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A critical analysis of the methods of preservation of manuscripts in Assam

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Abstract:

Manuscripts were created before the printing process and they can impart invaluable knowledge about language, society, culture, and its development, etc. these methods can be used as a medium of communication to history.

Therefore, it is important to protect and preserve these treasures. preservation of manuscripts was a major concern in the past and efforts were made to protect them from various causes.

Physical preservation is a difficult task but with the advent of technological development, it is very much possible in an easy manner. the methods of preservation of these valuable manuscripts will be discussed here.

Keyword: Manuscripts, Assam, preservation, conservation, digitation

Introduction

The manuscript is a handwritten document. Before the advent of printing technology, all books and reading materials were in the handwritten form. The wonderful history and culture of India lie in the heart of manuscripts. The word manuscript is derived from the Latin phrase manuscript. Which means hand written 'manu' means hand and 'scriptum' means documents. It is assessed that there are more than 5 million manuscripts in India which is the largest collection of manuscripts in the world.

Materials used for writing manuscripts

In ancient and medieval times, different materials were used for writing purposes which is subject to availability. Various leaves of different trees were used as the writing materials. The great sage Patañjali wrote his famous Mahābhāṣya on the leaves of trees.

The seals found in the excavation site of Mohenjo-Daro exhibit some signs that reveal that pieces of clay were used for writing purposes. The pieces of stones, walls, and pillars were also used for writing purposes, but they were mostly for religious purposes.

1. Birch-bark (Bhūrja-patra)
2. Bark of Aloe tree (Sāncipāt)
3. Palm leaves
4. Kumbhi bark
5. Tulāpāt
6. Cloth
7. Paper

Instruments used for writings- two types of instruments were used for the writings of the manuscript viz., the stylus (Lohkan taka) and the reed pen (Kalama). Both had a common name, Lakhani.

Statement of the problem

Manuscripts enjoyed a highly privileged position in religious and cultural life. In the concurrent time, all libraries have manuscripts sections for preservation and those are frequently used for information and research purposes, as the manuscripts have a significant value in the field of knowledge, and they are rare reading materials that should be preserved with proper care. Preservation and curative care are the two elements of preservation.

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If preventive measures are at Parthenon curative care can be avoided. the preservation care helps in preventing decay, growth of biological agencies, and any occurrences of manmade or natural calamities

In Assam, these manuscripts not only throw light on the religious aspects of human life but also consider social, economic, cultural, and scientific aspects of Assamese society. But disappointingly, due to some manmade and natural hazards, these manuscripts in Assam were neglected as far as their curative preservation and conservation are concerned. Hundreds of manuscripts are damaged in each passing year. In Assam, there are innumerable manuscripts in its hold, but the natural calamities, ignorance of the people, attacks by pests and rodents, theft, and foreign invasions had a deleterious effect on them.

Again, manuscripts are open to the damaging effects of rust, lights, mites, fungus, etc.1. manuscripts are the authentic medium of cultural heritage and are valuable sources for the reconstruction of history. However, these materials are widely scattered, and the need of the hour is to collect and preserve them for the benefit of future generations. These invaluable texts are scattered and are slowly decaying and vanishing. Some of them were destroyed because of water, fungus, fire and, and some were destroyed by foreign invaders. Those manuscripts are in normal condition and are also deteriorating day by day due to many causes; humidity, dust, heat, pollution, mishandling, etc.

Some factors that are directly responsible for these conditions are such as

- Lack of vision and long-term approach towards conversion and preservation of manuscripts
- Lack of requisite funds
- Lack of proper infrastructure for the conservation
- Lack of adequate knowledge of the latest technologies for conservation and preservation.
- Lack of technical skill and high cost involved especially for the digitation of manuscripts
- 1Bhusan, Chandra: Assam its Heritage and Culture, 2005, p. 42
- Lack of government initiatives for the preservation of manuscripts.

Objectives

This paper intends to explain how manuscripts have been preserved and conserved in Assam. The study means to find out:

- To understand the role played by the National Mission for Manuscript (NMM) in Assam for the conservation and preservation of manuscripts
- To scrutinize the current condition of manuscripts preserved by NMM as well as those that are still under individual possessions.
- To examine the effectiveness of digitization of manuscript in Assam
- To analyze the problems involving the preservation of manuscripts.

Manuscripts in Assam

Up to the 15-16 centuries, references were found to have well-equipped libraries in each of the capitals of Koch king Nararāyana, Koch Behar, which was famous for its cultural heritage.

The Neo-Vaishnavism of Sankardeva was responsible for the establishment of organizations like – Sattra and Nāmghar.

These sattras and Nāmghar were the repositories of manuscripts written on Sāncipāt and Tulāpat.

Śaṅkaradeva restored the Assamese society from all dimensions to infuse the philosophy of Neo- Vaishnavism. He took the media for its language in literature, drama, drawings, and paintings.

In Assam, there are many kinds of manuscripts written on the bark of a tree. The ancient kings took the initiative for writing collection, translation, and well preservation of those manuscripts.

Some types of manuscripts were written in simple Sāncipāt or Tulāpat. Every religious institution possesses a history of the institutions, detailing when it was founded, the lives, the teachings, and the reforms made by the head of the Satras.

It is not possible to exactly tell about the numbers of these puthis which were composed, or which are available today. Because lots of manuscripts were destroyed due to natural calamities such as floods, storms, fire, negligence of people, varmints, pests, etc.

Eventually, various institutions of Assam, Kamrup Anusandhan Samiti, Assam State Museum, Gauhati University, Dibrugarh University, Assam Sahitya Sabha, Kamrupa Sanskrit Sanjivani Sabha, Nalbari Department of Historical and Antiquarian Studies, Assam, etc. established and they collected a large number of manuscripts through various channels.

Kinds of Manuscripts

There are various biographies such as Dāmodar Carita, Guru Carita, Santa Carita, Thākur Carita, and so on.

Under the drama section, there are various dramas in the Assamese language such as arjuana bhanjana written brajāvalion sāncibark, kāliā daman, keli Gopāla, Rām Vijaya, Rukmini Harana, and so on. These puthis were written in a mixed language of Assamese Brajāvali.

Epics are also found in Assamese manuscripts, e.g. Baghāsura badh, Mahābhārata Pāncāli bibah, etc.

Some Sanskrit manuscripts have conveniently been classified under the subjects- Abhidhāna, Āyurveda, Chanda, Darśana, Jyotiṣa, Kāvya, Nāṭaka, Purāna, Smṛti, Vyākaraṇa, etc.

The manuscripts of Jyotiṣa include those on Astrology and Astronomy. The Smṛti Sagara by Damodar Misra and the Suddhi-Dipika by Srinivasa are such works dealing with astrological topics as well.

The Vyakarana category consists of Patra Kaumudi which is attributed to Vararuch. There are various unpublished works which required to be edited and published in the interference of Sanskrit studies and for the benefit of those engaged in the research of varied subjects.

Role of manuscripts regarding the formation of assamese society culture

According to the famous historian of Assam; S.K. Bhuyan, “One of the vast means of conserving and transmitting Hindu civilisation and culture was through puthis or manuscripts, elucidated by the verbal comments and explanations of the learned. Almost every Assamese family had in its possession a cluster of Assamese manuscripts. Sanskrit classics and commentaries are also to be found in the libraries of Assamese families”.

Assam has a rich history of art, culture, and literature. Hema Sarasvati’s written works can be considered the first systematically written literature of the 14th century [2]. The

Assamese literature from the 14th century to the end of the 18th century comprises Vaishnavite literature and literature of the Ahom age. Mahāpuruṣa Srimanta Śaṅkaradeva's works namely Kīrtan, Dasama, Rām- Vijaya, Pārijāta-Haraṇa, Patnī-Prasāda, Kāliyā-damana, Keli-Gopāla, Rukmini-Harana, Haricandra-Upākhyāna, Bhakti-Pradīpa, Ajamīlora-Upākhyān, Balichalan, Gunamālā, Bhakti- Ratnākara, Nimi-Navasiddha Sambāda are the biggest contribution to the Assamese literature stock. The works were mostly on Sāncipāt and Tulāpat. Sometimes Bhurja-Patra and bamboo stretches were also seen in the use. The literature in the Ahom Age is famous for the emergence of historical literature, i.e. Buranjis. The Purani Asomar Buranji is believed to be the oldest Buranji of Assam^[3].

At present, many well-known Assamese families still possess a vaṁśavalī or genealogical history which is a potential source of history, culture, lives, and careers of history. The study of Assamese

2 Goswami Bhupen Traditional Method of Sāncipāt Making in Ancient Assam, 2006, p. 73

3 Neog Maheswar Early History of the Vaisnava Faith and Movement in Assam, 1965, pp. 156-162

Manuscripts provides excellent opportunities to understand the evolution of the Assamese language and scripts. Unfortunately, the treasure hidden in Assamese manuscripts has not yet been fully brought to light due to several difficulties.

One successful attempt to collect manuscripts was made by Pandit Hemachandra Goswami. He collected as many as 233 manuscripts of which 156 were in Assamese and 77 in Sanskrit which were then handed to Kamrupa Anusandhan Samitī for preservation. Later on, he compiled a descriptive catalogue named Descriptive Catalogue of Assamese Manuscripts^[4]. There are 665 sattras in Assam along with uncountable numbers of personal libraries with manuscripts, acting as repositories of manuscripts.

Manuscripts decay over time. It also has a specific period of longevity. However, the period of longevity can be enhanced if proper preventative and curative methods are applied. If proper conservation processes are not applied, these historical treasures will vanish forever. Due to negligence, a large portion of the manuscripts have been damaged. Whatever remains should be preserved?

Preservation and conservation of manuscripts in assam

Preservation and conservation are the mighty sources of earlier information regarding social, religious, historical, cultural domains, etc. Conservation should be done by scientific methods.

The production of Agarubark folio is dealt with by Sir Edward Gait in his book "A History of Assam". The process is as:

"A tree is selected of about 15 or 16 years growth and 30 to 35 inches in girth, measuring about 4 feet from the ground. From this tree bark is removed in strips, from 6 to 18 feet long and from 3 to 27 inches in breadth. These strips are rolled up separately with the inner or white part of the bark outwards, and the outer or green part inside and are dried in the sun for several days. They are then rubbed by hand or a broad or some other hard substance, to facilitate the removal of the outer or scaly portion of the bark. After this, they are exposed to dew for one night. The next morning the outer layer of the bark (Hikari) is carefully removed and the bark proper is cut into pieces of convenient size, 9 to 27 inches long and 3 to 8 inches broad.

These are put into cold water for about an hour, and the alkali is extracted, after which the surface is scraped smooth with a knife. They are then dried in the sun for half an hour, and when perfectly dry, are rubbed with a burnt brick. A paste prepared from matimah (Urad dal in Hindi Mashkalai in Bengali, and Mah in Punjabi) is next rubbed in, and the bark is dyed yellow using yellow arsenic. This is followed again by sun-drying, after which the strips are rubbed as smooth as marble."6 The process is now complete, and the strips are ready for use. Apart from priming the folios with a paste of matimah, the white duck's eggs were also used, and, in some cases, turmeric paste replaced dying with yellow arsenic.

4 Das, Utpal Sāncipāt Tradition: A Study in the Majuli Island of Assam, 2005, p. 90

Tulāpāt was more popular among the Ahoms. The manuscripts' covers were in wood, designed with paintings.

The people of Assam have a great respect for manuscripts both religious and secular. They are from multicultural families and Brahmin priests. Some Sattras maintain manuscripts libraries.

Before the beginning of any conservation process. It is important to examine the specific manuscripts thoroughly. The conservator should first ascertain whether the manuscript is written on paper or other material. The conservator should observe:

- Whether the manuscript is strong or weak
- Whether is yellowed
- If there are any missing parts
- If there are any wrinkles in the paper.

Before the practice of using papers as writing materials. In Assam Sānci pāt was used.

Damages of manuscripts and their causes

Although deterioration is a continuous and natural process, there are some common causes behind the deterioration.

Internal cause

The internal deterioration is caused by the ingredients for the physical composition of the material used in the manuscript. The writing materials manuscripts are natural elements, and these materials automatically become fragile. If the material is of poor quality, the natural decay or ageing will be faster.

External cause

The external cause of deterioration by atmospheric conditions, environmental pollution, damage by fungi and insects, heat, light, etc. microbiological-like fungi and bacteria shorten the longevity of the manuscripts.

The chemical agent is another factor of damage and destructive condition of the manuscript collection. The polluted air acts as a deterioration agent under humidity and moisture. Dust and dirt discoloured the pages of manuscripts and they could not be discarded completely.

Control of Bio-Deterioration of Manuscripts

One of the most important of these agents is biological growth. The methods used to save manuscripts were based on experience and knowledge of natural materials. This knowledge was passed down from generation to generation. But there are pros and cons of biochemical. There is a potential health hazard for those who use them. It needs special equipment and a trained person. It is important, to reevaluate

the traditional materials used to explore the possibility of them with some modification to increase their efficacy if required.

Methods of preservation

Using herbs and other natural products against the bio-organism were common in the past and those products were very effective and non-toxic to people. Manuscripts were often stored in kitchen lofts, where smoke due to various materials used in cooking kept the insects away. The storage boxes were made of hardwood which kept insects away. The manuscripts were wrapped in red cotton cloth. combination of cumin, cloves, pepper, cinnamon, and camphor was used as an insect repellent; although it had to be replaced from time to time. Even peacock feathers and snake slough can be found may have insect-repellent properties. it was also a common practice to rub citronella oil on palm leaf manuscripts to increase flexibility and deter attack by pests.

Turmeric has also been used by rubbing on the palm leaves, and by dyeing the binding cords and the covers. Dried leaves from the neem tree were used between the two to keep the lice away.

Some produced by burning chamber oil are very effective as an insecticide and a fungicide. A mixture of camphor and clove has also been used to repel insects from manuscript collections.

Control of Temperature

Manuscripts are affected by heat and temperature so to preserve valuable manuscripts, the storage condition for safe manuscripts should be in the range of 72f -78f.

Proper Air Circulation- stagnant air in the stack areas can give rise to stagnant air pockets within the area which induces the growth of insects and fungus. Proper ventilation in the stack areas is essential which can be achieved by cross-ventilation and circulating the air in the areas by using fans and air circulators.

Manuscripts should be kept from dust and dirt. Proper cleaning should be done regularly.

Efforts should be taken to avoid direct entry of light into the storage buildings. Direct sunlight will affect and damage the manuscripts. The UV rays will damage the manuscripts can deteriorate them and may cause chemical deterioration.

Some curative measures

Repairing of Manuscripts

Numerous types of tools are used in mending manuscripts by hand. The repairing of manuscripts can be done by –

- Dry Brush cleaning
- Application of oils like clove/neem/ citronella etc.
- Wrapping by cloth
- Use of acid-free boards
- Labelling
- Examination
- Putting insecticidal paper

A soft brush or cotton scrub can be used for cleaning the manuscripts. A solution of glycerin water can be used to clean the dust from the manuscripts.

The fungus can infect repeatedly even after cleaning. Therefore, fumigation of infected record material and their chemical treatment is essential but also the treatment of wrapping cloth, covers plywood or wood boards in which fungus infection is suspected require anti-fungus treatment,

Lamination

It is one of the methods of preservation. It protects from all external enemies as well as makes it physically strong enough to preserve for a long time. It is a method of strengthening fragile papers. it is less time-consuming than traditional methods. And it is cost-effective for large collections. It also prevents damage from environmental contaminants.

Photostat

It is one of the cheapest methods of preservation. Many valuable manuscripts that are in a sensitive condition are not allowed to be used by users. So photostat copies of those manuscripts can help a lot which were given to the users without fear of mishandling.

Microfilming

It is a kind of film where a special type of camera is used. Materials are photographed at a greatly reduced size, useful for photographing at a reduced scale is used. Microfilm can last up to 900 years if stored in a special envelope and placed in a climate-controlled room. it is used for the preservation of rare materials, and documents such as manuscripts.

Conservation Methods- Use of Cow Urine

The manuscripts should be dipped in urine cow for 5 to 6 hours. And makes it more durable. It makes repellent to insects and varmints It can be used for manuscripts waterproof.

Use of Neem Leaves

The neem leaves are first boiled to extract the alkaline contents. And then it filtered through clean cloths. The filtered solution is smeared in the manuscripts as neem is a natural repellent.

Use of Talsi Leaf

Tulsi leaves should be kept between folios of the manuscripts to prevent insects from attacking the manuscripts and to make them more durable.

Use of Marigold Leaf

The petals of the marigold flower are used as preservatives by keeping them between the folios of the manuscripts. Marigolds have a natural tendency to repel insects and warm.

Use of Tobacco Leaves

The solution of tobacco leaves in water is smeared in the manuscripts. It also works as an insect repellent.

Use of Red Cotton Cloth

Manuscripts should always be wrapped in red cotton cloth because red colour is a natural repellent of worms and insects

Use of Wooden Plank

Manuscripts should always be covered from both sides by a wooden plank, a bit larger than manuscripts. It makes the manuscripts safe and prevents them from coming in sudden contact with fire in case of a fire accident. The wooden planks should be tightened with a thick cotton string.

Digital Preservation of Manuscripts in Assam

In Assam, the Sattrainstitutes are the major custodians of rare manuscripts. Besides the Sattras, institutes like the KKH Library of Gauhati University, Kamarupa Anusandhan Samiti, and the Department of Historical and Antiquarian Studies,

Guwahati are the repository of the rare and valuable manuscripts of Assam.

In Assam, the people worship manuscripts as sacred things. Therefore, the Digital surrogate of these manuscripts may be the best way for their preservation and access. Once the digitation of these manuscripts is completed, the user can use them in digital format. The user can take their required manuscripts with them in digital form. Digital preservation may facilitate the global accessibility of the manuscript.

Digital archiving or digital preservation means the preservation of documents in a machine- readable format and the organization of those materials with an adequate information retrieval system.

The process of digitalization comprises different steps like scanning, image editing, text conversation, digital resource management, etc. which require different software for different purposes.

1. Image capturing software
2. Image enhancement software
3. Optical character recognition software
4. Digital library software.

With the advancement of information technology, digitalization, promises documentation and preservation of original texts, facilitating at the same time, greater access for scholars and researchers.

Digital preservation is a process that requires the use of the best available technology, careful thought, administrative policy, and procedures.

There are various types of equipment needed for the process of digitalization

- Scanner
- Lamination Machine
- Server computer
- Documentation Management Software
- Training personnel
- Sufficient fund
- Digital camera
- Image processing Software
- OCR Software.

The NMM (National Mission for Manuscripts) runs a network of 32 conservation units across India, in Assam; its unit is located at Krishna Kanta Handique Library, Gauhati University.

The NMM established the Manuscript Resource Centre at the KKH library in the year of 2003. KKH library which is mainly working on the preservation and conservation of different manuscripts, now has almost 4500 valuable manuscripts written in Sāncipāt, Tulāpāt, and paper and these manuscripts have been preserved in the manuscripts section of the archival cell of the library. Recently, the digitalisation of around 2000 has been completed under the NMM.

Challenges of Digital Preservation

- Unlike traditional analog, a digital object always needs a software environment to render it.
- The massive and growing quantities of content present significant scaling issues to digital preservation efforts. Rapidly changing technologies can hinder digital preservation work due to outdated and antiquated machines.
- Digital content can also present challenges to preservation because of its complex and

- dynamic nature, e.g. interactive web pages, virtual reality, gaming environments, learning objects, and social media sites.
- Non-availability of the source code as commercial software.
- The amount of digital information being created along with the proliferation of format
- types makes creating trusted digital repositories with adequate and sustainable resources a challenge.
- Preservation missions require a significant amount of funds to create, along with ongoing
- costs for data ingest, data management, data storage, and staffing.

With the development of times. Libraries are changing their roles from book providers to information providers. Digital preservation of manuscripts restores damage, larceny, and decay for a long time.

Conclusion

Manuscripts should be read periodically as they are the source of knowledge. if damages are found, then preventive measures should be taken. The indigenous practices of preservation are friendlier to the health and surrounding ecosystem and are easily practicable.

The age-old manuscripts should be taken care of and preserved for the future. Many institutes of Assam along with NMM are doing commendable work to preserve and conserve the national heritage records.

However, there is still a need for improvement in terms of staff, finances, appropriate buildings, and storage techniques. The staff has to be professionally trained to take care of the manuscripts.

Thus, Sattras and NNM of MRCs should take proactive measures to save our national heritage records by devising sophisticated methods and by adopting corrective measures.

References

1. Baruah SL. A comprehensive history of Assam. New Delhi: Munshiram Manoharlal Publisher's Pvt, Ltd; c1995.
2. Bhuyan SK. A history of Assam 1681–1826 CE. DFK Trust; c1993.
3. Choudhury PC. A catalogue of Sanskrit manuscript. Government of Assam; c1961.
4. Gaur R. Preservation and access to manuscript Heritage in India. International Journal of Information Research (IGNCA), New Delhi; c2011, 1.
5. Goswami H. Descriptive catalogue of Assamese manuscripts. University of Calcutta; c1930.
6. Goswami H, Malinee (Eds.). A catalogue of manuscript in Assam. North Guwahati, India: Anundoram Barooah Institute of Language, Art, and Culture, Rajidae; c2012.
7. Nirmal M. Digital preservation of rare manuscripts in Assam. Preservation, and Conservation of Rare Materials, NFLIBNET Centre; c2013.
8. Neog M. The early history of the Vaishnava faith and movement in Assam. Guwahati, India: Lawyer's Bookstall; c1965.
9. Das US. Tradition: A study in the Majuli Island of Assam. New Delhi: Bhupendra Traditional Publications; c2005.
10. Das US. Traditional method of Sāncipāt making in ancient Assam. New Delhi: Bhupendra Traditional Publications; c2006.

11. Das US. Tradition: A study in the Majuli Island of Assam. New Delhi: Bhupendra Traditional Publications; c2005.
12. Prajapati CL. Conservation of documents. New Delhi: Mittal Publication; c2005.
13. Sarma MM (Ed.). Inscriptions of ancient Assam. Gauhati University; c1978.
14. Sah A (Ed.). Indigenous Methods and Manuscript Preservation. Samraksika, Series 1. New Delhi: National Mission for Manuscripts; c2006.