

Discuss of the Multidimensional Exploration of Spatial Layout and Artistic Expression in Cave Temples

—A Case Study of Yulin Cave 25

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Abstract

Architecture, murals, and statues are three elements that constitute the overall space of grottoes, and the combination of these elements could form different levels of space, leading to diverse spatial relationships. These relationships discussed from different perspectives bear great significance in reproducing the context of ritual procedures and exploring issues associated with grottoes. Thus, they serve as a supplement to the methods of studying grottoes using space as a starting point. This paper analyzes and discusses the space of Cave 25 of the Yulin Grottoes from the different spatial dimensions composed of the three elements, in hope of gaining insights into the grottoes and driving spatial research on grottoes. For this purpose, the paper is written and embraces criticism and correction by the academic community.

Keywords

Space, Grotto, Architecture, Mural, Statue

1. Introduction

Cave 25 (the 25th grotto), built in the Tang Dynasty, is the best preserved one of its kind among the Yulin Grottoes. Owing to its exquisite Buddhist painting art, the grotto has become the focus of academic attention and research. Scholars have delved deep into it from the following aspects: murals, the age of the cave, and the connotation of Buddhist illustrations. Among the representative studies, Lai Wenying combined literature and images in his doctoral thesis to study the connotations and functions of Buddhist images (which embody the harmony of esoteric Buddhism and Exoteric Buddhism) in Cave 25 of the Yulin Grottoes,

exploring the relationship between the Avatamsaka Thought advocated by Vairocana Buddha and the development of esoteric Buddhism in Dunhuang (Lai, 2014). Sha Wutian, the foremost scholar on combined murals and historical background, in his book “The Relationship between Tang and Tubo Reflected in Images in Cave 25 of the Yulin Grottoes in Dunhuang”, gives a more detailed discussion of Cave 25 from the historical background of its excavation and the origin of the images. In recent years, the discussion about the space of the grottoes has become a hot topic. Lou Jie was one of those who first paid attention to the space of the Dunhuang Grottoes. In the article “On the Spatial Composition of Dunhuang Grottoes Art”, she first proposed the relationships between the three elements of the grottoes: architecture, sculpture and murals. These relationships refer to two and three dimensions, as well as abstract and figuration. Moreover, she gave a brief overview of the space of Dunhuang Grottoes based on the shape of the grottoes, the content of murals, and statue. Wu Hong, in his book *Spatial Dunhuang: Experiencing the Mogao Caves*, explores the space of both the grotto and its environment, the overall and internal space of the grotto, and the space of murals, aiming to reinterpret Dunhuang Grottoes from the perspective of space and reconstruct the Buddhist ritual process (Wu, 2022). Inspired by his research achievement, this study analyzes and discusses the space of the grottoes via the combination of the three elements of the internal space of the grotto: murals, architecture, and statue. A grotto that integrates different regional cultures, historical characteristics and artistic traditions, can be viewed as the whole space, in order to better explore its architecture, murals, and statue at the spatial level. Specifically, this study attempted to investigate the relationships between the three elements, ranging from three dimensions to plane, and presence to imagination. Based on this, discussion was conducted based on the following aspects: 1) the perceived space—space being processed (the architectural entity); 2) the conceived space—the imaginary space composed of murals, sculptures and architecture; and 3) the experience-based space—atmosphere and feelings, meaning visual perception induced by the space of grotto involving religious rituals.

Cave 25 of the Yulin Grottoes was excavated during a special period when Dunhuang was under the ethnic Tibetan Tubo regime. Ruled by the ethnic group, Dunhuang underwent changes in political, economic, military, and cultural aspects. Thus, the space of religious buildings excavated in the period is slightly different from that of those from previous dynasties. As is known, donors are indispensable in excavating grottoes, drawing murals, and carving Buddha statues. During the occupation of Dunhuang, the Tibetan ethnic group who embraced Buddhism served as a donor, contributing money to the excavation and repair of grottoes. Thus, the Buddhist art represented by their grottoes reflected the characteristics of ethnic culture. Cave 25, in terms of the layout and theme of murals, displays a different style from the previous work. Based on visual expression of the Buddhist scriptures, this study placed the grotto into historic space through an analysis of multiple factors, ranging from the external space to internal space,

the plane space to three-dimensional space, and the physical space replete with murals to the imaginary space inspired by murals, in hope of exploring its artistic connotation from the perspectives of space and vision feeling, to create these components, incorporating the applicable criteria that follow.

2. The Perceived Space—Space Being Processed

Cave 25, located on the upper layer of the east cliff of the cave complex, faces east and west. The cave, together with the surrounding grottoes, constitutes a kind of space with religious functions, such as religious ceremonies and worship practices. The cave is composed of an entrance corridor, an antechamber, a corridor connecting two adjacent chambers, and a main chamber, forming a shape of “串” (a Chinese character) in terms of layout. The main chamber featured a damaged, inverted funnel-shaped roof, with only the lower edges of the north, west and south presenting the remaining thousand buddhas. The south wall of the main chamber is replete with scriptural illustrations of Amitāyurdhyāna Sūtra. (Figure 1) The north wall presents scriptural illustrations of Maitreya Buddha. (Figure 2) The west wall features paintings of Samantabhadra Buddha (on the south side), (Figure 3) and those of Manjusri Buddha (on the north side). (Figure 4) After entering the main chamber, the first to appear is a Buddha sitting on the altar in a cross-legged position. (Figure 5) The Buddha altar, located in the center of the main chamber, is the core of the overall grotto space. Although the original appearance of the Buddha statue was unrecognizable after its restoration, the fact that such statue and murals share the same religious attributes cannot be ignored. It can be inferred that, at the beginning of the excavation of the grotto, the builders



Figure 1. South wall of the main chamber., Scriptural illustrations of Amitāyurdhyāna Sūtra, Picture source: Digital Dunhuang.



Figure 2. North wall of the main chamber, Scriptural illustrations of Maitreya Buddha, Picture source: Digital Dunhuang.



Figure 3. South side of the west wall, Scriptural illustrations of Samantabhadra Buddha, Picture source: Digital Dunhuang.



Figure 4. North side of the west wall, Scriptural illustrations of Manjusri Buddha, Picture source: Digital Dunhuang.



Figure 5. Main Chamber, a Buddha on the altar in the center, sitting in a cross-legged position, Picture source: Digital Dunhuang.

placed the statue and murals into in the same space, in order to bring viewers a specific visual effect and psychological feelings. The Buddha altar is situated in the center of the entire internal space, and forms the visual focus. This is in line with people's habitual thinking that "the visual focus of regular space has its visual

focus at the center.

Behind the Buddha altar is the east wall, painted with Buddhas with the theme of Tubo Esoteric Buddhism, which are represented by Vairocana Buddha and eight bodhisattvas mandala images. Vairocana Buddha (body of essence) is the main body; on its left side are four Bodhisattvas: Akasagarbha, Maitreya, Ksitigarbharaja and Manjushri. Unfortunately, the right side of the existing wall has been damaged. According to the photos taken by Luo Jimei, Sha Wutian speculated that the four Bodhisattvas on the right are Vajragarbha, Avalokiteshvara, Samantabhadra, and Sarvanivarana-Vishkambhin (Sha, 2016), which is in consistent with the viewpoint of this study. In terms of the painting style, the east wall is quite different from the north and south walls. The former is characterized by “being planar”, which is in stark contrast with Depth effect represented by the latter. Such a huge difference is rare among murals from the Tang Dynasty in Yulin Grottoes. Moreover, no combined murals in the Dunhuang Grottoes are exactly the same as the combination of the Eight Great Bodhisattvas. As for this phenomenon, Liu Yongzeng pointed out that the figures on the east wall differ in any known combination of eight Bodhisattvas in Dunhuang, Tubo, and even India (the birthplace of Buddhism); thus, it is very likely that they were a new combination created to meet the needs of the builders of the grottoes (Liu, 2009). This innovation and change reminds us: does Cave 25 still follow the established viewing pattern and use pattern of space? Wu Hung classified the space of the Dunhuang Grottoes into hidden space and external space. The hidden space expounds reasonable viewing patterns and religious ritual proceedings. In the physical space of grottoes, sculptures, murals and architecture represent constituent elements. In spatial relationship, these elements are not only related to but also independent of the whole grotto (Wu, 2020). The sum of the spatial relationships featuring different combinations of elements constitutes the space-based narration mode, serving the purpose of offering grotto viewing and ritual procedures.

3. The Conceived Space—Space Being Guided

Owing to religious devotion, people engaged in the excavation of Buddhist grottoes, which represented the materialization of belief. Throughout history, all excavators used this way to express an imaginary Buddhist world, whether they were virtuous Sangha members or political elites. The murals of Cave 25 express the thought of Mahayana: “All living things have Buddha-nature, and everyone with the Buddha-nature may attain Buddhahood”. Moreover, they embody the believers’ expectations for a wonderful Buddhist Pure Land.

The composition of murals on the left side of the east wall is in the shape of “a cross”, which implies that the right side has the same composition and there exists a symmetrical relationship between the two sides. Such symmetrical relationship shortens the depth of the space, which differs from the circular composition with Buddha as the center on the north and south walls. The judgment of the lost part on the right side mentioned above also relies on this logic of visual and spatial

relationship. From the perspective of the combined images, the painters gave up depicting the depth of the space, focusing on how to combine the images and their layout. Since there are no extant image combinations as a reference, it can be inferred that the painters must have tried their best to preserve the original appearance of each Bodhisattva, in hope of strictly complying with the rituals of constructing religious statues and accurately conveying the religious meaning of the image. From the exquisite interpretation of murals on the south and north walls, it can be seen that the painters were fully capable of shaping the spatial depth of the image, but they abandoned their strengths in painting the east wall. In terms of the north and south walls, the spatial depth created by the circular composition with Buddha as the center, allows viewers to enter a sacred realm that transcends reality, as if being led to the center of the Pure Land, which gives an air of peace and solemnity. Although circular composition has limitations in spatial depth, it is often adopted in religious paintings in order to highlight the important identity of the figure being in the visual center. The content of the murals centered on Buddha also clearly conveys the only approach to salvation from suffering. Moreover, the depiction of the beautiful world in the murals helps free up mind space, which is constrained due to viewers' suffering hardships in real life.

In terms of the overall layout of murals in the cave, on the north wall appears Sutra illustrations on the Descent of Maitreya, which depicts the beauty of the world when Maitreya descends to earth. What it describes is a fantasy world where the beauty symbolizes people's longing for "birth". Such space is conceived based on religious teachings and paintings. The south wall demonstrates scriptural illustrations of Amitāyurdhyāna Sūtra, with its two sides revealing "the Sixteen Meditations" and "the Ajatasatru". The purpose of making these two paintings is not to narrate a story, but to emphasize the contemplation of the Western Paradise, which is the path to reach the other shore. The Pure Land of Ultimate Bliss is the place where Buddhists get rebirth after death in Buddhist teachings. The beautiful and peaceful Pure Land embodies the Buddhists' longing for the unknown world, which soothes people's unknown fear of death and serves as a solace to them. The paintings on the north and south walls, together with Vairocana Buddha and the Eight Great Bodhisattvas on the east wall, are integrated into one, and form a complete expression through gradually advancing the plot. This prevents the content of murals from being separated due to the spatial position relationship of the three planes. The Round Carving-based Buddha statue on the central altar, indicates that it is the Buddha that cares about life and death and represents the medium connecting these two worlds. These three planes form a semi-enclosed space, where viewers feel surrounded by illustrations and become a part of the space, while also feeling visually and psychologically impactful. Therefore, it can be understood that the design philosophy of the whole grotto is to first create plane murals to induce a vision of the Buddhist paradise. Then "initial approaches to becoming a Buddhist believer" are spread for the purpose of reaching the Pure Land of Ultimate Bliss after death. Finally, the image walks out of the wall into the

real world and turns into a statue to be worshiped by people. In this way, the religious ceremony of the grotto space is completed.

Visually guided by the Bodhisattvas on both sides of the west wall of the main chamber, viewers walk into the interior of the cave and perceive the visual space. The space, composed of murals and sculptures, demonstrates all kinds of beauty from the Buddhist Pure Land. Such beauty is materialized and then enlarged to occupy the entire wall of the grotto. The Vairocana Buddha on the east wall and Manjushri and Samantabhadra Bodhisattvas on the opposite side—the west wall, constitute the religious space of the three main bodies of the Lotus Sutra advocated by Mahayana Buddhism. “Among the Shakyamuni trinity, Manjushri and Samantabhadra are the cause, and Vairocana (Tathāgata) is the effect.” (Chengguan (Tang Dynasty), 2024) The combination of these three paintings is a supplement to the Buddhist thought on a different level, with Manjushri representing wisdom and Samantabhadra symbolizing down-to-earth Buddhist practice, both expounding on Buddhist teachings as well as providing guidance on the approach.

On the east wall, a vertically-hung scroll painting appears on the north side, which depicts a Medicine Buddha holding a bowl in his left hand and a staff in his right hand. On the south side is an image of Ksitigarbha Bodhisattva resembling a Bhikkhu in appearance (Sha, 2016). The Medicine Buddha symbolizes salvation in this life, representing the belief of “immortality without illnesses”. Ksitigarbha Bodhisattva symbolizes salvation in hell. According to Buddhist scriptures, after Shakyamuni attained Nirvana and before Maitreya descended to earth, Ksitigarbha Bodhisattva was entrusted by Shakyamuni to swear to deliver all six Realms of Existence from torment. The combination of these two images satisfies the dual desires of sentient beings: “not to fall into hell” and “to be delivered from suffering in this life”. It emphasizes the connotation of Lushna Buddha’s faith—showing compassion towards all sentient beings in the Dharma realm, and reflects the Buddhist concept of “taking across sentient beings universally and liberating all beings”. In the Sutra of the Medicine Buddha, there is a description of sentient beings reciting the scriptures of the Sutra and reading out the name of the Medicine Buddha. If one has a desire to be reborn in the Western Pure Land, then the Medicine Buddha will fulfill his wish and send eight Bodhisattvas to escort him to the Western Pure Land at the end of his life (*The Sutra of the Medicine Buddha’s Original Vows and Merits, Translated by Xuanzang (Tang Dynasty), 2024*). Among the Bodhisattvas dispatched were Avalokitesvara Bodhisattva and Mahasthamaprapta Bodhisattva, both of whom are depicted on the west side of the south wall. In the Western Pure Land thought, as long as people are devoted to reciting scriptures and reading out Buddha’s name, they can be delivered from suffering by Buddha and Bodhisattva, be reborn in the Western Pure Land, and ultimately attain Nirvana and liberation. Moreover, all this can be realized by worshipping Amitābha and the three Saints of the West. This thought is in line with the “Three Thousand Buddhas of the past, present, and future” represented by the Thousand Buddhas on the roof, and with the Mahayana buddhism idea that “All

living beings have Buddha-nature, and everyone with the Buddha-nature may attain Buddhahood” conveyed by the paintings on the four walls. It also complements the religious space of the grotto constituted by murals, statues, and architecture through focusing on the realistic factors such as the connotation of Buddhism, needs for belief, and practice methods.

The interdependent relationship between mural paintings and “space” can be compared to that between “figure and ground” (Arnheim, 2019, translated by Teng Shouyao). Both “Sixteen Meditations” and “the Ajatasatru” depicted on the south wall use borders. The borders help form a closed space, creating a visual effect that the image is separated from the background (which refers to those images without borders); thus the large image in the middle can be seen as “figure”, while small images on the sides as “ground”. In the Dunhuang Grottoes, there are many instances about such central scroll-style symmetrical composition, which forms a “picture-ground” relationship. This form seems to emphasize Dharma practice. Notably, the east wall connects the north and south walls. On the east wall is the Vairocana Buddha regarded as Dharmakaya; in Tibetan Buddhism, Vairocana is located in the center, symbolizing the essence and purity of all things (Lai, 2007). On the north wall are the scriptural illustrations of Maitreya Buddha depicting the Tushita, where Maitreya, the future Buddha, is said to dwell; Maitreya Buddha attained enlightenment in the Land of the Jambu tree and delivered all living creatures from torment. On the south wall, the scriptural illustrations of Amitāyurdhyāna Sūtra depict the sought-for Western Pure Land, aiming to guide sentient beings to reach this wonderful land. The three Buddhas and the thousand Buddhas on the roof together symbolize all the Buddhas in the Ten spiritual realms, representing the sublimation of the content of murals on the three walls. If the grotto space is seen as a whole, then two common boundary lines can be seen on the three walls. These two fold lines help the north, south and east walls form depth space. In this way, the mandala images on the east wall and the scriptural illustrations on the north and south walls are distributed at different depths of the “figure”. The spatial relationship between the three is conducive to highlighting the dominant position of the main wall (east wall) image located in the deepest part of the space. Thus, the recessed space and the three-dimensional Buddha statue form a visual relationship between “figure and ground”, with the “ground” highlighting the importance of the statue as the visual focus. The relationship between figure and ground involves planar and three-dimensional aspects. This means the content of the plane murals creates a sense of religious atmosphere, thereby generating spatial levels. The flat paintings and three-dimensional statues form a relationship between imagination and reality, namely, religious imagination turns into reality—a touchable statue to be worshiped, which not only brings viewers deeper experience, but also creates the hidden space of the grotto.

4. The Experience-Based Space—Space under Environmental Constraints

Inside the grotto—a complete space of religious art, the murals provide rich visual

content and narrative background, while the statue gives the space a sense of reality. However, both feature sanctity. The grotto as an architectural entity offers these artistic expressions framework and support. Paintings and statue as art elements complement each other in the space, enhancing the religious atmosphere and visual impact. In addition to decorating the interior space of the grotto, murals and statue guide viewers' eyeline to the content and help create psychological feelings through artistic means, allowing them to better understand and experience it. This comprehensive art space makes the grotto a place of worship, as well as immersive space offering religious experience. Believers can achieve spiritual purification and religious sublime by viewing murals, admiring statues and feeling the overall atmosphere of the grotto.

The above is an analysis of the design intention of the grotto based on the elements constituting the interior space of the grotto. However, in order to figure out the original context of rituals, it is necessary to review that period of history. Cave 25 of the Yulin Grottoes was excavated during the period when Tubo occupied Dunhuang. The Tubo regime pursued a policy of worshipping Buddha, leading to the number of monasteries in Shazhou increasing from 13 to 17, and that of monks and nuns soaring from 310 to thousands. Under the rule of Tubo, Dunhuang was saved from the "extermination of Buddhism" movement, and thus its development of Buddhism was not influenced. Actually, the Buddhist sects and temple economy flourished to a certain extent with the support of Tubo's policy of worshipping Buddhism (Jiang, 1987). In order to win popular support and restore local order, production and living as soon as possible, the Tubo regime adopted a series of measures after occupying Shazhou to promote agricultural production, such as reducing taxes and purchasing agricultural tools, so that agriculture and the economy could thrive and the regime's stability could be obtained. The creation of grottoes and statues is supported by the ruling class and aristocratic families, so the content and functional positioning of the grottoes are also determined by them, reflecting the aesthetics and needs of this class. In this context, the content of the murals could be reasonably explained. The living conditions of the people depicted on the north wall, such as "no one picks up and pockets anything" and "sowing once gets seven harvests", are likely to represent the intention of the rulers to use Buddhist art to educate people in the occupied areas to behave themselves and obey the rule. The rulers, who depicted all kinds of beauty after Maitreya's descent to earth for appeasing people and educating them, also seemed to pride themselves on ruling ethically and benevolently like Chakravartin in Maitreya worship. Given this, it makes sense that the content of murals conveys the intention of the rulers. The connotation of the mural space on the north wall gives us two obvious hints. First, people lack a deep understanding of Buddhism, so the rulers need to emphasize the concrete benefits of converting to Buddhism; second, the philosophy "one aspires to get something they lack most of all" applied to people at that time. In war-torn Dunhuang, oppression from an ethnic group rendered local people eager to get rid of their suffering. Thus,

Buddhism played the role of a “savior” to appease the people who were displaced due to the war.

The Sutra illustrations on the Descent of Maitreya on the north wall depicted scenes of life, such as “clothes growing on the tree”, “sowing once gains seven harvests”, and “writing and chanting sutras under the tree”. This kind of life was exactly what those nobles were happy to accept, as they were used to living a life without worries about food and clothing. The murals on the north and south walls all depict grand scenes of the palace, reflecting the core aesthetic taste of the aristocratic class. With the secularization of Buddhism, people were beginning to leverage Buddhism to pursue fame and fortune. The designers of the grotto demonstrated their understanding of Buddhist teachings through paintings, statue and architecture, attempting to educate people through religion and help themselves and their families gain recognition, in hope of achieving the secular purpose of stabilizing their rule.

In addition to the ruling class and aristocratic families who funded the grottoes, the builders of the grotto also included those who implemented the specific projects. As creators of Buddhist art, they all looked forward to interacting with the gods they created on a spiritual level. As disseminators of art, their aesthetics and artistic choices also affected the Buddhist art style of a grotto and even a region. Viewers of the grottoes all had a common identity in Buddhism—believers. What do believers want? The scriptural illustrations on the four walls of the cave and on the roof all suggest the worldly purpose in the troubled times with frequent wars and the ultimate goal of embracing Buddhism, that is, everyone can reach the Western Pure Land after death and enjoy the bliss. How to gain it? The answer lies in the space of religious art, where murals, Buddha statues and grottoes tell people that converting to Buddhism is the way to achieve such purpose.

5. Conclusion

Judging from the extant murals from the Tubo period in Cave 25 of the Yulin Grottoes, the grotto is a comprehensive art space that combines Exoteric Buddhism and Esoteric Buddhism in order to promote the Pure Land belief of Mahayana Buddhism. The grotto is a carrier of religious art; the purpose of its excavation lies in publicity and indoctrination, meaning promoting Buddhism and Buddhism-centered political tactics, so as to maintain the stability of the rulers.

The above analysis of the space of Cave 25 of the Yulin Grottoes aims to reproduce the original context of religious concepts and visual experience, in hope of enriching the extant research methods on grottoes from the perspective of space. The methods and purposes of digging the grotto and the functions of grotto changed, this is because when Buddhism was introduced into China, Buddhist scriptures were selected and combined with the local thought. Although we have repeatedly tried to recreate the original appearance of the grotto during that historical period, a lot of important historical information has been erased for various reasons. Only some fragmented information and the broken grotto were left

for future generations. Therefore, there is no way but to leverage these clues to seek the unknown truth.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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