

## Six Features of Three Kingdoms Period Architecture

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Korea's three oldest wooden buildings are Buddha halls at the monasteries Buseoksa, Sudeoksa, and Bongjeongsa that date to the 13<sup>th</sup> or 14<sup>th</sup> century. To understand earlier buildings, we turn to remains in other media. Many are stone, some of the oldest, often referred to as dolmen, are megalithic structures consisting of two or more upright stones. In the Three Kingdoms period, our subject today, above-ground and even many underground building remains also are stone: the observatory in Gyeongju (Cheomseongdae) first built during the reign of Queen Sondok (632-647), mountain-castle walls, subterranean tombs, and mounds above them.

For supporting evidence of stone construction and possible information about all other architecture one often turns to tombs as well as murals in tombs, particularly from Goguryeo. This line-drawing of a fortification painted on the wall of the Yaksuri tomb in North Korea, for instance, can be viewed as an illustration of a mountain-castle. Or, it might be viewed as evidence of the reliance of Koguryo architecture on China: the four-sided walled city with gates at the cardinal directions and corner towers and the suggestion of orthogonal lines, presumably thoroughfares, joining gate to gate at opposite walls. There are also a few miniature facsimiles of Three Kingdoms buildings. From a bronze and a gilt-bronze object in the Buyeo and Gamseong Museums, for example, we have specific information about Buddhist roof types and bracket sets. Better than paintings or models are excavation sites. Finally, there are a few reliable written records. I don't need to state that the field of early Korean architecture is still at a germinal stage.

To enhance the study of early Korean architecture, particularly the early wooden buildings, one has logically turned to China and Japan. Reconstructions of Korean monasteries usually rely on Chinese and Japanese Buddhist architecture. I'm sure some of you recognize these buildings drawn into theoretical reconstructions of Korean monasteries in Buyeo, because they stand in Japan. The other reason one turns to Japan, however, is because the 22 oldest wooden buildings in East Asia are in Japan. Once we get to China there is a continuous history of several hundred wooden buildings from 782 until the time of Buseoksa's hall. Comparisons with China also bring also 67 years of excavation to the study of early Korean architecture. Even if in the end the vast repository of contemporary and earlier material from China does not advance our understanding of Korea's Three Kingdoms period, it has to be assessed, and there is a lot of it.

The standard literature about Three Kingdoms architecture is almost exclusively a discussion of monastery plans and facsimiles. Monasteries provide a satisfying study because each kingdom has a plan closely associated with it, and each, moreover, presents clear connections with China or Japan. There is no argument that a Goguryeo monastery had a prominent pagoda near the center with multiple Buddha halls around it, or that the plan predates the central four-sided pagoda with three Buddha halls constructed at the Asukadera in the Fujiwara capital in Japan in 588. The most recent evidence shows this plan in the Northern Wei Pingcheng capital, today Datong, that may or may not be earlier than the Goguryeo monasteries. It is also known that six of the seven Paekche monasteries had a plan that can be traced to the core of Empress Dowager Hu's most splendid monastery Yongningsi, built in the Northern Wei capital Luoyang in 516. The plan was implemented by Prince Shotoku at Shitennoji in 593, at Ikarugadera, predecessor to Horyuji, and at Tachibanadera in the Fujiwara capital, both built in the very first years of the 7<sup>th</sup> century, and continued at Yamadadera among other places. Both plans have roots in monastery plans in 3<sup>rd</sup> or 4<sup>th</sup> century desert monasteries of Xinjiang. As for Silla, we associate its monasteries with twin pagodas. Twin pagodas existed by the Sui Dynasty in China and at Yakushiji in the first part of the eighth century in the Heijo capital at Nara if not in earlier version of Yakushiji in the Fujiwara capital of the Asuka period.

What you have just heard summarizes knowledge of Three Kingdoms architecture in comparison until about the beginning of the 21<sup>st</sup> century. My goal today is to bring newer or heretofore ignored or not thoroughly understood material into the discussion, especially information that leads us to more nuanced, perhaps more expansive, and I hope more accurate understanding of Korea's early architecture. I have selected six features that are relevant to at least two of the kingdoms or for which Korea provides significant material that informs the understanding of Chinese or Japanese architecture. Each one has profound implications for construction in East Asia and in some cases beyond.

I start with a simple, structural type, the arrangement of brick layers in a tomb interior. We find this structure in the tomb of King Muryeong (462-523) of Baekje's tomb in Gongju. It is distinguished by layers of alternating horizontal and vertical bricks, with four rows in the horizontal layers. The horizontal layers of the vault are in rows of either three or four.

Baekje is located across the sea from Shandong. Using evidence from tombs of China's Southern Dynasties, including the famous one with illustrations of the Seven Worthies of the Bamboo Grove carved into its walls, it had been assumed that tomb architecture and artifacts flowed from the capital Jiankang, to Baekje. A tomb from the Wu Kingdom, excavated in Zhongxia Village, Shangfang, Jiangning, Nanjing, published in December of 2008, confirms a southeast Chinese source even earlier, 220-280, two-three centuries earlier than King Muryeong's tomb. But it's not that simple.

Here I juxtapose Muryeong's tomb with a tomb from Jiayuguan in Gansu province. The Jiayuguan tomb is contemporary with the Wu Kingdom, or slightly later, 4<sup>th</sup> century at the latest. I fully understand how dangerous it is to build scenarios for how forms might have been transmitted. I am proposing here, however, that the long-held belief of the transmission of art and ideas from the Nanjing region to Baekje should be re-examined. If Nanjing is the direct source of this structure for King Muryeong, Nanjing to Gansu, or Gansu to Nanjing, could have occurred before the tomb structure was used in Baekje. I also want to emphasize that transmission of architecture is not unilinear. Buddhist cave imagery tells us this. That Baekje borrowed from tomb construction in the Nanjing region, and that the structure might trace to the 3<sup>rd</sup> century are not an earth-shattering revelations, but the fact that contemporary tombs in Gansu and Jiangsu are so similar is more interesting because it leads us to consider a Han source for both of them. Han sources and Gansu bring Goguryeo into the discussion.

The comparison here (on the screen), ca. 400 in Jiuquan, near Jiayuguan, in Gansu, and in Ji'an, in Goguryeo, includes not just structure but imagery, and further, placement of that imagery--plan, ceiling types, hierarchic deity in the heavens, world of man, flowering tree, and detail of ethnic identity. A Han source for the simultaneous use of motifs in in Goguryeo and Sixteen States territory, both locations commanderies of the Han, is possible. Further, the tomb form and images are present in Pingcheng, capital of the Northern Wei dynasty in today's Datong. Transmission from Gansu to Pingcheng can be supported. In the mid-fifth century, the Northern Wei resettled tens of thousands of population from Gansu after their conquest of several of the Sixteen Kingdoms. Among the families, one who is fairly well known to art histories is the Song family, whose son Song Shaozu, is buried in this sarcophagus. He had been born in Dunhuang and by the time he died in 477, he was an official of Northern Wei in Pingcheng. No matter how this construction came to Baekje, it existed in Jiayuguan earlier. We also have seen architectural links between Luoyang, where the Northern Wei capital was moved from Pingcheng, and Baekje: Baekje was building monasteries like this inspired by N. Wei Luoyang.

My first feature is chosen to to emphasize that, based on dated, physical evidence, both Goguryeo and Baekje were constructing tombs in the manner of tombs of Gansu, and they were two different kinds of tombs. Goguryeo and Baekje also were building two different kinds of monasteries, again both with sources in N. Wei. Although Baekje is just across the sea from Nanjing, I suggest that we need to consider whether King Muryeong's tomb, and Baekje art and architecture more generally, did not receive its continental influences on the continent, not from

across the sea. Art and architecture of Baekje may have a much more complicated source than Six Dynasties China and Gansu may have had a much more prominent role in Three Kingdoms architecture than is usually recognized.

My second feature is shared by Goguryeo and Baekje, and it is present after each kingdom has embraced Buddhism. These are the remains of Jeongneungsa 定陵寺, the largest Goguryeo monastery known, located about 17.5 kilometers southeast of P'yongyang. It spans 223 meters east to west and 132.5 meters north to south. I have already mentioned that a central, octagonal pagoda is standard in the Goguryeo plan. The date of Jeongneungsa is assumed to be later than 427, the year the Goguryeo capital was moved to the vicinity of P'yongyang. It is the most expansive Goguryeo monastery known, with thirty-three architectural foundations. The monastery was 223 meters east-west and 132.5 meters north-south. Based on comparison with Japanese monasteries, the buildings that flank the pagoda may have been a sutra library and bell tower, and a lecture hall and monks' residence would be possibilities for buildings in the northernmost central courtyard.

The most noteworthy feature is the I-shaped formation northwest of the octagon. It is common in China where it is known as the 工 plan, named after the Chinese character *gong*. The configuration is associated with China's most eminent building arrangements, perhaps traceable from the end of the second millennium BCE through late imperial construction in the Forbidden City. The name Jeongneungsa points us to a significant feature. Monastery Determined by the Tomb lies 120 meters due south of a necropolis that is believed to include tombs of Goguryeo kings. Some believe King Dongmyeong (259-298) is among them. There is a lot we can't confirm in what we read about architectural remains in North Korea. Some of the most detailed information still comes from Japanese excavations during the occupation of Manchuria. If the tombs are contemporary to or earlier than the monastery, then worship space, royal space, and the royal tomb were built in proximity to one another. If the tombs were made later than the monastery, then we are observing the practice of royal burial near worship space.

This is Neungsa 陵寺 of the Baekje kingdom, *neung* 陵 again meaning tomb. Neungsa is 200 meters west of a site of eight royal graves, not much farther from royal tombs than Jeongneungsa.

My second feature is this relation between royal temple and royal tomb. Here, too, there appears to be a Chinese precedent. N. Wei Pingcheng and N. Wei Luoyang and Southern Dynasties Jiankang, and E. Wei-N. Qi Ye and Jinyang (Taiyuan), not only had royal tombs near capitals that included royal monasteries, they also had cave-temples patronized by royalty (Yungang, Longmen, Qixiasi, Xiangtangshan).

Other relationships between buildings are better documented in China and we should be seeking them in the Three Kingdoms period. These diagrams from a study by Shimokura Wataru show the locations of imperial architecture in Han Luoyang and N. Wei Luoyang. According to Shimokura, the locations of the Mingtang, Lingtai, and Taishe in the Han capital became the location of Jingmings 景明寺, one of the major Buddhist monasteries under Northern Wei. Similarly, in Jiankang under Xiaowudi (r. 454-464) of Liu-Song of the Southern Dynasties, the Mingtang was moved and Dazhuangyansi 大莊嚴寺 was constructed in its place. We have no evidence that a Mingtang, ceremonial space of Han Confucianism, was ever built in royal cities of the Three Kingdoms before or after the arrival of Buddhism. I mention this rather to underscore that imperial or otherwise significant space continues to be equally significant after a change of dynasty or religious beliefs. Jeongneungsa and Neungsa inform us that the components of a royal city were planned in response to one another. Bringing Luoyang and Jiankang into the discussed indicates that as the ideology of the rulers changed, specifically toward Buddhism and

patronage of its monuments, sacred space remained sacred space. Jeongneungsa is the best example so far. I expect there were others.

In China, we can prove the relation between city, its architecture, and empire, features that I would like to be able to prove in Three Kingdoms Korea. The center of Han Chang'an was a midpoint between ritual space as far north as Mongolia and as far south as the Yangzi River, and probably as far east as the Shandong peninsula. This is one of Qin Shi Huangdi's detached palaces, so we have north, east, and south. Archaeology has not confirmed a western point, but it is definite that the tombs of the Han founder Liu Bang and his wife were on either side of the main axis through the city and beyond, with a palace due south of each and that Shi Huangdi's Xinle Palace was the eastern one. If a palace is the hub of an imperial city and the pivot of four quarters, then in a Buddhist world, substituting a monastery for a ritual structure, the pagoda should be the hub of its monastery and perhaps its city or a wider Buddhist universe. This was the role of Yongningsi Pagoda in Luoyang and Songyue Monastery pagoda on Mount Song, both built by Empress Dowager Hu (Songyuesi officially by her 8-year-old grandson). The pagoda that soars at the center of the sacred Central Peak, the axis mundi of the Buddhist world, is on the same peak where Han emperors performed rituals amid spaces marked by these *que*. I suspect that tall pagodas of Three Kingdoms monasteries had the same roles. Reappropriation of a ruler's most important pre-Buddhist space cannot quite be proved for the Korean kingdoms, but the relation between palace, temple, and tomb is compelling and we should be seeking to plot excavated monuments to see if this kind of relationship exists. So the relation between temple and tomb, and in that temple, the towering pagoda as the focal point and symbol of imperial power that spreads beyond its monastery, is my second feature.

My third feature involves Silla, the last of the three kingdoms to receive Buddhism, and it, too, supports the idea of a Buddhist universe spread beyond the space of its monastery. If we accept the date 527 for the year Silla received Buddhism, then we start with its earliest monastery with remains, Heungnyeonsa 興輪寺, was founded in 528 and completed in 544. The plan indicates a pair of buildings with octagonal ground plans. They could have been twin pagodas, in which case Heungnyeonsa is earlier evidence than Mireuksa that monasteries with twin pagodas were constructed on the southern part of the Korean peninsula in the sixth century, and earlier than remaining physical evidence from China or Japan.

Silla's most famous monastery is Hwangnyeungsa 皇龍寺, in Gyeongju. It had at least three building periods, each with a different plan. The first, 574-645, had the Baekje plan. The first major change was the addition of a lecture hall behind the main building line, attached to the enclosing corridor as already existed at Jeongneungsa of Goguryeo and at the Baekje monasteries that predate Mireuksa, and a feature of Shitennōji in Japan, established in 593. By this point, but not earlier than the 570s, the Buddha hall of Hwangnyeungsa was enlarged to nine-bays-by-five with 78 pillars, making it the largest known Buddha hall of the Three Kingdoms. Others are generally five bays across the front and four in depth. The size, both actual size and number of bays, is more like a Chinese ceremonial hall such as a Taijidian, Great Ultimate Hall, the name of the main hall of audience at Northern Wei Luoyang and Jiankang of the Six Southern Dynasties.

Remains suggest Hwangnyeungsa's nine-story wooden pagoda was equally splendid. The year 643 is inscribed in foundation stones uncovered at the site. This date is consistent with the story of its construction in *Samguk yusa* that I'm sure many of you know. In brief, in 636 while studying Buddhism at Mt. Wutai, the monk Chajang 慈藏 met the dragon whose oldest son was the guardian of Hwangnyeungsa. The dragon told Chajang that if Silla built a nine-story pagoda, nine districts would come to pay tribute to his kingdom and its enemies would submit. Upon his return to Silla, Chajang told Queen Sondok (c. 581-647) 善德 about the dragon's advice. Sondok sent gifts to Paekche, requesting that someone come from there to Silla to advise in the construction of a nine-story pagoda. Abiji, the man to whom Mireuksa's nine-story wooden

pagoda is attributed, was sent along with 200 artisans. The human link between Korea's two tallest known contemporary pagodas is the kind of rare evidence that so far does not exist for China of the period, although as I mentioned, these two pagodas had the same patron, Empress Dowager Hu, and Prince Shotoku is associated with numerous monasteries and a plan. Before construction of the Hwangnyongsa pagoda, Silla pagodas are believed to have been stone. The records might be evidence that a towering wooden pagoda was identified with rulers in 6<sup>th</sup>-7<sup>th</sup> century East Asia.

To finish the story, Abiji, he seems to have known about the dragon's advice to Chajang and realized Silla's intent to be the victor in the ongoing wars with his kingdom. *Samguk sagi* informs us that on the night prior to implantation of the main wooden pillars at Hwangnyongsa, Abaoji dreamed of Paekche's destruction, but before he had time to make a decision about his participation, a monk and soldier appeared in the early morning and erected the pillars themselves. Thus Abiji seems to have been responsible for the plan, but absolved of the guilt of seeing the pagoda to fruition. Silla, of course, was to unite the three kingdoms about twenty years later. The construction date of 645 for the Hwangnyongsa pagoda provides a terminus ante quem for Miruksa's wooden pagoda.

The plan of Hwangnyongsa perhaps also should be considered in relation to Mireuksa's. The closest resemblance is during the Hwangnyongsa rebuilding period, 574-645, when Buddha halls stood east and west of central Buddha hall that was enlarged to contain six gilt-bronze images. The date this occurred should be relevant to the Goguryeo plan and to the plan of the Japanese monastery Asukadera that was founded in 588.

In about 754 a bell tower was erected on the eastern side of Hwangnyongsa. The year is based on the excavation of a bell with this date, and if it is correct, one assumes based on contemporary monasteries in Japan that the symmetrical tower on the west was a sutra library. The central gate and corridors were moved southward to accommodate the additions. Later, the two small towers were enlarged from three- to five-bays-square. 854 is the last year of construction at Hwangnyongsa. These two plans, with twin or at least paired structures, focus us on our fourth feature, but before I get there, Hwangnyongsa also provides further evidence about features two and three.

I suggest that Hwangnyongsa is evidence that nearby monasteries were built in response to each other and perhaps even shared architecture. Bunhwangsa was founded in 634. Its stone pagoda is 390 meters behind Hwangnyongsa's pagoda. Believed to have originally been nine stories, Bunhwangsa pagoda was behind an entry gate with three Buddha halls enclosing it to the northeast, northwest, and due north, the Goguryeo plan, but the pagoda is four-sided, like Asukadera's, and stone, the typical Korean building material. The towering pagoda, often with a monumental deity inside, or the towering deity, surely were protectors of religious space in Asia. There are several examples from the Liao dynasty in 10<sup>th</sup>-12<sup>th</sup> century. I think you can anticipate that I am building a case for the inter-relationship between major imperial religious and secular monuments in cities from Han China onward. I think in addition that Buddhist monuments were built in response to one another, across time periods. So far, our best evidence of this from the Three Kingdoms period is in Silla.

Fourth--In 2002 archaeologists found this pounded earth platform about 1300 meters south of remains of the city wall of the Eastern Wei-Northern Qi capital Ye. Immediately, and correctly, comparisons were made with Yongningsi, Empress Hu's monastery in N. Wei Luoyang. Further excavation over the next three seasons revealed a central-pillar pagoda. Beyond the central core were two more concentric enclosures, the inner probably supported by twelve pillars and the outer by perhaps twenty pillars defining five bays per side. Each side of the pagoda is estimated at about thirty meters. The pagoda was approached from the south via a ramp about 2.3 meters in width. It is named Zhaopengcheng 趙彭城 Pagoda, after the town where it was found. Smaller in base dimensions and thus probably in height than Yongningsi pagoda, the size

nevertheless suggests the monastery had the status a similar level of patronage, in E. Wei-N. Qi Ye, that Yongningsi held in Luoyang. A *digong*, subterranean crypt, was uncovered. This is usually a sign of high-level, most often imperial, patronage.

In 2010 excavation showed that the pagoda was centered from east to west and positioned about one-third of the way north along the north-south span of its enclosure, 113 meters north of a surrounding, squarish moat, between 432 and 453 meters on each side. At the southern corners of the enclosure were remarkable features, southeastern and southwestern, bilaterally symmetrical courtyards, 110 meters square. The southwestern retained more information than the southeastern. It had a pounded-earth foundation, 38 by 20 meters, centered near the north. If these two enclosures are for bell or drum towers and/or a sutra repository, then we may be observing a Chinese source for the plan of Hwangnyongsa of ca. 643 and of 8<sup>th</sup>-century Japanese monasteries in Nara and its environs. If not, then we may have evidence of twin pagodas in combination with a towering central pagoda, pointing to Mireuksa. In any case we have pairing in a monastery in north, central China, in a capital, and at a monastery likely to be imperial, dated 577 at the latest (the year N. Qi falls) and probably earlier because there were Buddhist persecutions here in the 560s.

Also in 2002, trial digging was occurring at Tongzi 童子 Monastery, a temple complex in Jinyang, in the western hills of Taiyuan. Tongzisi is recorded with a founding date of 556 in *Taiyuanxian zhi* 太原縣志 (Record of Taiyuan prefecture), and a founder, the Chan master Hongli, who had three statues carved there, Amitabha, Avalokitesvara, and Mahasthamaprapta. The same record tells us that the N. Qi emperor visited Tongzisi in 559, perhaps the date by which the statues were completed. The emperor would be Gao Yang (529–559), second son of Gao Huan who was responsible for this cave at Xiangtangshan. *Bei Qi shi* tells us that Gao Yang climbed up to Tongzisi and ordered the excavation of a great Buddha into the cliff. In 1954, Luo Zhewen, one of the architectural historians involved in Chinese policy decisions for the last 55 years, found this structure, a Randengta 燃灯塔 (Burning Lantern Pagoda), with Buddhist imagery on all sides in front of the cliff. Over his long career, Luo never came back to Tongzisi; he died a few years ago. Luo wrote in an article of 1956 that this site would never achieve the importance of other architecture in the vicinity such as the Jin Shrines or Tianlongshan.

Luo noted the unusual orientation of the pagoda. In 2006, it was explained. Randengta overlooks a cliff in front of Buddhist caves, and this building group forms a parallel axis to the portion of Tongzi Monastery that included wooden buildings. To date, the reconstruction looks like this. Yes, twin structures at the front corners, like Zhaopengcheng Monastery. It appears, thus, that the monasteries of N. Qi did not have the Yongningsi plan. There was a change between N. Wei Luoyang in 516 and N. Qi's two capitals from the late 530s-550s. The N. Wei plan survives in Paekche and in the early version of Hwangnyeongsa in Silla. 40-50 years later. We have no physical evidence of a Southern Dynasties monastery, but like the brick tombs with which we began, we find construction practices of North China existing in south Korea. We can no longer declare Silla the source of paired structures in East Asia. Again Three Kingdoms architecture, this time from Silla, appears to be built with knowledge of current practices on the continent.

My most visual feature is fifth. Among Goguryeo's most significant construction are these ceilings, many of which may be labeled Domes of Heaven, or ceilings with heavenly bodies and by extension ceiling that take the forms of ceilings with heavenly bodies. One usually begins modern research on this subject with Karl Lehmann's article "The Dome of Heaven" of 1945. His main arguments were that the ceiling is a place where the sky is represented and that representation of the heavens on domes originates in representations of astrological images in Roman and provincial Roman art, and perhaps in ancient Egypt or Palestine, and can be traced in Christian art from Byzantium through the Baroque period. The domes used as evidence by Lehmann are generally circular, but astrological associations lend to division of the circle into a

dodecagon, octagon, and four sides and four corners. Sometimes the ceilings cover octagonal structures, other times four-sided ones. Well-known examples are at Hadrian's villa in Tivoli, the East Dome of San Marco in Venice from the Early Christian period, and in the late Gothic Baptistery in Florence.

Inspired by Lehmann's research, Alexander Soper wrote "The 'Dome of Heaven' in Asia" two years later, in large part to let it be known that similar structures existed far to the east of Lehmann's sample base, in India, Central Asia, China, Korea, and Japan, in two dimensions and in three. Soper drew important evidence from Bamiyan, Kizil (Kumtura caves GK 20 and GK 21 were not known in 1947) Mogao, Yungang, and Wanfotang Buddhist caves, and of course from Goguryeo tombs. His goal was to get the reader to the Ming-Qing period, with an example the ceiling of the imperial Buddhist Rulai 如來 Hall of Zhihuasi 智化寺 in the Nelson Gallery, Kansas City, and to Japan, to the much earlier canopy that covers the main images on a Buddhist altar such as the one in the Hōryūji.

Alexander Soper (1904-1993) was the preeminent scholar of East Asian architecture outside China or Japan and one of the most serious scholars of East Asian Buddhist art from the 1940s through the 1980s. The article on the Dome of Heaven is visual, not characteristic of Soper's carefully documented writing, in large part because there are no documents that prove why this ceiling is built in the majority of Goguryeo tombs. Seeking to prove that a feature in Western architecture "penetrated eastward far beyond the limits of Roman authority or of orthodox Christianity", he wrote that cave excavation began at Bamiyan in the period of Kushan rule in the late first to early second century CE and moved eastward. Soper was not the only scholar who tried to solve the origins of these ceilings. One was Josef Strzygowski (1862-1941), who, whether focused on Indian Buddhist, early Christian, early Islamic, or Byzantine art, managed to bring his reader back to the Greco-Roman world as the source of civilization's greatest art. Strzygowski's can be understood as writings are in the manner of Franz Boas (1858-1942) and other diffusionists of the 1920s through 1940s who argued for heliocentrism, the origin of many cultures in one, or at best, the origin of many cultures in several. These ideas followed the Darwinian use of the word evolution and fed into notions of ethnic cleansing, colonialism, and orientalism. There is no evidence that Soper or Lehmann were reading the cultural anthropology of their day, or that they knew Boas, although he was a professor at Columbia when he did much of his most high-impact writing, and others promoting similar ideas were at the American Museum of Natural History in New York. Some of this group certainly had political agendas in cross-cultural studies of the 1920s through 1940s.

In 1950, E. Baldwin Smith wrote a study of the dome subtitled, *A Study in the History of Ideas*. He focused on sixty-two domed worship spaces in Syria and what was then Palestine to argue that they derived from the human dwelling that transformed into a cosmic house. This concept can be traced to Ananda Coomaraswamy's (1877-1947) writings that the domed, thatched hut was the inspiration for houses of gods and for tombs. In 1963, Oleg Grabar wrote an article on the Islamic dome in which he chided Strzygowski, Smith, Lehmann, and Soper, cautioning the consideration of Islamic domes as derived from the Greco-Roman world without full knowledge of other material, for him "other" being Russian Central Asia and domes like these. I mention this group because before the 1980s, only Alexander Soper realized the significance of Goguryeo ceilings.

The dome is one among several forms that separate East Asian architecture from that of the rest of the world. Like those other forms, the most fundamental a timber frame and ceramic tile roof, it challenges us to explain why certain basic building principles do not change or resist change over long periods of time. The expression of old concepts and forms in later times is sometimes explained by a reverence for the past that guides the present or as an expression of hope that one's successes might be as great as those of his ancestors. James Watson uses the phrase "cultural standardization," writing: "Herein lies the genius of the approach...The system

allowed for a high degree of variation within an overarching structure of unity.” For architecture this has meant that this simply framed construction system with standard building components is uniquely adaptive and exportable, not just from China to Korea or to Japan but so as to result in shared construction features across royal, funerary, Buddhist, Daoist, Confucian, or Muslim, Beaux-Arts, or Imperialist contexts.

The dome is an extremely powerful form, but as I just mentioned, it is one of those standard features. The builders of this room in Pendzhikent may have first witnessed vaulting in Kizil or in Bamiyan; they probably did not see it in Goguryeo. Probably Goguryeo tomb builders, beginning with the builder of Anak tomb 3, saw the superimposed quadrilateral ceilings or learned to build them from Han China. This chart did not exist until the 1980s. Nor was it known that all these forms were constructed in China before the end of the 2<sup>nd</sup> century CE:

*banliang* 板樑, literally plank-beam, form (a), in which the ceiling is composed of flat beams, a precursor to *xiecheng banliang* 斜承板樑, or diagonal-support, plank-beam (b). Next comes the positioning of planks perpendicular to smaller segments of planks, *zhexian xuexie* 折線樑楔, or broken-line wedge-shaped with a plank inserted (c). The broken-line, wedge-shaped ceiling, without the insert, followed (d). It survives in Sichuan, with a tongue-and-groove joint (here the Western term applies), known as *zhexian xiexing qikou* 折線楔形企口 (e). The segmented-arch, also known as a barrel vault (*banyuan huxing* 半圓弧形), literally semi-circular curve or arc (f), also appeared in Sichuan before the end of the Han dynasty. Meanwhile, in Luoyang the domical vault, or four cells rising from four walls to a flat ceiling, appeared (g). It is known in Chinese as *hulong ding* 弧隆頂 (curved cavity ceiling). These 1<sup>st</sup> c. BCE – 1<sup>st</sup> c. CE ceilings can be seen in Guangzhou of *diese* 疊澀 [piled unsmoothly, or in puckers] style in which bricks are laid in concentric circles and Shaogou 燒溝, a suburb of Luoyang, of *xiecheng banliang*, dated, 49-7 BCE. And there are an increasing number of examples of star groups on Western Han tomb ceilings, such as this one in a tomb on the grounds of an elementary school affiliated with Jiaotong University in Xi’an. The ceilings exist in N. Wei Luoyang but they do not exist in tombs of Baekje or Silla or Japan, so far. Like the monastery plan, the Baekje tomb is different from the Goguryeo tomb.

One of the conclusions toward which I am heading is that we are dealing with three kingdoms, each almost definitely with sources of its architecture in China, probably Han China, but if architecture informs about civilization, then the physical evidence is that if each kingdom drew from some of the same places, Gansu and the N. Wei capitals in particular, and each kingdom made different choices in its architecture. This is why the story about Abiji is so significant. This is why the existence of a wooden as opposed to stone pagoda in one of the kingdoms is so significant, and why it’s important that only Goguryeo built mountain-castles.

Goguryeo is the one for which the best evidence of interchange with western China and points west exists, and this is why a Gansu tomb form in Baekje is so significant even if how it got there can’t yet be explained. The clothing of Goguryeo was represented in Afrasiab even if no denizen of that empire ever set foot in today’s Uzbekistan or Tajikistan. I have already shown you this ceiling from a palace in Pendzhikent, dated, perhaps 6<sup>th</sup> – 8<sup>th</sup> century. Chinese people and people of Goguryeo are painted on the walls of this palace from Afrasiab. Anyone who juxtaposes these images and tries to explain how transmission occurred is aware how dangerous it is to build scenarios. But it is a fact that ceiling builders here and here did not come up with the ideas on their own and the difference between this kind of study today and those more than 50 years ago is that the archaeological record provides us with irrefutable evidence of locations and dates. In the 1950s, the earliest dated ceiling of this type was in Anak tomb 3, dated 357. The pivotal role of Bamiyan ceilings were considered evidence of the movement of Greco-Roman

forms eastward, and Han examples were unknown. But political and social motivations aside, the embedded quadrilaterals not only do not survive in Japan, they are not known in Paekche or Silla. This is a north Asian phenomenon. This Guangzhou ceiling perhaps will turn out to have resolution in the southern part of the Korean peninsula.

My last feature is present in these ceilings. It is the octagon. I begin in Gyeongju. This octagonal foundation is just a few kilometers from Hwangnyeongsa and Buhwangsa. Excavators date it to the Silla or Unified Silla period, in other words 6<sup>th</sup> – early 10th century, or Tang. There is no definitive explanation of what it was. So far, no one has a good explanation for these octagons, either, within the walls of Wandu mountain castle, dated 5<sup>th</sup> century, in Ji'an.

The earliest confirmed archaeological evidence of an aboveground octagonal hall in China is from the Tang dynasty. Three octagonal foundations have been uncovered at the Tang capital in Luoyang. According to an inscription, the first was erected by imperial decree in 705. It is from the Tiantang 天壇 (Hall to Heaven). Empress Wu's Mingtang is the second foundation. The third octagonal wooden hall was excavated on the western side of the palace-city.

In Japan there are standing octagonal halls: the oldest is Yumedono 夢殿 (Hall of Dreams) in the east precinct of Hōryūji, begun in the 730s under the direction of the priest Gyoshin 行信 as part of what would be a century-by-century elevation to demigod status of Prince Shōtoku, who is said to have come to this site to contemplate, or dream about, the Buddha. In an inventory of 747, the hall is named *hakkaku* Butsuden 八角佛殿 (eight-cornered Buddha hall). Another octagonal hall stands in Hōryūji's west precinct. Built under the direction of the priest Gyoki 行基 in 718 at the request of Lady Tachibana, it was known as Saiendō 西円堂, "west circular hall." Saiendō was rebuilt in 1249. Its original images are not certain, but the current Heian-Kamakura-period main image, Yakushi 薬師, may represent the original primary statue. A healing deity, of course, is associated with severe, life-threatening illness.

A different plan is used for the octagonal hall at Eizanji 栄山寺, about twenty-five kilometers from Hōryūji in Nara prefecture. It has four interior pillars, the same configuration as the Luoyang building whose purpose has not been determined. This is the plan of the hall in Gyeongju. The Eizanji hall was built either in the very early eighth-century, a date proposed based on roof tiles, or in 763–64, a date based on patrons. A record of 989 states that in 765 Fujiwara Toyonari 藤原豊成 (704-765) donated land to support a monastery founded by his father Fujiwara Muchimaro 藤原武智麻呂 (680-737) and that Fujiwara Nakamaro 藤原仲麻呂 (710-764), son of Muchimaro, built the structure as a monument for the eternal rest of his parents. Muchimaro's ashes are believed reburied under a hill north of Eizanji. The ashes of Fujiwara Yoshitsugu 良継 (716-777), a nephew of Muchimaro, also are said to be reburied nearby. A record of chief abbot Jikkyō 実経 ascribed to 1098, however, states that the monastery was built by Muchimaro in 719. It is likely Eizanji was built with knowledge of the octagonal hall at Horyuji and that it was a memorial hall.

Both Nara-period octagonal halls are commemorative, posthumously created to evoke the memory of an ancestor or great man. Two eight-sided buildings stand at Kōfukuji 興福寺 in Nara, the earlier known as the north octagonal hall, vowed in 721, and the south octagonal hall in 814. Today they stand as Kamakura- and Edo-period buildings, respectively. Their Japanese names are Hokuendo 北円堂 and Nan'endo 南円堂, or north and south circular halls, respectively. The character *en* 円 is the same one used for the Heian-Kamakura-period Saiendo at Hōryūji. The names turn us to the issue raised by the dodecagonal Songyue Monastery pagoda.

If the name circular is used for an octagonal ground plan, does it follow that the intent was a circular building? I have argued that the intent of the unique twelve-sided Songyuesi pagoda was to approximate a circular structure, with the straight edges to which Chinese builders were accustomed. The name “circular” of course suggests a similar intent in Nara Japan when eight sides were involved. Although the two building in Luoyang were for imperial rituals, I suggest that the third one in its own precinct was commemorative, like the octagonal halls in Japan. I would not be surprised if the Gyeongju hall also was commemorative.

I have woven in and out of the Three Kingdoms and in and out of China, particularly Jiankang, Luoyang, Pingcheng, and Gansu, and in and out of Japan, primarily Asuka and Nara. The six pivotal features of Three Kingdoms architecture point to three kingdoms with their own building programs, sharing Buddhism but not necessarily monastery plans; sharing an understanding that the ruler builds his monastery near his ancestors tomb; sharing the architectural institutions and symbolism of Chinese rulers who built their most glorified pagodas of nine stories and in wood; building these ceilings and these, one with Han sources but the other still with an unexplained route to Baekje; and perhaps in the realm of sacred death, constructing an octagonal hall. These are points that can be supported, but far from conclusions. In simplest but perhaps most important terms, the Three Kingdoms were indeed three, each was integral to the development or and perpetuation of architecture in East Asia, and Goguryeo was the one with the farthest reach, with the clearest associations with Gansu and Sogdiana.