

# **Restoration of Painting of Architectural Monuments - Text for ACCU Training Course**

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## **1. Introduction**

In conservation of architectural monuments, restoration is necessary to maintain the structure. Painting on the outside of monuments tends to deteriorate due to the effects of sunlight, wind, and rain. In Japan, restoration of paintings has been implemented for many years to preserve our cultural properties. However, repainting hides the original and in the worst cases can even destroy it. In other words, restoration of painting that involves complete repainting leads to the loss of original painting that had been maintained as historical heritage/cultural heritage. Restoration is an act that affects what historical heritage is. We need to first recognize this point.

Many architectural monuments have been repainted in the past. The current painting restoration in Japan gives us an impression that the basic principles of painting restoration have not yet been fully established. This paper describes the methods of painting restoration currently applied in Japan and examines future directions of painting restoration.

## 2. Role of Painting for Religious Architecture

Many wooden structures in East Asia, including Japan, are painted in some way, particularly religious architecture. What was the role of painting in religious architecture? It can be broadly divided into two roles.

The primary role was to protect the surface of the structure from weathering. Paint coats and effectively protects the wooden base. In case of wooden architectures, painting is extremely effective for protecting the wood's surface.

The second role was to announce the functions and roles of the structure by converting religious characteristics to visual information of colors and shapes, or to enhance its religious authority. Many types of religious architecture are extensively decorated by paintings that play this role so as to secure their solemnity. A variety of painting methods are used for this purpose, including the method of directly drawing Buddhas on pillars and board walls, and the method of translating religious themes into symbolic colors and patterns.



Fig.1 The *torii* gateway at the entrance to a Shinto Shrine



Fig.2 The main building of a Shinto Shrine

### **3. Method adopted for Restoration of Paintings in Japan**

First, let's look briefly at how painting restoration has been conducted with the aim of preserving and restoring cultural monuments in Japan.

In Japan, the restoration of cultural properties started in 1897. The restoration of paintings from 1897 to 1928 was implemented based on the following rules.

- (1) If a painting is conserved relatively well, only exfoliation-preventive measures are taken and no colors are added.
- (2) New replacement wooden parts are painted to look old so that they cannot be immediately distinguished from the original parts.
- (3) Except for Nikko Mausoleum, exterior lacquer is mainly re-applied, and colors are also repainted in the original colors.
- (4) If an original pattern is identified through minute study, even if it is badly exfoliated, some parts may be restored to their original colors.
- (5) Reproductions and sketches of wall paintings and decorative patterns are created to retain records of the original state.

Not all practical restorations are conducted in the above ways. However, they were the principles behind painting restoration at that time.

Since then, painting restoration involving repainting has become more common, while holding to the above concept, and this trend has continued up to the present.

The concept of protection of cultural properties, i.e., its governing principle, is connected to social attitudes. Historical development of charters on the protection of cultural properties, including the Athens Charter in 1931, the Venice Charter in 1964, and the so-called Nara document in 1994 are evidence of this connection. Next, methods applied to actual painting restoration in Japan are described.

#### **Type I: Repair to maintain the Present State**

A method adopted when the painting is in good condition, and when the values of the painting contents are artistically and culturally high. This case is mainly seen on the painting of the interior parts of the building. In this case, no restoration is applied to the actual painting. The surface is cleaned, and treatment to prevent exfoliation is applied if its present condition, such as detachment of the painted layer from the base material, has a detrimental effect on conservation.

**Type : Partial Repainting (Partial Repair)**

A method of maintaining the present state, but at the same time, supplementary painting is conducted on parts where exfoliation has occurred and the wooden base is exposed. A treatment for preventing exfoliation may be applied to a part where deterioration of painting is noticeable. Even though the wooden substrate has not yet been exposed, repainting may be carried out in limited areas where deterioration is progressing.

This restoration method is often applied when the deteriorated portion on the painting is small, or for maintenance restoration needed after a complete repainting has been undertaken for restoration (described next).

**Type : Complete Repainting**

A method adopted mainly when an entire painting is exfoliated and has deteriorated. The repainting area is limited to the exterior or extends to the interior. In some cases, the current painting is totally scratched off and repainted. In other cases, items in good condition are conserved and repainted. Even in this complete repainting restoration, some parts may be preserved in their present state.

The majority of restoration and conservation projects adopt this complete repainting method. However, in the light of the fact that the painting itself is a part of the cultural heritage, this is the most controversial method.

Painting restoration in Japan takes place based on the above three methods. In fact, since deterioration of architectural painting is not uniform, these methods are combined in practice.

I have mentioned that complete repainting has been conducted on both interior and exterior of architecture for restoration of many cultural properties in Japan. I also mentioned at the beginning of this paper that painting is likely to deteriorate due to weathering. I have also pointed out that the principles of painting restoration have not been firmly established in practical painting restoration in Japan. Taking into account the fact that cultural heritage is often completely repainted and that painting itself is a part of the cultural heritage, we need to urgently re-establish guiding principles to govern painting restoration. What concept should it be based on?

In tackling this challenge, I will first confirm the positioning of painting itself in the historical relics, and then examine what form restoration should take in the future.

**4. The Cultural Value of Painting**

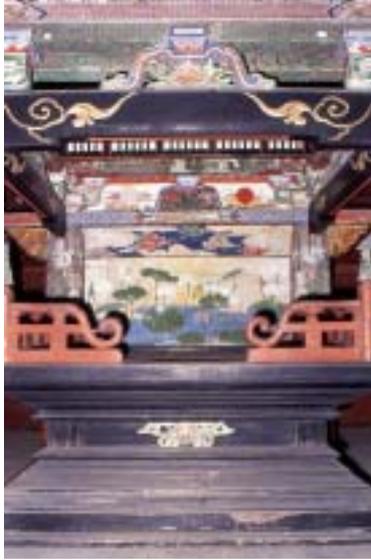


Fig.3 painting inside the pagoda

When preserving and protecting cultural properties, what should we keep and pass down to following generations? In considering this issue, it is important to gain an accurate grasp of the historical and cultural values of each target relic selected to be preserved. I have already described the roles and functions of architectural painting in historical monuments. Here, I will discuss further the value of painting as cultural heritage.

From the past days, colors have been effectively used for enhancing the solemnity of religious architectures. What do colors in architectural monuments tell us in the present day? Investigation of this point leads the understanding of the value of painting as cultural heritage. Colors are examined next with respect to their design and techniques to study this point.

#### **4-1. Cultural Value of Painting from the aspect of Style**

When we enter a colored religious monument, we sometimes experience an extraordinary feeling that space and time, in its religious form, envelops the monument.

The primary intention of coloring religious monuments is to convey suitable religious messages while giving it a magnificent and dignified appearance. Accordingly, the paintings appear to be based on religious doctrines and ethnic beliefs. We can thus understand that colored monuments play the role of conveying religious faith directly to people.

Paintings have two ways of fulfilling this role. One approach is to create pictures such as Buddhist paintings based on subjects that directly represent religious doctrines. The other is to express the same subject, but converted into patterns and designs. Colors are also one form of expression. In other words, the coloring of religious monuments is not just for decorative purposes: it is another way of expressing the essence of religious and ethnic beliefs.

On the other hand, the importance of the coloring of historical relics with respect to design is related to the interest of those observing the relics. The positioning of coloring already described is directly linked to the transmission of religious messages to the population. However, the importance of coloring in relics tends to be in proportion to the interest of the viewers. More specifically, it is possible to make comparative studies of religious and cultural aspects in East Asia through coloring in addition to coloring as a specific religious message. We can also study the aesthetic differences among countries.

In this way, diverse academic studies can be developed through painting, and thus painting as design has a variety of useful values as a cultural property. Next, the value of painting as a cultural property is studied with respect to techniques.

#### 4-2. Value of Painting as Cultural Property from the aspect of Techniques

There are several methods of classifying coloring techniques. One is to focus on the colored surface. In Japan, one method is to classify coloring by drawing style. For example, this includes *hira saishiki* and *okiage saishiki*. Another approach is to classify techniques by differences in coloration methods and finishes. All of these techniques affect the colored surface, and the techniques used are characteristic of particular historical eras.



Fig.4 Painting by *hira zaishiki* techniques

Next, another approach is to classify coloring techniques by the process of painting itself, and to identify the techniques applied in each process. This is briefly described below by process, referring to research tasks that arise.



Fig.5 Painting by *okiage zaishiki* techniques

The coloring process is roughly divided into the steps of design planning, base coating, pattern transcription, and coloration.

Design planning involves thinking and examining what to draw by making a preliminary sketch. It is rare for the sketch to be kept. However, if the preliminary sketch for a particular work were to be found, it would represent a major academic advance in the study of art and art history.

Base coating is the step of coloring the base material for the first time. The rest of the coloring is applied to this base-coated surface. Accordingly, under normal conditions, the base coating does not appear anywhere on the surface. The research focus with respect to base coating is thus a study of the materials used for base coating.

Pattern transcription is the step of transferring previously sketched designs and patterns onto the target surface. One research issue in this step is to investigate what kind of materials and tools are used for transcription, such as a *nenshi* (a sheet of paper on which outlines of images and patterns are drawn) and pattern paper. Transcription methods can often be read from remains on the base coating.

Coloration is the final step. This may be divided into two steps: the first coat and top coat. Similar to investigation of paints used for base coating, paints (pigments, etc.) used in

this step have been more actively studied in the pursuit of materials science, with the participation of numerous researchers in the fields of history of art and conservation science.

The researches into each step of coloring lead to a better understanding of the techniques used in the past, and thus the immense value of paintings as cultural records can be assumed in view of the techniques used.

However, these techniques can only be studied if coloring as an object, i.e., the actual painting layer, exists. All depends on the presence of the original painting layers. In particular, attention to the techniques in each step, described above, is related to making provisions on techniques for restoration, and is thus very important.

Furthermore, in Japan, the study of techniques used in original painting has the potential to lead to academic achievements extending over much broader areas: the history of technology, culture, and so on, since painting techniques in Japan were mostly introduced from China.

In general, technologies and techniques are handed down practically and specifically from person to person over centuries. At the same time, however, we must not forget that information is also handed down in the form of physical objects. Original paintings are of crucial importance as an information source on painting technology and techniques that are transmitted to us through physical objects.

## 5. Principles for Restoration of Painting

As described above, when we recognize the value of painting in architectural monuments as a cultural property, we realize the gravity of the problem of painting restoration in accordance with the policy of complete repainting. Next, I will discuss what form painting restoration should take in the future. To examine this issue, I will first present three problems.

First is related to the essential role of painting in architecture: how we should interpret the presence of painting as a protective covering of a wooden base.

Second is how we should interpret the actual painted objects, which are defined here as religious monuments, and how we should interpret architecture, which is also part of our historical heritage. In other words, religious architecture continues to live spiritually as places for practicing religious activities. Naturally, the paintings applied to such architecture cannot be simply regarded as “cultural heritage-type physical objects”.

Third is how we should protect and preserve painting itself as part of our historical heritage in line with the problems mentioned in 1 and 2.

When examining future painting restoration by comprehensively interpreting the above three points, I believe that the principle of protecting cultural properties can gain broad social support. This may not be easy, but I wish to envision a future image of painting restoration.

Firstly, I will discuss the first problem. Painting applied to wooden architecture can easily experience damage due to weathering, as I mentioned at the beginning. In case of lacquer, the urushiol in raw lacquer, which is tree sap, suffers significant deterioration when exposed to ultraviolet rays. The animal glue used as a conglutinating agent for the coloring is weakened by the effects of ultraviolet rays, humidity, etc. When this kind of painting which protects the wooden base is lost, the wooden base is completely exposed, and its surface rapidly deteriorates.

From this viewpoint, this is not just a problem of painting but is also a danger to the survival of the wooden structure itself. Horyu-ji Temple, a wooden structure, has survived for a long period but still only one thousand and several hundred years. Protecting these structures, made of organic materials, far into the future, is a major challenge. It is important for countries that have wooden architecture to examine the principles of restoration from this viewpoint when considering future painting restoration. It will be necessary to carefully examine restoration technology and work methods in line with restoration principles.

Next is the second problem. To what extent can today’s Japanese truly understand the religious nature of historical sacred architecture? Japan has progressed far economically, and people now pay less attention to religious issues in their lives. Although registered as cultural properties, religious structures are also definitely sacred sites.

In the contemporary world of faith, it is believed that the role of painting, to give solemnity to a religious architecture, must be contemporary and not antique (this expression may not be appropriate, though). In other words, it is quite possible that painting which has lost its original effect may be repainted from this standpoint. Those involved in restoration are required, therefore, to have a respectful attitude toward the owner of the cultural architecture. I believe it is important to understand what kind of restoration the owner requests, after which it is necessary to examine the restoration policy in accordance with the principle of preservation of historical heritage.

Lastly, the third problem. How we should examine the principles of painting restoration? I hope to consider the significance of historical heritage not only for us living today but also for people living in the far future.

For example, in a study of the culture, social climate, or aesthetic feelings of any country, their historical heritage contains valuable information. In that case, it is important for full-size historical heritage items to exist. At the same time, one must obviously have a certain knowledge on which to base one's study, not to mention a good imagination. This is because an architectural heritage item you see in front of you cannot reveal its original appearance. Architecture changes with the passage of time. In this sense, restoration of cultural properties also involves studying how to preserve their appearance in an appropriate way as historical heritage.

Since restoration is unavoidable in the preservation and protection of historical heritage, we must determine the principle of painting restoration as an urgent task so as to adopt better painting restoration early.

## 6. Principles for restoration of painting – author’s proposal

First, a protective treatment needs to be applied to interior painting of architecture to maintain its present state.



Fig.6 Working for preventing exfoliation

This is because interior painting is not directly exposed to ultraviolet rays, which is a major factor in painting deterioration, and thus paintings in many cases remain in good condition. Accordingly, I believe it is necessary to preserve these paintings' condition as long as possible. In wooden structures, however, lacquer and coloring are not physically integrated with their wooden base. Therefore, parts which may suffer exfoliation due to a deteriorated painting layer need to be treated to prevent exfoliation.

Second, there should be no repainting, not even supplementary painting of paintings inside wooden structures.

Even if exfoliation advances, and the wooden base is exposed, I believe interior painting should not be repainted unless absolutely necessary. This is because my understanding is that surviving painted pieces have value as a cultural property, and a trace of painting, even a faint trace, remaining on a wooden base has more significant value in terms of historical heritage.

Third, it is necessary to conduct protective treatment (treatment to prevent exfoliation) to conserve the present condition of the remaining painting on the exterior of the structure.

Also, for exterior painting, a restoration policy of maintaining paintings should be considered for those that have remained in relatively good condition. I think it is necessary to avoid restoration based on repainting just because it is exterior painting.

Fourth, for parts of paintings where the wooden base is exposed, protective treatment should be applied and repainted in principle using the same paint. Before taking this step, one should seek the opinions of several experts before making any decision.

In wooden architecture, in particular, it has been proved that painting has, historically, contributed significantly to the protection of wooden surfaces. Accordingly, from this viewpoint, parts where the wooden base is exposed in exterior painting should, as a general rule, be repainted.

Fifth, repainting should be conducted in strict conformance to authenticity of historical heritage, and using original materials and techniques.

The use of original materials and techniques for restoration also means handing down traditional technology to future generations. It is important to conserve each individual cultural characteristic, and thus careless introduction of modern materials must be avoided when possible.

Sixth, traces of paintings in their best condition should be sketched. Also, to keep a record of their present state, images of both interior and exterior paintings should be captured using a medium with good retention qualities.

It is a strict rule in restoration of cultural properties to keep records of their state before restoration. Recorded data should be retained permanently. Accordingly, it is necessary to consider the best place to retain these records for management.



Fig.7 Draw the trace of painting to keep a record its present state

Seventh, deterioration of both interior and exterior paintings does in fact progress. Therefore, regular inspections should be conducted by conservation experts to conserve existing paintings for the future. If their state of preservation is judged to have deteriorated, appropriate protective measures should be taken immediately.

Cultural properties need to be restored at the right time. This is also reasonable with respect to restoration expenses. Irresponsible neglect of damage leads to waste of national treasures.

## **7. Conclusion**

In this brief study, I have examined the future restoration of painting in cultural properties, and have given my views on the principles that should govern the restoration of painting. I have not touched on reconstruction accompanying painting restoration. Problems related to reconstruction are a remaining task. I hope to examine them on another occasion.

I chiefly stress the need for conserving original painting by preventing exfoliation. Treatments for preventing exfoliation have been conscientiously applied and experimented on, but there are still several problems as to materials used and techniques. In some cases, a protective treatment ultimately had a detrimental effect. The specification of materials to be used and the development of restoration technology are tasks to be faced before it will be possible to carry out appropriate restoration.