
ABSTRACT: Many institutions have been established in India which are making efforts to restore and conserve Indian treasures. Non-availability of quality materials for conservation has led to conducting research towards developing indigenous materials for specific conservation problems applicable to the tropical climate, to which the Indian National Trust for Art and Cultural Heritage (INTACH) is making a significant contribution. Not much research has been done on the conservation of Thangka paintings since there is a limited availability of trained conservators, and this fact, coupled with a lack of infrastructure, has led to limited developments in terms of conservation approaches. It is felt that there is a greater need for exchange programs for conservators to enhance their skills, as well as to practice and gain confidence with newer materials. This paper discusses the specific approaches that INTACH’s Indian Council of Conservation Institutes (ICCI), Delhi Centre, undertakes towards conservation of Thangka paintings.

Introduction

The Leading Institutions in India

The word ‘Conservation’ is relatively new in India. The movement was started in Madras in 1930 with the setting up of the first conservation laboratory, followed by one at the National Museum, New Delhi in 1958. Another headway was made by the National Research Laboratory in Conservation (NRLC), a premier institution that was established in 1976 with facilities like XRF/XRD spectrometers, SEM-Edax Systems (non-destructive type), Atomic Absorption Spectrophotometry, Infra-red spectrometer, etc. The institution’s objectives are to undertake research in materials and methods of conservation, to develop and test our own traditional materials, and to impart training in conservation. Along the same lines, the National Museum Laboratory at New Delhi has also contributed largely towards research in conservation with the good infrastructure that it has. Similarly, other museums like the Victoria Memorial Museum in Kolkata or the Government Museum at Madras, have significantly contributed towards conservation of cultural property by developing indigenous techniques.

These are government institutions and have been mainly catering to the conservation requirements of the collections of their own museums.

The founding of the Indian National Trust for Art and Cultural Heritage (INTACH) in 1984 changed the parameters. INTACH was established as a membership organization,
an NGO (non-governmental organization), to undertake measures for preservation and conservation of natural and cultural property having a high archaeological, historical, artistic or scientific value, not protected by the Central or State statutes. Thus, the mandate for INTACH is broader since it encompasses tangible and intangible materials, which extend beyond the conventional definition of an ‘antique’ (something that should be at least a century old, as per the Law of Antiques laid down by the Indian Government). So while the government institutions focused on ‘antiques’, INTACH looked at much more and realized that there was a lot more to preserve, not just buildings and artworks which fell into the limited definition of an antique. This mandate for INTACH particularly benefited the small communities and other unprotected collections of temples, small libraries, small archives, etc. who now had an option for getting their heritage preserved. This also opened a channel for private collectors, art galleries, institutions and also government offices to get their art works restored.

INTACH established its first Art Conservation Centre at Lucknow in 1985, under the leadership of Dr. O. P. Agrawal, an internationally renowned scholar who headed the National Museum Laboratory, started the NRLC and then INTACH, and continues as the Director General of INTACH. As such, the whole movement of conservation in the country can be credited to him. From the original laboratories in Lucknow, eventually a network of 10 conservation laboratories spanning the country under the banner ‘The Indian Council of Conservation Institutes (ICCI)’, now provide training and professional help towards conservation needs for art and heritage collections. The objectives of the ICCI are manifold: to preserve heritage for future generations; to undertake continuous study and research to develop the best methodologies for path breaking contributions in the field of conservation science in India; to provide unmatched services in conservation for art collectors; to foster awareness for heritage conservation; and above all, to provide training in conservation.

Important Contributions of the INTACH ICCI, Delhi Centre

Established in 1990, the Delhi Centre of INTACH ICCI specializes in conservation of easel paintings. This centre was started under the able guidance of Mr. Sukanto Basu, an eminent artist and a ‘confirmed’ Restorer; at retirement he said “I think I am a restorer now”. He worked at the Modern Art Gallery, Delhi and later headed the National Museum Laboratory as well. This centre initially started as an oil paintings restoration studio and gradually expanded to become one of the leading institutions in the country, and much of this owes to this remarkable man who taught us conservation. This Centre has also been working in various other fields of conservation. Types of works treated include: watercolors; tempera; acrylic and mixed media paintings; prints and photographs; painted/printed textiles; traditional Indian paintings such as Tanjore, Kalamkari and Pichchwai paintings; Thangka Paintings; sculptures, and recently wall paintings as well.

Being one Centre that is conserving large collections covering most of the entire North India, our scope of work has widened due to demand and innumerable Thangka paintings have also been treated. Most prestigious amongst them were three Thangkas that we received from the Bureau of H. H. the Dalai Lama in New Delhi. The first one was given to us as a test piece, and after gaining confidence, two more were entrusted for
restoration. And now there are plans for establishing a new dedicated Centre for training and restoration of Thangkas, where people from INTACH would be responsible for not only setting it up but also for managing it and for training the local staff.

Our approach is to use original materials as are present in the painting; synthetic materials always remain a second choice. We would definitely want to use the similar glues or pigments, etc. Our intervention is limited to the bare minimum. Our goal is to eliminate the primary causes of deterioration and to preserve the painting. Additions if any would need to be reversible and tested to determine whether they could cause physical or chemical alterations in the future.

**Thangka Conservation**

This paper does not deal with the step-by-step treatment that is generally followed for Thangka restoration, but highlights some processes that are generally adopted. Of course, all the treatments follow a set pattern of documentation and research prior to direct work on a Thangka.

To begin with, the paintings and their borders are treated separately; their separation is therefore necessary. After a condition assessment, written and photographic records are prepared and then the treatment begins after thorough testing and understanding of the materials present on the painting and the materials that need to be removed.

**Cleaning**

Solvent cleaning proceeds with judicious choices and applications. Most treatments are carried out using alcohols and little water. At times solutions are made alkaline by increasing the pH to 8.5 since most accretions and dirt are usually acidic and so are thus easily removed. Alkaline solutions may also be used to help in the cleaning of the painting’s cotton support. In order to clean with control and ease, we may make use of a low pressure suction table (Figures 1 to 6). This table has been designed in-house and is also used for cold linings of oil paintings.

*Figure 1 (left): Cold lining suction table with perforated table top, shown in Figure 2 (right), can make it easier to carry out solvent cleaning.*
Figures 3 (left) and 4 (right): Conservator working on the suction table. The area to be cleaned is exposed while the rest of the painting is covered with a polyester film. The painting is supported by blotters underneath.

Figure 5 (left) and 6 (right): It is imperative that cleaning operations are also carried out under higher magnification since tiny specks of paint could be picked up by the swab.

Consolidation

For localized consolidation, we may use for example dilute gelatin while absorbing excess moisture in blotters, hydroxy propyl methyl cellulose (HPMC), methyl cellulose (MC) or other consolidants, depending upon the requirements. It is essential to consolidate with the aid of transmitted light (Figure 7) since many cracks may not be visible otherwise. Overall consolidation may at times be achieved by wet lining since the lining adhesive does penetrate to some extent.
Mending

Mending is another important aspect in the restoration of Thangkas. In most cases, there are losses and holes in the support which need to be treated to restore legibility. Mending is often carried out with the help of a light table since this results in precise fitting of the patch (Figure 8). For preparing a patch, a similar cloth is taken and prepared as the original. The ground in particular is gelatine-based and it is applied with a spatula, resulting in a uniform thin layer which does not crack or flake easily.

Lining

Normally we try to avoid lining, but if necessary it would be a wet lining with gluten-free starch paste, and the lining is carried out in a semi-dry condition. There was always a problem to show the inscriptions on the back since a lining reduces visibility to a large extent. We use thin cotton (muslin) or even chiffon to maintain visibility (Figure 9). Lately we have ventured into semi-transparent lining using Pidcryl® 126 (an Indian substitute of Plextol B500). The simple process involves preparation of the adhesive by mixing it with water in equal proportions. Ethyl acetate in the proportion of 25% of the total solution is then added and stirred for a homogeneous mixture. It is applied on the lining cloth and dried. It is then regenerated using ethyl acetate and pasted to the Thangka by applying mild pressure. The best parameters which we aim for in our treatments are: a see-through lining, no water being involved, the entire assembly being light in weight, and the lining treatment being reversible. Credit goes to Sabine Cotte\textsuperscript{1,2} who demonstrated this technique in a workshop in Nepal organized by the Himal Asia Foundation and UNESCO in 2005, in which one of our conservators participated.

Infilling

It is with great care that one may apply putty infills on a Thangka since scraping or reducing the thickness of the putty is not possible as this will dislodge original paint at the same time. Infilling is therefore only carried out when absolutely necessary, mostly when the losses are large. We often use a gelatin putty of low viscosity so that a thin layer can be applied that does not require scraping (Figure 10).
Inpainting

An example of inpainting in progress is shown in Figure 11. In India there is a dearth of good quality materials. The pigments that are available on the market are not of high quality and are full of impurities. Importing pigments is a costly affair leading to increasing the cost of the restoration, which the clients sometimes are not willing to pay.
It is our mandate to work at finding cost-effective methods and at educating other professionals about such materials since many Indian conservators may not be able to import all conservation materials. We therefore prepare pigments to suit our requirements (Figures 12-14). These pigments can then be used for any inpainting work on a variety of art forms ranging from oils to wall paintings or even painted textiles. The required binders range from gum or glue to synthetic mediums like Paraloid® B-72.

Figures 12 (left) and Figure 13 (right): Preparation of colours. It is a tedious process involving washing and grinding of raw pigments at many stages to remove impurities and other additives.

Figure 14: Prepared pigments.

Our approach is that normally we would not inpaint losses, but there are cases where we do inpaint, for example when the client requests it. In cases where many tiny areas need to be inpainted, they are done directly without the prior application of putty (Figures 15 and 16). A separating synthetic layer may be applied as per the requirement to maintain reversibility.
Figure 15 (left) and 16 (right): Detail from a Thangka, showing direct inpainting without a ground. Figure 15 (left) is before treatment. Figure 16 (right): during work.

Figures 17 (left) and 18 (right): A Thangka before (figure 17) and after (figure 18) restoration.
An example of retouching work is reproduced in Figures 17 to 21; the owner wanted the losses to be completely touched up including the recreation of details. After discussions, he agreed on recreating the losses in support only whereas leaving the remaining original areas untouched.

Figures 19, 20 and 21: Details of the Thangka shown in Figures 17-18, at various stages of restoration. Top left (Fig. 19): A large area of loss is shown in middle, while at centre bottom, a smaller area of loss is shown with patch mending using a similar prepared tan-coloured cloth. Top right (Fig. 20): The large loss is now filled with cloth, with tracings applied, taken from other figures. Inpainting has begun at the top left side. Bottom (Fig. 21): The infills after tracings completed and during the final stages of inpainting.
Conservation of Borders

The conservation of a Thangka’s borders is carried out as a separate exercise. Normally the process involves cleaning of dirt and stains with suitable solvents, carrying out a stitch lining if necessary, darning and providing fine net (Figure 22) on top in case the threads are frail and giving way.

Figure 22 (left): Application of net. The net may be dyed to match the original colours of the Thangka borders.

Figure 23 (right): Paper drum support for a Thangka.

Mounting

Normally a Thangka is kept in rolled condition, or on display it hangs loose. With regards to its use and purpose, conservators have to respect its sanctity and thus conservation treatments are aimed towards not disturbing the originality of the Thangka. In cases where there is a provision that a Thangka will be permanently displayed, we advocate providing a paper ‘drum’ (paper fixed to a wooden stretcher) as a support to the Thangka (Figure 23). This is usually made of thin wood and then many layers of hand made acid-free paper are pasted on it with gluten-free starch paste in order to attain a firm yet soft backing for the Thangka; it also serves as a buffer for fluctuations of RH. The Thangka is stretched over this drum with the help of ribbons that are stitched at various places on the back. The size of the drum needs to be perfect so that its upper and lower sides can accommodate the rods of the Thangka.

Visual Comparisons, Before and After Treatment

Some examples of before and after restoration are shown in Figures 24-25 and 26-27.
Figures 24 (left) and 25 (right): ‘Stories from the life of Buddha Sakyamuni’, before (figure 24) and after treatment (figure 25).

Figures 26 (left) and 27 (right): ‘Dolkar’ Thangka, before (figure 26) and after treatment (figure 27).
INTACH: Beyond Treatments

The promotion of interactions with colleagues, and a commitment to pursue updated standards make this centre a sought-after workplace. Low pressure suction table treatments were developed back in 1995, which is also a very helpful technique in a lot of activities such as paper or textile conservation. An industrial Indian adhesive, Pidcryl® 126, has been identified as a replacement for Plextol B 500 (98% similarity confirmed by IR Spectroscopy). Low pressure suction tables have been supplied to about 15 conservation studios in India. The availability of acid-free boards was difficult in India in the past, but these are now easily available after a lot of persuasion to leading paper manufacturers. Similarly we are trying to have Japanese tissue locally produced… Such activities are regular endeavors at INTACH. Their merits and usefulness are advocated in all the workshops that are conducted by us, so that every individual associated with collections is made aware of the importance of using good quality materials.

What is taught in educational institutions is a programme of learning the behavior of different materials in different climatic conditions, the deterioration of these materials, and finally the conservation and restoration of objects. It is most often to European standards and conditions, yet these parameters cannot always be practiced in the field since the expectations of the end users are at times in conflict with preservation. While ongoing debates for many years have resulted in laying down best international standards for professional practices and the code of ethics, diversification may be needed since a common practice for all professionals across the globe may not be ideal. For example, in the Indian context, a damaged painting in a living temple can be preserved, but when it comes to restoration, the community which is the end user, may wish to have a fresh look and that it be ‘complete’ and ‘finished’ in all aspects. The expectations thus differ from place to place or from region to region. The set rules which one studies or practices are therefore deviated to accommodate the community as well, the ethics modified and the approach redefined, yet within conservation parameters.

Heritage preservation, in a broader term therefore, moves from a specific role to a broader range which a common person can understand and benefit. The European ideology and systems are thus being supplanted by indigenous practices, and training given by INTACH incorporates and accommodates all these ideas, thereby producing conservation professionals who understand the ethos and philosophy of the ‘Indian Heritage’ before undertaking any conservation and making it successful.

Both professionals and lay people work with INTACH but this is mostly to complete the assignments. Despite a lack of resources, little highly technical equipment, and difficulties in accessing high quality technical literature, the ICCI Delhi Center has produced many brilliant, thoughtful conservators who are doing exceptionally well in the field.

The Future

By now we have accomplished a lot, but much more needs to be done. Further funds are required to launch research projects or to sponsor internships abroad. Thangka conservation in particular is in a very initial stage of development because of the lack of
professionals and materials that are more permanent. Much of this heritage has been lost mostly because of lack of knowledge. Specialized education is required to sensitize the custodians so that they at least know what not to do, rather than how to do. The treatments required are specialized with very limited choices not only in terms of materials but also in terms of manpower. We, and many other institutions in the world as well, are concerned about saving Buddhist heritage, yet the expertise is not available in abundance and in particular, even less so in India.

Many more such problems need to be tackled and this can be possible by way of constant interactions with leading organizations and experts all over the world by way of internships, exchange programs and by conducting workshops, where experts are invited or sent. There are no defined scholarships in India for art conservators to undertake a training program abroad or funds available in-house to launch research projects. Exchange of personnel on the other hand is imperative to gain practical experience with materials and to learn new techniques. It is therefore necessary that we coordinate with different institutions and conservation studios across the globe for exchange programs and taking interns (ICCI Delhi Centre has taken interns from Germany and Belgium, and interns from France and other places have been taken by the National Museum also) on a regular basis for the benefit of the community and particularly for this part of the world. It is also necessary that major funding agencies be made aware of the importance and need of providing scope for Indian conservators to travel and study conservation abroad.

**Conclusion**

INTACH is a non-government organization that has been established to undertake practical work in conservation and restoration of India’s vast heritage that is largely unprotected by the government agencies. We need to constantly produce more professionals to preserve and safeguard our heritage. Apart from this, emphasis is required on training professionals as well as amateurs; even librarians, curators, art collectors, etc. The task is huge and the professionals are only a handful, but with growing awareness and demand for conservation, the overall situation is changing rapidly.

What is routine in the west is difficult in India: lack of literature, materials etc. Exchange programs for conservators to enhance their skills, to practice and to gain confidence in newer materials are therefore necessary. The exchange/training programs would also benefit others who could work and experience our methodologies since the Indian tropical climate does pose many serious problems that may not be present everywhere. The availability of scholarships and bilateral relationships with leading conservation institutions across the globe will create a better tomorrow.

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Endnotes


BIOGRAPHY: Nilabh Sinha has an undergraduate degree in science, a graduate degree in Fine Arts and a Master’s degree in Conservation from the National Museum Institute of History of Art, Conservation and Museology, the only institute in India. He joined the Indian National Trust for Art and Cultural Heritage (INTACH) as a Conservator and started working on Oil Paintings. As time passed, he gained good knowledge and improved on many conservation treatments that were carried out on oil paintings. He also worked on painted textiles, miniatures, paper manuscripts, photographs and wall paintings, among others. He did an internship at the Hamilton Kerr Institute, Cambridge University, U.K. in 1999-2000, and later became Director of INTACH. Mr. Sinha’s recent work has focused on indeginising and developing simple methods for conservation practices in India so that these can be easily followed by people/conservators who have limited resources. He presented the paper on “Training in Conservation in India: Activities of the INTACH” at the ICOM-CC 15th Triennial Conference held in New Delhi in September 2008.

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