



New Reflections on Curative Conservation of Manuscripts

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Abstract: India has the largest collection of manuscripts in the world. The manuscripts are the repository of wisdom of great thinkers of the past and the present and they are priceless heritage of mankind as they preserve facts, ideas, thoughts and evidences of human development in multifarious areas, ages and directions. These valuable resources are indispensable to the present and the future generations. Any loss to such materials is simply irreplaceable. This rich manuscripts wealth of India today faces a threat of survival. They are deteriorating fast due to several climatic, physical, chemical and biological factors. Various government and non-government organizations have already started making conservation strategies to meet out these challenges. Therefore it is the moral responsibility of everyone to preserve these valuable manuscripts. In recent years, the awareness about conservation is created in India by Cultural Department, Curative conservation means conservation treatment to stop active deterioration. This level of conservation by curation required high level of expertise and materials. Restoration is done to improve the visual aspects of any damaged manuscript.

Keywords: Restoration, Curation, Resources, Heritage.

1. Introduction:

Indian Association for Study of Conservation of Cultural Property, IASC was founded in the year 1966 as a spinoff of the UNESCO's Regional Seminar at New Delhi, in the same year. Formation of such a specialized professional Association gave a big boost to the conservation research activity in the country.

The Association provided a National forum for the conservators practicing in isolation to come together, and share their experience among the peers and also to seek answers to their problems and keep the

professionals informed of the difficulties is carrying out their work. The forum took the responsibility of information dissemination about the new developments in the area of conservation. Further it set the future goals; it shared concerns of the professionals in conserving the cultural property for the posterity.

2. Aspects of Conservation:

Conservation, according to IFLA, "a term which denotes those specific policies and practices involved in protecting library and archive materials from deterioration, damage and decay; it includes the methods and techniques devised and



undertaken by technical staff. Common conservation techniques include de-acidification, encapsulation or lamination, preservation microfilming, and digitization and electronic storage" Technology in this field appears to more helping, but the practices demand financial support and wise planning. Li and Niu explained three principles in ancient books restoration followed by Chinese libraries: "Originality: preserve the original look and feel of ancient books; least intervention: make the restoration procedure as simple as possible and reversibility: when new restoration technique appears, ancient books can be reversed to its original status and then be restored using the new technique" (2010, p-272). Deterioration of the library materials especially those are old i.e. MSs and archives is challenging. Different external and internal factors cause continuous decline to ancient objects. Major reasons behind the deterioration of the MSs can categorize as environmental, biological, chemical, human factors and natural disasters. Conservation activities can be divided according to its three major aspects: preventive conservation, curative conservation and restoration. Preventive Conservation is the process by which one takes care of the collections to avoid any further deterioration. This level of conservation can be achieved with simple equipment like cotton, soft brush, similar stationary supplies and other material. Curative

conservation means conservation treatment to stop active deterioration. This level of conservation required high level of expertise and materials. Restoration is done to improve the visual aspects of any damaged manuscript.

3. Role of Library for Curative Conservation:

The libraries around the world maintain historical collections and these collections require significant efforts for preservation because use, time and inherent materials are taking toll. To understand and eliminate the deteriorating physical, chemical and biological conditions that cause the damage to the works of art on paper latest development in scientific research and contemporary techniques to conserve and restore priceless collection.

The conservation treatments are done applying international methods and most up to date techniques, materials and equipments so that the conservators could restore the permanent collection and keep them in good condition. Every conservation treatment is done according to the ethics applied in conservation largely concentrating on minimal intervention policy. The Conservation lab is continuously concentrated and giving qualitative conservation treatments to the works of art.

The conservation lab regularly engages itself in preventive and curative conservation of collection. The art object is thoroughly examined



and according to need, appropriate treatment is given to prolong the life of the objects. Around the year preventive conservation steps such as cleaning of the Almirahs, dusting, good handling practices, mounting using acid free mount boards (different techniques of mounting are used) fumigation, insecticidal papers, fungicidal papers, Buffer paper, prevention of physical damage, acid free boxes and folders for collection etc.

4. National Mission for Manuscripts:

The National Mission for Manuscripts (NAMAMI) is an autonomous organization under Ministry of Culture, Government of India, established to survey, locate and conserve Indian manuscripts, with an aim to create national resource base for manuscripts for enhancing their access, awareness and use for educational purposes. The Mission was initiated in February 2003, by the Ministry of Tourism and Culture, Government of India and Indira Gandhi National Centre for the Arts (IGNCA) is the nodal agency for the execution of this project. India possesses an estimate of five million manuscripts, probably the largest collection in the world. These cover a variety of themes, textures and aesthetics, scripts, languages, calligraphies, illuminations and illustrations. Together, they constitute the 'memory Manuscripts form an invaluable part of India's documentary heritage, they

capture our thoughts, achievements, experience and lessons learnt from history. The present study draws the following conclusions on the basis of above observations.

- The National Mission for Manuscripts (NMM) is the first consolidated national effort devoted towards the preservation of manuscripts.
- The NMM functions through different types of centers known as MRCs and MCCs and these centers are established throughout the country.

5. Traditional and Modern Conservation Methods:

Traditional methods of curative conservation are still practiced in developing countries. Mainly these include avoiding the basic factors of deterioration specifically light, dust, heat, and humidity. Curative protection was made possible by indigenous methods i.e. safety from insect and humans' mishandling, sunlight to avoid humidity, turning the pages for air and checking, wrapping the MS into different color cloth especially in silk, using different herbs, using smoke as natural fumigation, rubbing oils on leaf manuscripts etc.

Modern methods include the use of technologies e.g. use of chemicals, artistic skills and other computer technologies for curation and restoration. into three level according to their state of conservation: "first, those that still have some useful life remaining; second, those that have no



useful life remaining, so that all that can be done is to save their contents; and third, those that have such unusual intrinsic value that expensive, special repair and restoration is justified". They also recommended a list of supporting conservation activities

- A. The training of conservators and technicians;
- B. Expanding the awareness of the seriousness and immediacy of the problem of paper deterioration;
- C. Developing examination and treatment facilities;
- D. Developing comprehensive research program;
- E. Establishing standards of training and
- F. Survey of conservation needs
- G. Collaboration and sharing in research

It is a fact that despite all precautions and preventive conservation efforts made for the care of curation, the deterioration and weakness continue by passage of time. It can only be slowed down with the help of proper conservation treatments along with preserving the contents for the future.

6. Preservation:

Preservation as stated "all the managerial and financial considerations including storage and accommodation provisions, staffing levels, policies, techniques and methods involved in preserving library and archive materials and the

information contained in them is preservationist important. Conservation and preservation is such an important aspect that needed to be considered while acquiring new manuscripts to the collections. Walters (1998) said that contemporary preservation management recognizes that preservation is an integral part of all functions involved in the identification, acquisition, preservation, access, and promotion of valuable research materials.

7. Preservation Techniques:

Manuscript was conserved and cared since old times but there were no methods to preserve them or at least safe their contents for forever. It's only becomes possible with invent of technology. Facsimiles, microfilming and now digitization is in practice for this purpose.

A. **Microfilming:** to preserve the manuscript contents in original forms was started in 1930's by libraries and archives in USA. It serves as a very effective way of preservation (Gertz, 1999). There are three types and levels of microfilming process, first is master copy known as camera negative that is to preserve with special care and from which second level print negative is produced, third is positive that is created by print negative. Although the microfilms are easy to distribute among repositories but it required special machines to read, that are expensive and are mostly removed from libraries.



Gradual technological shifts have reduced its effectiveness.

B. Digitization: is increasingly used as a technique to allow access to content without risking the original materials. Digitization not only helps the preservation of manuscripts but also solve the issues related to its cataloguing, access, distribution and research. Manuscripts are being digitized worldwide to provide user friendly interfaces, open and easy access and detailed search. There are many preservation standards for manuscripts and archives. Some of the famous standards that may be followed by the libraries are i.e.

International Organization for Standardization (ISO); American National Standards Institute (ANSI); the Rare Books and Manuscript Section (RBMS) of American Library Association;

The Society of American Archivists (SAA); The Library of Congress (LC) etc. (Walch, 1990).

Digitization of manuscript collection is consisting of a multi-step procedure. The process starts with questions: Why? How? What? Where? Whom? First question is of need of digitizing; second is about the process, standards and allied technologies; third is about selection to digitize; fourth is about the facility where the digitization will be done and last is about human resource and their skill set. Many experts stated that digitization should not be undertaken just because other institutions are doing this.

1. Organizational context;

2. Selection of collections to be digitized;
3. Selection of standards and procedures;
4. Metadata and retrieval;
5. Access, copyright restrictions and access policy;
6. Users, usage and interface;
7. Bibliographic control;
8. Environmental factors;
9. Staff training needs;
10. Security and control;
11. Disaster management and backups;
12. Digital preservation;
13. Expected outcomes.

Conservation and preservation is extremely important to save the manuscripts in their original form and their contents for dissemination.

8. Agents of deterioration and destruction:

- a. Environmental factors: like light, temperature and humidity, dust and dirt, pollution, water and fire.
- b. Biological factors: microorganisms like fungi, bacterial insects, silver fish,
- c. Cockroaches, bookworms, book lice, termites, rodents, etc.
- d. Chemical factors: formation of acids in paper.
- e. Human factors: like handling and improper stacking, theft, etc.
- f. Natural Disasters: like floods, earthquakes, etc.,



9. Conservation as part of

Curation:

In general paper conservation can be measured in two ways.

1. Preventive measure. (Passive way)
2. Curative measure. (Active way)

Preventive Measure:

Preventive measure is to take all the steps required to preserve the document by external ways. The preventive measure can be generalized under three headings:

1. Storage
2. Good Housekeeping
3. Pest control.

Some of the examples for preventive measures areas follow:

- To protect from light, heat, fire, etc. the library building architecture should be drawn and built accordingly.
- The control of dust, air, dirt and moisture inside the library room should be properly maintained and periodical housekeeping and cleaning is necessary
- To maintain relative humidity and temperature, air conditioning should be used.

These preventive actions will help to extend the life period of paper to some extent only. And due to improper care and natural properties of paper it automatically degrades and become 'brittle paper'.

As already said, the properties of papers are interdependent due to environmental, ageing and other factors mentioned above, the paper

substance structure collapsed and it becomes fragile and the need of curative conservation arises.

10. Curative Measure:

Curative measure consists of all forms of direct action aimed at the life expediency of damaged or undamaged elements of cultural property (paper document). It includes the following.

1. Washing and Cleaning
2. Deacidification
3. Fumigation
4. Mending
5. Encapsulation
6. Lamination

Washing and Cleaning:

Due to dust and dirt, the documents become brittle which are to be cleaned first. The washing can be done by the following methods.

1. For manuscripts, which are written by water-soluble inks, we can use rectified spirit (alcohol) for cleaning and washing.
2. The insoluble ink materials can be washed and cleaned with distilled water and steam water bath.

Deacidification:

Due to acid formation and acid content, paper documents get decayed, to test the life period of paper deacidification is necessary. Deacidification is explained here by three methods as follows:

- a. Aqueous deacidification in which affected paper is immersed in or brushed with an alkaline solution



or suspension until the acidity neutralizes. In general, magnesium bicarbonate solution is recommended as most effective.

b. Vapour phase deacidification: This employs chemicals in gaseous forms to neutralize the acid. This method is an easier to use and offers greater productivity either of the immersion process.

c. Mass deacidification: methods are being developed in number of countries, but are still in the developmental stage-all require expensive plan, mostly these are likely cost effective only where a high volume of work can be foreseen.

Fumigation:

Due to biological factors, the paper documents are deteriorated. To eliminate 100% the above said microorganisms, insect, etc., a fumigation treatment is necessary by appropriate chemicals. Thymol is longer preferred chemical for fumigation. For this, we need a chamber. Nitrous oxide gas can also be used.

Mending:

1. Chiffon cloth mending: In this system, chiffon cloth and Maida paste are used. Since the paste is soluble in water we cannot recover the documents from floods. Eaten away by moths also unavoidable, this makes the documents more brittle. Woven material like chiffon cloth is used here. The thread will come out often and struck to each page is not avoidable.

2. Tissue paper mending: Here also, tissue paper of different variety is used. Cellulose acetate foil and acetones are used. This is also a kind of paper material and has the same properties of a paper and susceptible to deterioration as the above said method.

Encapsulation:

This is the method adopted and approved by International Organization for conservation of paper documents. In this system, only polyester film is approved. The system can be done by placing the document in between two bigger size polyester films, and their four sides are to be sealed either by double sided tape or by machinery methods. Encapsulation is not advised to be used for very fragile documents. The air in between the document and the polyester film will react with paper (hydrolysis/oxidation) and degrade the paper still further.

Lamination:

1. Most of the lamination processes are irreversible.
2. PVC and BOPP materials were used for lamination. These materials have high air permeable capacity. The air passes through this will create oxidation, which will degrade the paper composition.
3. Struck to each page in ageing will occurs.
4. The color change to the subject will occur easily.



5. These materials are laminated by heat process. The heat will affect the paper structure.

Due to the above reasons, conservators decided to reject the lamination process for conservation purpose.

11. Modern Concept of Preservation and Access:

Awakened by the alarming rate of destruction of manuscripts, modern devices and techniques are being developed and utilized. In IGNC, for example, there is a conservation wing to provide preventive and curative conservation treatment to original manuscript or source. Again, IGNC resorts to microfilming to preserve the content of a manuscript. For access, digitized copy of a manuscript is more convenient, and the NMM has launched digitization project in a massive way; the culmination of which can be seen in the establishment of the National Digital Library in IGNC. It may be relevant here to mention that as the microfilm ensures durability, it is better than the digital copy so far as the preservation aspect is concerned. On the other hand, digital copy proves to be handy to provide efficient access. Therefore it can be followed that to ensure the preservation and access to manuscripts techniques and devices like preventive and curative treatment of original manuscript, microfilming and digitization are

resorted to. Besides these, publication of the facsimile copy of the manuscript, with or without translation/and transliteration is another important medium that ensures preservation and access. Realizing the need of publication, many an institute such as IGNC is coming forward to publish the unpublished manuscripts.

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- Fumigation
- Mending
- Encapsulation
- Lamination

13. **Conclusion:** Institutional and Individual Efforts in the Fields of Preservation and Access in India (Historical Perspective) with increasing popularity of printed books the interest for collecting and preserving of manuscripts gained ground in India. Some famous bibliophiles and institutions built up their collections and as a result large repositories of curation of manuscripts emerged and have played a significant role in preservation and access to manuscripts in India.

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