures 16.4 meters and its sides measure 15.2 meters, compared with Kaihuasi's Daxiongbaodian measure of 12.5 meters a side.⁴³ Front and back façades are supported by square stone columns with bevelled edges. Their tops are joined by architrave and column-top tie beam, the latter extending across the top of the corner column. In contrast to the Daxiongbaodian, here the architrave does not emerge from the corner column. Both front and back façades have doorways in the central bays, and prism-lattice windows pierce the side bays of the front façade.

Bracketing of the Shijia Hall

This building's bracketing is strikingly similar to that of Kaihuasi's Daxiongbaodian. Like the latter, Shijia Hall has two types of eaves-supporting sets, column-top and corner (Figs. 25, 26). The column-top sets of

FIG. 24. *Qingliansi Shijia Hall*. Dated to 1076–1102. Plan. After "Shanxi Fojiao caisu," p. 319.

FIG. 25. *Qingliansi Shijia Hall*. Dated to 1076–1102. Detail of column-top bracket set. Photograph by author.

FIG. 26. *Qingliansi Shijia Hall*. Dated to 1076–1102. Detail of corner bracket set. Photograph by author.

the two buildings differ only in the rendering of the *huagong* bracket arm; those in the Shijia Hall are not rounded by chamfering but have a sharp edge running down their center. The corner sets differ only in two ways. First, and most significant, the first step of the Shijia Hall *guazigong* does not extend across the corner of the hall to form a locust-head frame for the corner descending cantilever. In other respects, the corner sets are structurally and stylistically the same, down to the use of edged *huagong* and *linggong* bracket-arm tips on the extensions directly from the corner. In the second difference, only in Shijia Hall are there “corner spirits” (*jiaoshen* 角神) between the *you’angs* and the hip-rafters. Although it is unknown whether these are original to the building, there is a provision for such sculpture in the *Yingzao fashi*.⁴⁴ Considering that the original interior statuary of this hall is intact, it is possible that these figures are also original.

The details in these two buildings are so strikingly similar that they suggest an established regional style for the Ze-Lu territory. The buildings’ bracketing and roof frames are identical, and their forms are clearly dictated by stylistic choice rather than by structural considerations. The extension of the *guazigong* across the corner and the edged, rather than chamfered, articulation of the exterior column-top *huagong* arms are features consistent with the more northern Longmensi Daxiongbaodian, contributing to the conclusion that a southern Shanxi or Shangdang regional style existed in the eleventh and twelfth centuries.

Longmensi and Its Daxiongbaodian

Longmensi is located approximately sixty kilometers northeast of the town of Pingshun and roughly two kilometers north of Yuantoucun 源頭村, Shichengxiang 石城鄉. The monastery sits in a valley on the north side of a river on Longmen Mountain 龍門山, in the northern portion of the Taihang Range 太行山 that divides Shanxi from Henan. Its present name comes from the mountain on which it was built (Fig. 27). A recent survey of the site shows four major axial courtyards, three of which held a main worship hall on the north side and were enclosed on the east and west sides by side halls (Fig. 28). As is seen in the reconstructed plan, a *shanmen* gatehouse was originally located off the central axis but on the footpath leading up to the monastery. This building was followed by a Diamond Hall (Jin’gangdian 金鋼殿), of which only a foundation remains. The present complex begins with a Celestial Kings Hall (Tianwangdian 天王殿; present *shanmen*) followed by a Daxiongbaodian and Dīpamkara Hall,

(Randengfodian 然燈佛殿), and was originally completed on the north end by a Thousand Buddhas Storied Pavilion (*Qianfoge* 千佛閣), also no longer extant.⁴⁵ Additionally, there are residential complexes on the east and west sides of the central ritual axis. Though conforming to an overall courtyard complex configuration, the buildings follow the slope of the mountain, with each hall, from front to back, on a slightly higher elevation.⁴⁶

The complex was first built (*xiu* 修) and named Fahua 法華 under orders from the Northern Qi emperor Gao Yang 高洋 (r. 550–559), then rebuilt in 925.⁴⁷ According to an extant stele from 1479 at the site, Zhao Kuangyin 趙匡胤 (r. 960–976), the first Song emperor, personally visited the monastery in 960. The next year the people of nearby Licheng 黎城 and Lucheng raised funds to add more than fifty bays of buildings and corridors to the complex. Gazetteers also record that during the Taiping Xingguo reign-period (976–984), the second Song emperor, Zhao Kuangyi 趙匡義 (r. 976–997), officially named the monastery Longmen Shan Huiriyuan 龍門山惠日院.⁴⁸ During the Xining reign-period (1068–1078) 100 bays of residential quarters were added.⁴⁹ Although the monastery grounds were seven *li* in circumference during the Yuan dynasty, presently the circumference of the site is only about 286 meters.⁵⁰ The complex is famous for having one building from the Five Dynasties period (West Side Hall, 925), one from the Song (Daxiongbaodian, 1098), one from the Jin (Celestial Kings Hall), one from the Yuan (Dīpamkara Hall), and other subsidiary halls added subsequently. Additionally, it is famous for its wealth of steles from the Ming and Qing dynasties, including the above-mentioned and one from 1480 on which is carved a basic plan of the axial buildings at that time.⁵¹

The Structure of Longmensi’s Daxiongbaodian

Overall resemblance among the Daxiongbaodian of Longmensi, the Shijia Hall of Qingliansi, and Kaihuasi’s Daxiongbaodian is patent. The Daxiongbaodian of Longmensi is also a three-by-three-bay building, but it is significantly smaller than the other two (Fig. 29). The front façade measures 10.4 meters and the side façade 9.9 meters.⁵² There are doors in the central bays of the front and back façades and windows in the side bays of the front façade only. Windows also pierce the back bays of both sides; the windows and doors presently visible are later additions.⁵³ On the front façade all the columns are of stone, but on the back façade only the corner columns are of stone. All wooden columns are finished in the upturned-basin style. The corner columns are six centimeters taller than the cen-

FIG. 27. *Longmensi*. Extant buildings dating from 925. Pingshun County, Shanxi Province. Distant view of Daxiongbaodian back façade. Photograph courtesy of P. Lorge.

FIG. 28. *Longmensi*. Plan of complex. After “*Longmensi baohu guihua*,” p. 34.

FIG. 29. *Longmensi Daxiongbaodian*. Dated to 1098. Front façade. Photograph by author.

FIG. 30. *Longmensi Daxiongbaodian*. Dated to 1098. Cross-section drawing. After "Pingshun Longmensi," p. 287.

FIG. 31. *Longmensi Daxiongbaodian*. Dated to 1098. Angled view of front façade. Photograph by author.

FIG. 32. *Longmensi Daxiongbaodian*. Dated to 1098. Line drawing of column-top bracket set. After “Pingshun Longmensi Daxiongbaodian,” p. 25.

tral bay columns, making for a pronounced rise.⁵⁴ Both column-top tie beam and architrave extend outward at the corners, and the architrave is cut inward in the same manner as on the Daxiongbaodian of Kaihuasi.

The building frame spans six rafters from front to back (Fig. 30). Two interior columns frame a statuary wall in the back central bay. Although the *rufu* tie beam does not extend the regular length of two rafters, the structure is still considered to be a “four-rafter beam facing a *rufu* tie beam with three columns in cross-section.” The ceiling frame is presently open, but Ma Jikuan notes that it is rough-framed, suggesting that originally a ceiling covered these timbers.⁵⁵ Both the short *rufu* tie beam and four-rafter beam support rough camel’s-hump braces crowned with bearing blocks, though the camel’s-hump braces are of different heights. The bearing blocks support *zhaqian* 箭牽 tie beams that join into queen posts. These in turn support collar beams with king posts and inverted V-braces supporting the ridge pole.

Bracketing of the Daxiongbaodian

As in the Daxiongbaodian of Kaihuasi and the Shijia Hall of Qingliansi, bracket clusters appear on the column tops only (Fig. 31). The column-top bracket sets are five *puzuo*, consisting of a large bearing block supported by a column-top tie beam. The outward extension of the sets consists of a step of filled-heart *hua-*

gong supporting a *huatouzi*, filled-heart lute-face/split-bamboo descending cantilever, *linggong* penetrated by a descending cantilever-shaped *shuatou*, intermediary timber, and eaves purlin (Fig. 32).⁵⁶ Both *guazigong* and *mangong* “fill the heart” of the first outward step of *huagong*. These arms, as well as the *linggong*, are all bevelled. The arms of the *huagong* are edged on exterior façades and chamfered on the interiors. The interior of these sets consists of two layers of stolen-heart *huagong* and a *shuatou* carved in the locust-head fashion.

Although the corner sets show some variation from Kaihuasi and Qingliansi, the basic construction is the same (Fig. 33). Notably similar are the ends of the *guazigong* that cross over and frame the corner of the eaves and are finished in the locust-head fashion. Additionally noticeable at the corner is the angled finish of the architrave, which extends through the end of the corner column as well as the bevelled ends of the mandarin duck-style *linggong* crossing at the corner. Departing from Kaihuasi and Qingliansi, there is a second level of *you’ang* above the descending cantilever, a feature present, however, in other buildings of this area.⁵⁷

Differences in construction seen in the cross-sections of the Daxiongbaodian of Kaihuasi and Longmensi suggest that they were built by different workshops. The difference is most pronounced in the connection between the interior and the back eaves columns. At Kaihuasi a *rufu* tie beam extends from the interior col-

FIG. 33. *Longmensi Daxiongbaodian*. Dated to 1098. Detail of corner bracket set. Photograph by author.

umn's large bearing block to the back eaves bracket sets. At Longmensi the link is above the descending cantilever tails and *yatiao* joined into the bracket cluster at the top of the interior column. Although this is considered to be a *rufu* tie beam/four-rafter beam construction, these two timbers could be easily replaced with one six-rafter beam. The Kaihuasi hall approaches that on the next layer of timber construction with a *zhaqian* tie beam supporting a camel's-hump brace. Here a three-rafter beam extends across the top of the four-

rafter beam to provide a level ground for the queen posts. Again, Longmensi differs in the symmetrical placement of camel's-hump braces, although they are of disparate height. Here the queen posts are joined to both front and back purlins with *zhaqian* tie beams joining through the camel's-hump bearing blocks.

As suggested by the above, multiple groups of builders may have been working in this area; nevertheless, the similarity in the overall building style is quite remarkable. The front-eaves column-top bracket sets at

FIG. 34. *Zishengsi*. 11th c.—modern additions. Gaoping Municipality, Shanxi Province. View from northwest. Photograph by author.

Longmensi are virtually the same on both interior and exterior as those found at Qingliansi and Kaihuasi. The major stylistic difference in the bracketing is the increased use of edged *huagong* and the additional *you'ang* on the corner bracket sets.

Within the style exemplified by the Daxiongbaodian of Kaihuasi, the Shijia Hall of Qingliansi, and Longmen's Daxiongbaodian, a local idiom is also present. The Main Hall of Zishengsi is also a three-by-three bay hall with exclusively column-top bracketing, and that bracketing resembles the bracketing in the Kaihuasi Daxiongbaodian even more closely than that of Qingliansi or Longmensi.

An Argument for Local Idiom: The Case of Zishengsi

Zishengsi is located in Dazhouzuan cun 大周纂村, Gaoping Municipality, just west of Dongzhou 東周⁵⁸ and about three kilometers (1.87 miles) directly north

of Dayang (Fig. 34). The village is located on a bluff, and earlier descriptions of the complex suggest that it may have originally been on the outskirts of town, but it would never have had the panoramic mountain views of Kaihuasi, Qingliansi, or Longmensi. A series of buildings all seem to have been part of the original ritual complex. On the southernmost end, across the road leading into town from the other buildings, there now stands a two-story structure. There follow a smaller building that may have been a *shanmen* gatehouse, a central three-by-three-bay Main Hall, and a Back Hall. Because the two-story building at the southern end is roughly on axis with the other major buildings of the complex—rather like the Dabeige at the southern end of Kaihuasi's ritual axis—it may have originally been part of the monastery (Fig. 35). The other three buildings are now hemmed in on both sides by a strip mall of “classical-revival” buildings, all facing outward for business. Information regarding this site is sparser than for the other three. A Qianlong-period (1736–1795)

FIG. 35. *Zishengsi tower at southern end of complex. No date. Photograph by author.*

FIG. 36. Zishengsi Main Hall. 11th c. Back façade. Photograph by author.

gazetteer documents a Zishengsi in Dayang Town that may have been founded in the Northern Qi. This Zishengsi had an imperial plaque dated to 1020. But, even during the eighteenth century, no more information was available.⁵⁹

Once inside the complex, one encounters a Main Hall of a type that, after having seen those at Kaihuasi, Qingliansi, and Longmensi, is now completely familiar (Fig. 36). This central hall is also three bays wide by three bays deep, with a hip-gable roof and exclusively column-top bracketing. The bracket arms “filling the heart” of the *huagong* are bevelled (Fig. 37). Furthermore, here too the *linggong* does not have a central block above it, and the bracket-arm ends extending up to support the eaves at the corners are edged, as in the other three halls. But extension of the architrave through the column top and extension of the *guazigong* across the corner—both characteristics present at Kaihuasi but absent at Qingliansi—are notably present in the Main Hall of Zishengsi. The corner *huagong* are uniquely rendered, with corner and sides all displaying

bevelled rather than chamfered finishing. Direct comparison of the corner bracket sets of the Song halls at Zishengsi and Kaihuasi displays this remarkable similarity in detail (Figs. 38 and 18)—note the cavity in the column top and column-top tie beam where the architrave would have originally continued through. One major difference here, the use of timber columns rather than stone, may rather reflect the low availability of stone in the villages on the plains than stylistic choice.

The north end of the complex is framed by a five-bay-wide back hall that has been dated to the Yuan dynasty by the style of the structure (Fig. 39). One can see that bracket sets extending outward to support the eaves in this building fill the intercolumnar positions and are placed on top of the columns. The central bay of the building is emphasized as a point of entry with a larger, fan-shaped intercolumnar bracket set. The descending cantilever tips of the eaves bracket sets do not have a straight, angled profile, but are instead curved, and have ends with a pronounced pentagonal cross-section (Fig. 40). This is a variation of the “lute-face”

FIG. 37. *Zishengsi Main Hall*. 11th c. Detail of column-top bracket set. Photograph by author.

FIG. 38. *Zishengsi Main Hall*. 11th c. Detail of corner bracket set. Photograph by author.

FIG. 39. *Zishengsi Back Hall*. 13th–14th c. (?). Front façade. Photograph by author.

FIG. 40. *Zishengsi Back Hall*. 13th–14th c. (?). Detail of column-top bracket set. Photograph by author.

FIG. 41. Longxingsi Entry Gatehouse. 10th c. with 18th c. modifications. Zhengding County, Hebei Province. Detail of front façade eaves bracketing, contrasting brackets of the 10th and 18th c. Photograph by author.

descending cantilever tip documented in the *Yingzao fashi*, one that was increasingly common in this area from the beginning of the twelfth century. Another divergence in the bracketing style of this later building concerns the *shuatou*. Instead of the descending cantilever-shaped *shuatou* used in all four of the earlier halls, here the *shuatou* are rendered as scaled serpents. Animal-shaped elements within the bracket sets contribute to its classification as a “Yuan-dynasty” (here, 1234–1368) structure.⁶⁰

The earliest date actually *on* any building in the complex is an inscription on the roof ridge of the Main Hall documenting a restoration in 1506: the major roof purlins were replaced. Significantly, what must have been a major restoration did not include updating the building to a more contemporary, or “modern” sixteenth-century style, even though it was possible, during a repair, to update a building stylistically so as to make it appear more in keeping with contemporary trends in ritual architecture. Instead, the building was restored to

a recognizably Song-dynasty condition. I am not suggesting that the patrons of Buddhist architecture in the Shangdang region engaged in an explicit act of historic preservation in restoring this hall. I am only suggesting that returning the hall to its original condition appears to have been a conscious choice. Similar choices were made elsewhere to preserve the traditional, if not ancient, appearance of earlier monumental timber buildings, even as the expanding temple complexes that enveloped them included buildings showing the latest stylistic trends in ritual architecture.

The opposite choice is evident in the Entry Gatehouse of Longxingsi, an imperially patronized Buddhist complex located in present-day Zhengding 正定, Hebei Province, just north of Shijiazhuang 石家莊 (Fig. 41). Originally constructed during a rebuilding of the site between 982 and 988, the Gatehouse was updated during a major restoration in 1780. One can clearly see the addition of smaller intercolumnar bracket sets—an eighteenth-century preference—between the large tenth-

century column-top clusters. This is a large building, 23.28 meters across the front façade, so the intercolumnar bracket sets may have been deemed a structural necessity to support ancient timbers along the wall plane.⁶¹ But these corbelled brackets do not extend outward and upward to support the eaves. Their structural function could have been accomplished with a vertical strut (*zhidou* 直料) hidden within the wall plane. More than structural necessity, the intercolumnar bracket sets show stylistic preference. A choice was made during this renovation: to transform the appearance of the building into a semblance of other eighteenth-century buildings, with their plethora of decorative intercolumnar bracket sets.⁶²

Conclusion

My initial research on extant Song-dynasty buildings in the southeastern quarter of Shanxi Province has demonstrated that the caretakers of monasteries and temple complexes in premodern China appreciated their ancient buildings as artifacts of a particular place and time. My research has also made it clear that the category of “Song dynasty” is insufficient to articulate the distinctions between buildings constructed within the “Song-dynasty” empire. In southeastern Shanxi it is possible to discover not only Song-dynasty buildings but also a distinct regional style, and within that style, a local idiom of ritual hall in the late eleventh and early twelfth centuries. Kaihuasi’s Daxiongbaodian, Qingliansi’s Shijia Hall, Longmensi’s Daxiongbaodian, and Zishengsi’s Main Hall have all been preserved in complexes that have undergone numerous repairs, restorations, and additions. Many of the buildings that make up the greater portion of these complexes are larger than these halls, and thus were probably more expensive to build than the Song halls were to restore. The preservation of these halls in an identifiably late eleventh-century style does not, therefore, appear to have resulted from diminished economic means. There must have been another motivation.

These buildings suggest that the patrons of the Buddhist monasteries discussed earlier did not conceive of themselves so much as subjects of the Song dynasty, but rather as people of the Shangdang region, with dynastic identity occurring only secondarily. They did not, therefore, feel any strong or swift impulse to emulate the shifts in the metropolitan style, nor were they compelled to do so by government regulation. Old buildings were not quickly replaced, but were instead preserved and maintained with their identifiably antique characteristics. These antique and fragile timber buildings are pal-

pable evidence of the continuous local religious community necessary to keep them standing, and are thus evidence of the economic vitality of the region as a whole. They are more than just Song-dynasty buildings; they are markers of self-awareness and self-confidence in a specific time and place in medieval North China. Through continued documentation of the variety in monumental timber-frame buildings from the tenth, eleventh, and twelfth centuries, we can begin to discern the complexity of regional architectural variation that existed underneath Song dynastic control.

Notes

1. An early version of this paper was delivered at the New England East Asian Art History Seminar at Harvard University, and I am most grateful for the comments and criticism given at that seminar. I also thank Isabelle Charleux and two anonymous readers for *Archives of Asian Art* for their many helpful comments.

2. *Yijing, Xici xia*, in *Shisanjing zhushu*, vol. 1, ed. Ruan Yuan (1764–1849) (Taipei: Yiwen yinshuguan, 2001), 8/7b. This is also quoted in Li Jie (d. 1110), *Yingzao fashi* 營造法式 (Beijing: Zhongguo shudian, 1103/1989), 1/1b, which would likely have been available to the compilers of the *Xuanhe huapu*.

3. *Shujing, Zhoushu, Taishi shang*, in *Shisanjing zhushu*, vol. 1, ed. Ruan Yuan (1764–1849) (Taipei: Yiwen yinshuguan, 2001), 11/4b.

4. “*Xuanhe huapu xumu*,” in Cai You (1077–1126) et al., comps., *Xuanhe huapu* (preface 1120), *Congshu jicheng chubian* edition, ed. Wang Yunwu et al. (Shanghai: Shangwu yinshuguan, 1936), vol. 1, pp. 5–6. Cited also in Liu Heping, “The Water Mill, and Northern Song Imperial Patronage of Art, Commerce, and Science,” *The Art Bulletin*, vol. 84, no. 4 (December 2002), p. 567. I am grateful to Amy McNair for sharing a copy of her draft translation of the “xumu,” which has strongly influenced my rendering of this passage.

5. Liang Sicheng, *A Pictorial History of Chinese Architecture*, ed. Wilma Fairbank (Cambridge, MA: MIT Press, 1984) is a notable exception. Originally written in the 1940s, the three periods used by Liang for timber-frame architecture (Vigor, Elegance, and Rigidity) were developed for a Western audience based on nineteenth- and early twentieth-century Western paradigms of architectural history that he had learned as a student in the architecture program at the University of Pennsylvania 1924–1927. For more on this issue, see Cary Liu, “Between the Titans: Constructions of Modernity and Tradition at the Dawn of Chinese Architectural History,” in *Bridges to Heaven: Essays on East Asian Art in Honor of Professor Wen C. Fong* (Princeton: P. Y. and Kinmay W. Tang Center for East Asian Art and the Department of Art and Archaeol-

ogy, Princeton University, in association with Princeton University Press, forthcoming).

6. Stylistic distinctions between northern and southern architecture of China's tenth century have been discussed by Nancy Steinhardt in "Chinese Architecture, 963–966," *Orientations* (February 1995), pp. 46–52. Differentiating regional styles in other areas and mediums has spurred increasing interest. See Jerome Silbergeld, "Beyond Suzhou: Region and Memory in the Gardens of Sichuan," *The Art Bulletin*, vol. 86, no. 2 (June 2004), pp. 207–27, for a discussion of the regional tradition of vernacular and garden architecture in Sichuan; and Jennifer Purtle, "Foundations of a Min Regional Visual Tradition, Visuality, and Identity: Fuchien Painting of the Sung and Yüan Dynasties," in *Quyu yu wangluo: jin qian nian lai Zhongguo meishushi yanjiu guoji xueshu yantaohui lunwenji*, ed. Quyu yu wangluo guoji xueshu yantaohui lun wenji bianji weiyuanhui (Taipei: Guoli Taiwan daxue yishushi yanjiusuo, 2001), pp. 91–139, for the impact of regional identities on the history of Chinese painting.

7. Gudai jianzhu xiuzheng suo, "Jin dongnan Lu'an, Pingshun, Gaoping he Jincheng sixian de gujianzhu," *Wenwu cankao ziliao* 1958.3, p. 26. More recently, Yang Zirong 楊子榮 charted forty-four Song-period buildings and thirty-seven Jin-period buildings in his "Lun Shanxi Yuandai yiqian mujie jianzhu de baohu," *Wenwu jikan* 1994.1, p. 62.

8. Yue Shi (930–1007), *Taiping huanyu ji* (Taipei: Wenhai chubanshe, 1963), vol. 1, p. 355.

9. Sima Tan (180?–110 BCE) and Sima Qian (145?–86 BCE), *Shiji* (Beijing: Zhonghua shuju, 1959; reprint, 1994, 5/212–214). See also Nienhauser et al., trans., *The Grand Scribe's Records*, vol. 1, p. 120.

10. Yan Gengwang, *Tangdai jiaotong tukao* (Taipei: Academia Sinica Institute of History and Philology, 1986), pp. 1589–1625.

11. Smaller routes through mountain passes linked Shangdang with the Fen River valley to the west and with the plains east of the Taihang range; see Yan Gengwang, *Tangdai jiaotong tukao*, pp. 1411–19.

12. At the beginning of the Song Luzhou 潞州 was the administrative capital of Shangdang subprefecture (Shangdangjun). Luzhou was elevated to a commandery (*jun*) in 1101 and to Longdefu in 1104; see Tuotuo, *Songshi* (Taipei: Dingwen shuju, 1978), 86/2131–32. The later designation occurs in Tan Qixiang, *Zhongguo lishi dituji* (Beijing: Zhongguo ditu chubanshe, 1989), vol. 6, pl. 16–17.

13. Song Taizong took approximately this route from the Song capital at Bianliang to Taiyuan; see Li Tao 李燾 (1114–1183), *Xu Zizhi tongjian changbian* (Beijing: Zhonghua shuju, 1980) 20/448.

14. Pilgrimage routes from the plains east of the Taihang to Wutai Shan were well established by the ninth century. The Japanese monk Ennin describes travelling to Wutai in 840 CE. He went northwest through Zhenzhou (then named Hengzhou 恆州), and then northward along

a mountain path dotted with monasteries equipped to accommodate large numbers of pilgrims; see Yan Gengwang, *Tangdai jiaotong tukao*, pp. 1507–11, and Edwin O. Reischauer, trans., *Ennin's Diary—The Record of a Pilgrimage to China in Search of the Law* (New York: Ronald Press Company, 1955), pp. 209–14.

15. Chai Zejun, *Shanxi siguan bihua* (Beijing: Wenwu chubanshe, 1997), pp. 19 and 39 nn. 11, 12; Gudai jianzhu xiuzheng suo, "Jin dongnan Lu'an, Pingshun, Gaoping, he Jincheng sixian de gujianzhu," *Wenwu* 1958.3, p. 42. The term *lanruo* is short for *alanruo* 阿蘭若, a transcription of the Sanskrit *aranya*, meaning mountain forest or wilderness, and refers in this context to the monastic complex; see *Foguang dacidian*, vol. 4, p. 3697. *Qingliang* ("Pure and Cool") may refer to the abode of the bodhisattva Mañjuśrī described in the *Avatamsaka Sūtra* (C: Huayan jing), and was a standard epithet for Mt. Wutai farther north in Shanxi; see Robert M. Gimello, "Chang Shang-ying on Wu-t'ai Shan," in *Pilgrims and Sacred Sites in China*, ed. Susan Naquin and Yü Chün-fang (Berkeley, CA: University of California Press, 1992), p. 100.

16. Stone, being readily available in the Taihang Mountains, may well have been less costly there than timber. Stone also allowed donors of individual columns to have their names permanently carved into "their" column surface for karmic merit and public display. Deforestation, particularly from the fourteenth century onward, may also have contributed to the widespread use of stone for structural elements of the temple buildings in this area; see Richard Lewis Edmunds, *Patterns of China's Lost Harmony: a survey of the country's environmental degradation and protection* (London and New York: Routledge, 1994), pp. 32–34. Thanks to Isabella Charleux for calling this reference to my attention.

17. Chai, *Shanxi siguan bihua*, p. 19.

18. Chai, *Shanxi siguan bihua*, pp. 19, 39 n. 13. Here Chai speculates that placing towering structures (bell tower, image tower, or pagoda) in front of the primary Image Hall often preserved or echoed the original Period of Disunion or Sui-Tang plan of the monastery.

19. Gudai jianzhu xiuzheng suo, "Jin dongnan," p. 26.

20. Chai, *Shanxi siguan bihua*, pp. 19, 39 n. 14. Inscriptions transcribed here come from the two stone columns that frame the front façade. They list the names of individual donors, their wives, sons, daughters-in-law, and grandsons, and of their villages. Stone columns of the style found on the front façade also support the back central bay. The dates inscribed on all four stone columns correspond to 10 February 1073.

21. Chai, *Shanxi siguan bihua*, p. 19.

22. *Kaihuasi Songdai bihua* (Beijing: Wenwu chubanshe, 1983), p. 1.

23. Chai, *Shanxi siguan bihua*, p. 19, which gives no information as to the precise dates of these buildings or the source for the names assigned them.

24. Theft is a significant problem at the more remote

of Shanxi's historic buildings. When I visited this site in 1997, villagers informed me that dramatic glazed tiles had previously adorned the roof ridge. But with no caretaker in residence, the tiles were stolen for sale on the black market.

25. Chai, *Shanxi siguan bihua*, p. 19.

26. The name of this hall may also embody a dedication to the late Tang–Five Dynasties monk Guiyu, whose imperially bestowed title was Yanfa Dashi (862–936); see *Foguang dacidian*, vol. 7, p. 6573.

27. Chai, *Shanxi siguan bihua*, p. 19.

28. Chai, “Shanxi jichu zhongyao gujianzhu shili,” in *Chai Zejun gujianzhu wenji* (Beijing: Wenwu chubanshe, 1999), p. 164. The plan on p. 165 of this article shows the building as 11.40 meters from column center to column center. The plan of the complex published in Zhang Yuhuan, “Taihang gujianzhu,” in his *Gujianzhu kancha yu tanjiu* (Jiangsu: Guji chubanshe, 1988), p. 142, depicts the building as longer from front to back than across the front façade. The drawing in Shanxisheng Jin dongnan zhuan yuan gongshu, *Shangdang gujianzhu* (Changzhi and Beijing, 1963), pl. 39, shows this hall as 12 meters deep from column center to column center. According to my measurement, the exterior walls of the building were all approximately 12.5 meters long.

29. According to Chai Zejun, the painted decoration of the interior column-top bracket arms is very similar to the patterns found in the Northern Song-period building manual *Yingzao fashi*; see Chai, “Shanxi jichu zhongyao gujianzhu shili,” p. 165. Although not precisely the same, the peony patterns visible in Figure 12 are similar to examples preserved in the modern editions of the building manual; see Li Jie (d. 1110), *Yingzao fashi* (originally published 1103; Beijing: Zhongguo shudian, 1989), 33/2b.

30. In the version of the *Yingzao fashi* we have today, this term is written *pupai fang* 普拍枋, which was probably the result of a textual transmission error. Modern scholars use either term, depending on whether they want to be true to the letter or the spirit of the original source.

31. Tracy Miller, *The Divine Nature of Power: Chinese Ritual Architecture at the Sacred Site of Jinci* (Cambridge, MA: Harvard University Asia Center, 2007), pp. 112–22.

32. Qi Yingtao, “Dui Shaolinsi Chuzu'an dadian de chubu fenxi,” in *Zhongguo jianzhushi lunwen xuanji*, vol. 1 (Taipei: Mingwen shuju, 1984), pp. 273–83.

33. Li Jie, *Yingzao fashi*, 4/4b–5a.

34. Li Jie, *Yingzao fashi*, 4/8b–9b.

35. Li Jie, *Yingzao fashi*, 4/11a.

36. Pan Guxi 潘谷西, “Yingzao fashi chutan (1),” *Journal of the Nanjing Institute of Technology* 1980.4, pp. 41–42. For more on regional architectural traditions in the southeast, particularly in Fujian, see also Fu Xinian, “Fujian de jizuo Songdai jianzhu ji qi yu Riben Lianchang ‘Dafoyang’ jianzhu de guanxi,” *Jianzhu xuebao* 1981.4, pp. 68–77.

37. Eleventh-century statesmen such as Ouyang Xiu

were aware of tenth-century decisions to bring in southeast architects for imperially sponsored building projects in the capital, in particular the Kaibaosi pagoda 開寶寺塔 of 989 CE; see Ouyang Xiu (1007–1072), *Guitianlu*, in *Quan Song biji*, 1, vol. 5, ed. Zhu Yi'an et al. (Zhengzhou: Daxiang chubanshe, 2003), p. 237. For more on the possible political reasons for such architectural decisions, see Tracy Miller, “Something Old, Something New, Something Borrowed: Regional Style in China's 10th Century Timber-frame Architecture,” in *The Five Dynasties and Ten Kingdoms*, ed. Peter Lorge (under review by Chinese University Press). By the late eleventh century the regions of Wu (the vicinity of modern Jiangsu Province) and Shu (the vicinity of modern Sichuan Province) had become known for their skilled builders; see Su Shi (1037–1101), “Lingbi Zhangshi tingyuan ji,” in *Quan Song wen*, vol. 90, ed. Zeng Zaozhuang et al. (Shanghai: Shanghai cishu chubanshe; Hefei: Anhui jiaoyu chubanshe, 2006), pp. 408–9.

38. Lin Shimin, “Baoguo,” *Wenwu* 1980.2, p. 90.

39. This is also written with the characters 峽石山.

40. The Qianlong-period *Fengtai xianzhi* does not differentiate the upper and lower monasteries, but traces the entire Qingliansi complex back to the sixth-century monk Huiyuan; see Lin Li (Qing), *Qianlong Fengtai xianzhi* (Nanjing: Fenghuang chubanshe, 2005), *juan* 12, pp. 5a–b. This dating is consistent with a bell inscription: “峽石山福嚴禪院鐘識 Xiashishan Fuyan chanyuan zhongzhi,” in Hu Pinzhi, *Shanyou shike congbian*, 20/22b–23a. *Fuyan* is likely an abbreviation for *Fudezhuan* 福德莊嚴, a concept discussed in the *Mahāparinirvāṇa Sūtra*; see *Foguang dacidian*, p. 5858.

41. Gao Shoutian, “Shanxi Jincheng Qingliansi suxiang,” *Wenwu* 1963.10, p. 7.

42. Gudai xinzhengsu, “Jin dongnan Lu'an, Pingshun, Gaoping he Jincheng sixian de gujianzhu (xu),” *Wenwu* 1958.4, pp. 44–45. A Jin-dynasty stele inscription documenting an 1164 repair of the building mentions the Song Chongning-period (1102–1106) restoration; see “Xiashi Shan Fuyanchanyuan chongxiu fodian zhi ji,” in Hu Pinzhi, *Shanyou shike congbian*, 20/24a–24b.

43. Zhongguo fojiao wenhua yanjiusuo and Shanxi-sheng wenwu ju, *Shanxi fojiao caisu* (Beijing: Zhongguo Fojiao xiehui; Hong Kong: Xianggang baolian chansi, 1991), p. 319. On the published plan of this hall the sides show rounded columns, which suggests that they are wooden. This measurement seems a bit large and I suspect that the large dimensions apply to the building platform rather than to the hall itself.

44. Li Jie, *Yingzao fashi*, 12/2a.

45. Feng Dongqing, “Longmensi baohu guihua,” *Gujian yuanlin jishu* 42.1 (1994), p. 32.

46. The winding approach to this mountain monastery, relating the buildings topographically to the site, would have been much more apparent when the Diamond Hall and original *shanmen* were in place; see Guo Daiheng

and Xu Bo'an, "Pingshun Longmensi," in *Zhongguo jianzhushi lunwen xuanji*, vol. 1 (Taipei: Mingwen shuju, 1984), pp. 284–85.

47. *Shanxi tongzhi*, ed. Chu Dawen et al., 169/19b, and Guo and Xu, "Pingshun Longmensi," p. 291. Feng Dongqing, "Longmensi baohu guihua," p. 32, understands *xiu* to mean "repaired," and concludes that the monastery was already in place prior to the Northern Qi.

48. Feng Dongqing, "Longmensi baohu guihua," p. 32, and *Zhongguo mingsheng cidian*, p. 177. Chu Dawen, 169/19b, mentions the imperial plaque of 976–983, but does not provide information on the name at that time.

49. Guo and Xu, "Pingshun Longmensi," p. 291. The term "residential quarters" here is *liaoshe* 寮舍, and Guo and Xu speculate that this refers to the buildings found in the east and west courtyards.

50. Feng Dongqing, "Longmensi baohu guihua," p. 32.

51. Guo Daiheng and Xu Bo'an, pp. 285, 291.

52. Ma Jikuan, "Pingshun Longmensi Daxiongbaodian kancha baogao," *Wenwu jikan* 1992.4, p. 22, describes this hall as being 8.96 meters on both front and side façades. The drawing published in Chai Zejun, "Shanxi jichu zhongyao gujianzhu shili," p. 156, gives a side-façade (on column center) measurement of 8.84 meters. On p. 155 Chai, contradicting his drawing, states that the hall is 8.96 meters square. It should be noted that "square plans" are a characteristic feature of early buildings in this area, which prompts modern scholars to describe their plans as square; see Gudai jianzhu xiuzhengsu, "Jin dongnan," p. 27. Guo Daiheng and Xu Bo'an give 10.4 meters across the front façade and 9.9 meters along the side. The discrepancies are partially attributable to the difference between measurements from column center and measurements of total width of the building. Notwithstanding that consideration, it is clear from the measured drawings that the building is not perfectly square.

53. Ma Jikuan, "Pingshun Longmensi," p. 28, states that the original front façade windows would have been 2.42 meters wide and 2.04 meters high. He does not mention the side windows, but they appear to be the same size as those in the front façade, and so are likely to date from the same rebuilding.

54. *Ibid.*, p. 24.

55. *Ibid.*, p. 26.

56. *Ibid.*, p. 25, refers to this treatment as "fish-spine" (*yujǐ* 魚脊).

57. For example, in the corner sets of the Thousand Buddhas Hall at Chongqingsi in Zhangzi, approximately 32 km (20 miles) northwest of Gaoping.

58. *Zhongguo mingsheng cidian*, pp. 173–74, and Gudai jianzhu xiuzhengsu, "Jin dongnan," pp. 37–38. These two sources are somewhat inconsistent in their descriptions of halls other than those of Song-dynasty date. For Zishengsi's Main Hall both record a 1506 repair. My identification of the site is based on local directions and on a plaque placed in front of the Main Hall by the Shanxi

survey team of the 1950s–1960s, which identifies it as Zishengsi.

59. According to the *Qianlong Fengtai xianzhi*, 12/6a–6b, a complex named Zishengsi in approximately this location had been given an imperial plaque in 1020, and may have been originally established during the Northern Qi. This source does not discuss individual buildings within the complex.

60. *Zhongguo mingsheng cidian*, p. 174. According to Zhang Yuhuan, animal-shaped *shuatou* begin to appear in this area toward the end of the Yuan, and become commonplace during the Ming dynasty. More structural changes in building practices appeared as well, especially the use of large timbers to support the roof frame; see Zhang Yuhuan, "Shanxi Yuandai diantang de damu jie-gou," in *Zhongguo jianzhushi lunwen xuanji*, vol. 1 (Taipei: Mingwen shuju, 1984), pp. 143–86. In Zishengsi's Back Hall structural change is apparent in the increased thickness of the column-top tie beam.

61. Hebei sheng Zhengding xian wenwu baoguansuo, Zhang Xiusheng et al., eds., *Zhengding Longxingsi* (Beijing: Wenwu chubanshe, 2000), pp. 3–5, and Puay-peng Ho 何培斌, "Monumental Innovation: The Architecture of Longxingsi," paper presented at the First International Conference on Chinese Architectural History, Fragrant Hill, Beijing, 1998. Ho indicates that these bracket sets served a structural purpose in bolstering the dilapidated timbers of the gatehouse. But as we have seen with the Shangdang buildings that do not use intercolumnar bracket sets, the use of such bracketing here must have served the additional purpose of modifying the appearance of the hall.

62. According to Qi Yingtao, the number of intercolumnar bracket sets increased from the end of the Yuan dynasty, when one or two intercolumnar sets continued to be employed, to four–six intercolumnar sets in the Ming dynasty and up to eight in the Qing dynasty; see his "Zenyang jianding gu jianzhu," in *Zhongguo jianzhushi lunwen xuanji*, vol. 1 (Taipei: Mingwen shuju, 1984), p. 40.

Glossary of Chinese Names

alanruo 阿蘭若

Baoguosi 保國寺

Bianliang 汴梁

caofu 草苾

cejiao 側腳

Chan Master Dayu 大愚禪師

Changping zhizhan 長平之戰

Changzhi 長治

Chuzu'an 初祖庵

Daban niepanjing yiji 大般涅槃經義記

Dabeige 大悲閣

Dan River 丹河

Daxiongbaodian (Mahāvīra) of Kaihuasi 開化寺大雄寶殿
 Daxiongbaodian of Longmensi 龍門寺大雄寶殿
 Dazhouzuan cun 大周纂村
 Dongzhou 東周
 Fahua 法華
 fengsu 風俗
 Fudezhuangyan 福德莊嚴
 Fuyan chanyuan 福嚴禪院
 Gao Yang 高洋
 Gaoping Municipality 高平市
 Guanyinge 觀音閣
 guazigong 瓜子拱
 Guiyu 歸嶼
 Guo Fa 郭發
 Han 韓
 Hengzhou 恆州
 huagong 華拱
 Huayanjing 華嚴經
 Huiyuan 慧遠
 Jiangyitang 講肄堂
 jiaoshen 角神
 Jin Dongnan 晉東南
 Jincheng 晉城
 Jinci 晉祠
 Jingangdian 金鋼殿
 Jinguo 晉國
 juansha 卷殺
 jun 軍
 Kaibaosi pagoda 開寶寺塔
 Kaifeng 開封
 Kaihua chanlin 開化禪林
 Kezuotang 客座堂
 lan'e 闌額
 liaoshe 寮舍
 Licheng 黎城
 linggong 令拱
 Longdefu 隆德府
 Longmen Mountain 龍門山
 Longmenshan Huiriyuan 龍門山惠日院
 Luzhou 潞州
 mangong 慢拱
 mazhaxing 螞蚱形
 Nanchansi 南禪寺
 Niangziguan 娘子關
 Ningbo 寧波
 pingzuo 平座
 pubofang 普柏枋
 pupaifang 普柏枋
 puzuo 鋪作
 Qi Yingtao 祁英濤
 Qianfoge 千佛閣
 Qin River 沁水
 Qingliang lanruo 清涼蘭若

Qingliansi 青連寺
 Qingliansi's Shijia (Śākyamuni) Hall 青連寺釋迦殿
 qinmian 琴面
 Randengfodian 然燈佛殿
 rufu 乳苾
 Shangdang 上黨
 Shangdangjun 上黨郡
 shanmen 山門
 Shaolinsi 少林寺
 Sheli Mountain 舍利山
 shengqi 升起
 Shengmudian 聖母殿
 Shichengxiang 石城鄉
 Shijia Hall 釋迦殿
 Shijiazhuang 石家莊
 shuatou 耍頭
 Songshan 嵩山
 Taihang Mountains 太行山
 Taihang Range 太行山
 Taiyuan 太原
 Tianwangdian 天王殿
 timu 替木
 touxin 偷心
 Wei 魏
 Weimojingshi 維摩淨室
 Wuling Mountains 烏嶺山
 Wutaishan 五台山
 Xiashishan 硤石山，峽石山
 Xingtangxian 行唐縣
 xiu 修
 Xiyang 昔陽
 Yanbinshe 延賓舍
 Yanfa Dashi 演法大師
 Yanfadian 演法殿
 Yang Zirong 楊子榮
 Yingzao fashi 營造法式
 Yongji Canal 永濟渠
 you'ang 由昂
 Yuantoucun 源頭村
 Yuyao 餘姚
 Zezhou 澤州
 Zhaixintang 齋心堂
 Zhangzi 長子
 Zhao 趙
 Zhao Kuangyi 趙匡義
 Zhao Kuangyin 趙匡胤
 zhaqian 筈牽
 Zhending 真定
 Zhengding 正定
 Zhenzhou 鎮州
 zhidou 直科
 Zhongtiao Mountains 中條山
 Zishengsi 資聖寺

Glossary

architrave *lan'e* 闌額 tall tie beam that extends through the tops of columns
back hall *houdian* 後殿 axial hall at the back of a complex
batter *cejiao* 側腳 incline of a column, upward and toward the center of a building
bevelled *moxie* 抹斜
bevelled bracket arm *moxiegong* 抹斜拱
bevelled linggong *moxie linggong* 抹斜令拱
boot wedge *xuexie* 靴楔 wedge-shaped timber that is placed between an interior *huagong* and the tail of a true descending cantilever
bracket set *puzuo* 鋪作 “layered bracket set”; Song term for a combination of bracket arms supporting the roof system; *dougong* (料拱) in Qing parlance
bracket arm *gong* 拱
central block *qixindou* 齊心抖 small block located in the center of a bracket arm
chamfering *juansha* 卷殺 technique of rendering a curved appearance to a timber by planing off the corner with multiple straight edges; used for columns as well as the ends of moon-beams and curved portions of bracket arms
cicada back *chanbei* 蟬背 chevron pattern, here found on the bottom of a descending cantilever where it enters into the bracket set
collar beam *pingliang* 平樑
column-top tie beam *pubofang* 普柏枋 (also *pupaifang* 普拍枋) tie beam extending between the column tops and the cap block
corner cantilever *you'ang* 由昂 “facilitating cantilever”; uppermost cantilever on a corner column-top bracket set
descending cantilever *xia'ang* 下昂
descending cantilever-shaped shuatou *xia'angxing shuatou* 下昂形耍頭
double-panel doors *shuangshanbanmen* 雙扇版門
eaves beam *liaoyanfang* 撩檐枋 “eaves-raising beam”; rectangular timber located between outermost exterior *linggong* (above *shuatou*) and eaves rafters
eaves purlin *liaofengtuan* 撩風搏 (also *liaoyantuan* 撩檐搏) “eaves-raising purlin”; lowermost purlin, located between *timu* and eaves rafters
eaves rafter *yanchuan* 檐椽
filled-heart construction *jixinzao* 計心造 bracketing construction by which perpendicular bracket arms (*huagong*) hold both a parallel bracket arm (usually *guazigong* or *linggong*) and the next level of perpendicular extension (either another *huagong* or a descending cantilever)
five puzuo *wupuzuo* 五鋪作 “five-layer bracket set”; a bracket cluster of bearing block + two outward extensions + *shuatou* + intermediate timber or eaves purlin or eaves beam
flying eaves *feiyan* 飛檐 a second set of eaves rafters

that extend out at a slight upward angle from the eaves rafters; the tips of these rafters (the amount that extends beyond the eaves rafters) are called *feizi* 飛子
four-rafter beam facing a rufu tie beam with three columns in cross section *sichuanfu duiyufu yongsanzhu* 四椽茯對乳茯用三柱
guazigong *guazigong* 瓜子拱 short bracket arm used away from the wall plane and underneath a *mangong* or, in the Sage Mother Hall, a *luohanfang*
heart *xin* 心 a bracket set's center line running perpendicular to the building plane, i.e., the perpendicular extension of the *huagong*; if the separate block joined onto the end of the *huagong* contains a bracket arm parallel to the building plane (such as a *guazigong* or *mangong*), then the combination is referred to as a “filled-heart construction” (*jixin* or *jixinzao* 計心造); if a second step of *huagong* is joined into this position, it is referred to as a “stolen-heart construction” (*touxin* or *touxinzao* 偷心造)
hip rafter *jiaoliang* 角梁
huagong *huagong* 華拱 “petal bracket arm”; bracket arm that is placed perpendicular to the building plane
huatouzi *huatouzi* 華頭子 “bud” timber that supports a structural descending cantilever at the point of intersection with the bracket set; in the Sage Mother Hall this is the back end of the first step of interior *huagong*
intermediate timber *timu* 替木 timber, rectangular in section, located between the *linggong* and the purlin; on the Sage Mother Hall this timber runs the length of the eaves purlin, a variation sometimes called “*tongti* 通替”
inverted-V brace *chashou* 叉手 two-pronged strut that supports either side of the roof pole or *linggong* supporting the roof pole
king post *zhuruzhu* 朱儒柱
large bearing block *ludou* 櫨料 largest bearing block, usually found crowning columns and as the support for the bracket cluster at the column top; also occurs between intercolumns
linggong *linggong* 令拱 “lead bracket arm”; regular bracket arm, which usually supports the intermediate timber and purlin on eaves and in interiors
locust-head arm *mazhagong* 螞蚱拱 short timber finished in the locust-head style
locust-head style *mazhaxing* 螞蚱形 style of finish for the end of a timber commonly used for *shuatou*
lower interior purlin *xiapingtuan* 下平搏
ludou see large bearing block
luohanfang *luohanfang* 羅漢枋 “arhat beam”; beam running parallel to the building frame and supported by the *guazigong* and (usually) *mangong* either inside the building or under the eaves
lute face *qinmian* 琴面 descending cantilever tip that has a curved profile and is convex or pentagonal in section
lute-face/split-bamboo *qinmian/pizhu* 琴面/批竹 term

- coined by Liang Sicheng and the authors of the *Yingzao fashi zhushi* to describe the not-quite lute-face, not-quite split-bamboo articulation of the Sage Mother Hall's descending cantilever tip; the form was widely used in the Song-period architecture of southern Shanxi
- mandarin ducks bracket arm** *yuanyang jiaoshougong* 鴛鴦交首栱 elongated timber, usually in the *linggong* position supporting the eaves purlin, which extends from the façade *huagong* across the corner of the building, and is articulated to appear like two bracket arms that cross over and share a single arm-end block where they meet
- mangong** *mangong* 慢栱 “extended bracket arm”; the longest bracket arm, supported by the *nidaogong* on the wall plane (*nidao mangong*) or the *guazigong* away from the wall plane (*guazi mangong*)
- nidao mangong** *nidao mangong* 泥道慢栱 “plaster-channel extended bracket arm”; extended bracket arm along the wall plane that, typically, is supported by the *nidaogong* and supports the column top beams
- nidaogong** *nidaogong* 泥道栱 “plaster channel bracket arm”; bracket arm joined into the capital block along the wall plane
- pingzuo** *pingzuo* 平座 platform or balcony that extends out over the wall plane and is supported by bracket sets
- prism-lattice window** *pozi lingchuang* 破子櫺窗 straight lattice whose slats are triangular in cross section
- purlin** *tuan* 搏 horizontal timbers parallel to the roof pole which support the principal rafters; the depth of a building is usually measured by the number of rafter-lengths necessary to cover the building from eaves column to eaves column, which is equivalent to the spaces between the purlins in cross section.
- queen post** *shuzhu* 蜀柱
- rafter-supporting beam** *yacaofang* 厭槽枋 column-top beam that directly abuts the rafters
- residential quarters** *liaoshe* 寮舍
- rise** *shengqi* 生起 increase in column height from the central bay to corner columns
- ridge pole** *jituan* 脊樑
- rounding** see chamfering
- rufu tie beam** *rufu* 乳栿 “breast tie beam”; tie beam two rafters in length that spans between eaves bracketing and interior columns; according to Liang Sicheng and his research team, this timber usually spans from eaves bracket sets to the body of the column, but there are cases of it spanning from eaves bracket sets to interior column top bracket sets
- separate block** *sandou* 散料 small block placed between beams
- seven puzuo** *qipuzuo* 七鋪作 “seven-layer bracket set”; a bracket cluster comprising bearing block + four outward extensions + *shuatou* + intermediate timber/ eaves purlin or eaves beam
- shadow bracket arm** *yinggong* 影栱 bracket arm that is used along the wall plane; also called wall-supporting bracket arm *fubigong* 扶壁栱
- shuatou** *shuatou* 耍頭 “trifling-tip”; bracket-set timber that extends perpendicular to the wall plane and is joined through the *linggong*; frequently rendered in the locust-head shape, in the Shangdang region this element is often designed to look like a second layer of descending cantilever
- side brace** *heta* 合踏 strut placed on top of a *rufu* tie beam or a collar beam, which usually supports a king post or queen post
- side strut** *tuojiao* 托腳 strut that extends from tie beam to purlin; these are called inverted-V braces when they support the ridge pole
- six-rafter beam** *liuchuanfu* 六椽栿 axial tie beam that extends six rafters
- split-bamboo** *pizhu* 批竹 descending cantilever-tip, ending in the shape of a simple bevelled edge with a squared tip, common on Tang, Liao, and Song buildings but gradually going out of fashion beginning in the 11th c.
- split-bamboo style** *shuatou pizhuxing shuatou* 批竹形耍頭 *shuatou* finished in the split-bamboo style
- stolen-heart construction** *touxinzhao* 偷心造 bracketing construction by which perpendicular bracket arms (*huagong*) hold only the next level of perpendicular extension (either another *huagong* or a descending cantilever) without a crossing bracket arm (such as a *guazigong*); contrasts with “filled-heart”
- straight-lattice window** *zhilingchuan* 直櫺窗 window with straight slat latticework
- upper interior purlin** *shangpingtuan* 上平樑
- upturned basin** *fupen* 覆盆 term used for a rounded form similar to the look of an upturned shallow basin; can be carved (雕花覆盆) or plain (素覆盆); mostly used for column bases, but also applied to column tops (or other architectural elements) of this shape; this treatment was common before the Yuan dynasty
- vertical strut** *zhidou* 直料 post or strut, crowned by a small bearing block, usually found in intercolumnar position of Tang (or Liao) architecture supporting an eaves bracket set; also present in the Ten Thousand Buddhas Hall of Zhenguosi
- wall-supporting bracket arm** *fubigong* 扶壁栱 bracket arm that is used along the wall plane; also called “shadow bracket arm” *yinggong* (影栱)
- wing-shaped bracket arm** *yixinggong* 翼形栱
- yatiao** *yatiao* 壓跳 “wedge step”; intermediary timber placed horizontally between the upper interior *huagong* and the axial tie beam
- zhaqian** *zhaqian* 筓牽 tie beam that spans the length of one rafter