

Heritage conservation under the effect of large water conservancy projects

- *the rethinking of the tangible and intangible heritage conservation*

Zhang, Xiaonan, graduate school of cultural heritage conservation, school of architecture Tsinghua university, mail: 100084, mobile telephone: 13661093655, Email: xnzhangseu@yahoo.com.cn

Tang, Xiaoli, school of management and economics, North China Institute of Water Conservancy and Hydroelectric Power, mail: 450000, mobile telephone: 13253370146, Email: xtangust@sina.com.cn

Abstract: This paper mainly discusses the rethinking of tangible and intangible cultural heritage under the effect of large water conservancy projects, and its impact on the assessment and the protection strategy, which is illustrated by the conservation of the World Cultural Heritage--the Yuzhen Palace, a part of Ancient Architectural Complex in the Wudang Mountain.

Heritage and Heritage spirit

Heritage spirit is formed in the process of heritage formation by the interaction of the creators of heritage and the inherent characteristics of Heritage. In the process of the heritage evolution, the creators and users of the heritage will continue to enrich and develop this spirit. Heritage spirit does not remain the same, but changes with the development of times, social environment changes, and the variation of user groups.

Heritage spirit is reflected by both tangible and intangible heritage. Tangible material cultural heritage is often visible in terms of ancient buildings, ruins, and other forms of material. Therefore, it often embodies the Heritage spirit indirectly and may even be covered up by its own artistic, scientific, and historical values. While the intangible non-material cultural heritage more often directly reflects the natural function and spiritual connotation of heritage, hence, has straightforward connection with Heritage spirit.

Heritage is composed of both tangible material and intangible non-material cultural heritage, but the two exist in different forms. Tangible heritage exists more in historical, concretionary, and epic patterns. Some part of intangible heritage may yet have vitality, and be in the process of evolution. Therefore, it has both historical pattern and realistic evolution. Such a dynamic feature in intangible heritage is also reflected by both dynamic and diverse characteristics of Heritage spirit.

As a result, we should understand heritage and Heritage spirit from not only historical but also evolutionary points of view. The physical pattern of heritage needs to be defined in terms of “authenticity” and “integrity”. On the other hand, we should have a continuous and evolutionary understanding of the abstract Heritage spirit. As for the intangible carrier of Heritage spirit that includes intangible heritage or other things, it is necessary for us to both understand the intangible heritage composition in its historical patterns and recognize the new composition or carrier resulted from its evolution.

The Wudang Mountain is the ninth blessed land of Chinese Taoistic "the 72-blessed land. It is the shrine of Chinese Taoism. The important non-material cultural

heritage carried by the Wudang Mountain Ancient Buildings, being as a world cultural heritage, should belong to the Wudang Taoism culture.

In the Wudang Mountain, the formation of Heritage spirit is a long historical process. Since the beginning of the Eastern Han Dynasty, there were the records of the seclusion in the Wudang Mountain for Retreat, Lianda, and religious cultivation. In the Xuanhe phase of the Northern Song Dynasty, the Zixiaoyuan Palace was built in the Wudang Mountain, and it is known as the "the court of blessing for the state." Up to the Yongle phase of the Ming Dynasty, the development of the Wudang Taoism reached its peak period. Those palaces with variable sizes built by the imperial court basically make up the scale and form of the ancient buildings in Wudang Mountain seen today. In the Qing Dynasty, the Wudang Mountain Taoism was still developing, but incomparable with the period of the Ming Dynasty. The Wudang Mountain Taoism started to decline, so did the Wudang Mountain Taoism buildings.

From the historical evolution of the Wudang Mountain Taoism, we can conclude that the Wudang Mountain, as one of the Taoism holy places, is the source of Heritage spirit, and that the Wudang Mountain ancient buildings, as a world heritage, is exactly the product of this Heritage spirit and also a manner of expressing materialization. Taking the Wudang Mountain as an example, Heritage spirit first comes from the anastomosis of natural environment and spiritual needs of human beings. The natural shape of Wudang Mountain's "the 72 peaks in the big top" strengthens the pursuit of artistic conception of Taoism on their way of searching Taoism. At the same time, the Taoism culture, being as the Wudang Mountain Heritage spirit, gives unique cultural and spiritual connotation to the Wudang Mountain Ancient Buildings. It is such spiritual connotation that directly affects the layout, form, content, and other aspects of the buildings, making it an outstanding example of Taoism architecture in the Ming and Qing Dynasties. It is just Heritage spirit that makes the Wudang Mountain Ancient Buildings having an outstanding universal value.

Heritage spirit and the outstanding universal value

The outstanding universal value of heritage is the basic condition of its landing the World Heritage list. Whether or not is Heritage spirit taken as the reason and motivation for the outstanding universal value coming into being? The creative spirit and outstanding performance of human beings reflected in Wudang Mountain Ancient Buildings are all, without exception, closely related to the drive internal to Taoistic beliefs. Although this interdependence between the two is subject to the the impact and intervention from political, social and other factors, it is undeniable that Taoism plays a sustaining, proactive, and stable role in this relationship. From the historical process standpoint, Heritage spirit should be a most constant, long-lasting, and natural factor or feature contained in the life cycle of heritage.

Further discussed here is heritage, its outstanding universal value, Heritage spirit.

Heritage and Heritage spirit should be a complete whole. Heritage includes not only material cultural heritage, i.e. tangible, such as ancient ruins, buildings and other physical structures, but also relevant non-material cultural heritage, i.e. intangible, such as oral traditions, beliefs, rituals and festivals. The common thing owned by both tangible and intangible cultural heritage should be the characteristic that reflects Heritage spirit.

The heritage composition and the outstanding universal value of heritage are

directly correlated. Whether tangible or intangible heritage should be distinguished and selected based on its outstanding universal value. However, the outstanding universal value of heritage is often reflected in more than one respect.

According to ten standards of landing World Heritage list, the outstanding universal value of heritage would normally have multiple aspects. Whether or not can heritage spirit be set up as its internal common feature or spiritual quality in the outstanding universal value of heritage?

Viewed from this angle, Heritage spirit may be a more core, abstract and natural characteristics of heritage and the outstanding universal value owned by heritage should also be an expression of Heritage spirit.

Therefore, in the process of assessing the value of heritage, through the study of history, the understanding of heritage features and the exploration of Heritage spirit are helpful to the interpretation of heritage value and the assessment of the outstanding universal value.

the rethinking of the tangible and intangible heritage conservation

The tangible and intangible heritage is a closely connected entity. They both reflect the outstanding universal value of heritage, and it can be said that they also reflect common Heritage spirit. For heritage protection, tangible and intangible heritage should be treated as a whole. The protection of the tangible material cultural heritage needs to be considered from the truthfulness and completeness. However, for the protection of the intangible non-material cultural heritage, should we take it as a historical memory, or let it continue to be in a recognizable evolution?

In the truthfulness and completeness assessments of the World Heritage, we much more consider the distinction and protection of the material culture heritage, whereas it seems not accurate to assess non-material culture heritage based on authenticity and integrity. Being as a connotation of heritage, Heritage spirit often still has vitality to a certain extent, and is in a dynamic and slow evolution. In the meanwhile, it also faces the threat and destruction, and lies in a situation of contemporary social neglect and self-declination. For example, being as one kind of Heritage spirit, although Wudang Mountain Taoism culture has certain influence and plays a religious role in contemporary society, it is yet not given deserved important position in the Wudang Mountain Ancient Buildings, a World Heritage. Therefore, it is also in a secondary and marginal situation in the management and conservation of heritage. At the same time, being as an important carrier of Heritage spirit, the non-material culture heritage is more taken as a historical memory for preservation. Being peeled off tangible carrier of material heritage causes the loss of its vitality and evolution function.

An interesting phenomenon worthy of discussion is the restoration of heritage function. From the truthfulness, heritage should be maintained not to be restored by modern people with the lack of basis, as possible as it should. However, from the perspective of completing or restoring the function of the non-material culture heritage, it seems that conducting some identifiable restoration will be of important significance to closely connect tangible and intangible heritage, and to much better and more completely demonstrate Heritage spirit. Among there is some contradiction, which can simply be viewed as the problem of recognizing the relationship between truthfulness and identifiability. On the basis of guaranteeing identifiability, whether or not can the function restoration out of protecting Heritage spirit be distinguished

naturally from rehabilitation?

As for the rehabilitation attempting to restore the historical original appearance and the function restoration out of protecting Heritage spirit, these two are essentially different. For the rehabilitation attempting to restore the historical original appearance, it is believed that there are already many in-depth discussions. Herein no details will be discussed. The function restoration out of protecting Heritage spirit probably also includes some buildings or the construction of the buildings. In the process of constructing these material carriers, those should be reflected are not true reflection of the historical original appearance, but the identifiability of heritage. The material, form, and outlook of material carriers may be different from heritage, but the compatibility or contrast should be considered. The purpose of the construction is not the restoration of the historical original appearance, but the protection and demonstration of intangible heritage, Heritage spirit. The rules obeyed in the construction should be identifiability and reversibility.

See an example of the Yuxu Palace ruins in the Wudang Mountain Ancient Buildings. The Yuxu Palace, being the largest construction in the historical development of the Wudang Mountain Ancient Buildings, was ever the altar of the Wudang Taoism and the place to hold the numerous rituals. The Yuxu Palace ruins fully reflects the grand construction scale of the Yuxu Palace, but the display and protection of intangible heritage that more directly reflect its Heritage spirit becomes a limiting factor. The damage of the architecture causes the loss of part of material carrier of intangible heritage, which would limit or lead to the incompleteness of something, such as some sacrifice rituals in the Wudang Mountain Taoism. On the other hand, from the perspective of the authenticity of heritage protection, it seems that the protection measure of maintaining the current situation is mostly appropriate. The changes in protection objectives may even lead to completely different principles and measures for the protection. This may be the complexity and difficulties of the heritage protection.

In short, the understanding of Heritage spirit contributes to a clearer understanding of the heritage value and composition, and can more accurately protect both tangible and intangible heritage as a whole. The protection measure of continuing Heritage spirit seems to need more in-depth investigations. Especially, helpful to further understanding of Heritage spirit is the distinction of the rehabilitation from function restoration and the discussion about the relationship among the integrity, authenticity and identifiability of tangible and intangible heritage.

The cultural heritage conservation under the effect of the large water conservancy projects

After new China was founded, a series of water conservancy projects were constructed in the Yellow River Basin, namely, the Liujiaxia Reservoir, the Sanmenxia Reservoir, and the Xiaolangdi Reservoir, etc. Also constructed in Yangtze River Basin were the Gezhouba Dam Project and the Three Gorges water conservancy project, leading to tremendous changes in Yangtze River Basin. The South-North Water Transfer Project will be another large-scale water conservancy projects following the Three Gorges water conservancy project.

The construction of large-scale water conservancy projects brings enormous changes to the relevant geographical environment. These large rivers often are also the cradles of Chinese civilization and a great number of cultural relics have retained

in these areas. The construction of water conservancy projects often forms large submerged areas. The human cultural heritage in the submerged area faces an immediate impact from water conservancy projects. This impact causes not only the change of heritage itself, but also the great change of the environment where the heritage locates. Mostly important is that the assessment and understanding of the impact on the heritage spiritual connotation, Heritage spirit, is still not enough yet.

Currently, as for the cultural heritage protection under the effect of large water conservancy projects in China, there are two broad categories, i.e the relocation protection and the original-site protection.

For instance, the construction of the Sanmenxia Reservoir in Yellow River basin caused the first example of the relocation protection, the relocation protection of Shanxi Yongle Palace. The Yongle Palace, formerly located in Ruicheng County, Shanxi Province, was the most complete ancient architecture of the Yuan Dynasty existing in China. When Sanmenxia Water Project embanked to store water, the original site of the Yongle Palace would be submerged. The relocation protection program was to move the Yongle Palace near to Longquan Village, three kilometers to the north of Ruicheng. The relocation process did not change the original size, form, structure and other relic features of the Yongle Palace. Also moved to the new site were all the wall paintings. Any original unsafe factor was ruled out. Part of original state with authentic basis was recovered. Moreover, the process of moving was also displayed after relocation.

Since then, for the cultural heritage under the effect of the water conservancy projects, particularly the heritage in submerged area, the relocation protection becomes normality. For example, the relocation projects under the effect of the Three Gorges Project are as follows: the relocation protection project of Chongqing Yunyang Zhangfei Temple, the relocation and rehabilitation project of Chongqing Fengdu ancient folk residence, and the relocation protection project of Chongqing Dachang ancient town, etc.

The relocation and rehabilitation project of Fengdu ancient folk residence is to put together the following 6 ancient folk residences from different locations to a new site using the method of demolition and rehabilitation, namely, Fengdu Qinjia big yard, Wangjia big yard, Zhoujia big yard, Lujuhe big yard, Luichuan gate, Tianfu temple. Every piece of brick or girder at 6 ancient folk residences is moved from the demolition of the original architecture and is numbered in order. The rehabilitation is conducted in sequence according to the original style.

As for Dachang ancient town, it is the case that, in combination with the migration project, the whole town was shift to a new site and reconstructed. Dachang ancient town located in Wushan county, Chongqing city was built in the year of Taikang, the Jin Dynasty (A.D. 280) and has a long history. The similarity of environmental characteristics to that of original site was fully considered and the continuation of traditional life of users was also taken care of in the process of relocation and site selection. The new site where Dachang ancient town is relocated has consciously retained the environmental feature that is unique to the ancient town so that the relevant value can be continued.

According to the above case only, we can see that under the influence of water conservancy projects the case of using relocation protection become more and more, and that the scale also becomes larger, such as the development from single building, buildings to the town, the reconstruction from single heritage site to a number of heritage sites, and even the emergence of the dangerous tendency of reconstructing the heritage in new site required in the transformation of the old city.

There are often technical difficulties, huge investment, and high cost of operation and maintenance in the protection of the original site under the influence of water conservancy projects. Therefore, only when technology, economic, and management conditions have developed to a certain extent can the protection of the original site be adopted. A typical case is such as the protection of the grottoes in Tianti Mountain in Gansu province that initially adopted the program of the relocation protection after careful exploration and clean-up. The reason for this is that the grottoes in Tianti Mountain were in submerged area because of the construction of Huangyang River reservoir. Except for the Dafu grotto, the 49 statues, more than 100 square meters of murals, and 25 boxes of relics in the small grotto located several tens of meters above the ground surface were all moved to the museum for preservation. In the 1990s, the Dafu grotto water-seepage-prevention cofferdam was built, providing the conditions for the original-site and situ reconstruction of the grottoes in Tianti Mountain. The back-relocation restoration of all original historical relics was performed in year 2006.

Again, the cases that also adopted the original-site protection program are the protection project of White Crane Ridge Inscription on the southern bank of Yangtze River located in Peiling city, Sichuan province, and the protection project of the slope-protection steel-gate cofferdam located in Shibao Village, Zhong County, Sichuan Province.

White Crane Ridge Inscription protection project selected “no-pressure containers” program in which the prevention of Inscription from sand wear is achieved by constructing a shell in original site, and adjusting the pressure inside the shell equal to outside prevented the Inscription from the influence of the pressure of deep water. At the same time, constructed along both sides was the arcade for visiting, through which visitors can go underwater to observe the stone inscription.

The slope-protection steel-gate program selected in the Shibao Village protection project is such that the embankment is built surround Shibao Village, but a breach was left 50 meters ahead of the village, and part of the wall was replaced with mobile steel gate. At high water level, closing gate can protect the gate of the village. In contrast, at low water level, opening the gate can recover the complete appearance of the village and its gate.

No matter what protection program was selected, all the above cultural heritage protection projects under the effect of water conservancy projects generally went through a scientific process of detailed preliminary investigation, video recording, in-depth assessment of the value, comparison studies of multiple programs, and experts’ approval and proof. The greatest effort made under any possible condition was paid to the full and maximum extension of the heritage value. If, however, observed from the perspective of Heritage spirit, the Heritage environments in whether the relocation protection or the original-site protection all have experienced huge and even fundamental changes. Then, what kind of impact of Heritage spirit would be? How to evaluate the impact of Heritage spirit?

First, the heritage value and Heritage spirit are different. The heritage value means the significance of heritage to history, art, science, human, and other different aspects. Heritage spirit is an abstract, ideological connotation implied in heritage and is related to heritage itself, environment, and other heritage components, and more closely to human memory. Changing of the environment of heritage will result in the change of this memory carrier. Doesn’t the change of memory carrier affect the memory itself? Therefore, even though the protection program extends the heritage value maximally, if without the study of the assessment of Heritage spirit impact, then its impact on Heritage spirit is still not identified.

Whether or not can the assessment of the impact of Heritage spirit be analyzed from the relationship between the heritage composition and Heritage spirit? From the perspectives of heritage itself, environment, and non-material cultural heritage, etc., we should first analyze its relation to the emergence and formation of Heritage spirit; then analyze different component's weighted-impact on Heritage spirit in which, of course, there is a need of resorting to some strategic-analysis methods, such as, Delphi method; finally, evaluate the impact of protection program on the heritage composition and resulted impact of Heritage spirit.

Essentially, heritage value and Heritage spirit should be unified. The value reflects Heritage spirit, while Heritage spirit should be the most core nature of a heritage. Therefore, the assessments of the value effects of protection programs and the effect of Heritage spirit should not be contradictory. The assessment of the effect of Heritage spirit will only facilitate to clearly understand the the core values of heritage, and provide protections.

The thinking of the protection of Yuzhen Palace in Wudang Mountain

Another large-scale water conservancy project following the Three Gorges water conservancy project is the South-North Water Transfer project, which forms the overall layout of south-north water transfer that includes east, center, and west lines, and comparison plan. The central line of the South-North Transfer project will start to supply the North in year 2010. At the time, the water level of Danjiangkou Reservoir will increase to position of 170-meter from current 156-meter, which causes that part of the area with the radius of 300 kilometers around reservoir would be submerged permanently. The Yuzhen Palace is right located in this submerged area.

At present, there are three options in the Yuzhen Palace's heritage conservation program, i.e. the cofferdam protection program, situ uplift program, and the site shifting and reconstruction program. Among the above three options, the cofferdam protection and situ uplift programs belong to the type of the original-site protection, in which there is complex technical issues to be solved. For example, the selection of cofferdam protection program will result in both a substantial increase in the groundwater level and the changes in local physical environment, which will bring uncertain and relatively greater risks to the protection of heritage itself. Moreover, the fact that Yuzhen Palace retained not only ancient architecture but also a large amount of construction ruins puts the selection of protection measures into a more complicated situation. On the other hand, the site shifting and reconstruction will inevitably cause damage to the relationship among the ancient buildings in Wudang Mountain. In the meanwhile, the selection of the new site is also a relatively difficult problem.

From the perspective of protecting Heritage spirit, we should maintain the overall integrity and completeness of Wudang Mountain Taoism buildings whose spatial relationship and site selection have closely related to Taoism legend and pilgrim Taoist. In a sense, the spatial location of the Wudang Mountain Ancient Buildings is possibly even more important than the building itself to the significance of protecting Heritage spirit.

Therefore, the protection of the Yuzhen Palace should be performed on the basis of ensuring of Heritage spirit. On this basis, it is just the case that the protection program, whether cofferdam protection or situ uplift, is selected according to the feasibility of technology. Even if the situ uplift program is selected, there is a need of

further analyzing ancient building and construction site and then taking separate technical measures.

In a word, through the research and understanding of Heritage spirit, in the case of the Yuzhen Palace protection program, first is to ensure the common protection of Heritage spirit and heritage value, and secondly, is to study the technical means of protection program. Technology serves the purpose of protection, but not determines protection program based on technical means. Therefore, the study of the Yuzhen Palace protection program must perform the evaluation of heritage value and Heritage spirit impact.

Reference

The Illustrated Principles for the Conservation of Heritage Sites in China. Operational Guidelines for the Implementation of the Protection of the World Cultural and Natural Heritage Convention, 2005.

Zhang Song, "International Charter for the City Cultural Heritage Protection and the Selected National Legislation", Tongji University Press, January 2007.