

The Yonggu Mausoleum Complex and Surrounding Structures

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Anthropology 116Q

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06 December 2017

ABSTRACT:

The Northern Wei dynasty has left behind precious little evidence of dynastic architecture. In fact, there are exactly zero traditional buildings preserved, and only one single brick pagoda. In the absence of actual evidence, we are forced to rely on other sources to piece together the story of Northern Wei architecture. In this paper I will detail Northern Wei architecture with evidence from contemporary paintings and cave grottoes. Using this, I will reconstruct the Yonggu Mausoleum site, which includes the final resting place of Empress Dowager Feng, the unused tomb of Emperor Xiaowen, and the Buddhist monastery. By utilizing Corona and Google Maps imagery as a basis, a final reconstruction of the Buddhist complex near the mausoleum will be attempted, including identification of specific buildings and architectural styles.

Keywords:

Northern Wei, Tomb Mound, Empress Feng, Monastery, Pagoda

EMPRESS FENG

Before delving into the archaeology of the Yonggu site, a quick discussion of the empress to whom the site was made for is useful. Empress Feng is widely considered to be the single most powerful Northern Wei empress (Swartz 24). Her royal name is actually Empress Dowager Wenming, as Feng was her birth name. She lived from 441-490 AD, dying at only 49 years of age. She ruled for two separate time periods: once from 466-469 and then again from 471 until her death in 490. Empress Feng was bi-racial, as her father was Xianbei and mother was Korean (Swartz 24). This may indicate that her marriage was a political one to help maintain good connections between the Northern Wei and Koguryo dynasties.

Before ruling the dynasty, she had a varied and interesting life. She first became an honorable lady to Emperor Wencheng of the Northern Wei in 452 and became Emperor Wencheng's non-ruling Empress in 452. "She was still relatively powerless, but when the emperor died in 465, he was succeeded by his eleven-year-old son, Emperor Xianwen. Feng became empress dowager and in a coup in 466 declared herself regent in place of the original one" (McMahon 139). However, she only held power for a few short years before being forced to abdicate. Luckily for her, however, Emperor Xianwen retired in 471 - although he still held power. Feng had him killed in 476 and once again became the regent, this time ruling relatively unopposed and "virtually as if she were emperor" (McMahon 471). As mentioned above, "the history compliments Dowager Feng's abilities, saying that early on she gained a rough knowledge of writing and calculation such that, when she took power, she was ready and able to engage in all aspects of government. She promoted reforms in administration, land taxation, and social custom" (McMahon 139). In particular, important reforms such as "an official salary system in 484 and the Equitable Fields system in 485, were implemented" (Swartz 24). All in all, Empress Dowager Feng proved herself to be a strong, independent, and driven woman, ruling over a great Chinese dynasty as a competent and effective leader.

BURIAL MOUNDS AND TOMBS

From the beginning of dynastic China, “the typical Chinese grave was a mound with an interior chamber, large or small in accordance to the importance of the family” (Boyd 142). This practice was made famous by the mausoleum of Emperor Qin Shi Huang of the Qin dynasty. “Measuring 120 meters tall, the mausoleum is so large that it is easily mistaken for a natural hill, and to this day has yet to be excavated; the extreme size of the tomb was in direct accordance to his importance as a unifier (Cai 52). Since then, until the Ming period, graves were generally in the form of a mound, with “the typical visible form of an imperial tomb [being] merely a mound in a walled enclosure, at first square, with gates at cardinal points, no surface buildings and a concealed ramp down to the mausoleum” (Boyd 142).

YONGGU SITE

There are 21 large Northern Wei tombs spread over 14 mountain peaks over 1,500 square meters, all sharing the common characteristics of round mounds on top of square platforms (Dien 182). The size and location of the tomb mounds “enabled them to blend into the natural landscape”, although to be honest a large, solitary tulumus in the middle of a flat plain definitely does not look natural. Northern Wei tombs were generally constructed of brick, which contributes to their decent survival rate (Dien 182). The Yonggu Mausoleum is the final resting place of Empress Feng. It is a huge, grand structure measuring 406 feet at its widest base and 75 feet tall. It is located on a mountain in Datong, Shanxi, China. (Figure 1) shows the current Google Earth digital satellite image of the mound while (Figure 2) shows the Corona film image taken in the early 1970s. We are fortunate that Yonggu Mausoleum has been excavated, as it remains the earliest Northern Wei royal tomb to have studies performed on its interior structure (Dien 182). Dien describes the tomb best:

The mound, 117m x 124m and 23m high, is described as being round with a square base, but there is no mention of a platform such as characterized the earlier mausolea. The tomb itself consists of a stone passageway and a brick front chamber, inner corridor, and rear chamber. Excluding the passageway, the brick structure is over 17m long, and the internal area is some 71 sq m! The front chamber and inner corridor have barrel-vaulted ceilings, and the rear chamber has bowed walls constructed in jade-belt fashion with two rows of stretchers and one of soldiered bricks, repeated seven times. The walls lean slightly inward and are topped with a dome. The inner corridor has two stone doors of high quality, although they are not functional. This tomb is probably similar to the earlier royal tombs of the Northern Wei, though on a grander scale. Also notable is the fine stone carving of the door blocks in the shape of tiger heads in front of the inner corridor and elsewhere in the tomb, a skill that marks the Northern Wei material (182-183) (Figure 1).

About 800 meters north of the large tomb is a smaller one, of the same style (Figure 3, 4). This is a curious case of a finished, but unused structure. Emperor Xiaowen, grandson of Empress Feng, originally planned to be interred here, close to his grandmother. This tomb was built very similarly to that of the Empress, as both are double-chambered, but his is much smaller (Dien 183). The distance away from the Empress's tomb as well as the size difference were probably meant to pay respects to the memory of the powerful Empress. However, Emperor Xiaowen's tomb was never used as he later moved the Northern Wei capital to Luoyang in 494, whence he "declared that future royal burials would be in the Man Hills west of the Chan River, which would have been northwest of the city" (Dien 183). Although the smaller tomb was never utilized, it was still completed and as such, includes all of the aspects of a fully operational tomb.

200 meters south of Yonggu Mausoleum is an interesting complex of Northern Wei structures, contemporary with the two tombs to the north (Figure 5, 6). Since the Han dynasty, there had been a tradition of building a hall or temple near royal tombs. In the case of the Yonggu site, the structures actually comprise a Buddhist monastery complex, with a centerpiece being the 40m x 30m foundation of a pagoda. Here the influence of Buddhism can be seen as the decidedly non-Buddhist tradition of constructing buildings near a tomb was in this case appropriated by the Buddhists (Dien 183). The remainder of this paper will be dedicated to determining and reconstructing the monastery complex by identifying buildings and conjecturing architectural styles.

THE PROBLEM OF NORTHERN WEI ARCHITECTURE

Buildings of the Northern Wei dynasty were generally made of timber or a mix of both timber and rammed earth (Fu 123). Unfortunately, “apart from one pagoda of brick, and the reflections of timber-frame buildings that may be seen in Japanese temples, no actual structures of any significance survive from the period” (Dien 47). So, in order to determine what buildings looked like, we must seek evidence from elsewhere. In particular, the rock-hewn caves at Maijishan as well as painted murals at Dunhuang give us insight into the actual appearance of Northern Wei architecture.

Before diving into that, however, it is worthwhile to note that the “basic uniformity and standardization of the Chinese tradition” meant that Chinese architecture had similar basic features throughout almost the entirety of its history (Boyd 23). This is due to the use of wood as the primary building material, as well as the post-and-lintel construction method, constraining any changes to a relatively narrow spectrum (Dien 46). However, in the grand scheme of things, the Six Dynasties period set itself apart from previous periods due to the impact of Buddhism on architecture. In addition, “it was also during this period that certain typical features appeared, such as an increased commitment to wooden structures, a greater emphasis on the roof, a start toward greater depth of eaves, a more

complex bracket system”, meaning that the although change was relatively minor, the Six Dynasties exerted a huge influence on proceeding dynasties (Dien 46).

The earliest extant wooden building in China is the main hall of Nanchan Monastery, dating to 782 AD, in the Tang dynasty (Fu 79). It would at first seem reasonable to draw the conclusion that Tang dynasty architecture was similar to Northern Wei, due to the principle that Chinese architectural basics are similar across history. However, this is a dangerous pit to fall into as the Tang is several dynasties removed from the Northern Wei. Additionally, buildings were relatively standardized within their own dynasties, meaning that one cannot take one dynasty’s style as indicative of another’s. Within a dynasty, “proportions of columns were by rule, and bracket arrangements and other details...were all part of a known repertoire” (Boyd 27). This fact is important in that it indicates that if we can find evidence of Northern Wei architecture from other sources, it is viable to draw the conclusion that the style was somewhat similar across the realm.

Fortunately, we do have one structure that dates from the Northern Wei period, from which we can draw some conclusions. “The pagoda of the Song Yue temple on Mount Song in Henan was built in 523 and is the oldest surviving brick building in China. This temple was originally a pleasure resort of the Northern Wei emperors. ... The interior is a hollow octagonal well without floors or staircases” (Boyd 127). Although pagoda architecture was obviously quite different from regular buildings, it does have architectural features typical of wooden buildings carved into it, emulating a wooden building. In fact, the Northern Wei was actually known for building incredibly tall *wooden* pagodas, with frequent mention of them in texts. The pinnacle of Northern Wei timber pagodas was the one erected at Yongning Monastery, which rose a staggering nine stories tall (Fu 123). That the Song Yue pagoda is brick but attempts to emulate wood indicates that wooden construction was preferred over other materials. The carved details (Figure 7) also help us to reconstruct the eaves of wooden buildings, as they are direct imitations thereof. There is also one other extant Northern Wei structure, although it is completely in ruins and has very little surviving. The building was possibly an imperial ancestral

temple with “walls, side and back...made of pounded earth... The inside walls were covered with white plaster; the outside surfaces painted red” (Dien 63). This provides valuable and unique evidence of the physical nature of a Northern Wei building. As Buddhist temples often drew inspiration from traditional ancestral temples, it would be fair to conclude that the structures at Yonggu were painted red on the outside and white on the inside.

In order to reconstruct fully Northern Wei architecture we must draw upon somewhat secondary sources due to the lack of primary sources, in this case extant buildings. The two main ones we can use are carved stone cave grottoes and painted murals. These sources are extremely helpful, as they are the only basis from which to start. They do, however, have some major issues. Murals and paintings can only be judged from afar, for the most part as they are often fanciful and somewhat crudely drawn. In particular, “artistic freedom was unhampered by the need to present a viable structure...and further, the fine details were only sketched in, if at all. Nevertheless, there is much to be learned from these paintings, especially concerning the building in its larger setting, of which these depictions are an important, and in some respects, the sole source of information (Dien 47) (Figure 8). So although murals exhibited a high degree of inaccuracy, they also had a high degree of accuracy. In particular, if relatively minute details that were not entirely necessary to include were painted in, it would indicate that those details were important to actual structures and as such were part of the architectural program.

The other source of evidence, carved cave grottoes, prove to much more useful in specific architectural details, although problems are still encountered. The grottoes were carved from stone, directly imitating wooden buildings of the time (Figure 9). The main problem here is that stone is not hampered by the necessity of being freestanding like wooden buildings are. In spite of the “occasional lapses from what might be possible in ordinary timber-frame buildings, the detailed structural elements carved of stone convince us of the fidelity of their prototypes. This in turn suggest the authenticity of their representation of contemporary practice” (Dien 47). Similar to the murals, if small, unnecessary

details were included, they would most likely have reflected reality. As working with stone is expensive and painstaking, details were not be carved in if they were not important to the end visual result.

With comparison of similarities between both stone and painted representations, it is possible to determine, with some degree of certainty, the features of Northern Wei architecture.

CONTEMPORARY BUDDHIST ESTABLISHMENTS

Although as we know physical architectural evidence of the Northern Wei is severely lacking, textual evidence fares somewhat better and helps us to understand the overall context of sites and locations. A very famous Buddhist temple of the Northern Wei period is the Yongning Temple which was located in the later Northern Wei capital, Luoyang. Yongning Temple was “built under the sponsorship of Empress Dowager Ling, nee Hu, and the foundations were laid in 516” (Dien 72). This complex was started only 26 years after the death of Empress Feng, and in the same dynastic period and style. With this, we can conclude that descriptions of Yongning Temple can be applied, in a basic form, to the complex near Yonggu Mausoleum. Yongning Temple was entirely enclosed by a rectangular rammed-earth wall with a perimeter of 1,040 meters, with gates on all sides (Dien 72). The wall itself had a tiled pitched roof all around with either two or three story towers and two or three passageways. The Buddha Hall, a staple of all Buddhist monasteries, contained an “18ft tall gilded statue of the Buddha...surrounded by plantings of trees and shrubs” (Dien 73). In this time period, as with earlier ones, the “pagoda held the relics of the Buddha and, as long as the relics were the focus of worship, the pagoda occupied the central position” (Dien 72). This is certainly true with Yongning Temple as the pagoda was actually one of the wonders of its time. The wooden pagoda was nine stories tall, about 240 meters high (Fu 123). The amount of passageways would seem to indicate that the temple was a very popular destination, with so many people going in and out that multiple entry and exitways were necessary to control the flow. This makes sense as Yongning Temple was in the imperial capital, and likely had a high concentration of Buddhist adherents and visitors to the complex.

RECONSTRUCTING THE YONGGU MONASTERY COMPLEX

From Google Maps satellite imagery, there are evidently five distinct building foundations at the monastery site (Figure 1). Corona imagery shows a somewhat more convoluted view but the five structures are still evident (Figure 2). The aim of this section will be to identify each structure and the architectural nuances of each. First, we will attempt to reconstruct the general architectural style of the Northern Wei dynasty. We already know that the buildings were almost certainly made of wood, due to the common practice of constructing most buildings with timber. This statement is assisted by the lack of stone ruins or remains at the Yonggu site. Now that the material of the buildings is conclusively determined, the details of the architecture must be discussed.

An important part of Chinese architecture is the roof style. There are a variety of roof styles (Figure 10), but one of them is more likely to have been used. We know from Dien that the hip-and-gable roof style saw widespread usage during the Six Dynasties period, of which the Northern Wei is considered to be a part of. More evidence can be found from the Dunhuang murals, which feature both hip-and-gable as well as hipped roof styles. However, “evident from the frequency of its occurrence in the Dunhuang murals, [hip-and-gable] became especially widespread in the later years of the period” (Dien 60). Although several caves, notably 28, 30 and 140 show hipped roofs, hip-and-gable roofs were enjoyed greater popularity during the later Northern Wei. Empress Feng died in 490, 45 years before the end of the dynasty, which is dated to the later years of the dynasty’s history. For these reasons, it is reasonable to conclude that the Yonggu monastery buildings featured hip-and-gable roofs. The roof overhangs are also a matter of discussion, but due to the fact that “corbel bracketry, which is used to support eave overhang, was still relatively undeveloped during this period, and such overhang as occurs, especially in buildings of modest proportions, may well have depended on a slight extension of the overhang rafters” (Dien 47). Although the buildings here are fairly large, it is not impossible to assume that they also exhibited overhangs, slight or not.

Now that the roof style has been determined, the smaller details must be investigated. A characteristic of Chinese architecture across the years and dynasties are the curvy acroteria found on the ends of the roof ridges. “At first simply an upward curve...the ridge decorations became in time increasingly ornate. By the Six Dynasties period, the ends demonstrate a curving outline that came to be called ‘owl tails’” (Dien 50). Furthermore, although owl tails at first were restricted to imperial palaces and the residences of high officials, the cave murals at Dunhuang almost always show buildings with owl tails (Dien 50). This could indicate one of two things: 1) that the murals depicted only higher-class buildings or 2) that the murals put owl tails on everything for aesthetic purposes or because the artists could, as they were not confined to the limitations of physical architecture. Either way, it is safe to conclude that the Yonggu monastery’s building exhibited ornate owl tails as the complex was associated with both royalty and religion. Finally, the question arises of the tou-kung style. Tou-kung, or eaves overhang, are structures underneath the roof eaves made of criss-crossing wooden beams. These were emphasized more in some periods and less in others (Boyd 32). In the few examples we have to go off of, the tou-kung appear fairly large and appear to have a heavy emphasis. Therefore, the Yonggu monastery buildings likely had larger tou-kung.

In Maijishan cave 140, a tomb grotto which dates to the Northern Wei has an incredible mural which presents some excellent evidence of outward appearance of structures (Figure 8). The mural depicts two halls, both of hip-and-gable construction. “There are round tile ends and drip tiles, that alternate with the round tiles, and the eaves are flat, with no upturn. The tiles were probably glazed, since that practice had been introduced in the Northern Wei” (Dien 53). In addition, the painting shows “an inverted V bracket, or chashou, under the bofengban of the rera hall, which may mean that the construction of the building was of a truss-and-crossbeam type” (Dien 54). The painting assists in the conclusion that the Yonggu buildings were built with a truss-and-crossbeam construction style, had glazed roof tiles, and were hip-and-gable. It is difficult to get a clear picture of the column style from the cave 140 mural, but luckily caves 28 and 30 are carved into the stone and as such show the columns

in excellent detail. These two caves feature hip style roofs, but the object of interest here are the columns which are octagonal, fluted, and tapered. The columns are “topped by a capital with a hexagonal amulet, a rounded echinus, and a square abacus” (Dien 56) (Figure 11). Each column features a base whose original function was to raise the wooden columns above the damp ground (Boyd 26). It is very likely that Yonggu buildings had wooden columns as well, but the bases are another question. The column bases were made of rammed earth for lesser buildings and brick or stone for grander ones (Boyd 26). Since the Yonggu monastery was a grand site, it is most probably that the column bases were made of elaborately carved stone instead of a lesser material.

Earlier we have established that the Yonggu buildings were most likely painted red on the outside and white on the inside, but there are a host of other possibilities as well. Buildings in this period as well as others were “designed in color as well as form, and in a complete and brilliant range of color as well” (Boyd 37). Walls were painted a solid red, white, yellow or black. Columns were painted a solid color as well, usually red. The “beams, brackets, rafters, eaves members and ceilings, a range of vivid colors and patterns often with blues and greens predominating”, and roofs would be a solid blue green, purple, black or yellow (Boyd 37). If the Baimasi Buddhist temple is any indication, as red would have been the most likely color for the exterior, as concluded earlier.

MONASTERY LAYOUT AND STRUCTURE IDENTIFICATION

The Indian Buddhist tradition of building temples and monasteries on or near mountains was brought over to China. Peaceful mountain locations were ideal for meditation and studying, and it only made sense to place the monastery on top of a mountain, especially since it was associated with the mausoleum of Empress Feng (Cai 77). Buddhist temples and monasteries in China were heavily influenced by imperial and elite palatial architecture (Fu 80). To that end, most featured courtyards, halls, and gardens. The main departure from the palatial architectural style was the pagoda, which was either the central focus or secondary focus, depending on the time period (Wang 40). At this time, in

accordance with the Yongning Temple, the pagoda was still the main focus of the complex, although there was a “gradual shift away from the pagoda to the Buddha hall as the focal point of the monastery” (Fu 80). Since this monastery is of a later date than Yongning Temple, the pagoda may have been moved to the back, with the Buddha hall as the central focus (Cai 77). Figure 12 shows the site, labeled with its constituent parts. It is difficult to tell if the pagoda, 100 ft x 125 ft, is at the front or the back of the Yonggu site, as it could be either. In one interpretation, the complex is entered from the east side which puts the pagoda front and center. In another, the complex is entered from the west side which puts the pagoda at the very back. Either one is equally plausible, but I believe that the monastery was entered from the east with the Buddha hall, 400 ft x 250 ft, at the very back of the complex. This is due to the better symmetry of having the Buddha hall at the back. If the entrance was to the west with the pagoda at the very back, the Buddha hall would either have to be the very first building or one of the side buildings. It probably was not the very first building to be entered as a courtyard was almost always present before the Buddha hall. Additionally, the Buddha hall would have occupied a somewhat more important position than being simply one of the side buildings.

The structure past the pagoda to its left, 200 ft x 175 ft, is seemingly multi-chambered. This may be either the academy or the sutra repository. I believe that the multi-chambered nature of the building indicates that it is more likely to be the sutra repository or some other kind of library. Behind the sutra repository, joined to it, is a 325 ft x 150 ft structure which may be the academy. Within the academy are remnants of some unidentifiable structures. There are two straight lines approximately 100 feet long arranged in a 45-degree angle with a gap at the vertex of the angle. The angle opens out to an oval shaped mound around 40 feet in diameter. The layout of them is too regular and symmetrical to be a coincidence or a natural formation so must have been part of the structure. What they are is impossible to determine, especially since they only appear in Google Maps not Corona, and as such I will avoid this question altogether. To the right of the conjoined hall/repository, detached from the rest of the

structures is what I posit is the bodhisattva hall, 275 ft x 175 ft. This would have been dedicated to the main bodhisattva of the monastery, although whoever that was is impossible to determine.

THE PAGODA

The pagoda of the Yonggu monastery is an enigma. Very little is known of it, except for the extant foundation and small mound. Luckily, there is enough secondary evidence to analyze that a full reconstruction of the pagoda is possible. First, what did the pagoda look like? It is well known that Chinese pagodas quickly departed from the Indian model and became less of a round mound and more of a tall architectural tower, which we can use as the basis. In one of the Yungang caves is found a small, rock-carved model pagoda (Figure 13). The “arched niches imply solid construction, but ordinary Chinese wooden construction with columns, beams, tou-kung and tiled eaves is clearly shown” (Boyd 127). So although this is not a real pagoda, it provides valuable evidence for exterior architectural features. A somewhat better example of a Northern Wei pagoda is the actual Northern Wei pagoda of the Song Yue Temple on Mount Song in Henan. This pagoda was built in 523 and is the oldest surviving brick building in all China. “This temple was originally a pleasure resort of the Northern Wei emperors. [The pagoda] is 12-sided in plan, of solid brick construction with high double plinth storey. The interior is a hollow octagonal well without floors or staircases” (Boyd 127). Now the question lies in whether the Yonggu pagoda was built of brick or wood. As shown in both the model pagoda and the Song Yue pagoda, wooden features are carved into the exterior. This would indicate that no matter if the pagoda was wood or brick, it would have had wooden features regardless. But the texts often refer to wooden pagodas of the Northern Wei, which probably helped the pagodas reach their record-breaking heights. In fact, as early as 398 the Northern Wei erected a five-story pagoda in Pingcheng (Fu 123). Texts mention that while “Southern Dynasties craftsmen never achieved more than five stories, the Northern Wei could stack at least seven on top of each other, which probably demonstrates the slight superiority of Northern Wei technology” (Fu 123). Northern Wei pagoda

construction technology involved a rammed earth core with wooden exterior and upper stories, while Southern pagodas were made of all wood (Fu 123). The Yonggu pagoda was likely built in this fashion, with earthen core and wooden exterior. This is supported by satellite imagery which shows a modest mound rising from the pagoda's foundation, most likely made of rammed earth. If the Yongning pagoda is any indication, the Yonggu pagoda most likely had walls painted red on the outside with either murals or a solid color on the inside. The Yongning pagoda is much grander than Yonggu, but the basics should still fit. We have now reconstructed that the Yonggu pagoda was wood, at least five stories tall if not seven, and painted red on the outside.

THE OUTER GATES AND WALLS

The monastery complex would have been entered through a grand gate with between one and three arches, depending on the grandness and usage of the complex. Regardless of whether or not this was a popular destination, there were probably three arches due to its proximity and relationship to the Empress Feng. The gate would have been constructed of rammed earth and topped with a classic tiled roof. It was probably painted red like the rest of the buildings. Beyond the gate would have been a courtyard. This courtyard would have been modeled after the traditional elite courtyard (Cai 76). The courtyard would probably have been populated with gardens, ponds, statues and gazebos, similar to an imperial garden. Monks would have used the courtyard for walking or sitting meditation, gardening, and leisure. Unfortunately, the satellite imagery does not show much indication of what would be expected to be the walls, but we know that walls and a gate must have been present.

THE SUTRA REPOSITORY AND ACADEMY

These two conjoined structures were likely conjoined due to their similar purposes. A sutra repository is a library where sutra texts were kept, as well as other academic writings. The academy is located right next to the sutra repository for easy access to the materials. The academy is where the

monks would have studied, copied sutras, and performed other academic duties. The unknown features within the academy could have served some relevant purpose but again it is impossible to tell so I will not attempt to conjecture. These buildings had, like the rest of the site, painted red exterior walls with the relevant roof style and details we reconstructed earlier. There likely was nothing particular special about these two buildings as they would not have been the main focus of the complex.

THE BUDDHA HALL

The Buddha hall is the largest building of the entire monastery site. It is 400 ft x 250 ft and is located at the very back of the complex. It is conjoined to the academy and 500 ft away from the pagoda. There is a straight thoroughfare from the pagoda to the Buddha hall, which would have been lined with trees and planters. This central courtyard area would have been used by the monks for walking meditation as well as leisure. Inside the Buddha hall would have been a very large statue of the Buddha, most likely of gilt bronze. The Buddha statue at Yongning Temple was 18 feet tall, so this was probably smaller since this structure was probably not in common use, at least not to outsiders. This structure would have been one or two stories tall and populated with bells, murals, and all manner of other types of decoration. The roof was hip-and-gable, it had large tou-kung, and was decorated lavishly. The hall is large enough to accommodate the entire monastery population which would have regularly congregated there for group meditation and contemplation. Behind the Buddha hall is a strange, semicircular structure. This is either part of the outer wall or a garden area. It would not be unreasonable to conjecture that this is a garden where trees, plants, and a pond were situated. A garden area like this would be more useful for meditation, contemplation and leisure than the central courtyard as it is a more private, quiet place.

CONCLUSION

It is a difficult task to accurately reconstruct the Yonggu monastery complex. The main reason is the absolute lack of any sort of architectural remains beyond the foundations, and the lack of excavations of the site. Luckily, a full architectural reconstruction of the complex can be performed using satellite imagery to gauge size and shape and the secondary sources of stone carvings, murals, and texts to recover the finer details. Knowledge of typical Buddhist monastery layout helps to identify the buildings. After analysis of all of the evidence, we can thus conclude that the buildings at the Yonggu site included a magnificent, tall pagoda, a huge Buddha hall, a Bodhisattva hall, an academy and a sutra repository or library. The pagoda incorporated a rammed-earth core and lower sections with wooden upper stories, and the rest of the buildings were all wood. The site was surrounded by a red-painted, rammed-earth wall with tiled roof. Each building within the site featured hip-and-gable roofs, large tou-kung, red exterior walls and interior walls painted white or with murals.

To honor Empress Feng a large tomb mound was constructed as her final resting place. In accordance with tradition, a monastery complex was built before the tomb. The mausoleum survives well and is still visible in most of its splendor. However, the monastery long ago succumbed to the ravages of time. Luckily, taking advantage of modern science and ancient art leads to a full and conclusive reconstruction of the entire site. The Yonggu monastery complex lives again.

FIGURES FOR REFERENCE

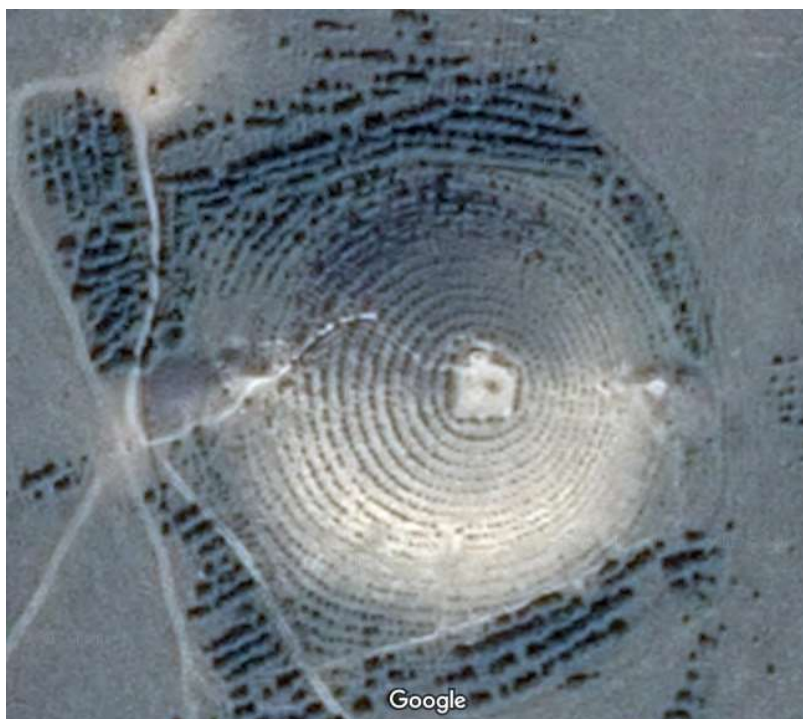


Figure 1: Google Earth Satellite Image of Mausoleum of Empress Feng. 40°16'48"N, 113°20'45"E.



Figure 2: Corona Satellite Image of Mausoleum of Empress Feng. 40°16'48"N, 113°20'45"E.



Figure 3: Google Earth Satellite Image of Unused Mausoleum of Emperor Xiaowen. $40^{\circ}28'59''\text{N}$, $113^{\circ}34'82''\text{E}$.



Figure 4: Corona Satellite Image of Unused Mausoleum of Emperor Xiaowen. $40^{\circ}28'59''\text{N}$, $113^{\circ}34'82''\text{E}$.



Figure 5: Google Earth Satellite Image of Yonggu Monastery Complex. $40^{\circ}27'56''\text{N}$, $113^{\circ}34'53''\text{E}$.



Figure 6: Corona Satellite Image of Yonggu Monastery Complex. $40^{\circ}27'56''\text{N}$, $113^{\circ}34'53''\text{E}$.



Figure 7: Song Yue Pagoda. (Boyd, 82).

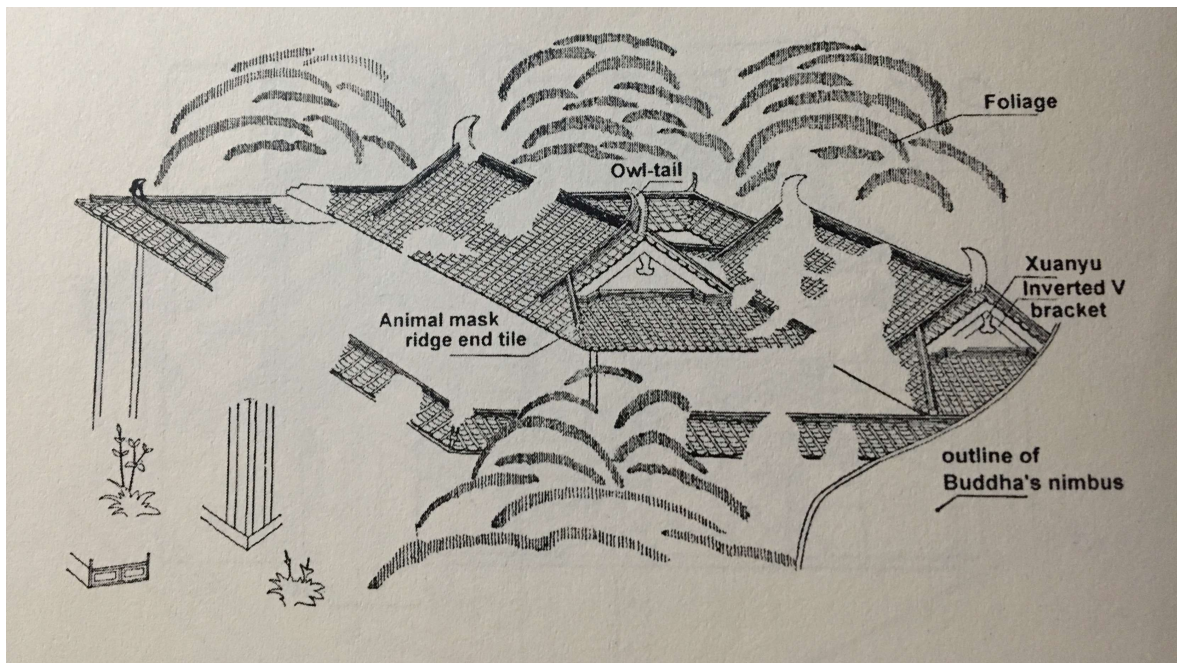


Figure 8: Mural from Cave 140, Maijishan. (Dien 54).

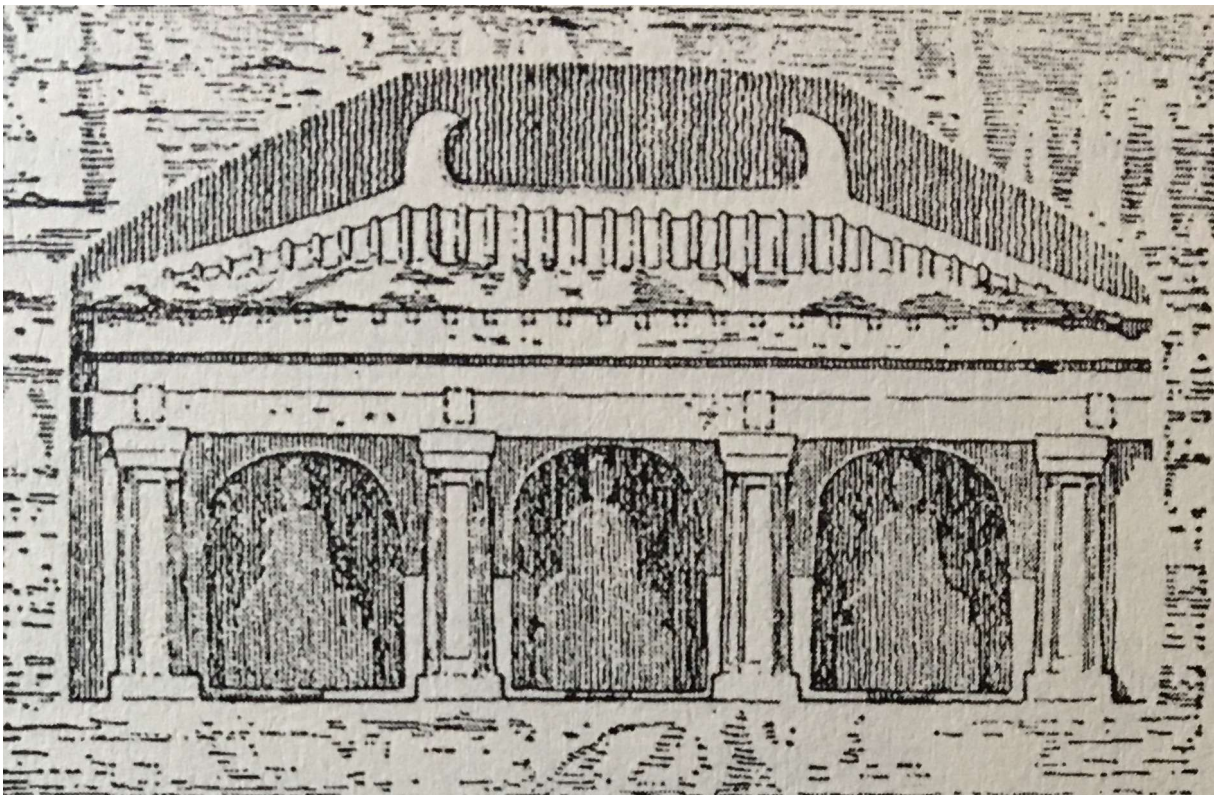


Figure 9: Cave 30, Maijishan. (Dien 57).

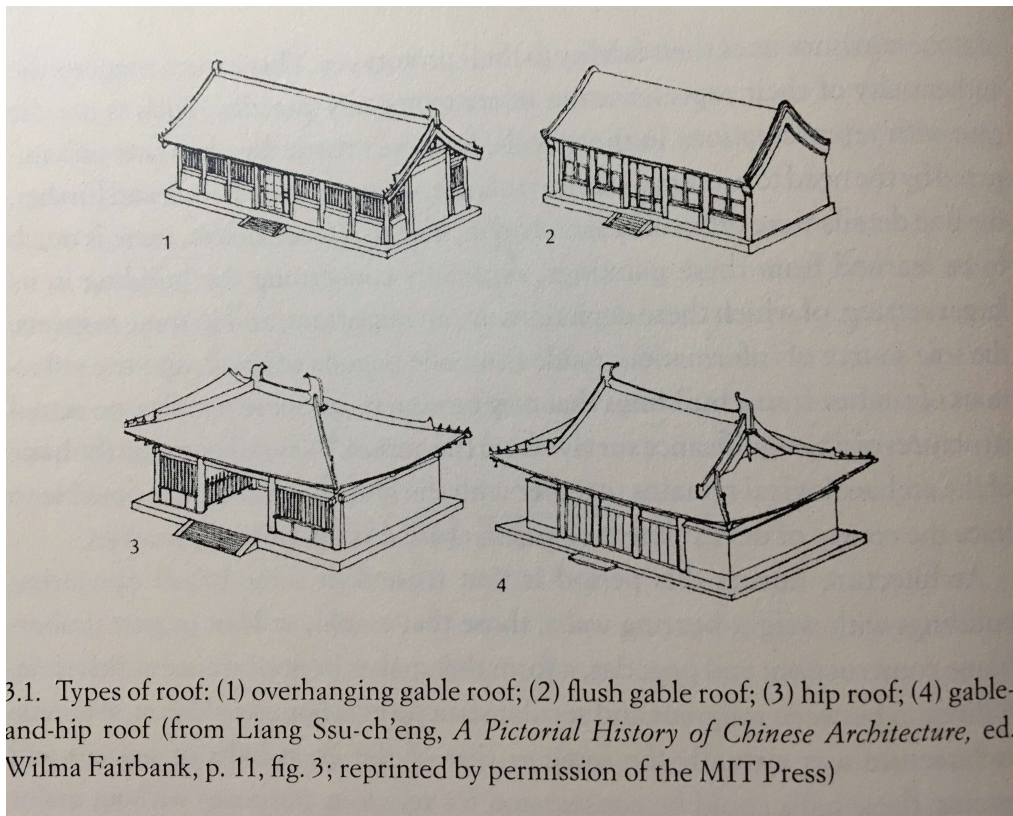


Figure 10: Types of roofs. (Dien 48).

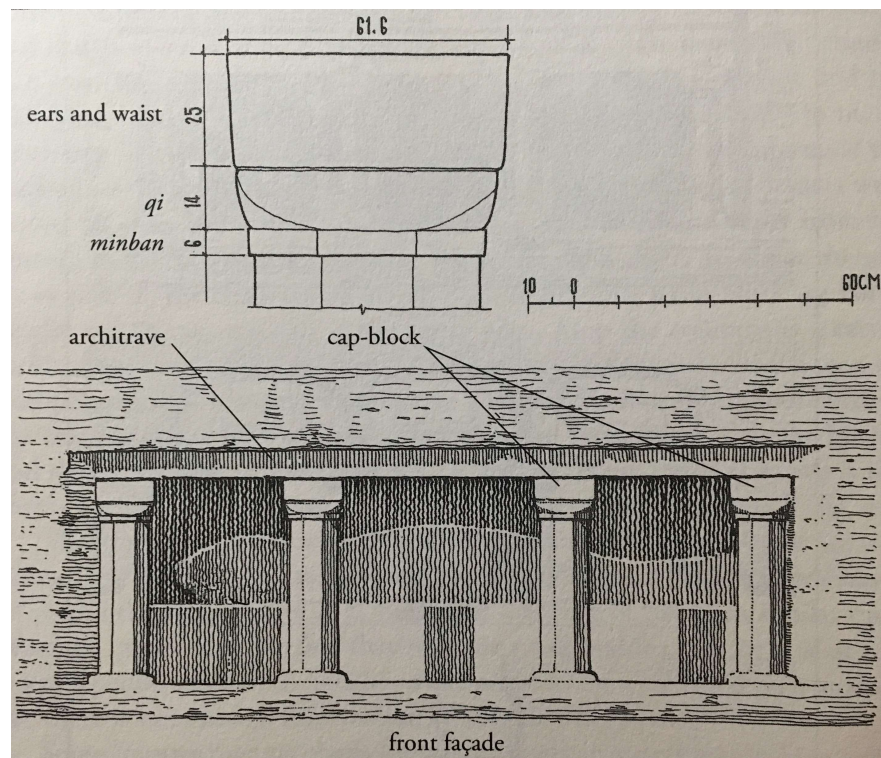


Figure 11: Columns of Cave 1, Maijishan. (Dien 36).

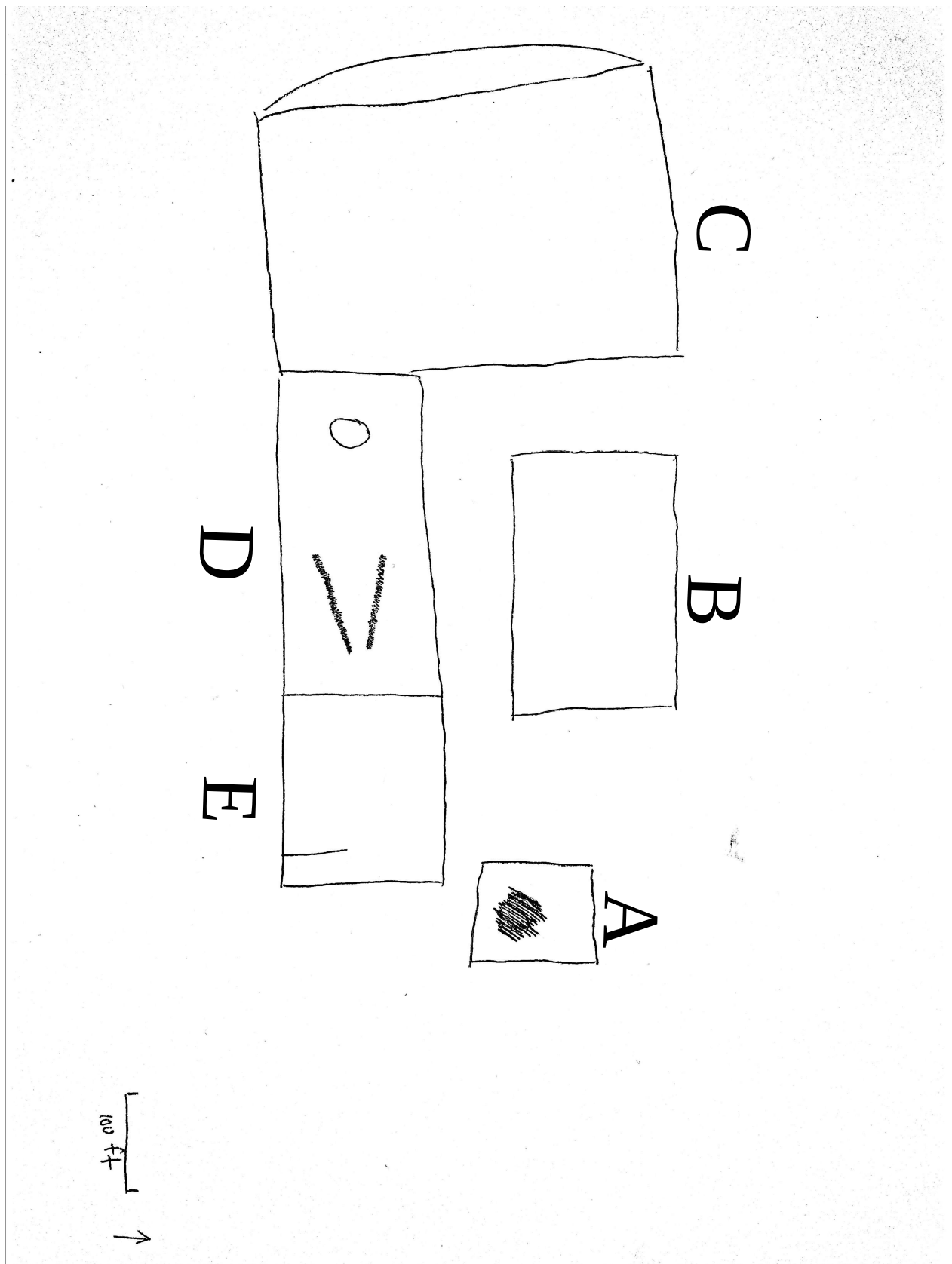


Figure 12: Yonggu Site. A: Pagoda. B: Bodhisattva Hall. C: Buddha Hall. D: Academy. E: Sutra Repository. After Google Earth Satellite Image.



Figure 13: Small rock-cut model Pagoda. (Boyd 170).

BIBLIOGRAPHY

- Boyd, Andrew. *Chinese architecture and town planning, 1500 B.C.-A.D. 1911*. University of Chicago Press, 1963.
- Cai, Yanxin. *Chinese Architecture*. Cambridge University Press. 2011.
- Dien, Albert E. *Six dynasties civilization*. Yale University Press, 2007.
- Fu, Xinian, et al. *Traditional Chinese architecture: twelve essays*. Princeton University Press, 2017.
- McMahon, Keith. *Women shall not rule: imperial wives and concubines in China from Han to Liao*. Rowman & Littlefield Publishers, 2013.
- Swartz, Wendy. *Early Medieval China: a sourcebook*. Columbia University Press, 2014.
- Wang, Qijun. *Chinese Architecture*. Better Link Press. 2011.