

Protection of Cultural Heritage in Uzbekistan: Practice and Experience

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Abstract: This article deals with the issues of museumification of archeological monuments in Uzbekistan on a scientific basis. In particular, in recent years, research on the study, classification, restoration and conservation of unique monuments has been reflected. At the same time, different approaches and criteria for the museumification of archeological monuments, such as the historical significance of the monument, the degree of preservation and artistic value, are discussed separately. As a result of the research, the work on the museumification, conservation and restoration, preservation and documentation of archeological monuments was discussed.

Keyword: Archeology, museology, restoration, conservation, complex, heritage, laboratory, experiment, research.

1. Introduction

Today, museums are changing with the times. One such transformation was the advent of museology. The concept of “museumification” first appeared in the 1920s in the works of F.I. Shmidt¹.

The essence of museumification is to show archeological objects as a whole, to show the interrelationships between its individual features. It is also a great way to preserve archeological monuments by converting them into an archeological park or museum, especially in the implementation of the program of museumification of historical and cultural heritage².

Museumification of archeological monuments remains one of the most important issues today. There are almost no museums that have not encountered this or that form of museum problems. They have clashed with many museums that previously worked only with collections and expositions of portable monuments. It is safe to say that in the coming century, this idea has not only survived, but accelerated³. The practical peculiarity of archeological monuments is that museumification is, in fact, the only way to use them as a museum object. There are a number of measures aimed at preserving such monuments.

The museumification of archeological monuments not only solves the problem of their preservation, but also turns the monument into a tourist object and introduces the national cultural heritage to the general public by including it in the museum network⁴. The scope of work in the museum of archeological sites is carried out in the following order: identification, scientific research, restoration of the object, the organization of the exhibition. The design work can even be carried out in parallel with the excavation work, and the recording (fixation) of the monument in the process of research can be carried out taking into account its subsequent museumification. They only need to be museumified in their place.

The issues of museumification were also discussed at the 1980 All-Union Conference on “Problems of Preservation of Archaeological Monuments in Settlements” in Yerevan. Archaeologists O.N.Bader⁵ and A.N.

Medvedev's⁶ research provides relevant suggestions for the museumification of archeological monuments.

Archaeological heritage is often seen as a complex that is inextricably linked with the cultural landscape, and it is possible to form a unique archeological component of the cultural landscape by connecting and harmonizing with the objects that make it up⁷.

Among such archeological monuments, rock carvings have a special place, which are of great interest to spectators and tourists. Exemplary restoration and conservation works were carried out in the caves of Altamir in Spain⁸ and Lasco in France⁹.

In the case of museums of rock art, it is advisable to think about how to display them to visitors. For example, in Russia, two museums based on petroglyphs, "White Petroglyphs" in Karelia and "Tomsk Manuscripts" in the Kemerovo region were established¹⁰. Since the monuments are located under the open sky, there is no problem of possible changes in the microclimate of the monument.

It should be noted that it is difficult to directly and indirectly visualize the external features of archeological heritage sites, which are subject to erosion due to strong anthropogenic and natural influences¹¹.

There are different approaches to the museumification of archeological monuments, and the following criteria are followed in the selection of objects for museuming: historical significance, level of preservation and artistic value¹². Proper implementation of this sequence of approaches will allow this historical monument to create a more impressive and interesting, clear image for visitors.

It is very important to take into account the original preserved part of the monument, mainly in museums and especially in exhibitions. It should be noted that in order to clearly see where the original parts are located, the part of the monument being repaired must be separated from the original.

The most popular method of museumification of archeological monuments is the conservation of parts of the object under the open sky, in which the exhibits found during excavations in a separate building are mainly in harmony. Another method is to install shelters, pavilions and other protective equipment on top of archeological sites to protect them from atmospheric influences.

Archaeological excavations are carried out at many monuments in Uzbekistan every year. The main excavations are in Afrosiyab, Koktepa, Kofirkala, Dabussia in Samarkand region; Sangirtepa in the Kashkadarya region; Poykend and Uchkulak in Bukhara region; Axsiket in Namangan Province; Mingtepa in Andijan region; It is being carried out at facilities such as Old Termez and Kampirtepa in Surkhandarya region.

Archaeological excavations will reveal complexes, defense structures, handicraft workshops and habitats. Clay and plaster materials were mostly used to decorate the interiors of the building rooms. After archeological excavations, the remains of ancient buildings made of water-resistant and brittle materials begin to deteriorate rapidly in the open due to the influence of weather and climatic factors. In addition, groundwater close to the surface and dissolved mineral salts change the structure of raw brick under the influence of air.

During the archeological excavations in Uzbekistan, which began in the 60s of the last century, the issue of conservation of the most unique objects discovered at the time of excavations in the ancient cities of Afrosiyab, Kofirkala, Erkurgan, Kanka, Shahrukhiya, Toprakkala, Old Termez and many others arose. At that time, there were no effective methods of preserving raw brick structures, and therefore many of them were buried with soil. For example, the palace complex of King Varkhuman in Afrosiyab can be included. In his ceremonial hall were found VII century patterns that are famous all over the world. The practice of burying excavated and studied rooms is still present in a large number of monuments, where archeological excavations are still being carried out.

In the 80s and 90s of the last century, as a result of the growing influx of foreign tourists interested in the historical and cultural heritage of the Uzbek people, the work on conservation and museumification of archeological monuments began. Restorers of the Institute of Archeology conducted research on the development of chemical methods for the conservation of archeological objects made of clay and raw bricks. The method of conservation was tested in the Bronze Age monuments of Sopollitepa and Jarkutan (Surkhandarya), ancient and medieval (Afrosiyab in Samarkand, Kanka, Oktepa and Shoshtepa in Tashkent) and positive results were obtained.

In the ancient city of Afrosiab, a partial restoration and chemical conservation work was carried out on the defensive wall of the VI-V centuries BC. Monitoring of this section over several years has shown that the wall is in a satisfactory condition. A more complicated situation arose in the experimental plots of the Bronze Age monuments Sopollitepa and Jarkutan. Restoration work was carried out on some parts of the walls to restore certain parts of the walls. These monuments are located between artificially irrigated cotton fields. In the absence of a protected area, irrigation work in the agricultural areas around the monument led to a rise in groundwater levels. The soil in this area became saline, which led to an increase in the impact of salts on the

surface of the monument walls, which resulted in degradation in both experimental and untreated areas.

The accumulated experience in the chemical conservation of archaeological monuments suggests that any successful technology for the consolidation of monuments made of raw bricks will also lead to failure without complete museumification of the object. Monument structures that are not protected from the vandalism of visitors, atmospheric precipitation, sudden changes in temperature and humidity are crumbling, which leads to the need for constant repair and restoration.

At present, the method of chemical conservation of archeological complexes discovered by the restorers of the Institute of Archeology is being combined with the method of their museumification. Coverage is now being built on the excavated structures. Visitors will have the opportunity to get to know them only visually. For example, such work is being carried out at the Karatepa Buddhist Complex. Such projects, ie the necessary conservation and museumification, require the involvement of specialists in various fields and the use of building materials. This leads to significant financial costs. That is why today the most unique monuments are selected for conservation.

One of the most important structures of the Karatepa monument is a large stupa located in an above-ground temple complex in the northern hill region. Excavations and historical analysis show that this is one of the largest Buddhist stupas present in the Central Asian region.

In 2000, the stupa and part of the courtyard where it was located were covered with a 5-meter- high roof, and the problems of removing atmospheric precipitation were solved. Annual monitoring has so far shown no deterioration of the old structures.

Currently, an engineering project is being developed to cover the roof of the Karatepa temple complex. This will allow, on the one hand, to preserve the unique Buddhist buildings of Karatepa for many centuries, and on the other hand, it will become a unique open-air museum for tourists. In 2002, for the first time in the archeological practice of Uzbekistan, a new method of conservation was used in Karatepa. In particular, the walls of the devices were lined with old-fashioned raw bricks up to a certain height and covered with a flat roof. Such a method of conservation was applied on the cells of a Buddhist temple. Their walls and old interior elements are well preserved. Thanks to the work done, the walls and interior of the rooms have been preserved for future generations and open to visitors.

In Karatepa, the protection of well-preserved wall surfaces from the adverse effects of the external environment by the method of black cellophane coating is widely used. This method covers parts of devices that are more susceptible to precipitation. Initially, light-colored cellophane was used for this purpose. However, under sunlight, the moisture at the bottom of such a film increases, a greenhouse effect occurs, and the outer surface of the walls loses its original appearance. No such effects were observed when black cellophane was used. The walls are covered with film every year in the autumn-winter season. With the arrival of stable weather, the film will be removed and visitors to Karatepa will be able to get acquainted with the excavated structures.

Certain conservation works are also being carried out in the old city of Old Termez, where restoration work is being carried out on the south-eastern part of the defensive wall made of baked bricks of the XII century. Ancient bricks found on the surface of the old town are used to restore the wall. As a construction mixture is used "dirty" composition consisting of sand, lime and reed ash. Such a mixture was used by medieval builders in the ancient East. The mixture will be very hard. Importantly, such a mixture is cheaper than modern.

Similar conservation and restoration work is currently underway at the Kampirtepa monument. Under the leadership of Academician E.V. Rtveladze, the staff of the Institute of Art History is working on the conservation and restoration of the monument. Especially noteworthy is the work done on the defensive walls and towers of the ancient city. They were restored at the height of ancient walls and towers, taking into account all the structural features of the architecture.

In the process of researching the monuments, unique elements from the monumental decorations of the palace of rulers, the ceremonial halls and living rooms of the rich, as well as places of worship have been identified. They include majestic color images from different historical periods and regions, clay and plaster sculptures painted with mineral paints, and plaster and clay carvings. Examples of these ancient art masterpieces can be found in Varakhsha, Afrosiyob, Bolaliktepa, Karatepa and Fayaztepa Buddhist centers, Kuyavkurgan, Tavki and many other monuments. They are brittle and often fragmented. It is impossible to preserve them without the use of special methods of chemical preservation. The Institute of Archeology has developed the most effective methods for the conservation and restoration of priceless works of art as a result of many years of laboratory research.

In recent years, the laboratory of the Institute of Archeology is working on the study and restoration of unique specimens of Afrosiyab murals. Scientific research has shown that, taking into account the condition of the patterns and the technique of their creation, new compositions of artificial plasters for the processing of fragments, methods of separation of secondary paint layers have been developed. At the same time, the study of the chemical composition of materials (plaster and plaster layers) used by ancient masters was carried out. The best way to preserve and restore fragments is to choose the right materials. This is a guarantee of preserving the monument in its original state and allows it to be given the lost strength¹³. Due to the selective use of conservation methods, brittle and crumbling fragments are gaining strength. The processed materials replenish the funds of our museums and introduce the history and culture of the people of Uzbekistan to the world community.

During the years of independence, significant work has been done to preserve and document the rocks. In particular, the identification, storage and monitoring of degraded rocks in Sarmishsay, as well as the preservation of unique rock carvings are a clear example of this. Documentation was carried out in accordance with the standard developed and adopted at the Regional Training Seminar held in 2003 at the Tamgali (Kazakhstan) Rock Art Gallery, organized in cooperation with UNESCO. The obtained materials were prepared for the creation of the database “Central Asian petroglyphs”¹⁴.

In addition to their scientific research, the most important issues related to rock paintings include the task of preserving the images and passing them on to future generations. Natural disasters such as earthquakes and floods can be cited as factors that damage rock paintings. However, the biggest damage is caused by visitors to the monument, who leave their “product of creation” on the stones, which are supposed to reflect the rock paintings. Such unsightly work they do by sprinkling mud on the stones, carving with a sharp-edged tool, or by painting cylinders of different colors. As a result, rock paintings are damaged to varying degrees. Unfortunately, the “memories” left by the carving cause irreparable damage to the original photos. In any case, stains in the form of inscriptions or marks left on the flat stone using paint can be chemically removed.

Substances such as acetone and hot steam were used in the experiment to erase the various notes or marks left by visitors. For example, in practice, the cleaning of paints soaked in stone in acetone was eliminated. However, the natural blue color left by the fungi (lichens) on the stone surface has not faded. In this case, the use of boiling steam from a previous existing experiment gave good results, and the petroglyphs came to their original appearance. In this regard, alternative high-pressure cleaning devices (e.g. Tornado ACS) are being used abroad to clean painted graphite in rocks. Such alternative high-pressure cleaners clean algae, moss, exhaust gases, salt layers, dust, and graphite on rock surfaces well, even without water or chemicals. Most importantly, it does not pollute the environment¹⁵.

Restorers not only clean rock paintings, but also do conservation work to extend their life. An example is the chemical cleaning, conservation and museum work carried out by scientists and restorers in Sarmishsay in the mid-2000s. Here the tops of the rocks on which the paintings are drawn by them are covered with a stone umbrella. As a result, according to the monitoring conducted several years later, the condition of the pictured stones has not changed, i.e. remained stable. No new cracks appeared on their surface and the old ones did not enlarge. No cases of stratification, fractures and microcracks were observed¹⁶.

New substances are also used in the practice of conservation of rock paintings. For example, Movilith DM 123 S is a copolymer and MSN 7 solutions (Movilith DM 123 S is a non-plasticized aqueous copolymer dispersion based on vinyl acetate and polyunsaturated vinyl ether of MSN 7); 7- 80) - a solution of polymethylsilylazan in toluene.) was used. Subsequent observations show that these substances were used, that the chemically hardened rocks were well preserved, that is, that the glued pieces did not move, that the fillings (mastic) in the cracks were in place, and that no movement or cracking was observed.

The author of this article can also cite foreign experience in cleaning the inscriptions on stone surfaces. In particular, chemical and physical methods were used to clean the inscriptions on the museum's stoneware “Universal dye remover”, liquid soap, alcohol, sterilized liquid, special paper, etc. were used. First, the solution was applied to the stone surface using a cotton swab. After 15-20 minutes, the melted soft paint was removed using cotton swabs. In the next step, the liquid was cleaned using a 1:10 solution of soap in water. After cleaning, the stoneware was washed with distilled water. Even then, writing marks remained on the surface, and they were cleaned mechanically, that is, using a scalpel. The object was then washed again with liquid soap and distilled water. After cleaning, the cracks in the stone surface were filled using epoxy resin. Filled mastic was leveled with a bar machine and painted with a mixture of artificial glue (Cemedine), micro-air balloons

(Micro-balloon) and pigment, and finally acrylic paints¹⁷.

It should be noted that Uzbekistan has a rich experience in the field of conservation and restoration. Undoubtedly, these experiments should be widely introduced in all archaeological monuments under study in the first place. Conservation and restoration of archaeological monuments requires large financial costs. During the years of independence, more attention was paid to the problems of conservation and restoration of monuments. But there are certain problems in conservation and chemical-technological study. At present, laboratories do not have the capacity to perform certain types of analysis required for the scientific restoration of art culture subjects. Foreign organizations and experts are helping to solve these problems. Archaeologists of Uzbekistan have always been among the first to apply the achievements of natural sciences in archaeology. For example, the work carried out by the Chemical Technology Laboratory of the University of Barcelona on the program of archaeometry and geophysics. Of particular interest are the geophysical surveys conducted in Old Termez. Interesting information about the structure of individual structures of the ancient world without archaeological excavations was obtained from this monument. We believe that the development of such technologies will be an important factor in achieving positive results in the future.

In recent years, scientific research has made remarkable discoveries in monuments using modern equipment based on the methods of the exact sciences. Examples of this are methods in the areas of periodization, content definition, and 3D image capture. This knowledge and tools will allow for a correct interpretation of past labor tool making technologies and craft history.

A large set of restoration works was carried out with the materials of the Munchoktepa monument. There, for the first time in Central Asia, coffins made of reeds were found in underground tomb¹⁸. Since reed coffins were first encountered in restoration practice, methods for the preservation of this brittle material were developed in the laboratory of the Institute of Archaeology. Using the developed methodology, 18 coffins and other unique objects (woven baskets, wooden tables, dishes, etc.) were restored and exhibited at the Pop Archaeological Museum¹⁹.

In short, it is expedient to divide historical and cultural monuments into museumification, partially museumed and objects that need to be museumified, to classify archaeological monuments and to develop methods of museumification. Methods of museumification, preservation and restoration of historical and cultural monuments are diverse. The rapid use of new technologies in all areas, including the preservation and conservation of cultural heritage sites, is proving to have a positive effect. The most important thing is to reserve and display the original condition of historical objects for as long as possible. Such practices are very important in preserving cultural heritage.

2. Literature

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