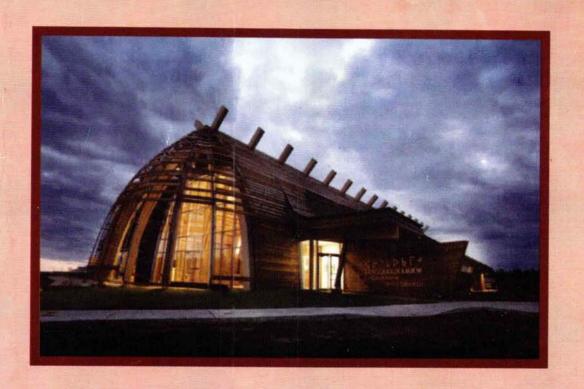# JOURNAL OF THE DEPARTMENT OF MUSEOLOGY

VOLUME 13

UNIVERSITY OF CALCUTTA

2017

JOURNAL OF THE DEPARTMENT OF MUSEOLOGY

Volume 13

2017

Editor

SUPREO CHANDA

Department of Museology

UNIVERSITY OF CALCUTTA

Kolkata

Editorial

Journal of the Department of Museology, University of Calcutta, is a refereed (blind) journal. Papers published here have been duly reviewed (double) by the internationally reputed reviewers. The Journal has achieved a set standard within a short period of its existence by publishing academically credible papers from India and abroad. In recognition, it has been included in the approved list of journals of the University Grants Commission (UGC). The Journal has got a clearly defined Ethics Policy. A dedicated webpage is there for the Journal in the official University website with the necessary details making the policies and principles quite transparent.

The current issue contains nineteen papers, which were finally selected, from the thirty received, after thorough review and modifications, though some still have scope for improvements. Diverse subject fields have been covered like art, archaeology, anthropology, botany, conservation, ethnography, heritage, etc., all relevant to museology. Contributors, from Canada, Russia and United Kingdom beside India, comprise academics, museum professionals – senior, middle and junior, research fellows and scholars.

As usual, the editorial policy emphasised on maintaining uniformity in language, grammar, expression and reference system. Utmost care has been taken to exclude gross mistakes and controversial statements; nevertheless the freedom of expression has not been tampered with. It is sincerely hoped that like the previous ones this issue of the Journal would also be able to meet the high expectations of the stakeholders. Constructive suggestions are welcome for betterment of the Journal.

I express my sincere gratitude to Professor Sonali Chakravarti Banerjee, Honourable Vice Chancellor; Professor Swagata Sen, Pro-Vice Chancellor (Academic Affairs); and Professor Paula Banerjee, Dean (Arts Faculty) of the University of Calcutta for providing unstinted support. I convey my regards to the members of the Editorial Board for advice and cooperation. I thank Dr Stephen Inglis, the Founder Director of the Cree Cultural Institute, Quebec, Canada, for providing photographs for using on the front and back covers.

At the last I would like to put on record my acknowledgement of active cooperation received in editing and making the publication possible to all the

referees, who reviewed the papers meticulously and forwarded their unbiased views/ suggestions to improve the quality; my colleagues in the Department, **Dr Ma**hua Chakrabarti, Dr Indrani Bhattacharya, Mr Sanjit Jotder, Dr Dhriti **Ray an**d Dr Piyasi Bharasa; and the contributors of the papers. My sincere thanks are due to Professor Raja Gopal Dhar Chakrabarti, Registrar, CU, for kindly publishing it and Dr Apares Das, Superintendant, CU Press, for printing the Journal so professionally.

Supreo Chanda
Editor

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Kalighat Paintings

ATUL CHANDRA BHOWMICK

Abstract

Kalighat paintings originated in the early 19th Century around the Kalighat temple in Kolkata. Kalighat paintings (*Pat* in Bengali) include both line drawings and hand-coloured lithographs. Kalighat *pat* was made by *Patua* (*Pat*, meaning painting and *ua*, meaning one, who works with paint), an artist community, who have ability to make an indigenous art form as their once occupation. The Bengali word *pat* is derived from the Sanskrit word *patty*, meaning cloth. The other synonyms of *patua* are *patidar, patakar, pattikar, poto* and *chitrakar*. The paper illustrates the origin, style, subjects of the Kalighat *pat* and the social status of the *patuas*.

Keywords : Pat, Patua, Kalighat Pat, Origin & Subjects of Pat, Style & Colour of the Pat, Socio-religious Status of the Patuas.

Introduction

The Sanskrit *Brahmavaibarta purana* (13th century AD) mentions the *chitrakars* are the offspring of celestial architect *Visvakarma* and *apsara Ghritachi*, a *gopa* (milkmaid) *sudrani* by birth, hence, Hindu. The tenth section of the *Brahmakhand* of the *Brahmavaibarta purana* also very clearly states that the *chitrakars* were degraded for drawing paintings not following the *shastras* scripture. The words of the *purana* run thus: "*Betikramena chitranang sadya chitrakarsth/Patity Brahmasapena Brahmanacha kopotah.*" (Transliteration – *Chitrakars* for drawing paintings untraditionally have just been punished, expelled and outcasted from the Hindu society by the angry Brahmin.) Once Lord *Mahadeva* also cursed the *patuas* to be degraded to the status of a javana (Muslim) for using faulty polluted brush.

Origin of Kalighat Painting

According to the *Puranic* legend Lord *Siva*, the god of destruction and dance received the news of death of his wife (*Sati*). *Siva* wandered madly for days with *Sati*'s body on shoulder in inconsolable grief threatened to ruin the earth. Lord *Visnu*, son of *Maharshi Kashyap* and Aditi (mother), the preserver was called upon by other gods

to save the earth in this grave situation. To relieve *Siva*'s grief, *Visnu* dismembered *Sati*'s dead body into fifty-one pieces by his emblem *sudarsan chakra*. Out of these fifty-one parted pieces, four conjoint toes of right foot of *Sati* was said to have fallen at K*alighat* on the left bank of the river *Adi Ganga* in Kolkata and the place, ultimately became as a sacred place (*Pithasthan*) for pilgrimage, known as holy *Kalikshetra* (Kalighat). The present Kalighat temple was constructed in 1809 following the traditional Bengali architecture with eight-roofed (*athchala*) design at the same spot where the earlier *Kali* shrine was situated in seventeenth century amidst the prevailing jungle there at that time.

Kalighat temple became popular by the early nineteenth century and either single or in batches pilgrims daily visited the temple for offering worship in reverence to benevolent goddess *Kali* of Hindu pantheon. The pilgrims present to the deity the formal promise of vow aiming to peace, happiness and cure of disease, ailment and good health. While the pilgrims back home they used to purchase religious item, small Kalighat *pats* at a cheaper price as souvenirs. This huge demand made a brisk business of *pats* and the Kalighat *pat* painters began to paint *pats* in large numbers.

The Kalighat *pat* painting was flourished in the first quarter of the 19th century (1800-1830), the formative period, stretching over thirties of the century and then passed surely through stages of development depicting variation in style, composition and colour from 1830-1890 or 1900, the middle matured period, charting a move to an end stage of the tradition in the twentieth century from 1900-1930.

The Kaligat paintings show certain nuance of the *Pahari* miniature in figurative mannerism. There is an overall effect of flatness in the composition and the forms are shaded with a narrow strip of tone, stretching rather an outline giving a sense of volume to the forms. Often ornamental decors were made in these paintings with several almost parallel lines drawn at close intervals for indicating strings by using silver sheen prepared from colloidal tin, which was replaced by white in later works. Technically the Kalighat paintings can be categorised into two broad groups – (1) Water-colour painting and (2) Line drawing.

The coloured *pats*, known as royal *pats* are again of two varieties, namely, one having a flat colour over the entire background and the other having paper-white background over which only suggestive patches of colours appear. The last variety usually present on part of a door curtain or having a line to indicate the indoor and outdoor, specially seen in later works. Again the folds of the wearing garments are indicated by a number of parallel stroke-lines with a deeper colour over the dried up already applied ground colour.

Among the water-colour paintings there is another variety, which was done in

monochrome, emphasizing the contour with a gradually fading tone. The inner part of the drawing was supplemented with a few details.

The enormous demand of the Kalighat painting among the devotees was practically responsible for the emergence of line-drawing, known locally as *rashi pat*, which can be delineated quickly in black or reddish brown colour with a single sweep of the brush over the pencil drawing on unglued paper of newsprint quality by the diligent *chitrakars*.

W G Archer in his book *Kalighat Painting* (1971, p.2) remarked that the use of water-colour in Kalighat painting has an unquestionable relationship to British water-colour paintings, particularly to Natural History paintings, where these were depicted on unprimed paper-base, keeping the background blank and unworked. But Hana Knizkova and Jyotindra Jain did not agree with W G Archer. Mukul Chandra Dey, a student of Santiniketan had assessed a large collection of Kalighat paintings during the early twentieth century. Archer was the Keeper of the Victoria and Albert Museum, Indian section, London, from 1949-1959. But the Indian paintings on unprimed paper and unworked blank background are found at a much earlier date than the emergence of Natural History paintings that of the British. For an example most of the paintings of an illustrated paper manuscript of the *Ramacharitamanasa*, dated 1772 AD, now in the collection of the Asutosh Museum of Indian Art, Calcutta University, may prove it. Another example may be cited of the illustrated manuscript of the *Bhagavat Mahapurana* of a still earlier date, 1687 AD, in which a number of paintings were executed on unprimed ground with their backgrounds either covered with a flat transparent water-colour or simply left blank. The only effect of the European contact, however, the Kalighat *patuas* were inspired to use water-colour extensively, but in their own right, the colours of the deities were made following the religious prescriptions, whereas the bodies of human figures were covered with light shade of the colours used. They pay greater attention to the shapes of the bodies, full frontal face (en face), narrow nose, arched eyebrow, large expressive eyes with shaded thick eyelid, soft lip and rounded chin. Profile face was shown rarely. Female figures are fatty and voluptuous form evoking sensuousness. Goddess *Saraswati* and *Laksmi* were presented in common form that of a middle class Bengali woman. The young man was slender and the grown-up with moustaches. One or two figures were usually depicted in one composition; more than two figures appeared only rarely, the figures were delineated in eliminating mostly all details on cheap hand-made paper, keeping its background plain. But the figures attained a distinctive clarity. This hand-made paper did not last long in the humid climate in Kolkata ambient. The simple exercise in painting down composition of figures, line and colours of the Kalighat *pats* enabled the *patuas* to increase rapidly their productions to meet the high demand of *pats* in the market

among the visiting pilgrims at Kalighat. The *chitrakaras* led on easy livelihood out of earnings in selling batches of Kalighat paintings to devotees, price of each *pat* ranging from one *paisa* to one *anna*. In 1950-1960 each Kalighat *pat* had a soaring price ranging from Rs. 15/- to 150/- and Rs. 400/- to 500/- later and *pat* figure pencil drawing is called *tipanl pat lekhal pat likhan*. Often simplified forms with curving lines on demy (22½" x 17½") paper, but not on hand-made paper as it is obstructing the flow of line, within a short time, while colour-wash is *varnalapen*. Two *pats* can easily be completed in a day. The Kalighat painters have affiliating themselves to the *chitrakar* caste of Hindu society as they also do painting as *chitrakar* do for painting *Laksmi sara* and *Manasa mer*. The Kalighat *pat* is categorised into *Chouko* (square) *pat*, measuring variously into calibrated of 13 cm x 8 cm, 38 cm x 30 cm, 45 cm x 31 cm, 48 cm x 40 cm, 54 cm x 44 cm or 76 cm x 53 cm. *Patuas* came to Kalighat from the rural areas of Medinipur, where earlier they migrated from Odisha and started to paint *pat* on *Kali* originally for sale, later other social items including the Natural History specimens were included.

The subject matter of Kalighat painting

The principal theme of Kalighat painting was the goddess *Kali*, everyday domestic life, emerged *Babu* (*Bhadralok, nanababu*) culture showing ridiculous satirical caricature of the middle class of Bengalis of Kolkata in the twentieth century holding up a mirror of the time, gods and goddesses, animals and birds and secular theme.

Social life depicting woman playing on violin (*sitar*), man and woman smoking *hookah* (hubble-bubble), woman sitting on floor preparing *pan* (betel leaf), woman selling fish, woman sitting on a stool with a large fish knife, commonly called *ansh-bati*, a gentleman dressed in *dhoti* and *chaddar* on shoulders and *pamshoe* is standing in front of the fish-seller holding a container in his left hand, the fish-seller fashion bedecked with necklace, bangles, armlet and hanging carrying ornaments, woman preparing for the night, lady at her hairdo with a comb, seated lady on chair drying her hair, a barber cleaning a woman's ear suggesting *bibi* (wealthy courtesan) and seated lady with hands crossed across her chest.

The temple area of Kalighat was full of gossips about rich and unhappy *Babus* (gentleman), their debauchery scandals, drunkenness and corruptions. The Kalighat *chitrakars* listened and observed these people and certain characters of their life, which were depicted in the Kalighat paintings reflecting their social life. *Babu* holding a *hookah* or a wine glass embracing a courtesan, *babu* and *bibi* embracing each other, *babu* is dragged by his lady, *babu* with a lady, *babu* at the feet of his lady, woman trampling on her lover, a doting husband, a woman beating her lover as a sheep and postcard sized young *babus* and *bibis* painted at the end of the century holding rose or bird. From these standpoint scenes Kalighat paintings are extremely very important.

Tarakeshwar scandal showing *Mahant* (Abbot) Nabin, Elokeshi, Elokeshi

accompanied by her younger sister Muktakeshi and their servant *Benebhau* (grocer's wife) meet with *Mahant* at the gate of the Tarakeshwar *Siva* temple and later an illicit relation was developed between *Mahant* and Elokeshi. Elokeshi was murdered by Nabin by a fatal blow with a *dao* (chopper). Elokeshi muttered – "*ei ki kaj*" (what was doing). This horrified deed was painted showing Nabin's trial and subsequent punishments with turning an oil press, as *mali* (gardener) and *bhisti* (water carrier).

Gods and goddesses are: *Siva* mounted on his vehicle *bahana* (*lanchana*) bull *Nandi*, *Durga*, *Kartika* riding on peacock, *Ganesa*, *Brahma*, *Visnu* sleeping on serpent, *Visnu* as dwarf *Vamana*, *Narasimha*, *Gagannatha*, *Balbhadra* and *Subhadra* trio, *Krishna* and *Yashoda*, *Krishna* milking a cow, *Radha* kneeling at *Krishna*'s feet, *Krishna* quelling the serpent *Kaliya*, *Yashoda* milking, *Jatayu* attempting to stop the capture of *Sita*, *Hanuman* revealing *Rama* and *Sita* in his heart, *Narasimha* and false *Vaishnav*. Depicted animals and birds are pet cat with a lobster prawn (*Fenneropenacus indicus*) in its mouth. This painting is greatly influenced by the popular Bengali proverb, ''*Biral bole maach khabo na ansh chhonbo na Kashi jabo*!' It means that the cat *biral tapasvi* promises that it will not eat fish not even touch fish scales, he will go to Kashi. The cat acts like such as hypocrite. *Shol* fish (*Channa striata*) in a cat's mouth, a parrot is caught by a cat, cow, Muharram duldul horse, elephant, tiger, lion, jackal, parrot (cockatoo), pigeon and peacock.

Winged angel, a man wrestling with a dangerous wild tiger, an Englishman on an elephant shooting at a tiger, jockeys horse racing, two *sepoys* (soldiers) fighting are evidences of the Kalighat paintings with British influence produced in the later period.

Kalighat *Pata* Painters

Nibaran Chandra Ghosh (1836-1930), Kali Charan Ghosh (1838-1935) and Kanai Lal Ghosh were active master *patuas* at Kalighat between 1900 and 1930 showing their talent in line drawing. Nibaran Chandra Ghosh was expert in line drawing in 1880, which Bengal had witnessed an acute visual statement. Following the Rajani Chitrakar (1892-1968), his three sons Srisa Chitrakar, Sambhu Chitrakar and Ramanath Chitrakar and Chinmay Chitrakar became famous in *pat* painting at that time at Kalighat. Kalighat *patuas* lived at Patuatola near Mirzapur, Chitpur and Kumortuli. Chitpur *patuas* are not traceable now. Bholanath Bhattacharya of Kumortuli was expert *patua*.

A few expert *patuas* still practise Kalighat School of Painting. They are master artists Kalam Patua of Village & PO Chandpara, Birbhum, PIN – 731 241, a postal employee; Amar Chitrakar, Dukhushyam Chitrakar, Gurupada Chitrakar, Ranjit Chitrakar, Uttam Chitrakar, Piyar Chitrakar, Anwar Chitrakar, Puspa Chitrakar, Ajit Chitrakar of Kuachak village, near Tamluk, PO – Kumarchak, Purba Medinipur.

Kartik Chitrakar, Bablu Chitrakar of Karkarda village, PO – Demari, Niranjan Chitrakar of Habichak village, PO – Nandapur, PIN – 721 625. Gouri Chitrakar of Nirvayapur village, near Basudevpur, Paschim Medinipur. Kalam *Patua*'s four master pieces are mentioned here —

1. His revisiting *Kaliyug* (dark age – *ghor Kali*) painting shows the wife is riding on her husband' shoulders, while his religious mother follows him behind on foot.
2. Fluid water-colour washed *Abhisarika* (meaning fearless) signifies a heroine, who braved the danger of the night to meet her lover, personifying the theme of romantic love.
3. Nectar of her body (40 x 48 cm) arising from the sudden influx of money in the lifestyle of the middle-class urban people of Kolkata, drawn in 2003.
4. Sneaking into the mirror painting portrays a lady is alone in the privacy of her room, stares seductively at her imaginary lover is a mirror reflection in her front, painted in vibrant blue colour rendition.

Kalam's *Pats* are preserved in Japan, Germany, Switzerland, Italy, Holland, HongKong, United Kingdom. Kalam Patua makes painting nowadays on silk pieces, *Ganesa chouko pat* painted in 1992. Late talented Banku Patua of village & PO – Satpalsa, Birbhum, PIN – 731 234, attended the Festival of India, held in London in 1982 and the Aditi Exhibition in Washington, USA in 1985.

Style and Colours of Kalighat *Pat*

The Kalighat paintings are especially marked for their bold, simplified forms, technique and treatment imbibing realism and newly social criticism of nineteenth century *Babu* culture of Kolkata, besides the themes of the religious *puranic* anecdotes. Parrot drawn in deep green, red beak and colourful crest perching on a tree branch to rest upon. The most appealing aspects of the style of the Kalighat painting are flawless rhythmic strokes and quality of brush-work. This creative art form is very attractive and extremely elegant.

The practice of Kalighat painting began to die out in the early decade of the twentieth century for the introduction of dazzling glossy mass lithographic prints done at the Kansaripara Art Studio in Kolkata and the demand of these ostensible prints was increased for its cheaper price than Kalighat paintings. At Bat-tala, now Bow Bazaar, College Street *pats* were found.

The outlines of the figures in the Kalighat paintings were drawn in black colour misty on brown and pale yellow background paper in bold sweeping single stroke with a facile *kalam* (brush). Red, blue, yellow and green colours were also used. The brush was made earlier of *kathbidali* (squirrel) or *nakul/ beji* (mongoose) tail hair or she-goat's underbelly fine hair. But nowadays the *Chitrakars* purchase

brushes from the local markets. They delineated lines or apply colour solution (*bamalepan*) with market pliable brushes. Indigenous sources of colour preparation – *patuas* traditionally relied on natural pigments that were prepared mainly from locally available vegetable sources. Vegetable dyes were extracted from organic leaves, creepers grown in the local areas. Extracts of these were made into paints by mixing with a variety of different binding media, extracted from bel (*Aegle marmelos Correa*) or occasionally from boiled tamarind (*Tamarindus indica* Linn.) seeds or even Arabic gum (*Acacia*). These dyes were mostly used in the nineteenth century and still used today by a very small section of artists working in the *patua* village at Naya, PS – Pingla, Paschim Medinipur, PIN – 721 140.

Different shades of colours

Red

1. Orange red — Extracted sap of *pui-metuli*, pot herb, locally called *bansunti* (*Basella rubra* Linn.), grown in kitchen garden, ripen fruits produce this colour, but fugitive in nature. To darken the colour, a little shell-lime is mixed. Or, from seeds of saffron dried fruit pods, rubbed and mixed with *bel* gum.
2. Rosy red — A little limestone when mixed with *hingur* (*girimati* – red oxide) produces this colour or even from rose petals.
3. Deep red — *Hingur* earth piece is rubbed on a whetstone with a little water for brilliant scarlet.
4. Red pigment is made from the crushed dried up leaves of *segun* (teak – *Tectona grandis* Linn.) and mixed with green *bel* fruit gum as binding medium.

Blue

1. Blue is made from the petals of *aparajita* (*Clitoria ternatea* Linn.), grows profusely in Bengal. The petals are crushed into and mix with gum arabic to form a paste.
2. Royal blue — Earlier indigo plants were chopped up into small pieces and decomposed in water. The decoration thus obtained was boiled to produce royal blue (prussian). Shell-lime or root of al plant (*Indigofera tinctoria* Linn.) was mixed to achieve permanence of blue colour.

Black

1. Black — Rice grains were roasted to black and then produced and add a little of water.
2. Deep black — Lamp soot either of hurricane or of cooking earthen vessel when mixed with very little water and stir thoroughly with fingertip to produce paste of most preference.

Yellow

1. Light yellow — Juice of broad bean (*Dolichas lablab* Linn.) or aquatic *helencha/ hincha* (*Enhydra fluctuas* Lour) and lime are mixed together. Or, crushed down dried *haldi* (Turmeric – *Curcuma longa* Linn.) rhizome mixed with a little water to produce light yellow dye of fleeting nature. To achieve colour a brilliant tone a little shell-lime is added. Or, chrome yellow (*peuri*). Or, red lead.

Green

1. Light green — Extracted juice of broad bean or *helencha* leaves produce light green.
2. Deep green — Addition of a little amount of commercial blue turns the juice of broad bean or *helencha* leaves into a darker green. Or, Juice of *neem* (Margosa – *Melia azadirachta* Linn.) young leaves produces green colour. *Neem* acts as a preservative to the organic paper of the Kalighat *pats* against obnoxious insect infestation. *Pat* paper is full prone to vermin attack.
3. *Kundri* (*Coccinia grandis*), known as ivy gourd, leaves are crushed into a mortar and pestle and wetted into water, then squeezed out and added gum to produce green colour.

But in reality, nowadays the *patuas* use poster colours purchased from the local markets.

Social & Religious Status of the *Patuas*

The *patuas* live in a state of oscillating just like clock pendulum midway between Mohammedanism and Hinduism, like a half Muslim and a half Hindu (*dobhanja*). The conversation of the recognized Hindu caste of *patuas* was said to be responsible for the levied *thirtha karv – jiziya* (poll-tax) by Firoj Shah Tughlaq (1351-1389) on non-Muslims. The Hindus had to bear the burden. The *patuas* then became Muslim. Akbar (1542-1605) abolished that *jiziya*, and the *patuas* again embraced Hinduism. But when Aurangzeb (1618-1707) reintroduced *jiziya* in 1671, the *patuas* became Muslim to receive protection against non-payment of inexorable *jiziya* for life protection, so oscillating.

Ajit Chitrakar sang: "*Habil parilo Shastra Kabil Quran, Taha hote sristi holo Hindu Musalman*" (Translation – Habil reads scripture, Kabil the Quran and from that Hindu and Muslim are created). Or, "*Hindur Narayana tumi, Musalmaner pir*", (Translation – You are *Narayan* of Hindu and *pir* (Mohammedan saint) of Muslim). Or, "*Sab jani Hindu Muslim/ Amra ek mayer santan*" (Translation – All Hindus and Muslims are sons of one mother. That's all is known). Religious groups and not only assimilated in the groups. So, they live on the outskirts of the villages. They

follow both the Hindu and Muslim rites, showing a solitary example in India of religious unity. But considering the solemnized rites and the rituals the *patuas* followed (listed below), it may be said that these are all Islamic rites; so, they are more a Muslim than a Hindu. It is also true that the *Chitrakars* of Kalighat follow only Hindu rites and rituals.

1. They perform circumcision (*sunnal/ khatna*) by *hajam* (barbar) usually at the age of five or six.
2. They pronounce four *Kalmas* (passage) of the *Quran* at the time of marriage. *Kaji/ Maulavi* performs marriage in presence of two witnesses. Before marriage *nafar namaj* is must.
3. *Denmohar* (dower) is promised before all the persons present there.
4. They perform five times *namaj* (prayer) daily. Evening *namaj* is *magrib*.
5. Bury the dead body after *janaja* (last prayer) directing the face westward to Kaba (Kaba*mukhi*).
6. Each *patua* has two names – one Muslim and one Hindu.

Conclusion

Kalighat *pats* are preserved in the Asutosh Museum of Indian Art, Calcutta University; Gurusaday Museum, Joka, Thakurpukur; Indian Museum, Victoria Memorial Hall, State Archaeological Museum, Behala, Kolkata; Kala Bhavana, Visva Bharati, Santiniketan. Victoria & Albert Museum, London got 28 Kalighat *pats,* presented by Rudyard Kipling on 08.08.1917, which had been collected by his father John Lockwood Kipling. John Lockwood Kipling was also the Principal of the Industrial Art School in Lahore in 1875. Of course, before that some Kalighat *pats* were also collected in the Victoria and Aibert Museum. S C Belons collected 24 Kalighat *pats* plate of nineteenth century by the Curator of the Lahore Museum (1870), who was living in India (1865-1893).

Bibliography

Archer, W G (1971) *Kalighat Paintings: A Catalogue and Introduction.* London: HMSO.

Bharasa, Piyasi. (2011) "Kalighat Painting at Victoria Memorial Hall." *Kalighat Paintings* (Eds. Suhasini Sinha and C Panda). London: V & AM and Mapin Publishing.

Bhattacharya, Binoy. (1980) *Cultural Oscillation: A Study on Patua Culture.* Calcutta: Naya Prakash.

Bhowmick, Atul Chandra. (2012) "The Indigenous Art form of the Patuas of West Bengal." *Indigenous People in India: Identity, Empowerment and Discontent* (Ed. Dipak K Midya). New Delhi: APH Publishing Corporation.

Chakrabarti, Jayanta. (1986) "Kalighat Painting." *Nandan*. Santiniketan: Kala Bhavan, Visva Bharati.

Sinha, Suhashini. (2011) "Kalighat Painting in The V & A Collection." *Kalighat Paintings*, (Eds. Suhashini Sinha and C Panda), London: V & AM and Mapin Publishing.

ভট্টাচার্য, ভোলানাথ ও দেবদত্ত গুপ্ত, (২০০১), ''কালীঘাট পটঃ সাম্প্রতিক সমীক্ষা,'' পশ্চিমবঙ্গের পটচিত্র (সম্পাদিত – অশোক ভট্টাচার্য), কলকাতা : লোকসংস্কৃতি ও আদিবাসী সংস্কৃতি কেন্দ্র, তথ্য ও সংস্কৃতি বিভাগ, পশ্চিমবঙ্গ সরকার।

The Cree Nation of *Eeyou Istchee:* an Important Exhibition

ERICA CLAUS AND STEPHEN INGLIS

Abstract

Culture and identity are central concerns for indigenous peoples in Canada. In 2011, a new cultural center was completed in the Cree community of Oujé-Bougoumou, northern Quebec. Being called the Aanischaaukamikw Cree Cultural Institute (ACCI), it functions as a museum, archive, library and teaching center dedicated to promoting and preserving all facets of history and culture. On April 12, 2017, the Institute organized a day-long event, welcomed elders, leaders, community members of all ages and partners from the south to celebrate the opening of the inaugural travelling exhibition "Footprints: A Walk Through Generations"

Keywords : Indigenous, First Nations, Museums, Travelling Exhibition

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Eeyou Istchee is the ancestral home of the James Bay Cree and means "the Land of the People" The territory comprises ten coastal and inland communities in northcentral Quebec Province of Canada. The territory encompasses 400,000 sq. km., or a fifth of Quebec's total land-mass. It includes the lakes and rivers that drain into eastern James Bay and southeastern Hudson Bay, along with the salt marshes, coastal islands, interior uplands, dense coniferous forests and tundra. For the Cree, this entire natural bounty — the lands and waters, the plants and animals — is sacred.

The relationship of the Cree with *Eeyou Istchee* has been shaped over thousands of years of hunting, fishing and trapping, guided by the values of respect and gratitude for the land, the Elders and the Creator. Courage and patience, sharing and self-reliance, defined the ancestors and inform who the Cree are today.

The People of *Eeyou Istchee* call themselves *Eeyou* and *Eenou*, which simply means "the people" of the coastal and inland areas. There are more than 18,000 who belong to the Cree Nation, with nearly 16,000 residing in ten Cree communities.

Building a sustainable economy is a preoccupation of the Cree. *Eeyou Istchee* is fully occupied and intensively used by Cree people. Based on traditional family

territories, the Cree land management system has been operating with great efficiency for centuries. The economy is not limited to traditional pursuits. While Cree continue to practice, and to protect traditional hunting, fishing and trapping ways, the communities and region are engaged in all manner of modern economic activity, generating economic development and employment within and outside *Eeyou Istchee*, and contributing hundreds of millions of dollars to the regional, provincial and national economies. Recognizing that sustainable development is necessary for the economic future, and particularly for youth, the Cree have concluded numerous energy, mining and forestry agreements with corporations within *Eeyou Istchee*.

Protection of ancestral rights has made of the Cree wise stewards of ancestral lands. This is their duty and the commitment remains strong, even as it has evolved to accommodate a rapidly changing world. Indeed, a series of landmark treaties with both provincial and federal governments have both strengthened traditional ways of life and ushered in new opportunities to better the communities. Through these agreements, the Cree have assumed responsibility for governance, education, health and social services, culture and language, communications, economic development, tourism, police, and the protection of natural resources and the environment.

In addition, the "Cree Vision of the Plan Nord" (2011) has laid out a blueprint for the use and sustainable development of *Eeyou Istchee* that respects the Cree traditional economy. More recently, the *Truth and Reconciliation Commission* (2015), which laid bare the abuse of Indigenous schoolchildren across Canada, including within *Eeyou Istchee*, set a framework for healing, affirmation and redress.

Culture and identity are central concerns for indigenous peoples. Cree culture is strong and the Cree language is spoken by most people. In 2011, a new cultural center was completed in the Cree community of Oujé-Bougoumou. Called the *Aanischaaukamikw Cree Cultural Institute* (ACCI), it functions as a museum, archive, library and teaching center dedicated to promoting and preserving all facets of history and culture. In 2013, the Institute was granted "Museum A" status by the federal Department of Canadian Heritage. This was based on high standards of temperature and humidity control, conservation, security, access, programming and professional expertise. The designation enables the Institute to borrow from other recognized museum, become eligible for federal grants, and take a place among the leading museums in our country.

After five years of operation, and a busy program of teaching, commemoration, collecting, and acting as a cultural hub of the nation, the Institute has prepared its first travelling exhibition. What follows is an account of the opening celebration for this exhibition, another important step in the life of a First Nations cultural organization. A travelling exhibition has special meaning for the profile of the institution, because

it will travel not only to Cree communities, but also to museums in larger cities across Canada. As such it will be a window onto the culture and tradition of the Cree Nation, accessible to many more people than could make the long trip north to the Cree Cultural Institute itself.

On April 12, 2017, the *Aanischaaukamikw Cree Cultural Institute* (ACCI) in Oujé-Bougoumou, Quebec, organized a day-long event, welcomed elders, leaders, community members of all ages and partners from the south to celebrate the opening of the ACCI's inaugural travelling exhibition *Footprints: A Walk Through Generations.* Numbering 200, with the youngest at 3 months wrapped in a moss bag, feelings of pride in community and Cree heritage overflowed. The outstanding professionalism of the management, staff and guides who were on hand to assist visitors resulted in a seamless and well-paced event. The large number of non-indigenous professionals, business people and scholars in attendance attests to the importance of continuous learning about the Cree people in order to foster sustainable partnerships.

The Cree who's who showed up, including Dr Abel Bosum, President of ACCI, Rodney Mark, Deputy Grand Chief, Lance Cooper, Deputy Chief of the Oujé-Bougoumou Cree Nation, Dr Sarah Pashagumskum, Executive Director of the ACCI, Curator, Natasia Mukash and Matt Iserhoff, Juno award winning musician. The Grand Finale brought the five-hour event to a close when Matthew Coon Come, former National Chief of the Assembly of First Nations and now Grand Chief of the Grand Council of the Crees (Eeyou Istchee) addressed the crowd. He expressed his conviction that "our culture and way of life is still alive and thriving, and with exhibitions like *Footprints*, young people can seek healing and we pass on knowledge to make our way of life strong again" ACCI is one of the centers "I'm very proud of where we can tell our stories and where our elders teach us" he said. Coon Come's steadfast message of reconciliation and relationship building reinforce dynamic collaborative coexistence.
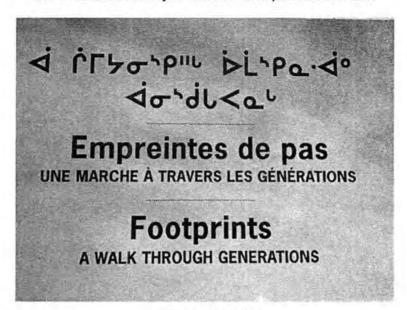
Footprints may be a dense show with lots of text and pictures, and it is a relevant and timely exhibition for indigenous peoples and other Canadians living in a fast-paced and contemporary world. The show follows the evolution of travel through the eyes of the Cree as it teaches and shares ancient knowledge, practices and language for modern times. It tells the story of walking on the land as a nomadic people, moving from region to region and season to season as a way of life for hunters and trappers who depend on it. It demonstrates how the many ways and means of walking in the forest reinforces everything science is teaching us about the health benefits of spending time in nature. Only, the Cree knew it a long time ago. The 150 contemporary and historic artifacts punctuate the intensity of the exhibition experience.

The exhibition is arranged in spiral sections winding into an intimate center recalling the structure of a teepee. The thematic markers are The Earth is Our Mother, Rites of Passage, Clothing Through Generations, Wealth of Our Land, Strength of Our People, Travelling through Time and *Eeyou Istchee* (Cree for "The People of the Land"), The Backbone of our Culture, and Walking with our Past to a Better Future.

We learn about stories, art and traditional technologies passed down from Cree ancestors. *Footprints* is an expression of living life well and encourages healthy habits and connection with the land. Among the artifacts and art works, there are several detailed and decorative outfits made for little ones taking their first steps on Mother Earth that can be seen up close along with gloves, mitts, boots, bags, sleds and snowshoes. Photographs, film and sound recordings enhance the experience. Dr Sarah Pash explained that the "exhibit celebrates who we are as Cree people and our connection to the land we have travelled across and lived with for centuries. It invites visitors to celebrate our culture and to share knowledge about our history, culture, ceremonies and stories. This sharing and celebration of Cree culture and history is of central importance to the ACCI, a vision given to us by our elders"

Footprints was created by the ACCI in collaboration with other Cree communities and elders and is co-curated by Natasia Mukash and Paula Menarick. Panels are in Cree syllabics, French and English. This travelling exhibition was made possible with a grant from the Federal Government's *Museums Assistance Program* and will travel to nine Cree Communities (http://www.gcc.ca/communities/comnav.php) before making its way across Canada. Look for it at the Canadian Museum of History in Canada's capital city in 2019. For updates on the Cree Cultural Institute and its activities, see *creeculturalinstitute.ca*

(Thanks to Ross Clark and the Eeyou Eenou Community Foundation for some information included here).

Exhibition title panel

Reverend Eliza Webb from Chisasibi (with cap) with her
sister Maria Scipio
Eliza Webb recited the opening Lord's Prayer in Cree

ERICA CLAUS AND STEPHEN INGLIS

Visitors Stella Bearskin from Chisasibi with Nancy Danyluk from Wemindji

Footwear

Guide Hillary Saganash assisting visitor.

Curator Natasia Mukash

Matt Iserhoff performing for guests

Recent Trends in Museums

G S RAUTELA

Abstract

In last more than a decade the rate of transformation in museums has been rapid. These institutions are now more visitor friendly, professionally managed; adopting modern business approach and museums are designed as experiences rather than a mere presentation of objects. In order to realize their education and entertainment potential fully, museums have adopted newer designs both in building architecture and display, communication techniques, marketing, presentations and visitor engagement. Museums are now designed as experience venues. Technology has been adopted in management and communication to be more efficient and engaging. Exhibits and activities are designed to satisfy needs of various visitor segments. For outreach, mobile units and activity packages are taken to community. This transformation was influenced by financial hardships faced by museums and visitor expectations and changing paradigm of communication in society. Therefore, in order to survive and remain relevant museums had to make paradigm shifts in their approach. Now they register more footfall and greater community involvement. At the same time visiting public also attaches more value and importance to museums for education, entertainment, socialization, leisure activity and entertainment.

Keywords : Edutainment, Experience Design, Immersive, New Media, Accessibility, Visitor Engagement, Communication Tools, Outreach, Hands-on, Participatory Culture.

Museum world has been witnessing a sea change in recent times in concept, approach, presentation, management and communication with the audience. Attractive architecture and gallery displays, visitor friendly digital communication tools, experience hot spots in the museums are replacing the traditional approach and practice (Kino, 2010). Networking and collaboration, outreach, web presence and marketing are increasingly being practiced and considered as important functions of museums. The success of museums is no more dependent only on internal curatorial expertise but on networking, collaboration, outreach, virtual presence in

cyberspace, audience engagement and experience using variety of communication tools and practices.

This change is influenced by the visitor centric planning, financial model of self-sustainability and tremendous possibilities that digital technology has offered. Museums have seen change in approach from *'eyes-on'* to *'hands-on'* to *'minds-on'* and now *'emotions/hearts-on'*. However, museum approach of presentation from *'known to unknown'* or *'unknown to known'* selectively gets implemented even today. Visitor engagement with museum objects and programmes has now taken the centre stage of museum planning and practice. Human and visitor friendly technology interface is being increasingly introduced to attract, engage and educate the audience. In addition *'museum as an experience'* is being promoted as part of marketing strategy. The earlier approach *'about something'* replaced by being *'for somebody'* (Weil, 1999) is now greatly recognised as important functional strategy for success of museums. The success of a museum also depends on inclusiveness, networking and collaboration with other institutions, organizations and agencies, marketing and PR using modern communication methods and outreach activities but not only on quality of objects. It is the museum experience as a whole which determines the success of the museum today. The recent concepts – experiential, exclusivity, e-promotion, global citizenry, virtual presentations, inter-disciplinary content treatment, etc., are being globally introduced to transform museums and focus on visitors, rather than objects. Some of the recent trends are enumerated below.

Architecture

The concept of museum architecture has undergone a revolution in last few decades.
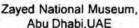
The traditional architecture is no more popular. Though overwhelming art and architecture is often criticized but the museum building today is made attractive, imposing and distinctive with compelling designs. The buildings stand as iconic and distinguishable. Accessibility provisions are being incorporated to make them more inclusive and visitor friendly. Internationally known architects are associated to add value to the project for generating funds. The architecture of today provides large spaces, huge spans

Museum of Art and Science in Singapore

and heights of halls, visitor facilities such as merchandise store, restaurants, parking, resting places, as well as new technological add-ons to provide visitor comfort, encourage social activity and make museums provide a holistic experience.

Zayed National Museum,   Denver Art Museum, USA   Museum of Middle East
Abu Dhabi,UAE   Modern Art, Dubai

Museums of today are centre of social activity rather than mere store houses of objects and their display. This has resulted in huge investments in buildings. But modern imposing designs are considered as key elements for sustainability.

Exhibits

Exhibits are heart and mind of a museum. The exhibits of art and history museums, though historically and culturally very important and national treasures, are no more isolated pieces of display in a museum. Interpretation through human interface write ups, audio-visual aids, multimedia kiosks or digital technology bring them live and make them even more educational. Similarly, exhibits in science museums are designed in such a way that they are hands-on and minds-on supported by technological communication tools to make them engaging and part of an overall museum experience (Carliner, 2001). Today exhibits are more interpretive and engaging. To make them curios and attractive, support is taken from technology (Heath and Lehn, 2010). Another move is to add entertainment components to exhibits to engage non-serious visitors. Theatre experts are utilized in exhibitions for interpretation as a story to make dramatic presentations to hold attention of visitors and engage them. This combination of education and entertainment, termed as *'edutainment'* (European Report on Quality Indicators of Lifelong Learning 2002), virtual experiences, minds-on simulations form part of experience economy in museums today.

Display

The display design of galleries today is attractive, appealing, inviting, immersive and offers a *'wow'* feeling to visitors. Illumination (Gay Hunt, 2009), colour, creation of cognitive spaces, ergonomic structures, incorporation of visitor behaviour research data make them visitor friendly. Creation of an experience guides the designer in space creation. Exhibits today are designed in such a way that they are

firing platforms for imagination and enrich and enlarge the life of a visitor. They encourage intellectual and social connections (Krukar, 2014).

Attractive displays offering a WOW feeling

Programme & Activities

Museums are today living spaces and centres of year round vibrant activities. These activities are either part of exhibition promotion or in support of overall objectives of the museum. If the objective of the museum is to support education or to promote culture or to create awareness on important social issues, the activities are exactly planned to achieve those objectives. However, constant research and surveys have provided valuable data on visitors' behaviour, ways that help learn better or needs of visiting public. Market

Senior citizens in a computer awareness session museum

Durga Puja in British Museum, London

surveys also provide important demographic data about people not aware of the museum, or needs and expectations of people from the museums. This data helps in designing activities as per needs and suitable for particular group thereby making museums more inclusive and useful.

Special packages or *'designed experiences'* (Liu, 2013; Tzortzi, 2015) involving exhibits, shows, activities, simulations, engaging

multimedia demonstrations which are both educational and entertaining supplement the museum galleries. As part of marketing strategy to increase footfall, special tailor made activities to attract particular ethnic or social group, are designed and organised. In nutshell, it is the educational and business model, which dictates the activities of museums. In many countries museums have to raise funds for survival except in some European countries, India, China and developing countries where governments continue to fund museums

Creating a real-like presentation in a museum

as part of social commitment. Business model, though, has distinct advantage in improving museum services, bring in efficiency and drive innovation both in presentation and activities; educational and promotional.

Management

The museum management of earlier times where collection management and research was a priority area is no more relevant. Today museum management sees reflection of corporate governance in fundraising, marketing, services and promotion. Market research guides museum presentation, fundraising activities. Financial difficulties have put pressure on fundraising, hence on marketing activity, an essential
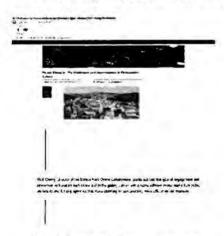
management function of a museum today. Visitor centric planning, experience economy, exploiting other avenues of fund generation, supplementing traditional museum presentations with experiences with added cost, developing exhibitions for rentals, setting exhibits, providing consultancy, souvenir stores, cafeterias, publications etc. are few services that bring in substantial money. Organising activities has become '*event management*' to optimise on resources and success. In fact, the government supported model has worked against proliferation of museum cause and innovation due to complacency and no accountability. Therefore, museums, basically a service sector, need committed and business-like approach to sustain in mission and economy. We need to create special marketing teams in each museum or in group of museums or as a consultancy team for need assessment and promotion of museum '*brand*'

New Media

With advent of digital media, the museum is no more confined to four walls of space, it is increasingly becoming a global concept. Virtual tour of museums or its collections, accessing information through museum websites or portals, is becoming popular. The museum social media networks are mushrooming in recent times. These social media or twitters are becoming tools of promoting museums or tools of evaluating museum experience or initiating discussions on roles of museums in 21st century. Use of new media is increasingly becoming an extended museum service. The social media has contributed immensely in contributing to substantive conversations about key questions museums should be addressing or challenges they face. It is sometimes a virtual conference and the global perspective that is offered to the discussions is very significant and important. Social media is simply a participatory culture. In fact cultural institutions, like museums, can use this media to their advantage in promoting their objectives, philosophy or key educational elements to global audience. They can also help in:

- listening to visitors, inviting their increased participation in our work·
- making museums more accessible both physically and intellectually·
- interacting with and influencing local communities, contributing to their quality of life
- creating spaces where citizens can both learn about and shape their world
- shaping authority with the public in developing exhibitions and programs
- utilizing social media to involve and attract the public
- assessing needs of users for planning in future.

Social media discussions on
museum matters

Multimedia kiosk for visitor

Outreach

The focus of outreach activities, apart from reaching out to unreached – is inclusive approach to create brand for the museum, social institutionalization and to maximize efficacy of the museum services.

Reaching out – museums now go to visitors who can't come to museums

Digital media has opened new vistas of outreach where global citizen is the targeted audience, instant communication without time lapse is possible, reactions or response of audience is available. While reach has been extended beyond geographical or community boundaries of the museum, it has given new challenges which require a much higher pace to work. But this is the trend which will determine museums' success efficacy or failure in years to come.

Human Resource

Traditional museum expertise will require a new look to incorporate expertise to handle present day requirement. Tech-savvy staff with adequate skills to handle digital technology tools and services, is needed to handle responsibilities needed for modern museums. In a situation where additional manpower is a difficult proposition, only solution is to develop multiple competencies in existing staff by regular manpower training in required skills. National Council of Science Museums has always managed its requirement through this approach and has succeeded. A curator in NCSM is a scientist, an engineer, a computer expert, a marketing person, a communicator for public relations or presentations, an event manager and a CEO to run a small centre. Regular training programmes help NCSM to achieve this to a large extent, though encyclopaedic expertise is difficult to develop in any person.

Developing human resource with multiple skills

Conclusion

Museum field is poised for a major paradigm shift – from traditional to modern communicative and inclusive museum. The success of a museum, in future, shall greatly depend on its catching the strings of change, in content, presentation and communication with its audience both within the museum and globally. Digital technology has offered immense opportunities and sky is the limit for its effective utilization. Financial sustainability is not the issue for Indian Museums to consider as they are funded by the government. However, relevance sustainability is within the competence and mandate of museum professionals. No one else can keep the museums relevant and connected to people. It is the question of making the right paradigm shift from time to time by taking advantage of technology and new emerging concepts in museology.

References

Carliner, Saul. (February 2001) "Lessons Learnt from Museum Exhibit Design." In: *Technical communication*, Vol. 48(1).

European Report on Quality Indicators of Lifelong Learning 2002. European Commission, Brussels.

Gay Hunt, Elizabeth. (2009) *Study of Museum Lighting & Design*. Thesis for Graduation, University of Texas.

Heath, Christian and Lehn, Dirk vom. (2010) "Interactivity and Collaboration: New Forms of Participation in Museums, Galleries and Science Centres." In: *Museums in Digital Age*. London: Routledge. pp. 266-280.

Kino, Karol. (16 May, 2010) "Giving Museum Goers What They Want." In: *The New York Times*.

Krukar, Jakub. (2014) "Walk, Look, Remember: The Influence of Gallery Layout on Human Memory." In: *Behavioral Sciences*.

Liu, Kegeng. (2013) *Designing Visitor Experience for Open–ended Creative Engagement in Art Museums: a Conceptual-Multi Touch Prototype Design.* Graduate Thess and Dissertation, Iowa State University, USA.

Tzortzi, Kali. (2015) "Spatial Concepts in Museum Theory and Practice." In: *Proceedings of the 10th International Space Syntax Symposium.* London: University College London. pp. 37:1-37:14.

Weil, Stephen E. (Summer 1999) "From Being About Something to Being For Somebody: The Ongoing Transformation of the American Museum." In: *Daedalus,* 128(3): 229-258. America's Museums: The MIT Press.

Buddhist Monasteries of Arkhangai Aimag of Mongolia

OLGA N TRUEVTSEVA

Abstract

The article is devoted to the problems of preservation of the monasteries of Arkhangai aimag (one of the Provinces of Central Mongolia), which was from 1600-1920 a Centre of Buddhist Art. There are many objects of cultural heritage – the tangible and intangible. Monasteries were founded in the 16th-18th centuries at this region and played an important role in the economic and cultural development of Central Mongolia. Around monasteries formed a large settlement, city, trade, transport, craft and social infrastructure, developed education, medicine. A significant part of the residents of the Arkhangai aimag devoted themselves to the service of the Monasteries. Monasteries were centres of culture and art. Silk Road, crossing the Aimag, contributed to the integration, mutual influence of European and Asian cultures. From 1928 the Buddhist Religion was persecuted by the communist party. The Monasteries were collectivated. Already the adoption of the law on the separation of Church and State, the mass repressions of the second half of the 1930s most of the monasteries were destroyed, some changed to the use as utility rooms, ware-houses, institutions for culture. In 1937, in relationship to Stalin's Terror the Soviet Military was stationed in Mongolia and all of the Monasteries were closed or destroyed. Monks were taken from their positions in the Monasteries and secularized. Since 1990, Mongolia began the revival of religious associations, the return of former monasteries to liturgical actions. The surviving monastic buildings are the monuments of material culture. Many of them turned into ruins and relate to archaeological objects of cultural heritage.

Keywords : Cultural Heritage of the Monasteries, Material Culture, Intangible Cultural Heritage, Art, Monuments, Religious Culture.

Buddhist monasteries have long attracted the attention of scientists of different specialties. Historians study their role in the formation of statehood and the

development of society. Ethnographers are interested in the way of their life, cultural and everyday features of monastic life and interaction with the rest of the population. Physicians are trying to understand the secrets of Tibetan healing, the main custodians of which are still monasteries and their special schools. Philosophers, psychologists, physicists, astrologers, art historians and other specialists find subjects of their interests of study in Buddhist monasteries and temples. The scientists dealing with objects of natural, material and intangible cultural heritage have their subject of research. These are the problems of their identification, description, study, protection, restoration, popularization and use.

This range of problems not only denotes the subject and the main aspects of studying the object of scientific discipline, which some scientists call heritology. They, in fact, reflect the main components of the system of practical activities for preservation of natural and cultural heritage. The technology of this activity, the conditions and factors of its implementation, concrete experience accumulated in different countries, should also be considered as a subject of heritology.

The heritological approach was the basis for the joint Russian-Mongolian project of studying Buddhist monasteries of Archangay aimak of Mongolia. The project was developed by a group of university scientists from Barnaul (Russia) and Erdenet (Mongolia) and supported by the Russian Foundation for Basic Research and programs of the RAS and the Academy of Sciences of Mongolia. In June 2017, the first reconnaissance expedition to Archangay aimak was conducted. Its main task is to test the methodology for identifying, describing, photo-fixation the state of monastic buildings in the field conditions.

The territory of Archangay aimak was chosen not by chance. Located in the centre of Mongolia, at the crossroads from east to west and from north to south, not far from the ancient capital of Khalkh, the town of Kharkhorin, it has been in the centre of events throughout the centuries-long history of the country. And a lot of settlements of amok scattered in the mountains and river valleys, far from the big roads, still preserve the ancestral culture in its original form.

The acquaintance of the Mongols with Buddhism took place during the creation of the Genghis Khan Empire in the 13th century. However, at that time the Mongolian nobility did not need religious bonds of the state and provided an opportunity for representatives of Islam, Catholicism, Shamanism, Buddhism to conduct competing sermons. Only by the 16th century, the power struggle between the descendants of Genghis Khan encouraged them to turn to Tibet's gaining influence. Over the next two centuries, more than 20 legislative acts have been adopted, pursuing Shamanism and providing legislative support to the new religion.[1] This meant official recognition, reinforced in the construction and growth of economic, political and spiritual influence of the monasteries.

The first monastery of Mongolia, Erdene-zuu, was built in 1586 in Kharkhorin. In the same year, the first temple was laid on the southern slope of the sacred mountain Bulgan, which eventually grew into one of the largest monasteries of the country. This monastery became the base of the city of Tsezerlag, the capital of Archangay aimak. By the end of the 19th century, about a thousand lamas resided there, and in the days of great Khurals up to four thousand lamas gathered here.[2]

Pic. 1. *The first monastery that we visited in Mongolia was Erdene-zuu. It was built in 1586 in Kharkhorin and was the first monastery of Mongolia*

Pic. 2. *There are a lot of buildings which were formerly Buddhist Temples in these areas. Now they are used as museums and as churches*

The monasteries of Archanghai were always in the centre of events in Mongolia. In 1932 they were one of the most powerful centres of anti-government uprising in order to restore the theocratic system. This largely predetermined the fate of the monasteries during the repressions of the late 1930s. Most of them were blown up or burned, and many lamas were shot or sent to camps.[3] Only some buildings of 29 monasteries, located on the territory of the aimak, survived, and later they were

found another application to. The return of a number of buildings to church communities began only with the beginning of democratic transformations at the end of the 20th century.

Another reason for choosing the monasteries of Archangay aimak as an object of research was the insufficient degree of study of the problem of preserving their cultural heritage. Except for Erdene-zuu, declared by UNESCO in 2004 as the World Heritage Site, about which the largest number of books and articles are written, the history of the creation and development of the Zaia gageniy huree – one of the oldest monasteries in Mongolia – has been most fully recreated.

One of the first researchers was a well-known Russian specialist in Mongolian studies A M Pozdneyev, who gave the detailed description of the monastery. During his second trip to Mongolia in 1892-1893 he visited Tzetzerlag and recorded in his travel notes a detailed description of Zaya gegeniy huree, biographical information about his founder and Khubilgans.[4]

A monograph of the famous Soviet architect N Shchepetilnikov, who worked in Mongolia in the 1950s is extremely interesting from the point of view of a detailed analysis of Buddhist religious buildings. Relying on his own observations and archival documents and photographs, he reconstructs the development of Mongolian architecture from the first nomadic buildings to the middle of the twentieth century. Special chapters are devoted to the typology of monasteries, the principles of their planning, and the influence of Tibetan and Chinese traditions on the local temple architecture. Among the numerous illustrations there are photos of four temples from the ensemble of the monastery Zaya gegeniy huree.[5]

Among the books published in Mongolia, it is worth mentioning the works of local historians S Zhunsh and T Yadamsuren who dedicated their history to Archangay aimak, especially to its main attraction – the monastery, its inhabitants and their famous compatriots. The books are generously illustrated with photographs, many of which reflect the now lost Buddhist monuments.[6]

The monograph of Hungarian researchers J Mayer and K Teleki, who reconstructed the history of the monastery Zaya Pandita, described places of worship, holy springs, suburgans located on the territory of Archangay aimak, presents a great interest as well. A separate chapter is devoted to the recreation of monastic traditions in modern conditions. A special value of the monograph is the use of a wide range of historical sources: archival documents, photographs, drawings, memoirs of participants recorded by the authors.[7]

Unfortunately, almost all the published materials cover the description of the temples located in Tzecarlage, the capital of the aimak. The information about 28 monasteries of other somons is absent.

These studies do not settle the problems of preserving the cultural heritage of Buddhist monasteries in Archangai aimak, especially since most of them are not

even mentioned in the published sources. Their common destiny – they were destroyed during the political repressions of the 1930s – speaks only of the need to restore historical memory, reconstruct the history of their emergence and development. And, where and if it is still possible, to locate, describe and photograph their foundations, ruins, debris, structures in emergency or other conditions, defining measures for conservation, restoration, protection, popularization of objects, and establishing special regimes for their preservation.

The research methodology developed by us assumed the identification of the location of the destroyed monasteries by means of bibliographic and archaeographical search. During the departure to the site of the dislocation, a visual inspection of the monuments was carried out, the results of which were recorded in a special document – "The map of the cultural heritage site." In all cases, photo-fixation of the state of objects, aerial photography with the help of a quadcopter, video recording of interviews of informers from among local residents and local historians was carried out.

The object map is the main document, in which all the results of the research are included. Some results are introduced before the expedition starts: name, location (aimak, somon, populated point or distance to it). GPS data, landmarks, exact location on the map are applied during the site visit.

Prior to the expedition, we studied and introduced the results of bibliographic and archival research, the established dates of construction, the history of creation and activity, the found descriptions of the object, drawings, photographs, information on destruction, reconstruction, documents confirming the property right, on state protection, modern use.

If it is initially established that the object is not currently in use, because of the unusable condition, it is advisable to try to ascertain the composition of the structures entering the monastery complex, the types of temples, what religious trend they refer to, their architectural styles, description of each structure.

At visual inspection it is necessary to compare the received descriptions with real objects and to give an estimation of a condition on external signs. The evaluation is based on five main indicators. Evaluation of the "normal" state indicates that there is no need for repair work. "Satisfactory" condition requires routine maintenance with the elimination of local damages without strengthening the structures. "Unsatisfactory" means the need to strengthen and restore the load capacity of damaged structures. "Emergency" indicates that the damage made the structures unsuitable for operation; there is the danger of their collapse. "Ruined" condition states the destruction of structures, complete or partial collapse of the roof and walls.

After the assessment, the factors determining the state of the objects are identified. These factors can be natural, man-made and anthropogenic. The natural

factors include, first of all, earthquakes, wind and water erosion, floods, landslides. Technogenic factors include disturbances in the geological environment, air and water basin pollution, disturbance of soil and vegetation cover as a result of economic activity. Anthropogenic ones are the lack of an effective owner, unqualified repair work, non-compliance with fire safety standards, vandalism, irrational use of the facility and others associated with acts or omissions, criminal negligence rights.

It should be emphasized that all assessments are carried out without the use of special instruments, laboratory studies, the involvement of specialists in the field of construction, architecture, geology, hydrology and others. The task of our research is to visually inspect objects and submit assessments of the state of objects of cultural heritage to state bodies authorized to protect monuments, to inform the public about the threats of their loss, to attract the attention of business and authorities to the rational and careful use of objects in the interests of preserving the national heritage.

An assessment of the state of a historical monument, the identification of negative man-made and anthropogenic factors that exert a destructive influence on it are undoubtedly the most important tasks of such studies that ensure the preservation of cultural heritage. However, no less important tasks are connected with the use of monuments, their inclusion in the modern socio-cultural context, the identification and dissemination of information about their place and role in the cultural heritage, musefication, making excursion routes, ensuring a comfortable stay of tourists at the site, training guides, natural and material cultural heritage from vandalism.

We fully realized the urgency of these problems during the expedition to Central Mongolia. The narrative should begin with the problems of identifying and searching for objects of cultural heritage.

In the process of preliminary study of published sources, a certain discrepancy in the estimation of the number of monasteries in Archangai aimak, and in Mongolia in general, was revealed. The fact is that attempts to count the monasteries in Mongolia have been undertaken several times. And each time in the end different numbers figured. Thus N Hishigt referring to the archival sources of the Main Intelligence Directorate of Mongolia, speaks of the existence in the late 1920s of 790 large and medium-sized monasteries with 2,960 temples and dugans, to which more than 100,000 lamas and huvaraks were attributed.[8] In his famous book *Three Maps of Towns and Settlements of Mongolia,* published in Russian in 1970, D Maidar gives a table with the name and location of 750 monasteries, in which there were 1536 liturgical buildings (datsans, aimags, dugans, sums and svrags).[9]

For the purposes of our study, the divergence of experts in assessing the number of monasteries does not matter much. Considering that the historical process, the technology of political, economic, social, ideological, administrative,

judicial, repressive suppression of the church, religion and its adherents in Mongolia has now been thoroughly studied by Russian and Mongolian scientists, it is much more important for us to see the total volume of objects of cultural heritage, dynamics, the nature of their destruction and the results of vandalism.[10]

In the framework of this article, we will confine ourselves to a brief summary of the actions of the authorities towards Buddhist monasteries. In the mid-1920s, as a result of the failure of economic and social policy, the leaders of the ruling Mongolian People's Revolutionary Party (MPRP), on the recommendation of the Soviet and Comintern leaders, decided to correct the economy by redistributing the property of the monasteries in favour of the state. With this purpose, during the next decade, taxes on monasteries were repeatedly increased until they reached proportions that were not covered by income.

At the same time, political pressure was exercised: deprivation, at first the leaders of the church, and then all lamas permanently living in the monasteries, of electoral rights. A criminal penalty was imposed for admitting young men under the age of 18 to the monasteries. A little later, the permission was given to families that only a third son who had reached the age of 18 could be sent to a monastery to become a monk.[11]

Under the pretext of the forthcoming Japanese aggression, in April 1937, the relocation of monasteries from the border area into the interior of the country began, which by the end of the year had assumed a mass character far beyond the danger zone. The relocation of monasteries served as the beginning of repressions, organized according to the experience of the Stalin regime. In 1937-1939 about 17 thousand lamas were repressed, more than 14 thousand of which were shot by the decisions of a notorious "troika" (three persons) – in the Mongolian case an "editorial office" called the Extraordinary Plenipotentiary Commission, which signed falsified death sentences, accused political opponents of treason, espionage in favour of Japan, and all kinds of conspiracies.[12]

Since the main objects of the material cultural heritage of the monasteries are the buildings used for worship, we were certainly interested in their fate, especially in Akhangai aimak, where according to the data of D Maidar, at the beginning of 1937 there were 33 Khuree and Hyida, which corresponds to modern concepts of monasteries and 22 independent temples: sum, dugan and datsan.[13]

It should be noted that the international expedition of 2004-2007, which included Mongolian and Hungarian specialists, identified 74 heathen temples, most of which were in a ruined state.[14]

When and how were the structures lost, many of which survived for 200-300 years? By the middle of 1938, the Lama Commission at the Central Committee of the MPRP began to distribute monastic real estate among the aimak organizations. For example, in Arkhangai, schools got 83 temple constructions, 8 constructions went to hospitals, associations of lamas and craftsmen got 38 temples, 234

constructions were given to trade organizations, 16 to party organizations and 16 went to social organizations. 83 houses, 30 wooden yurts and 30 households were distributed among these organizations. At the same time about 400 buildings remained ownerless – there was nobody to transfer them to. Some buildings were away from settlements, some were in unusable condition and needed major repairs, while some were burned and destroyed.

However, only a small part of the funds confiscated from the monasteries was aimed at the development of aimaks and their social infrastructure. The country, which had been under social and political turmoil for a decade and a half, survived the war with Japan in 1939, which gave its resources to the Soviet Union during the Second World War, could not afford to care about the preservation of architectural monuments. The buildings of the temples, most of which were built of clay and wood, gradually deteriorated, collapsed, and were taken away by the local population for economic needs.

Together with the temples, there were lost religious shrines, a huge number of valuable books, thangki, church utensils. The export of the most valuable monastic property from Archangay aimak required 150 vehicles, which the government did not have. There were not enough workers to clean the temples: the local population was mostly hostile to the destruction of monasteries. Nevertheless, some of the books were delivered to the capital, where they were stored in three temples, saving them from destruction. Bronze figures and statues were brought to the re-melting in Ulaanbaatar.

Over the decade, the severe Mongolian climate, the mismanagement of the authorities, the looting of the impoverished population, multiplied by official ideological denial and practical struggle with religion, turned the former greatness of Buddhist monasteries into ruins. This fact was repeatedly noted by Soviet specialists who worked in Mongolia in the 1940s-1950s.[15]

What is left in the inheritance to our contemporaries in Archangay aimak? This is what our Russian-Mongolian expedition tried to evaluate, choosing for the pilot survey three objects that differ in the degree of preservation and conditions of existence: a monastic complex in the capital of Tszarzaleg aimak, a monastery in the Jargalant settlement of Somon Batzangal and the ruins of the once large Khan-Undur monastery in the Somon Ich Tamir.

The monastery complex in Tzecerlage is commonly referred to as Zaya Gegeenii Khuree the Monastery of the Khalkha Zaya Pandita. It is one of the most ancient Buddhist monasteries on the territory of Mongolia. Founded at the end of the 16th century, it gained the fame of the centre of enlightenment of the Khalkh. Throughout its history, the residence of the spiritual leaders of Mongolian Buddhism (Pandita in India – the honorary title of learned Brahman, and Zaya means "victorious") the monastery was known for its scientific schools.

By the beginning of the 20th century, the monastery complex, which in fact consisted of two parts: Daed Khuree (the upper monastery, at the foot of the sacred Mount Bulgan) and Dohod Khuree (the lower one, located a few Kilometres in the valley) – contained, according to various sources, up to 30 temples, 5 monastic schools and religious schools for 600 people. In the monastery lived up to 1000 monks, and in the days of holy feasts more than 4.5 thousand people gathered here. Today we can see only some of the buildings of the upper monastery, since the lower monastery was razed to the ground.

Outstanding Russian orientalist A M Pozdneev, who visited this place in 1892, wrote: " ¯ with the first general view of the old and together the main part of the monastery, as well as during more detailed acquaintance with it, the aspiration of the founder of this monastery, Luvsanprinlaya, to transplant Tibet to the Khalkh soil ... Architecturally, all the most important joss houses of its old Tibetan style, built in two and three floors, in many ways resemble, especially from afar, the construction of European two-storey buildings" [16]

Pic. 3. *Painting of a local artist. From the collection of the Museum of the History of Archangay aimak*

The picture (3) by a local artist, painted on the basis of preserved photographs and descriptions, gives some general idea of what A M Pozdneev could have seen 125 years ago. Today a photo taken by us from approximately the same angle, shows that from the former original greatness there are only three structures left: Firstly, it is the Galdan Zuu temple, on top of the mountain, which in 1946 was completely disassembled for economic needs, and in 1994 it was recreated according to the surviving drawings and photographs. The building of the newly-made temple belongs to the local museum of local lore and is currently not accessible to visitors.

Pic. 4. *Lavran – the residence of Zaya Pandita Luvsanprinlay*

Another preserved structure is Lavran, the residence of Zaya Pandita Luvsanprynlay, not only a religious figure, but also an outstanding Mongolian educator, the author of the four-volume encyclopaedia Todorho Tol (Clear Mirror). After the brutal repressions of the 1930s, the building of the palace was transferred first to the fire brigade then it was adapted to the production premises, the warehouse of alcohol products, the food factory. And only since the beginning of the 1960s, the local history museum was located in Lavrane, which allowed preserving remarkable monuments of architecture.[17]
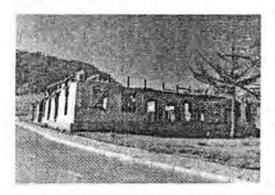
Pic.5. *Museum of the History of Archangay aimak*

The palace complex consists of three buildings: the central one is Guden Sum, with three domes built by Luvsanprinlay at the end of the 17th century and forming two inner courtyards, Barouun Semchin Dugan (Western Semchin) and opposite Zuun Semchin Dugan (Eastern Semchin). The khurals were held in the Western Dugan, and in the East one there was the residence of the Third Gegen

Luvsangzhigmaddorzha. Both buildings were reconstructed and by 1910 had acquired a modern look, having lost the third floor. The decor of all three buildings was updated in 2011 with the help of the Anthropology Museum of Monaco.

To the left of the Lavra lie the remnants of the main temple of the monastery of Tsogchin Dugan, built in 1706.

Pic. 6,7 *Ruins of the monastery Tsogchin Dugan*

In A M Pozdnev's opinion, and with a simple comparison of old photographs, it can be seen that the architecture of Tsogchin Dugan is much inferior to the once nearby temples Gushig datsan and Gungarag datsan. However, even the foundations did not survive. In 2017, Korean specialists elaborated a reconstruction project for Tsogchin.

In general, it should be noted that after the start of democratic reforms in Mongolia, the aimak and the administration of the museum are supportive of preserving the history of the monastery. One of the halls of the museum, which stores numerous authentic exhibits, is dedicated to it. And when in 1990 in many monasteries of the country the religious service began to revive, one of the former liturgical buildings, in which the museum of the history of religion was located, was handed over to the Buddhist community of Archangay aimak for use.
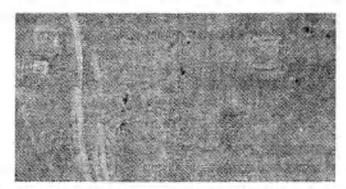
The fate of the monastery of Luo Guni huree in Batzangal appeared to be more difficult. Founded in 1846, it consisted of 10 religious schools and numbered about 500 monks. Today, the only temple preserved, representing historical and cultural and architectural value and in need of urgent restoration, since it is in an emergency condition. At the same time, since 1990, the church service resumed in the adapted building on the territory of the monastery. Through the efforts of the local community, with the active support of the Soman administration, a project for the reconstruction of the temple has been prepared, and funds are being raised for its implementation.

Pic. 8 - 9. *Monastery of Luo Guni huree in Batzangal.*

The fate of Khan Undur monastery in Ihtamir is tragic. This is one of the first monasteries of Central Mongolia. Its foundation is associated with the construction of the religious school Togchin in 1679. By 1934, the monastery had included about 30 temples and more than a thousand monks lived there. In 1939 the monastery was destroyed. Today, only from the 100-meter height you can see the foundations of the temples, which are depicted in the archive photograph.

Pic. 10. *The foundations of Khan Undur Monastery in Ihtamir.*

Thus, there are three monasteries representing the cultural heritage of Mongolia. Most of the temples are destroyed and cannot be restored. Separate temples representing historical and architectural value are in emergency condition and in need of urgent reconstruction. Some facilities are in satisfactory condition, but are used for other purposes. How to preserve the cultural heritage?

Obviously, not a single recipe exists that can cure the loss of historical memory. Evidently, we need a state program, which, first of all, must assess the scale of the disaster. The public, and not only the metropolitan, but also the local, should participate in the development and discussion of the program. It seems quite

hopeless to recreate a thousand temples on the site of the destroyed ones. Some attempts have already been undertaken but appeared to be unsuccessful.

What was the conclusion of our expedition after the completion of its first stage? The most important thing is to preserve the historical memory of the generations who adopted Buddhism. It is equally important to remember those who tried to eradicate it, breaking the destinies of people, destroying the age-old foundations, squandering the national treasure, burning temples. The reminder of this time can take many forms. However, it will be natural if they correspond to the ethnic culture and the traditions of the people.

Given that Buddhist temples have never been erected in randomly chosen places, but coordinated by specially created commissions in sacred places, it seems logical to establish memorial signs in the form of destroyed temples in the form of mortars (suburghans) or other Buddhist spirituality close to traditions and forms. It is important for these signs to contain information about the destroyed churches, religious ascetics, who suffered for the faith. At the same time, information should be accessible to all generations, taking into account modern, including electronic forms of submission. Temples, including those destroyed, must be marked on maps, included in tourist routes. Information about the temples and their history should be reflected in the media.

In the process of discussion, there will surely be other, possibly more interesting, proposals. It is important not to forget the tragic pages of history and continue its study.

[1] Zhukovskaya L. I. Lamaism in Mongolia. /_Buddhism: Dictionary, I.: Publishing house «Republic», 1992, p. 165

[2] Pozdneev, A M. Mongolia and the Mongols. St. Petersburg: Printing house of the Imperial Academy of Sciences, 1896, p. 415

[3] Kuzmin S.L., Oyungchimeg. Armed uprising in Mongolia in 1932. M.: Publishing House of the IBA, 2015, pp. 35-67.

[4] Pozdneev, ibid., pp. 410-426.

[5] Schepetnikov N. Architecture of Mongolia. M   State Publishing House of Literature on Construction, Architecture and Building Materials, 1960. pp. 85, 147, 156.

[6] Rongsh S. The claim of Bandida Luvsanparenlein Olgiy Nutar. Aryn Saikhan Hangay. Ulaanbaatar Hot, 2013; Yadamsuren T. Zaya gegeniye nuthiin jaya saitaytumen min. 2009's Ulaanbaatar. p. 124.

7 Majer Z., Telek, I K. History of Zaya Gegeenii Khuree, the Monastery of the Khalkha Zaya Pandita. Ulaanbaatar, 2013. p. 174.

8 Hishigt N. Mongolian Buddhist Monasteries: History and Modernity // Memory of the World: Historical and Documentary Heritage of Buddhism / Ed. V.V. Minaev., p. 30.

9 Maidar D. Three maps of cities and settlements of Mongolia. Ulanbaator: Publishing House of the Academy of Sciences of the MPR, 1970, p. 55.

10 For more details, see: Kuzmin, SL, pp. 298-429.

11 For more details, see: Kuzmin, SL, pp. 298-429.

12 Kuzmin, SL, pp. 315-420.

13 Maidar, D. Three maps of cities and settlements of Mongolia. Ulanbaator: Publishing House of the Academy of Sciences of the MPR, 1970, pp. 55, 64-67;

14 See: List of old Temples of Arkhangai. Access mode: http//www mongoliantemples.org.

15 For more details, see: Kuzmin, SL, pp. 298-429.

16 Pozdneev, ibid., p. 414.

17 Majer, Z, Teleki K. History of Zaya Gegenii Khuree, the Monastery of the Khalkha Zaya Pandita. Ulaanbaator, 2013, pp. 44-47

Biographical Museums: Existence Before Existence

MAHUA CHAKRABARTI

Abstract

At the initial stage of journey, self-glorification was the inspiration for establishment of museums throughout the world. Royal and noblemen collected valuables in their palaces as well as created their edifices in their lifetime intending to their bodily remains be preserved inside the mausoleums after death. Besides, the people established mausoleums at different places to preserve the bodily remains of their beloved teachers and preachers. As according to modern concept, a museum, which preserves the relics and related documents of an eminent person, is taken as biographical museum. If we survey in the ancient story of civilizations, we may find out that there were something like the biographical museums in modern sense. These are the ancient tombs and mausoleums like pyramids of Egypt, the Buddhist chaityas/ viharas as well as stupas in various Buddhist countries, etc. The paper aims to highlight the notable ancient mausoleums and monuments, which can be treated as biographical museums.

Keywords : Biographical Museum, Pyramids, Chaityas, Viharas, Stupas.

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Biographical or personalia museums are recent phenomenon. These museums are mainly set on a famous person, a group of people, or the collection of a personality. Such museums are normally named after the person. However, it is the decision of a nation state to glorify its history as well as to highlight the national identity to other nations through their biographical museums.

Owing to both historical reconstructions and monographic shows, biographical museums attempt to create a vision of their biographical subjects through the presentation of images, personal items, diaries and other kind of material documentation or corporalremains. This is relevant to a broader understanding of objects, their links to identity, and their cultural significance in museum displays.

Biographical museums had developed in nineteenth-century Europe and, as specific cultural policies, contributed to the description of social and national identities. In Britain, the National Portrait Gallery was established in London in 1859, which

collected portraits of the most notable British men and women throughout history. In 1885, the first volume of the Dictionary of National Biography was published. The authors considered portraits and life stories of its most distinguished citizens as means of shaping the ethical and social conscience of the nation. This idea is apparent in the creation in 1842 of the Walhalla, the Temple of the Gods, commissioned by King Ludwig of Bavaria to commemorate the German genius through the busts of the great national personalities.

However, this was the modern development of biographical museums. We may presume that biographical museum-like bodies did exist long ago. Throughout the history of human civilization, different cultures remembered and treated the dead differently. Most cultures show their respect by burying the dead, sometimes in complex and ornate tombs, crypts, and catacombs and preserving their used articles along with the bodily remains.

This paper studies some of the most fascinating mausoleums around the world, from the largest prehistoric burial mound in Europe to the tombs of pharaohs to the most beautiful edifices in the world, which may be treated as biographical museums in modern sense.

Newgrange, Ireland

The megalithic burial mound of Newgrange in County Meath, Ireland is unquestionably one of the most imposing prehistoric monuments in the world. Built between 3300-2900 BCE, it is the also the oldest surviving building in the world. It is older than Stonehenge and the Great Pyramid of Giza in Egypt.

The Newgrange structure is very impressive; the circular mass is 250 ft. (76 m.) crosswise and 40 ft. (12 m.) high (Fig. 1). A long subway under the mound leads to a high-domed burial chamber, a corbelled vault with ceilings made of huge, interlocking stone slabs (Fig. 2).

The entrance to Newgrange is noticeable with a huge and richly carved curb-stone; it shows spiral and concentric arc motifs chipped into the stone with flint tools (Fig. 3).

Fig. 1. *Newgrange burial mound. Courtesy: Flickr*

Fig. 2. *The wall of Newgrange. Courtesy: Flickr*

Fig. 3. *The engraved slab in front of Newgrange's entrance. Courtesy: Flickr*

Abu Simbel Temples, Egypt, UNESCO World Heritage Site, 1979

The Abu Simbel temples are two massive rock temples at Abu Simbel, a village in Nubia, Southern Egypt, near the border with Sudan. The temples were built by Rameses II in approximately 1264 BCE. The complex is part of the UNESCO World Heritage Site known as the Nubian Monuments. The twin temples were originally carved out of the mountainside during the reign of Pharaoh Ramesses II in the thirteenth century BCE, as a permanent memorial to himself and his queen Nefertari, to celebrate his triumph at the Battle of Kadesh. The design of Abu Simbel expresses a measure of ego and pride in Ramesses II.

Fig. 4. *Temple of Abu Simuel, Egypt*

It was dedicated to the gods Amun, Ra-Horakhty, and Ptah, as well as to the deified Ramesses himself. Four colossal 20-meter statues of the Pharaoh with the double Atef crown of Upper and Lower Egypt decorate the façade of the temple (Fig. 4). All statues represent Ramesses II, seated on a throne and wearing the double crown. Another notable feature of the façade is a stele that records the marriage of Ramesses with a daughter of king Hattusili III, which sealed the peace between Egypt and the Hittites.

The inner part of the temple is almost triangular in plan, with rooms diminishing in size from the entrance to the sanctuary. The temple is complex in structure and quite extraordinary because of its many side chambers. The hypostyle hall is supported by eight huge Osirid pillars depicting the deified Ramesses correlated to the god Osiris, to show the everlasting spirit of the Pharaoh. The bas-reliefs on the walls of the hypostyle hall as well as many of the sculptures are given to the Battle of Kadesh, on the Orontes rover in present day Syria, in which the Egyptian king fought against the Hittites (Fig. 5 & 6).

Fig. 5 & 6. *Inside the temple of Abu Simbel*

The Tomb of Nefertari

The tomb of Nefertari, the Great Wife of Ramesses II, in Egypt's valley of the Queens is called the Sistine Chapel of Ancient Egypt. Ramesses II built the Temple of Hathor to respect her as a goddess, and specially made portraiture wall paintings. Nefertari's tomb once preserved her mummified body. Now, everything has been robbed except for the wall paintings (Fig. 7). These wall paintings characterized Nefertari. The tomb itself is primarily focused on the Queen's life and on her death. In addition, poetry written by Ramesses about his dead wife is featured on some of the walls of her burial chamber.

Fig. 7 *Inside the Tomb of Nefertari*

The Great Pyramid of Giza, Egypt

The Great Pyramid of Giza (Fig. 8) is the oldest of the Seven Wonders of the Ancient World and now the only one to remain largely intact, inside of which are tomb chambers, anterooms, chambers, and the Grand Gallery, ventilation shafts and access tunnels. Originally, the entire casing was finished in a polished limestone.
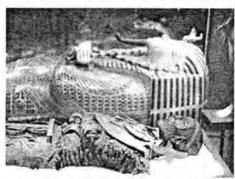
Fig. 8. *Great Pyramid of Giza*   Fig. 9. *Mummy preserved inside the pyramid*

Based on a mark in an inner chamber naming the work team and a reference to Khufu, the fourth dynasty Egyptian Pharaoh, this pyramid was built as a tomb over a ten to twenty year period finishing approximately 2560 BCE. Inside would have been provisions necessary for the life after death, including his coffin (Fig. 9).

Valley of the Kings, Egypt

The Valley of the Kings is a burial ground of ancient Egyptian pharaohs, like King Tutankhamen and the 'Curse of the Pharaohs' that associates with his burial chamber and one of the most celebrated archaeological sites in the world (Fig. 10 - 13).

Fig. 10. *Valley of the Kings. Courtesy: Flickr*   Fig.11. *The tomb of King Tut in the Valley of the Kings. Courtesy: Wikipedia*

Fig.12. *Tomb of Ramses III in Luxor,* *Valley of the Kings. Courtesy: Wikipedia*

Fig.13. *Saracophagus of the Phataoh* *Merenptah in the KV8 tomb. Courtesy:* *Wikipedia*

Patthirippua at Sri Dalada Maligawa, Kandy, Sri Lanka

The worship of worldly relics of the Buddha, as noted in the *Mahaparinibbana-sutta* (the Record of the Demise of the Buddha), was approved by the Buddha himself on the verge of his passing away. After his death, the bodily remains of the Buddha had been distributed among various states that claimed for the relics, and had been enshrined in the funerary mounds known as *stupa*. However, his four canine teeth were said to have been individually enshrined and worshipped. The right canine was worshipped in the heavenly domain of the king of gods, Sakra, while another was worshipped by the king of Gandhara in modern Pakistan. The third was taken away by the Nagas and worshipped placing it in a golden shrine room. The fourth, the left canine was removed from the funerary ashes by a monk and was handed over to the king of Kalinga in Eastern India, as recorded in the *Digha Nikaya*.

Thenceforth, the Tooth relic of Kalinga became an object of great veneration by generations of Kalinga kings. The last Indian ruler to hold the Tooth relic was Guhasiva of Kalinga (c. 4th century CE).

Finally, an attempt was made by a neighbouring state to make war with Guhasiva for the possession of the Tooth relic. By that time, Buddhism was well rooted in Sri Lanka, and the island rulers maintained close relations with the Indian Buddhist states. Seemingly, it was for this reason that the Kalinga ruler, under threat of losing in battle, decided to send the Tooth relic to his friend, the Sri Lankan king.

In Sri Lanka, the Tooth Relic was preserved in various places under various rulers and at last, it was brought to Kandy (Fig. 14) and placed in the shrine with much veneration and ritual worship was started.

The golden canopy built in 1987 over the main shrine and the golden fence which encircles the main shrine are other notable features. The tooth relic is en-

cased in seven golden caskets which are engraved with precious gemstones. The caskets have a shape of a *stupa*. The Procession casket, which is used during the Kandy Esala Perahera, is also displayed in the same chamber (Fig. 15).

Fig. 14. *Patthirippua at Sri DaladaMaligawa, Kandy, Sri Lanka, Photo taken by the author*

Fig. 15. *Casket preserving the Tooth Relic shrine, Photo courtesy: Facebook*

The Great Stupa at Sanchi, India

Sanchi is famous for outstanding Buddhist art and architecture, belonging to the period between the third century BCE and the twelfth century CE. The most important of all the Sanchi monuments is the Sanchi Stupa. The Stupa is surrounded by a railing with four carved gateways facing all the four directions (Fig. 16).

Fig. 16. *The Great Stupa at Sanchi. Courtesy Instagram.*

The Great Stupa was originally commissioned by the emperor Asoka the Great in the third century BCE. Its nucleus was a hemispherical brick structure built over the relics of the Buddha. It was crowned by the *chatra*, a parasol-like structure symbolising high rank. A pillar of finely polished sandstone was also erected. The old *stupa* was later covered when it was expanded. The lower part of the pillar still stands. The upper parts of the pillar are preserved under a shade nearby. The pillar has an Asokan inscription (Schism Edict) and an inscription in the ornamental Sankha Lipi from the Gupta period.

The original brick stupa was later veneered with stone during the Sunga period. It is supposed that Pushyamitra may have destroyed the original stupa, and his son Agnimitra rebuilt it. During the later rule of the Sunga, the stupa was expanded with stone slabs to almost twice its original size. The gateways and the balustrade were built and coloured by the Satavahana.

The gateways were carved with narrative sculptures. They show scenes from the life of the Buddha integrated with everyday events that would be familiar to the onlookers and so make it easier for them to understand the Buddhist creed as relevant to their lives. At Sanchi and most other stupas the local population donated money for the embellishment of the stupa to attain spiritual merit. There was no direct royal patronage. Devotees, both men and women, who donated money towards a sculpture would often choose their favourite scene from the life of the Buddha and then have their names inscribed on it. This accounts for the random repetition of particular episodes on the stupa. On these stone carvings the Buddha was never depicted as a human figure. Instead, the artists chose to represent him by certain attributes, such as the horse on which he left his father's home, his footprints, or a canopy under the *bodhi* tree at the point of his enlightenment (Fig. 17 & 18)

Figs. 17 & 18. *Elaborate carvings on Torana depicting Jataka tales, Courtesy: Flikr*

The subject matter of the carvings on the gateways are classified in five types namely, (1) scenes from the Jatakas, (2) scenes from the life of Gautama Buddha, (3) events in the later history of Buddhism, (4) scenes relating to mortal Buddhas, and (5) various scenes and decorations.

Caves of Ajanta

The murals of Ajanta are now documented as some of the greatest arts produced by people in the world, and the superb picture gallery to endure from any ancient civilisation (Fig. 19). They are also the oldest Buddhist paintings existing, dating from only 300 years later to the passing away of the Buddha. The walls put the Jataka stories in the pictures of wonderful sophistication and beauty.

Fig. 19. *Ajanta Caves*

The Jataka stories depicted the would-be Buddha as the Bodhisattvas, surpassed others by his highest intelligence, nobleness of his character, his spirit and self-sacrificing service and his immeasurable kindness. The artists selected a specific Jataka, for instance the Chhandanta to reveal the Bodhisattva's boundless kindness, the Vessantara his charity, the Vidhurapandita his insight. The purpose was to highlight the importance of honest living rather than the doctrinal expression of Buddhism (*Fig. 20 - 23*).

Fig. 20. *Padmapani Avalokitesvara, Cave 1*

Fig. 21. *Coming of Simhala, Cave 17*

Fig. 22. Girls, Cave 2

Fig. 23. Mahajanaka Jataka, Cave 1

Warriors' Pit, China

The Terracotta Army or the 'Terracotta Warriors and Horses' is a collection of terracotta sculptures depicting the armies of Qin Shi Huang, the first Emperor of China. It is a kind of funerary art buried with the emperor in 210–209 BCE, with the intention to safeguard the emperor in his life after death.

The figures vary in height according to their roles, with the tallest being the generals. These include warriors, chariots and horses. The three pits containing the Terracotta Army contained more than 8,000 soldiers, 130 chariots with 520 horses and 150 cavalry horses; the majority remained buried in the pits in close proximity to Qin Shi Huang's sepulchre. Other terracotta non-military figures were unearthed in other pits, comprising officials, entertainers, strongmen, and musicians (Fig. 24).

Fig.24. *Warriors' Pit, China, courtesy: Wikimedia*

Great Stupa of Borobudur, Java

Borobudur is a ninth century Mahayana Buddhist Temple in Central Java, Indonesia (Fig. 25). The monument consists of six square and three circular platforms, with a central dome at its summit. The temple is carved with 2,672 relief panels and 504 Buddha statues. The central dome is surrounded by 72 Buddha statues, each seated inside a stupa (Fig. 26).

Fig. 25. *Borobudur Shrine, Courtesy: Wikimedia*

Fig. 26. *Buddha inside stupa at the Borobudur shrine. Courtesy: Wikimedia*

The pilgrims begin their journey at the ground of the shrine following a path around the monument, which goes up to the apex through three stages symbolizing Buddhist cosmology: *Kamadhatu* (the world of desire), *Rupadhatu* (the world of forms) and *Arupadhatu* (the world of formlessness). The monument has flights of steps and passage ways with 1,460 narrative relief panels on the walls and the balustrades. Borobudur is the largest and most complete collection of Buddhist reliefs in the world.
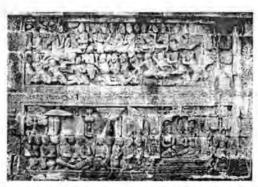
Fig. 27 *Gautama Buddha's great departure from Kapilavastu, photo courtesy: Wikimedia*

Should these be considered biographical museums?
From the above discussion, question may arise in mind that should we consider these as the biographical museums and why. At the initial stage of journey, self-glorification was the inspiration for establishment of museums throughout the world. Royal and noblemen collected valuables in their palaces as well as created their edifices in their lifetime intending to their bodily remains be preserved inside the

mausoleums after death. Besides, the people established mausoleums at differ-ent places to preserve the bodily remains of their beloved teachers and preachers. However, according to modern concept, a museum, which preserves the relics and related documents of an eminent person, is taken as biographical museum. If we survey in the ancient story of civilizations, we may find out that there were some-thing like the biographical museums in modern sense. Modern biographical muse-ums are meant to highlight a famous person/group of people or the collection a person's (or people's) life and work. Like these, the ancient monuments, which are mentioned above may be taken as biographical museums. Because, these memo-rials were meant for personal glorification. In some cases, to commemorate na-tional heroes the tombs were made.

We may take for example, the megalithic burial mound of Newgrange, like other counterparts throughout the world, was meant to preserve the bodily remains of people. In the Great Pyramid of Giza, like other pyramids, the mummified dead body of the pharaoh along with his pets, and used articles were preserved with a belief that the deceased pharaoh would enjoy afterlife along with those things. On the other hand, the stupas like the Great Stupa of Sanchi, and the Patthirippua at Sri Dalada Maligawa, Kandy, contain the bodily remains of the Buddha for veneration. Here, we can find the aspect of collection and preservation of biographical items like that of modern biographical museums.

Another major function of modern museums is education through exhibition. The panels of sculptures/ paintings as we find in the caves of Ajanta and on the walls of the shrine of Borobudur were meant obviously for showing the life of the Buddha and educating people his principles.

Again, we may consider museums 'introvert' and 'extrovert' Introvert muse-ums are those concentrating on collection and preservation mostly. On the other hand, extrovert museums emphasise exhibition and communication with the visi-tors. The monuments under discussion may also be categorized into such groups. For example, the megalithic burial mound of Newgrange, the Great Pyramid of Giza, the temple of Nefertari, etc. are 'introvert' due to the fact that they were not meant for public access, they were only the collection house. On the contrary, the 'extro-vert' monuments like Ajanta caves, the Great Stupa at Sanchi, Patthirippua at Sri Dalada Maligawa, Kandy, temple of Borobudur, etc, have the items for public view and communication.

Therefore, we may take these ancient monuments as biographical museums though in very rudimentary form. We may say that biographical museums existed even before their existence.

Source: Wikipedia

Basics of Textile Conservation in Museums

INDRANI BHATTACHARYA

Abstract

Textiles are woven fabric of various materials. Humidity, temperature, light, contaminated airs, development of fungi & bacteria, neglect, administrative fault, etc., are the causes of deterioration of textiles in museums. Every museum should give serious thoughts on care and conservation of textiles in its possession. The paper discusses in brief some simple but important issues, like the material composition of textiles, physico-chemical nature of the fibres, identification of the fibres, nature of the colour & dye, deteriorating factors of textiles, preventive measures and laboratory conservation methods.

Introduction

The use of cotton is as old as the Indus valley civilization. Numerous spindles and spindle whorls found in the houses there proves that spinning was a common practice then. Woollen garments were considered fit to be used during Vedic rituals and ceremonies. In the period of *Upanishads* and *Sutras* woollen, linen, and hempen garments were prescribed for *Upanita* ceremony. *Arthashastra*, the treatise composed between 2nd century BCE and 3rd century CE, mentions the fame of eastern Bengal and the Gangetic Delta for the white and soft *dakula*. In the Scythian era, muslin was exported to the Roman Empire (Biswas, 1985). In the paintings of the Ajanta caves, it is found that during 6th and 7th centuries silk was used by the well-to-do families. During Mughals, the textile industry flourished with the patronage of the rulers. Luxurious display of drapery was a Mughal fashion. Before the Battle of Plassey in 1757, Indian Textiles were in high demand all over the world. *Sari, dhoti, kurta, jubba, ravikkai, mundu, kappayam, phanek, mekhla, choli*, etc., are used by different Indian communities. Many of these are acquired by the Indian museums. The care and conservation of textiles are matters of concern for the museums. Humidity causes rapid changes by activation of salts, rhythmic movement of the materials, flaking of the pigments, weakening of the adhesives, etc. On the

other hand, contaminated air causes discoloration, blackening of pigments, tarnishing of metal threads and causes bio-deterioration of the textiles. Neglect due to careless handling and improper storage and display also affect textile collections in a museum seriously.

Textile Fabrics

A thorough knowledge of material composition of textiles is a key point of textiles conservation. It can be made of natural fibre or synthetic fibre. Textile made of natural fibres either of animal origin (wool, silk) composed of mainly keratin – a nitrogenous compound; or of vegetable origin, i.e., cotton, linen, etc., composed of cellulose. Synthetic fibre (terylene) is of fossil fuel origin from the petrochemical industries having polymeric structure; though synthetic textiles are not covered here. Having the knowledge not only of the composition of fibres but also the technique of weaving is 'must' to a conservator. It is said that closely and neatly woven fabrics resist the destructive influence of different agents better than others. Fabrics made of two or more different types of fibres; and having threads of different strength for wrap and weft, are very fragile. All woven fabrics are composed of at least two distinct series of threads – longitudinal threads placed side by side are known as "wrap" threads. These threads are interlaced in a definite order by a continuous single thread passing from edge to edge, termed as "weft" threads at right angles to wrap threads and thus producing a pattern. From a practical point of view, there are four distinct classes of fabrics:

1. Single fabrics, including all kinds of modifications in the method of weaving.
2. Backed or double fabrics.
3. Gauze fabrics, in which the threads, while practically working in the same plane, cross one another, and are held in the crossing position by means of weft threads.
4. Pile fabrics, in which looks are pulled out of the ground texture, and left uncut, as in terrycloth, or are cut to form tufts, as in velvet, or fabrics in which weft floats are severed to form a pile, as in ordinary velveteen.

Weaves

1. Straight line wrap weaving – there are the following types of weaves
   a)   Plain or tabby weave and its variation
   b)   Twill-weave and its variation
   c)   Satin weave and its variation
2. Curved wrap weaving – there are gauzes, and certain others.

In the plain or tabby weave, the weft yarn passes over one wrap yarn and under the next and so on, across the fabric. Its variation is the matt weave, where two or more weft yarns passes over two or more wrap yarns.

Embroidery Stitches

Stitches found generally in Indian textiles are – Cushion Stitch, Cross Stitch, Couching or Laid Embroidery, Chain Stitch, Feather Stitch, Opus Anglicanum, Stem Stitch and Japanese Stem-Stitch. Kanthas of Bengal are done by run stitch, stem stitch, chain stitch, etc. The Phulkaris have mainly shading stitch, feather stitch, etc. 'Chikankaris' of Lucknow are mainly done by 'buttonhole' stitches, together with feather, stem, stitch, chain stitch, and back stitches. Sometimes during restoration it becomes a great problem for the restorer to mend up the stitches which is properly done, in its original shape and type; if properly done, gives a renewed glamour & beauty and this is the safest type of treatment.

Identification of Textile Fibres

Physical tests:

a) Burning test – Cotton burns rapidly with a yellow flare with an odour like of burning paper and leaves small residue of grey ash. Wool burns slowly and easily goes out with a bad odour similar to that of burning feathers. It melts before igniting and leaves a gummy and brittle residue. Camel hair; mohair, alpaca, etc., also behave in the same way as wool. Linen burns less quickly than cotton with an odour of burning paper. Silk does not ignite when a light is applied; it merely chars, turning reddish brown or dark in colour with a less strong smell like that of burning wool. Pure silk melts and splutters and forms globules which set firm on cooling but are easily crushed. In cotton wool mixture fabric cotton being in one direction and wool in the other, the above tests can be applied to discover which yarns are cotton and which are wool after untwisting them. Synthetic fibre burns very rapidly and rolled on.

b) Microscopic test – the fibres of different types must be examined under a simple microscope at about 100/150 diameters magnification to identify them. Ripe cotton fibres twisted, ribbon like, thick and irregular edged with a central channel. Some of the coarser cottons (e.g., Indian cotton) have thin edges. Unripe cotton fibres have little or no twist and usually thin edges. Wool is a rod like fibre having uneven surface and edge, fineness, crimpiness, lustre and elasticity. It consists of a thick layer of fibrous cells or cortical tissue, an outer layer of overlapping scales and central marrow or medulla. Mohair is fine straight, smooth, lustrous, having thin, flat, regularly outlined scales. Cashmere is lustrous, silk softer than mohair, smoothly arranged epithelial scales. Linen obtained from flax which is cylindrical and rod like, thin central canal inside the fibre. A raw mulberry silk fibre appears as a double fibre united by a gummy substance sericin. The single filament from the cultivated silk worm is straight, narrow glass

like cylinder, occasionally having slight swelling. Poor grade silk has tubular fibre, irregular edge. The filaments from silk worm are broad, flat, large number of fine markings along their length and apparent concentration of the fibre at certain points.

Chemical tests:

a) Staining test – Certain dye stuff and chemical solutions stain various textiles differently. Most reliable staining solution is Shiralastain. The undyed yarn after thoroughly wetting with water is immersed in cold Shiralastain for one minute and finally washed off in cold water. The colours obtained are as follows

Name of the fibre	Colour
Cotton	Purple
Wool	Golden yellow
Silk	Brownish yellow
Flax	Violet blue
Jute	Golden brown

b) Acid test – Different types of acids react differently with different types of fibres which help to identify them.

Name of the fibre	Acid used	Result obtained
(i) Cotton	(1) HCl (strong)	Decomposed cotton and forms powder after drying.
	(2) HNO_3 (hot & strong)	Decomposed cotton.
	(3) Weak H_2SO_4	Stains cotton blue.
(ii) Wool	(1) Conc. H_2SO_4	Destroys and finally dissolves wool.
	(2) HNO_3	Turns wool yellow.
(iii) Silk	(1) Boiling in HCl (5 min)	Dissolves silk.
	(2) Hot HNO_3 / H_2SO_4	Dissolves silk.
Wild Silk	(1) Strong cold HCl	Dissolves partially.
Cultivated Silk	(1) Strong cold HCl	Dissolves cultivated silk.
(iv) Linen	(1) Conc. H_2SO_4	Slowly dissolves.
	(2) Strong HCl	Slowly dissolves.

c) Alkali test – Wool is dissolved when boiled in 5% solution of caustic soda (NaOH) in water. Cultivated silk dissolved in hot caustic soda or caustic potash (KOH).

d) Millon's Reagent test – This solution of mercury (Hg) dissolved in nitric

acid (HNO_3) turns the animal fibres (like wool, silk, mohair, cashmere) to a brownish red colour and leaving vegetable fibres (like cotton, linen) uncoloured.

e) Elsner's Reagent test – A boiling solution of this made of zinc chloride in water ($ZnCl_2$) with zinc oxide dissolves silk within 2/3 minutes but not affect cotton or wool.

f) Miscellaneous tests – (1) A black precipitation will be formed if drops of lead acetate are added to wool; (2) Zinc chloride will dissolve the cultivated silk very quickly and wild silk slowly respectively.

Cleaning

As a preliminary step the old and fragile textile with bleeding colours may be consolidated by spraying or brushing with 5% alcoholic solution of soluble nylon. Then it can be handled easily and can be transformed to the laboratory safely without damaging old and fragile fragments. The first step is superficial cleaning, which can be done by brush or by vacuum cleaner. Thus all the loose dust can be removed. Insects and moth eggs adhered with textile have to be removed with scalpel or forceps. It should be done under a binocular microscope. The fugitive colours of the textile have to be fixed with 5% solution of vinyl acetate in alcohol and from 5% to 20% solution of acetic acid as per requirement. For removing salt deposition, the textile should be wetted by water; if wetting with water spray is not possible, by a little wetting agent, i.e., Lissapol N.

Washing

Old textiles should be washed in a flat vessel. A supply of soft water is necessary for washing textiles. Hard water should not be used as it forms a scum. Small textile may be washed in photographic developing dishes but large textiles should be washed in a large wooden tray lined with polythene and has a perforated false bottom. In case of fragile textiles, they should be manipulated on a support and handled as possible. Before washing 2 spot tests with water will have to be applied in order to examine whether the colours are fast. Fugitive colours can be fixed with 5% solution of common salt or acetic acid. If necessary, strong solution (20%) of acetic acid may be used. The spot test may be done with a piece of white blotting paper to determine whether the salt or acid fixes the colour. The whole textile can be immersed in the appropriate fixing solution. For washing, a tank should be filled with soft water (distilled and deionised) to a depth of about 8 cm. The material should be kept flat and well spread open weave. Thread work or lace in textile, if present, have to be pinned down or tacked by thread to the sheet of polythene for safety. The textile should be kept immersed for an hour, changing the water as per requirement or after a period of 20 minutes. In case of larger tank, a siphon draining

system may be used. If textiles are contaminated with grease, oil, etc., soap should not be used. The use of 1% ammonia in water in case of vegetable fibres and 0.4% for animal fibres at the time of washing will give a better result. Soaps are generally not used in museum work as they form an insoluble scum which cannot be removed easily. Synthetic wetting agents are safer for textiles like Igepal Ca Extra (octylphenoxypolyethoxyethanol), Lissapol N. Another cleaning agent that can be used is a liquid soap, based on potassium oleate, although it is marketed as spirit soap. It is alkaline in nature; 1% to 5% dilute solution of wetting agent is sufficient for most purposes. The detergents should first be added to water and should be stirred thoroughly to form a solution of uniform strength then the textile is to be washed. The wash water should be changed at least three times and then a final bath of fresh soft water. Detergents in powder form for domestic uses contain many additives. It also includes bleaching agents which make fabrics appear whiter. They are not suitable for museum work. Some of the dirt will be soluble in water and insoluble sandy matter will be released by gently tamping with the fingers, after the textile has been soaking for some time or by compressing with a sponge.

After cleaning, drying is done by pressing warm dry absorbent material – towelling or flannel. After partly dried it has to be transferred to a sheet of polythene and pinned out. Drying can be carried out in a warm well ventilated room by using infrared lamps or a hot air blower. Reetha or Soap nuts or soapberry (Sapindus sp.) have mild detergent properties. It is natural in action and from higher plants. It should be applied with a soft brush. The froth is worked over the surface of the textile with the help of soft brush. Excess froth can be removed with a soft rag and then the fabric should be dried with absorbent towelling. Excellent result can be obtained without rubbing the surface and with minimum use of moisture.

Dry cleaning can be done by (a) vacuum treatment along with brushing, (b) with the help of organic solvents, (c) by using spirit soap, or (d) by using dry steam. The nature and size of the object determines which method is to be used. Dry cleaning should be given preference in case where the presence of water is undesirable.

Textiles can also be cleaned using different solvents. Solvent Cleaning is also known as French cleaning, because it was first introduced in Paris. The advantages of solvent cleaning are – (i) it does not soften textile fibres and there is also less shrinkage and loss of shape, (ii) dyes which are not fast in water may be undisturbed by solvent, (iii) solvents more easily dissolve grease than water, (iv) solvents are volatile and dry quickly. It has disadvantages also – (i) these are expensive, (ii) petroleum is aromatic type of solvent and takes fire easily but chlorohydrocarbons are not inflammable, (iii) the vapours of these solvents are harmful to health. Among chlorinated solvents perchloroethylene is most suitable for museum work. It is quicker in action, volatile and will remove stains that are

unaffected by white spirit. The most suitable of the petroleum solvents is white spirit. It is the safest of all dry cleaning solvents commonly used on textiles. The solvent most commonly used is trichloroethane, though being an ozone depleting agent its use is highly restricted now. It is essential that all colours on a textile should be tested individually by spotting with solvent before immersing it in the cleaning solution. The efficiency of organic solvents can be increased by adding spirit soap, which is found as liquids or gels. The Potassium Oleate Soap B30 which incorporates Sextol (methylcyclohexanol) is suitable for use. It is soluble in white spirit or trichloroethane and used. The object should be immersed in 1% solution of it and pressed in order to remove dirt and to dissolve grease. Residues of soap on the textile should be removed by dipping it in the solvent. Very greasy fabrics should be cleaned with a soft bristle brush working from the area of stains towards the edges of the textile.

Steam cleaning is less drastic than water cleaning with organic solvents. Steam can also be used for softening and removing stains even in the presence of fugitive colours. A steam gun apparatus is used for cleaning certain kinds of museum textiles such as costumes or ethnographical specimen.

Bleaching and Stain Removal

Animal fibres are very sensitive to hot water; contact with hot water it shrinks and loses lustre forever. Vegetable fibres are generally robust; should be thoroughly washed after bleaching or using acidic reagent. Enzyme preparation is useful for removal of many kinds of stain. Enzymes have specific action in catalysing reactions. It breakdowns sugars, fats, protein, etc. 'Digested Protein,' a solution made of 1 gm of pepsin with 25 ml warm water and 2 drops of HCl can be used as stain remover. Enzymes will act best at a temperature between 37-50°C and can be destroyed at a temperature above 60°C. The hydrolytic action of it may take an hour or longer. This enzyme mixture spread on a hard stain and kept there until it becomes soft. After the treatment it should be washed.

The traditional method of removing wax or grease stains is to cover the both sides of the stained cloth with clean blotting paper and a warm iron is applied. These stains melt and run into the warm paper. All the residues should be eliminated with toluene, turpentine or trichloroethane. In 'Ringing Technique' procedure the textile should be stretched; stained side should be kept downward over a glass plate covered with blotting paper. The reagent is to be applied to the back in drops from a small pipette. It will form a ring around the stain. By this procedure grease is dissolved without spreading and the excess solution is absorbed in the blotting paper.

Hydrogen peroxide is the softest bleaching agent. It should be rendered alkaline with sodium silicate. The solutions may be prepared by dissolving 250 ml of 20 vol. H_2O_2, 3 ml of sodium silicate and 4 litres of soft water. It is sufficient for treating 1 kg

of textile. At first, silicate is to be dissolved in some water and heated and then remaining water and H_2O_2 is to be added and should be mixed well. The textiles should be immersed in cold solution for a day. Frail textiles should be washed with care.

Before resorting to stain removal the nature of the stains should be identified and the nature of the textile should be thoroughly studied. Before selection, it is necessary to make test of the appropriate reagent. A smallest quantity of the reagent should be applied by a small screwed up tuft of cotton wool.

Fungal and Insect Attack

Textiles are susceptible to attack by insects and moulds, if not clean and kept in damp condition. Growth of mould can be easily arrested by removing the mould with a soft brush and by keeping in dry environment. If the outbreak of mould is extensive, textiles may be sterilised with thymol vapour or by spraying 0.5% solution of ortho-phenylphenol in white spirit. Para-dichlorobenzene is also used as insecticide and fungicide. Ortho-phenylphenol can be obtained in the form of white crystalline flake. It is soluble in most organic solvents. A 0.5% solution is lethal to bacteria, fungal spores and surface mildews. Mould staining due to the effect of leaking water can be effectively treated by exposing them to a current of dry air. The most effective instrument for the purpose is a hot air blower. The use of heater without ventilation must be avoided as it may encourage and intensify mould growth.

Insect pests cause damage to textiles, which also accompany fungal attack. Animal fibres, wool and silk are good nutrients for several varieties of insects. Textiles can be protected from the attack of insects in three following ways – 1) by isolating the fabric, 2) by using insecticide, 3) by using an inhibitor that is either distasteful to the insects or toxic that protection is assured. Stored textiles should be regularly inspected at regular intervals.

1) Isolating textiles – if some textiles are kept by wrapping, a quantity of volatile insecticide can be used in the parcel. Good quality of paper should be used for wrapping. Transparent plastic is better for storage as it has added advantage of regularly inspecting the article. If polythene bags are used it should be ensured that the article is completely dry as moisture cannot enter through. It is advised to put para-dichlorobenzene crystals in the bag as the protection against moth.

2) Application of insecticides – vacuum fumigation is very effective for textiles. Para- dichlorobenzene can be kept in cotton bags hanging in wardrobes. It can also be scattered in drawers or between the layers of paper. Many types of insecticides are available for spraying. For protection against carpet beetles, preparations containing dieldrin can be used (though very effective, now banned). Eulans are efficient larval poisons.

Reinforcing of Textiles

Weak textiles can be reinforced either by attaching the weak fabric to a stronger one or this can be done by impregnating the fibres with a solution that will set to solid or by the combination of two methods in which liquid acts as an adhesive in order to attach the weakened fabric to a stronger support. Fastening a weak fabric to stronger one includes sewing methods and the techniques with adhesives. The development of manmade fibres and synthetic resins has made this process easier. During the selection of material lightness, strength and flexibility should be maintained. The procedure involves stretching a very lightweight nylon or terylene net on a frame and coating internally with plasticized vinyl acetate. On drying it becomes insoluble in water but soluble in industrial alcohol. E R Beechar developed a process in the Conservation Department of the Victoria and Albert Museum, London, in early 1960s, where a suitable terylene net is chosen, stretched and coated with a special thermoplastic adhesive (vinyl acetate – vinyl caprate copolymer emulsion) using a hot air blower to prevent clogging the holes. Reinforcement takes place and attached to the old textile with the aid of two warm irons or using a vacuum table in conjunction with infrared lamps. The advantages are – (1) the adhesive on drying loses its solubility in water but remains soluble in industrial alcohol, i.e., the process can be reversed if necessary; (2) no alien substance is introduced into the fibres of old textile so that it can be draped for display purposes; and (3) there is no staining or liability to attack by micro-organism.

Conclusion

Textile specimens, especially made of organic fibres are susceptible to light, humidity, fungal & insect infestations, rendering them weak and fragile. Conservation of textiles is quite elaborate and complex, where various factors must be taken into consideration before resorting to the suitable method. Proper storage in a clean environment is an absolute essential requirement taking care of ideal light, Relative Humidity and temperature. Textiles are commonly stored and displayed flat, rolled or hanged on padded hangers (particularly costumes). The rule of thumb for textile conservation, as usual, has been to choose & use simple, reversible but effective methods.

References

Agrawal, O P (Ed.). (1974) *Conservation in the Tropics*. Rome: International Centre for Conservation.

Aiyappan, A and Satyamurti, S T. (1960) *Handbook of Museum Technique*. Madras: Government Museum.

Basu, M N. (1943) *Museum Method and the Processes of Cleaning and Preservation*. Calcutta: University of Calcutta.

Beecher, E R. (1964) "Aspects of Protection from Light and Methods of Reinforcement." In *Studies in Conservation (Delft Conference on The Conservation of Textiles)*, Vol. 9, Issue Sup 1: 43-47.

Biswas, A. (1985) *Indian Costumes.* New Delhi: Publication Division, Ministry of Information and Broadcasting, Government of India.

Gairola, T R. (1960) *Handbook of Chemical Conservation of Museum Objects.* Baroda: Maharaja Sayajirao University.

Kharbade, B V and Bhatia, S K. (2003) *Preventive Conservation of Museum Objects.* Lucknow: NRLC.

Nair, S M. (2011) *Bio-deterioration of Museum Materials.* Delhi: Agam Kala Prakashan.

Plenderleith, H J and Werner, A E A. (1971) *Conservation of Antiquities & Works of Art: Treatment, Repair and Restoration.* London: Oxford University Press.

Thomson, G (Ed.). (1963) *Recent Advances in Conservation: Contributions to the IIC Rome Conference, 1961.* London: Butterworth.

Corrosion Characteristics of Metals Exposed at the Premises of World Heritage Taj Mahal : Identification of Corrosion Products to Ascertain the Dominant Air Pollutants Leading to Tarnishing of White Marbles of the Heritage

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Abstract

Corrosion characteristics of carbon steel, copper and zinc exposed for four years at the premises of Taj Mahal situated at Agra, India are studied. Mass loss and characterization of corrosion products formed at the surface of the exposed metals were performed using different analytical techniques namely, Raman spectroscopy and X-ray diffraction. The results of the study suggest that in addition to the usual pollutants emitted from the nearby industries the hydrogen-sulphide evolved from the polluted Yamuna River flowing near the Taj Mahal had dominant role on the corrosion of metals.

Keywords Taj Mahal, Air Pollution, Metal Corrosion, EIS, XRD, Raman Spectroscopy.

Introduction

The Taj Mahal, a world heritage and considered one of the wonders of the modern world and India's greatest landmark, is showing distress not only due to deterioration of its aesthetic white look but also its structure as a whole. The city of Agra, where the great monument stands, is heavily polluted by nearby industries and vehicular traffic over the past decades. The major industrial sources of air pollution in Agra region are attributed to iron and steel foundries, ferrous and non-ferrous alloy industries, rubber processing plants, engineering and chemical industries, brick kilns, refractory units, etc. The distant sources of the pollution are the refinery at Mathura and bangles and glass industries located at Firozabad. It is believed that the pollution caused by these industries is adversely affecting the look of the Taj Mahal.

Tourists visiting Taj Mahal experience the unpleasant smell of hydrogen sulphide gas in the atmosphere. This gas is evolved from the water of the river Yamuna which flows very close to Taj Mahal. The river is highly polluted due to the discharge

of sewage water which is decomposed by bacteria to release acidic hydrogen sulphide in the environment. Literature search indicates that the presence of hydrogen sulphide with sulphur dioxide in the environment accelerates the corrosion attack on metals.[1] Although no report is available on study of corrosive effect of hydrogen sulphide on marble (Taj Mahal is constructed using white marbles), the gas is reported to have severe corrosion on concrete materials.[2] The present study was planned to identify the dominant role of constituent of pollutants present in the atmosphere of premise of the Taj Mahal on corrosion of metals. The corrosion products formed on the surface of metals may provide a clue to direct future research on conservation of the monument.

Experimental details

The samples were exposed in the premises of the Taj Mahal which is located in the city of Agra. The geographical coordinates of this city are as follows:

Latitude: $27^{\circ}10'18.12"$ N, Longitude: $79^{\circ}02'26.52"$ E, Altitude: approximately 170 m. above mean sea level.

The arrangement for exposure of samples is shown in the Figure 1. The Yearly average temperature, relative humidity and major pollutants' profile during the period of exposure measured by a unit of Central Pollution Control Board of India located at Agra are recorded in Table 1. The average temperature and relative humidity data were taken from the data published by Meteorological department of India. The present authors however, could not monitor the other pollutants, *viz.*, ammonia and hydrogen sulphide (generated due to petrification of nitrogenous materials flowing in river Yamuna) in the form of dry deposition. The rainfall data and its general ionic profile are recorded in Table 2.
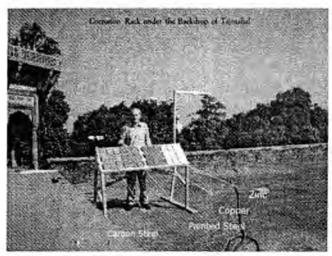

Figure 1. *Exposure rack and exposed samples at the backyard of Taj Mahal, Agra*

Table 1: Yearly average temperature, relative humidity and major
pollutants profile ($\mu g/m^3$) at the exposure site.

S. No.	Year	Temperature ($^\circ$C)	Relative Humidity (%)	*SO_2	*NO_x	*RSPM	*SPM
1.	2006	26.06	56.63	6	22	133	316
2.	2007	26.28	57.39	6	23	167	296
3.	2008	27.34	56.39	7	22	167	304
4.	2009	29.32	57.82	6	20	157	334
5.	2010	26.91	56.45	5	20	167	337

*SPM = Suspended Particulate Matter, *RSPM = Respirable Suspended Particulate Matter also known as PM_{10} (particulate matter < 10μm), *SO_2 = Sulphur-di-oxide and *NO_x = oxides of nitrogen.

Table 2: Average rain fall and its ionic contents at Taj Mahal, Agra,
during the period of the exposure study

S. No.	Year	ARF	*Ionic content in the water									
			Na^+	NH_4^+	K^+	Ca^{2+}	Mg^{2+}	F^-	Cl^-	PO_4^{3-}	NO_3^-	SO_4^{2-}
1	2006	26.27	Data not available									
2	2007	30.63	23.00	16.67	1.40	28.00	4.00	0.40	19.00	0.76	9.40	26.00
3	2008	45.43	25.00	17.90	1.20	26.00	4.90	0.60	17.00	0.90	9.00	24.00
4	2009	30.92	24.00	15.00	1.00	22.00	5.00	0.30	15.00	1.00	7.00	20.00
5	2010	34.92	22.40	13.30	1.90	22.00	3.80	0.70	18.20	0.10	5.90	11.70

*Unit of ion concentrations: μmol/l, the analysis of water of first monsoon rain of the year.

The samples of copper, zinc and carbon steel of dimension 100 mm x 150 mm x 0.75 mm (w x l x t) as suggested in ASTM G-50,[3] were cut and abraded on polishing wheel fitted with 100 grade sand paper to remove the oxides present on their surface. This was followed by polishing with 200-600 grades of emery paper to get scratch free surface. The polished samples were then degreased with acetone and weighed to 4 place of decimal of gram. The samples in Triplicate were exposed according to the procedure for the atmospheric exposure test as described in [3], at the exposure rack fitted at the backyard of the Taj Mahal, at Agra. The chemistry of the exposed samples is recorded in Table 3. After the exposure period of four years, the samples were taken out from the rack and further studies were performed.

Table 3 . Chemistry of the exposed metals at the Premises of Taj Mahal, Agra

Metals	% Alloying elements						
	C	Mn	Si	Zn	Fe	Cu	Al
Fe	0.08	0.12	0.04	–	99.76	–	–
Zn	–	–	–	99.90	0.04	0.03	0.03
Cu	–	–	–	0.02	0.04	99.94	–

The corrosion rate of the metal samples was evaluated by dissolving their corrosion products in solutions as recommended in ASTM G1-90.[4] An average corrosion rate of three samples has been considered in the paper. It was observed that the computed corrosion rates for all the three sets of samples of the exposed metals were very closer to each other.

Results and Discussion

The pollution data recorded in Table 1 shows that the content of main air gaseous pollutants namely SO_2, NO_x are below the maximum acceptable limit fixed by WHO (respectively 40 and 20 µg /m^3 for NO_2 and SO_2).[5] The recorded value for PM_{10} however is considearbly higher than the WHO's maximum fixed limit (25 µg/ m^3). The analyses of the rainwater collected during the period of exposure shown in Table 2 exhibits that the pH of the rainwater ranged between 5.6 to 7.4 which can not be classified as acid rain. The ionic profile of the rainwater indicates that the concentration of SO_4^{2-} was appreciably high followed by NH_4^+ Both of these ions are considered as anthopogenic pollutnats.[6]

The corrosion rates of the exposed metals at the premises of Taj Mahal are shown in Table 4. The data incorporated in the table show that the highest recorded corrosion rate is for carbon steel (11.39 µm/ year) followed by copper and zinc (2.46 and 1.93 µm/ year respectively).The slower rate of corrosion of zinc in comparison to carbon steel in majority of the environments is a well-known phenomenon and is attributed to the formation of protective passive film of hydrozincite and zinc carbonate on its surface.[7] However, a higher rate for copper than the zinc is unusual. The copper metal in an urban/ industrial environment corrodes at a slower rate than zinc.[8] These results suggest that some constituents of the pollutants present in the atmosphere of Agra had accelerating effect on corrosion of copper metal. To find out the main constituent for this accelerated attack of corrosion, the film formed on the surface of the exposed metals were diagnosed by different analytical techniques. Raman spectra of the corrosion products formed on the exposed samples are shown in Figure 2. The Raman peaks of corrosion products formed on the surface of carbon steel are attributed to maghemite (γ-Fe_2O_3) and magnetite (Fe_3O_4) and a strong peak of iron sulphide at 254 cm^{-1}. On the copper surface very distinct peak at 471 cm^{-1}, attributed to cupric sulphide (CuS) is recorded. The XRD spectra for carbon steel, Zinc and copper are shown in Figure 3. The phases of corrosion products formed on the exposed metals' surfaces identified by XRD are in conformity with the results recorded by Raman spectroscopy.

Table 4: Corrosion rate of metal samples exposed at Agra in premise of Taj Mahal

Materials	Corrosion rate (μm/year)
Zinc	1.93
Copper	2.46
Carbon steel	11.39
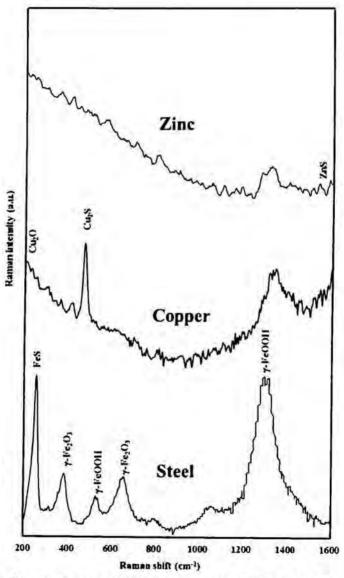
Figure 2. *Raman spectra of corrosion products formed on the surface of different metals exposed at the premise of Taj Mahal, Agra*
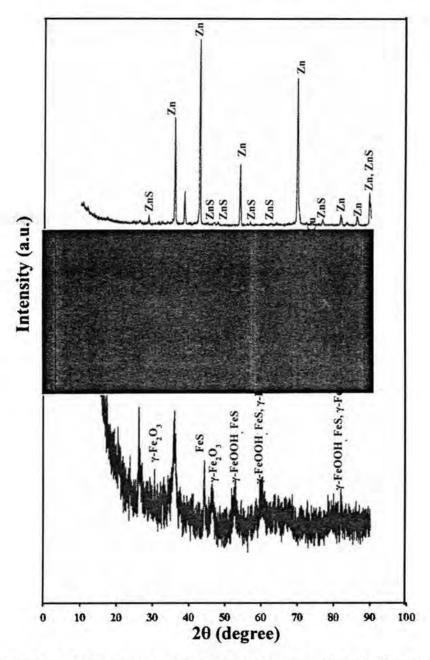
Figure 3. *XRD of corrosion products formed on the surface of different metals exposed at the premises of Taj Mahal, Agra*

The above results indicate that the presence of hydrogen sulphide in the atmosphere of exposure site had very decisive role on the corrosion of metals. In the presence of normal pollutants the corrosion products are normally sulphates/ nitrites and oxides. Since the water solubility of these compounds is more than corresponding metals' sulphides, they may have got washed away by rain leaving sparingly soluble sulphides of the exposed metals.

Conclusion

It is concluded that the presence of hydrogen sulphide played important role in affecting the corrosion rate of the metallic samples exposed at the premise of Taj Mahal in the city of Agra. The surface characterization techniques namely Raman spectroscopy and XRD indicated that the phases of sulphides and oxides formed in corrosion products of exposed metals.

Acknowledgement

[1]Franey, John. (1988) "Atmospheric Degradation of Copper and Coper Alloys by Atmospheric Sulfur." In: *Degradation of Metals in Atmosphere*. ASTM STP 965, S W Dean and T S Lee (Eds.). Philadelphia: American Society for Testing and Materials. pp. 306-315.

[2] HRSD OD/ Coatings Manual. (2011) Appendix A-1-9/7/05, *Basics on Corrosion in Wastewater Collection and Treatment Systems: The Corroding Environments and Materials*.

[3]ASTM G50-76. (1992) *Recommended Practice for Conducting Atmospheric Corrosion Tests on Metals*.

[4]ASTM G1-90. (1994) *Recommended Practice for Preparing, Cleaning and Evaluating Corrosion Test Specimens*.

[5] *WHO Air quality guidelines for particulate matter, ozone, nitrogen dioxide and sulfur dioxide: Global update 2005: Summary of risk assessment* (2006).

[6] Goldstein, Allen H and Gunnar W Schade. (2000) "Quantifying biogenic and anthropogenic contributions to acetone mixing ratios in a rural environment." *Atmospheric Environment,* 34(29-30):4997-5006.

[7] Ghosh, Rita and D D N Singh. (2007) "Kinetics, mechanism and characterisation of passive film formed on hot dip galvanized coating exposed in simulated concrete pore solution." *Surface & Coatings Technology,* 201(16-17):7346-7359.

[8] Leuenberger-Minger, A U; M Faller and P Richner. (2002) "Runoff of copper and zinc caused by atmospheric corrosion." *Materials and Corrosion,* 53(3):157-164.

Complementary Role of Public Archaeology and Museums in Promoting Heritage

R V RAMANA

Abstract

Public Archaeology (called Community Archaeology in the UK) is the practice of presenting archaeological data and interpretations of that data to the public. It seeks to engage the interest of members of the public, passing along what archaeologists have learned, by way of books, pamphlets, museum displays, lectures, television programs, Internet websites and excavations which are open to visitors. Much of public archaeology is conducted by museums, historical societies and professional archaeology associations. Increasingly, Cultural Resource Management Studies in the United States and Europe have required a public archaeology component, arguing that the results paid for by a community should be returned to that community. Logically this norm should also be applicable to other continents; where the subject discipline is studied, researched, shared and promoted – mostly though public funding. However, archaeologists must also face a range of ethical considerations when developing public archaeology projects. Such ethical considerations include prevention of looting and vandalism, the discouragement of international trade in antiquities, and privacy issues associated with studied peoples. Besides these, conscious efforts should be made by museum personnel and public archaeologists to bring academic research of the subject to the reach and appeal of general public. Findings resulting from the projects should be shared with the visitors with imagination and propriety. This paper deals with some concerns, efforts and finds of archaeology, its ongoing relevance to societies and efforts of the governments and institutions to preserve and promote the heritage value of the artefacts. It suggests how archaeology displayed and disseminated at museums, contributes to the popularity and purpose of museums.

Keywords : Protection, Popularity, Awareness, Universal, Humanity.

Introduction

"Archaeology is fascinating to people when it is communicated to them in plain language." – William H. Marquardt.

Archaeology is evidence based and interpretative discipline which may be shared best with people through museums. Countries and contexts endowed with old civilizations continue to explore and offer new interpretations about their past. The new countries rich in museums substitute this activity either by acquiring or borrowing artefacts. The phenomenal growth of museums in about the last three decades, reveal their popularity with the public. Of course, a vast majority of them were of modern and contemporary art. Nevertheless, inquisitiveness of mankind with antiquity whether of nature or art has also been a strong pulling factor of attendance of visitors to museums all over. Technology – let it be instruments or gadgets of public utility caused a deluge of opportunities to the professionals, researchers, institutions and of course most importantly even to lay public to know, access, exchange, participate or even contribute to the understanding of a topic. In view of this plethora of opportunities in the contemporary context, the scope and purpose of archaeology and the museum institution have expanded. In view of the growing awareness about the universal value and appeal of heritage and its role in enabling people to connect, understand and compare with one another; multi pronged, collaborative and conscious efforts are being made globally to protect and promote antiquity. This notion would be of special relevance to India, a country known for its archaeological wealth.

Past and Relevance of Archaeology

The word archaeology comes from the Greek word *arkhaios*, which means ancient. Although some archaeologists study living cultures, most archaeologists concern themselves with the distant past. "History is what we said happened, but archaeology is the record of what actually happened." – Robert Maxwell.

This may suggest the reason for popularity and relative acceptability of the subject, as it is evidence based, interpretative, speculative, intriguing; and at times obvious, apparent, confirming and narrative. There is an element fact, surprise, mystery, imagination that appeals human quest, emotions and a sense of achievement and fulfillment of finding an answer or solving a riddle.

However, the subject has not entirely been the domain and pursuit of the experts. People indulged in treasure hunt and amateurs found treasures by chance that shed light on many interesting facets of the subject, some of which have become internationally popular through exhibitions at museums. People surveyed monuments and collected artifacts, some of which were thousands of years old. Often, these people were not scholars, but looters and grave robbers interested in the monetary value of artifacts or antique collectors interested to build their personal collections. For instance, grave robbers have been plundering the magnificent tombs of Egypt since the time the Pyramids were built. Grave robbing was such a common crime in ancient Egypt that many tombs have hidden chambers where the family of the deceased would place treasures. Continuing traditional activities and lifestyles such as grazing or nomadic life, along with modern developmental activities such

as infrastructure building through construction of dams, transportation, mining etc. have also led to unintentional and accidental finds of interest to humanity. In Egypt in the mid-1800s, an Egyptian man searching for a lost goat stumbled across the tomb of Pharaoh Ramses I.

Popularity of archaeology led to publication of fiction and entertaining literature in the form of books and creation of films and television documentaries initially that made the heritage sites and monuments around the world more appealing and attractive to heritage tourists. It ushered in tourist economy to some of the beleaguered economies, rich in heritage and endowed with some of the old civilizations, such as Machu Picchu of Peru, Petra in Jordan (Fig. 1), etc. Some sites became so crowded with visitors that measures were adopted to restrict access in order to safeguard the sites. The formal studies by the subject experts, research institutes and exhibitions at museums combined with the entertainment by a host of creative industries have created a thriving tourist and associated service economies to some countries. Some of these thoughtfully managed became successful and sustainable examples. Of course, with remote exceptions, sites and contexts with vast territories and resources and were targets of frequent pillage and plunder, also experienced had an unfortunate incident of shooting dead a group of tourists due to mistaken identity, *e.g.*, Egypt. Furthermore, the advent of user friendly and affordable electronic gadgets and associated information and communication technologies towards the end of last century and onwards led to a host of opportunities to this subject in the form of games, quizzes, puzzles, etc.
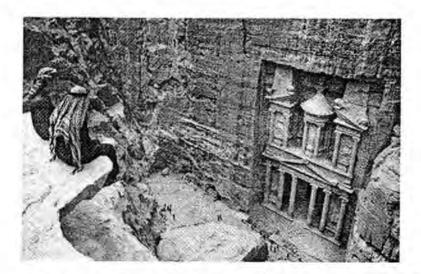
Fig.1: *Petra, Jordan; Photograph by Yadid Levy, Alamy Stock Photo; Source: http:// travel.nationalgeographic.com/travel/top-10/reasons-to-visit-jordan/#/view-treasury-petra_93203_600x450.jpg*

Museums promote general interest in antiquity of old, esoteric or exotic civilisations through their activities and programmes. National Museum of Egypt is a classic example to know about Egyptology and ancient Egyptian Civilisation. Simple, but popular antiquities such as bust of Nefertiti at Neues Museum or altar displayed at Pergamon Museum in Germany, Cyrus cylinder and Parthenon marbles at British Museum can trigger the interest of the public and encourage them to learn more about these bygone and fascinating cultures. At times theme and content of the material is explicitly narrative and reminds bits of history most of visitors would have learnt as school going children. It vindicates the cross cultural contacts of the civilisations and distant lands in lore and the consequent awareness of and knowledge about those exotic places (Fig.2).

Fig. 2: *Archaeologists study decorative features, such as this Roman mosaic in Agrigento, Sicily, Italy, to reveal telling details about the culture that produced them. This mosaic shows the sort of armor hunters and warriors wore during Roman times. It also shows that Romans were familiar with both lions (top right) and tigers, native to African and Asian civilizations thousands of kilometers away. This helps demonstrate the extent of Roman trade routes. Photograph by Luis Marden; Source: http://education.nationalgeographic.org/encyclopedia/ archaeology.*

However, with the change of world order from the nascent stages of beginning of archaeology, with more of literacy, democracy and enhanced opportunity of participation, there has been shift in focus of the subject from that of the nobility and classical extending to even that of the uncommon, exceptional, extending to

broad range of material and also seeking to greater humanitarian and universal values. Prolonged and intense strife and conflict at some of the world renowned places of ancient civilisations and immensely valuable heritage, such as pockets of Syria, Iraq and Libya for over the last few years; and intentional attacks on monuments at places such as Bamyan in Afghanistan, Palmyra in Syria and Bardo Museum in Tunisia (Fig. 3); and also killing of a elderly and renowned Syrian archaeologist Khalid al-Asaad has alarmed the international community. Some international initiatives have been taken by countries such as France, Britain, Egypt and Israel to protect and document the antiquarian and archaeological heritage of these regions. In an attempt to counter and prove that destruction of antiquity would only enhance the concern and appreciation of humanity about it,   National Archaeological Museum in the northern Italian town of Aquileia, undertook a project of temporary exhibition and displayed eight wounded artefacts of Bardo Museum.

Tourists look at a bullet hole in a sculpture casing at the Bardo National Museum in Tunis; Photograph by Fethi Belaid/ AFP; Source: http://www.thenational.ae/arts-life/the-review/ why-tunisias-bardo-has-become-a-museum-of-the-macabre.

If development projects such as metros or transport lines are leading to chance discoveries, a recent trend is to display those artefacts at those venues, to enable the lay people to become aware of the importance and antiquity of the place and purpose or significance of the finds (Fig.4).
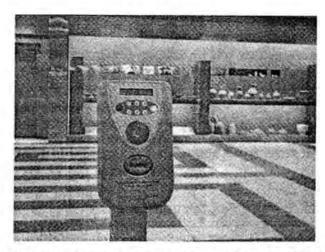
Fig. 4: *While constructing underground tunnels for the subway system in Athens, Greece, for instance, workers found hundreds of ancient Greek artifacts. Many of these artifacts, like those in this picture, were eventually displayed in the station close to where they were found. Photograph by Yannis Koulouridis, MyShot. Source: http://education. nationalgeographic.org/encyclopedia/archaeology/*

As archaeology draws from and connects to many other disciplines, it also enriches and contributes to a host of other streams (Fig.5).

Fig.5: *Artifacts and features discovered by archaeologist provide data for many other scientists: anthropologists, art historians, geographers, climatologists, and religious scholars, like those people studying Dead Sea scrolls, include interpretation and fragments from almost all books of the Jewish Bible, Israeli scholars study them for their spiritual as well as historical value. Photograph by B. Anthony Stewart. Source: http://education. nationalgeographic.org/encyclopedia/archaeology/*

Public Archaeology and Museum

According to Moshenska and Schadla-Hall (2011) 'Sir Mortimer Wheeler (1955) one of the first prominent public archaeologists, stated "I was, and am, convinced of the moral and academic necessity of sharing scientific work to the fullest possible extent with the man in the street and in the field" and that "It is the duty of the archaeologist, as of the scientist, to reach and impress the public, and to mould his words in the common clay of its forthright understanding" (1956)'. Public archaeology has remained at the core of archaeology throughout its history and into the present, touching upon every aspect of the discipline worldwide. Public archaeology straddles the great divides within archaeology between professional, academic and amateur; between the local and the global; between science and humanities: in fact, the study and critique of these disciplinary divisions is a vital part of what public archaeologists do. This has been reiterated by Matsuda and Okamura (2011, p. 4) 'a subject that examines the relationship between archaeology and the public, and then seeks to improve it.'

One of the challenges of public archaeology is its all-encompassing nature: its study draws on fields as diverse as economics, international law and film studies, while its practice ranges from grassroots community activism to high-level international diplomacy. All of this makes public archaeology difficult to pin down and define. Schadla-Hall in 1999 sought to define it as 'any area of archaeological activity that interacted or had the potential to interact with the public – the vast majority of whom, for a variety of reasons, know little about archaeology as an academic subject.' (p. 147)

Public archaeology exists in a tangle of overlapping definitions and interpretations, many of them the result of different national, organisational and educational traditions. Archeology as a subject and museum as a venue, medium and mode of transmission, interaction and interpretation; would complement each other in promoting heritage by making it accessible and enjoyable by public. A shared understanding of heritage develops awareness about its value and engenders support and empathy for its protection and preservation. Conaty (1990) states

> the role of educator requires a dual approach. On the one hand, the public must be told about the province's natural history. At the same time they must be shown how archaeology works and what significance archaeological resources have, and they must be convinced of the importance of conserving these resources. Traditionally these objectives have been approached through the development of didactic displays, the production of books and films, and the sponsorship of lectures.

Likewise, West (1989) gives interesting description and insights into the nature of collection belonging to different subjects and their associations and utility as under.

Each State in the United States controls lands and is responsible for establishing regulations for and monitoring their use. Their biologic and hydrologic resources are very high-profile because of... concern for biodiversity, endangered and threatened species... In addition state-controlled public lands possess geological, paleontological, and archaeological resources of various value and importance.

Regulations governing collection have broad ramifications within several disciplines. Both natural and man-made objects may have an intrinsic beauty and thus be of interest as *objects d'art* as well as scientific specimens. The line between archaeology and history is at best imprecise. Similar objects may be found in art, history or science museums. Native American ethnological materials, found in many types of collections, are variously covered under archaeological regulations. The link between paleontology and archaeology often depends upon the actual association *in situ*: zooarchaeological materials are essentially indistinguishable from sub-recent paleontological materials when removed from their human context.

Significance of Archaeology in India and Museums

With the advent of British rule and introduction of the subject under the leadership of Alexander Cunningham and also inception of the Survey in 1860 to promote the subject, Archaeology made inroads in India. However, it is under the leadership of John Marshall, it began to appear on public domain with the establishment of site museum at Saranath. The host of site museums administered by the survey and an impressive number of Archeology museums under the respective department of Archaeology by the State Governments offer a broad array of the diverse and rich heritage of the country and the cultural confluences the country has undergone. Government Museum, Mathura; State Museum in Bhopal, State Museum in Hyderabad – are some classic examples of this. In addition the museums established initially at the erstwhile presidencies, during the colonial rule are also rich in archaeological finds let it be the Indian Museum, Kolkata having images from the famous excavated site of Bharhut, etc., and the Government Museum, Chennai, having the renowned Amaravati sculptures. Of course, the National Museum established after independence also has an impressive and substantial collection of archeological material. Its introductory gallery offers even a comparative chart of Indus Valley civilization with other famous old civilizations of the world.

Considering the overall significance of the subject, Ministry of Culture, Government of India, has initiated Mission Monuments and Antiquities and Mission Manuscripts to preserve and promote value of the immovable and movable and

vulnerable heritage of the country of historic, religious, artistic and literary significance, that is not only useful to promote heritage, leisure and religious tourism, but also aids in promoting goodwill and mutual international relations as manifests from the exhibit of a Buddhist altar gifted by Thailand, displayed at National Museum, New Delhi. The above suggests Archaeology as a discipline is capable to draw visitors to museums and inform them about various interesting facets of heritage, thereby supporting the purpose of museums.

References

Conaty, G T. (1990) "Public Archaeology and Saskatchewan Museum of Natural History," *Curator 33*(1): 19-30.

Moshenska, G and Schadla-Hall, T. (2011) "Mortimer Wheeler's Theatre of the Past." *Public Archaeology, 10* (1): 46-55.

Moshenska, G. (2017) "Introduction: public archaeology as practice and scholarship where archaeology meets the world." In: Moshenska, G. (Ed.) *Key Concepts in Public Archaeology*. London: UCL Press.

Okamura, K and Matsuda, A. (Eds.) (2011) *New Perspectives in Global Archaeology*. Springer International.

Schadla-Hall, T. (1999) Editorial: "Public archaeology." *European Journal of Archaeology*, 2 (2): 147-158.

West, R M. (1989) "State Regulation of Geological, Paleontological, and Archaeological Collecting." *Curator 32*(4): 281-319.

Biographical Museum and Society

SANJIT JOTDER

Abstract

Biographical museum is to express the idealism of eminent personality and their contribution to the society. It praises nonviolence, secularism and brotherhood among men. Museum is to inform society about those people who devoted their life for humanity and social justice. Biographical museum attempts to create a vision of their biographical subject through the presentation of images, personal diaries, archive and other kind of material documentation. This is relevant to a broader understanding of objects, their links to identity and their cultural significance in museum displays. Biographical museum is important for social and national identities. The museum function primarily on a personal level, the turning of personal possessions into modern relics has broader social and cultural significance.

Museum is to inform society about those people who devoted their life for humanity, society, and justice. The biographical objects as tangible links between the past and the present, between reality and its articulation as narrative systems, whether social, economic or cultural-historical. Biographical objects are striking because of the diversity of the material presented. Portraits, photographs, personal items, notebooks, letters, pages of diaries, books, various kinds of objects and artefacts that illustrate the subjects activities and achievements, oral records, such as interviews of the subjects or of other renowned personages who knew him/ her, and videos.

The Museum is an institution of social change. Museums can change people's lives. They contribute to cohesive communities and reflect the history and identity of all citizens. In turn, museums live and develop by the skills and the creativity of their public and they must show their value to society. One of the major tasks of museums is the development of the society. There are various types of museums in the world. Most of the people know that Biographical museums can only focus

the life of great personalities, but the social responsibilities they carry are greater than one could ever imagine. The objects and activity of museums are very important part of society. Museums inspire people and change the society by the message of a particular person and educate people.

Biographical objects mark the life of a person and help to create a tangible landscape that provides the self with a cultural configuration anchoring its fluid and fragmentary nature within a concrete framework of experience. Biographical objects, like souvenirs and memorabilia, are both tangible parts of our past as well as of our present because of the feelings and images with which they are invested or that they are able to evoke.

The recognition of an object as the embodiment of an intrinsic truth that substantiates the writing of natural and cultural history suggests the cultural significance of objects as tangible links between the past and the present, between reality and its articulation as narrative systems, whether social, economic, or cultural-historical.

The original functionality of biographical relics is displaced in favour of their biographical significance. They act as discontinuous traces and active memories of the biographical subject that are used to produce a tangible archive that testifies to the individual and can be used to construct biographical narratives, since they endorse a myth of authenticity and an illusionary creation of reality. Clothes and other personal items are conventionally fetishized, because of their close association with a person. Clothes, in fact, literalize the notion of embodiment by showing the traces left by the body. They tell us, through their physicality shape, condition, texture, colour, and smell – about another absent physicality, that of the person who wore them.

Such traces, memories of use and belonging, are what arguably authenticate biographical relics, rendering them 'true' to the biographical subject, or rather to the cultural relationship that is recognized between the subject and the object.

Books play an important role, and in this sense they are biographically relevant. we consider an emblematic category of objects, those that mimetically represent the subject, such as portraits, photographs, busts, medals, prints, and miniatures, questioning their biographical authenticity and functions as records of the subject in display or exhibition narratives.

Images as well as words concur in drawing a portrait of the biographical subject and in developing a coherent narrative that meets socio-cultural expectations about representations of the self. The images may have existed as mementos for the biographical subject.

Like other biographical sources, such as memoirs or diaries, portraits also

construct a complex relationship between private and public presentations of the self, in an attempt to capture the inner self as much as providing a denotative image of the biographical subject. The personal letters and other archival documents show contemporary social conditions.

The photograph does not call up the past. Photographs possess an 'evidential force' that bears not on the object but on time. From a phenomenological point of view, in the Photograph, the power of authentication exceeds the power of representation.

Biographical exhibitions are inherent in the cultural assumptions that, through their materiality, objects act as evidence of 'truth' For biographical objects, the notion of belonging and authenticity overshadows the many other cultural facets that intervene when such objects are invested with meaning as biographical relics.

Biographical museums are important for society. Biographical museums are organised different programmes for society. Some important museums and their social activities are as follows:

Gandhi Memorial Museum, Madurai

Gandhi Memorial Museum, established in 1959, is a memorial museum for Gandhi located in the city of Madurai in Tamil Nadu, India. It is now one of the five Gandhi Sangrahalayas (Gandhi Museums) in the country. The roles of this biographical museum are:

Inter religious prayer

On October 2nd whole day spinning-prayer is performed. In the evening, along with an inter-religious prayer, a meeting is arranged in which citizen of Madurai region participate. It is an important programme by which we can see the role of biographical museum on National integration.

Gandhi memorial lecture series

Prominent and Star Speakers and Artists from around the country come and deliver speeches, conduct debates and perform Artistic Skill on the theme of Gandhiji, Nonviolence and Peace at large.

Exhibition on the life of Mahatma Gandhi

To propagate the nonviolent ideas and philosophy of Mahatma Gandhi an Exhibition on the Life of Mahatma Gandhi is conducted to school pupil on 2nd October every year.

Exhibition on "India fights for freedom"

This Exhibition gives knowledge about the Indian Freedom Movement, the amount of sacrifice performed during the struggle, etc., to the younger generation, the emphasis on nonviolence and the historic role played by Mahatma Gandhi and his supporters.

Summer course on histrionic talents

To develop the histrionic talents embedded in children a mouth-long summer course is conducted between mid-April and mid-May every year. To create a cadre of nonviolent activists, a week long summer training course on Nonviolence and Gandhian Thought is conducted during June in every year.

Gandhi clubs in schools

The Gandhi Club is functioning in different schools which is self-supportive and conducts many programmes relating to Gandhi & Nonviolence.

Observance of Gandhiji's martyrdom day

On 30th January a fasting-spinning prayer is performed. This gives an opportunity for the Gandhian followers to rededicate them for building up a Nonviolent (Sarvodaya) Social Order.

Freedom fighters' day

To honour the freedom fighters, August 9 is observed as Freedom Fighters' Day. This gives an opportunity to remember the sacrifice done by the Satyagrahis during the Indian freedom struggle.

Vinoba-Bharathi day

September 11th is observed as Vinoba Jayanti and Bharathi Memorial day. A seminar focusing on *Bhoodan* is conducted in which *sarvodaya* workers, educationists and persons from other sections participate.

Gandhi children centre

This is an innovative centre dedicated to develop the inbuilt skills of children. With

this purpose from classes on Bharatanatyam, Vocal Carnatic, Flute, Violin, Veena, Karate, General Knowledge, Painting are conducted. Trained teachers are taking the class.

Weekly inter-faith prayer

Hindus, Muslims, Christians, Buddhists, secular men and women from different cross-sections numbering about 100 participate in this prayer.

Mobile exhibitions

Mobile Exhibitions are periodically conducted to propagate the ideals of Mahatma Gandhi. A set of select pictures depicting the life and action of Mahatma Gandhi is taken to schools/ village clubs and displayed. Every year about 100 places are covered along with explanation and interaction. Also an Exhibition on the Horrors of Hiroshima and Peace is also displayed in schools/colleges during August (Hiroshima and Nagasaki Day).

Children Day celebration

On 14th November, Children Day is celebrated by organizing competitions for school children on Elocution, Quiz, Drawing, Painting, Mono Act, etc.

Kastruba Gandhi Memorial Day

In observance of Kasturba Gandhi Memorial Day, a seminar focusing on Women's Development is organized. Women from different cross-sections take part in it.

Yoga, pranayama and meditation classes

The ancient art of Yoga as defined by saints and especially Patanjali Yogi is conducted undergo training in Asanas (Postures), Kriyas (Cleaning Process), Mudras (symbols), Pranayamas (Breathing Practices) and Dhyana (Meditation). Scientific, cultural, therapeutic and spiritual values are taught in this intensive course.

Self-employment courses

Short Term Courses on Household Materials preparation, Food preservation, etc., are conducted in every month.

Present Day Activities

- There is regular arrangement of Guide-Lecture, playing of Tape and Disc Records, Film Shows on Gandhiji, Gandhian Themes and Freedom Movement.
- Researches undertaken and assistance to interest provided on this behalf.
- Museum has several publications for their credit and on-going programmes.
- Museum has developed a few photographic Exhibition Sets on the Life of Gandhiji, Tagore, Netaji, Sri Aurobindo and 200 years of the Indian Freedom Movement which are sent to educational institutions,

- Special, Temporary or Occasional Exhibitions are also arranged as and when the necessity is felt.
- Collaborative Programmes are also organized with NGOs and Voluntary Organisations and Government Departments and Academic Bodies.
- Seminars and Workshops are regularly organised in and outside of the museum.

Vivekananda House, Chennai

Sri Ramakrishna Math conducts a number of activities for the benefit of society.

Meditation class

Every Saturday evening from 7 to 8 PM, a class on the 'Purpose and Method of Meditation' is conducted for the benefit of the general public.

Yoga class

On Sunday mornings, in the two halls in the Illam, separate Yoga classes are held for men and women.

Vivekananda youth forum

Personality development, especially for youths, is the need of the hour. And to this end, a meeting of local youth is held every Sunday evening at the Vivekananda House. It consists of readings from the Complete Works of Swami Vivekananda and discussion, Question-Answer session, group singing, prayer, voluntary work and other related activities.

Book sales

Books on Ramakrishna-Sarada Devi-Vivekananda, Vedanta and self-improvement published and sold here.

Computer centre
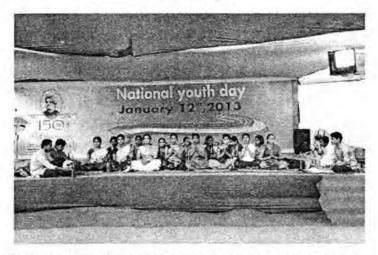
Training in basic computer skills is given free of charges to the poor children living near the Vivekananda House.

Coaching centre for children

Coaching classes are held for poor school children from the vicinity so that they can be independent in completing their own assignments and are also provided guidance to improve in the subjects in which they are weak.

National youth day celebrations

Swami Vivekananda's birthday (Jan 12th) and the National Youth Day, is celebrated at Vivekananda House in a befitting manner every year. Procession, eminent persons' lectures.

National Youth Day is being observed at the Vivekananda house, Chennai

are held on this occasion. India's first "Stereoscopic 3D Animated Short Movie" on Swami Vivekananda was also launched on the same day.

Netaji Bhawan, Kolkata

Netaji Bhawan has modern auditorium called Sarat Bose Hall with accommodation for a hundred and fifteen persons. Lectures, seminars, symposia, etc., on Netaji, the Indian Independence movement as well as on current problems of national and international interest are frequently arranged. Netaji Research Bureau seeks also to foster exchange of culture on an international level. Prestigious musical soirees held from time to time in the Hall are a great attraction for the music-loving people of Calcutta. The Bureau has made documentary film on Netaji and assisted with advice and material the making of others.

A Gallery exhibits the life of Netaji during 1938- 1941

Film-shows, especially historical documentaries on Netaji and Indian struggle for freedom have become a regular feature. The rich museum, library and archives are recognized as the first and one of the best of their kind in the part of the world. Seminars, lectures and cultural programs of an international character are being organized. In short, Netaji Research Bureau has grown up to be an impressive Institute of History, Politics and International Relations. Netaji's Collected Works have been published in ten volumes. Films and voice and music tapes also constitute a major part of the archives. Scholars of modern Indian history find the Freedom Library an important centre of learning. To take steps for the dissemination of knowledge about the life, work and teachings of Netaji Subhas Chandra Bose and to arrange lectures, discussions, meetings and exhibitions either generally or dealing with the life and work of Netaji Subhas Chandra Bose.

The Netaji Museum, archives and library have been upgraded and modernized to provide the basis for the task of building political and socio-economic cooperation in Asia and the global South on a long-term basis.

Dr Ambedkar Museum and Memorial, Pune

Dr Babasaheb Ambedkar Museum and Memorial houses a large number of his personal belongings. With audio-visual facility some of the important events from the life of Dr Babasaheb Ambedkar have been depicted here. New touch screen facility has been introduced at the entrance of the museum.

Aims & Objectives

The Museum promotes awareness about the life and ideals of Dr Ambedkar. In other words, the larger goal is to create a *Prerana Bhumi* to inspire people to uphold the principles of social justice and equality, peace, and humanitarianism. The Museum boasts a well-appointed garden library and a study centre to encourage visitors to read books related to the work and ideas of Dr Ambedkar.

There are various events that are conducted in the premises of the museum:

1st January – On the first day of the New Year many visitors from all over Maharashtra visit Dr Babasaheb Ambedkar Museum and Memorial.

26th January – To celebrate the Republic Day of India, Symbiosis families come together at the Ambedkar Museum.

4th February – Shri Lanka Independence Day

12th March – Celebrate Mauritius Independence Day

14th April – This day marks the Birth anniversary of Dr Babasaheb Ambedkar. It is celebrated with much pageantry on the campus. On this day the, many of Dr Ambedkars followers visit the museum to pay tribute to Dr Ambedkar.

15th August – Every year the Symbiosis families celebrates the Independence Day

of India the open air theatre of Ambedkar museum. Every year the National flag is hoisted by a special chief guest from the institutes of Symbiosis.

6th **December** – This marks the death anniversary of Dr Babasaheb Ambedkar. A large number of people visit the Museum to commemorate and learn about the life of Dr Ambedkar.

Other Activities of the Museum

Dr Babasaheb Ambedkar Library – Dr Babasaheb Ambedkar Library caters to the needs of young and seniors equally. It has 4000 books on different subjects and forms such as Biography, travel, Inspirational, etc. Books are issued for home reading. The library is open to all from 7 am to 10 pm an all days. A good number of periodicals are made available to users. The books on and by Dr Ambedkar, there is General Section, Dalit Section, Buddhism Section, R K Laxman, J P Wasvani collection, Dr S B Mujumdar collection forms the major stock of Dr Babasaheb Ambedkar Library. Researchers are provided with necessary literature & Bibliographical Support.

Study Centre – Museum run the Study Centre for the students from the nearby slums. These under privileged students face lack of space and educational resources required for studying. Most of them don't even have books. They have kept sets of 4th to 10th standard text books for such students. They avail of this facility between 8.30 am to 9.30 pm. They provide notebooks to the needy students as well.

Open Schooling – Thoughts and preaching's of Dr Babasaheb Ambedkar, this museum want to educate children's from below poverty line. Many of these children cannot attend the regular schools due to many reasons. So a branch of National Institute of Open Schooling in Marathi Medium has been stared as an activity of this museum. Such open education truly opens up an opportunity to gain educational qualification through an extremely flexible learning system. This system has facilitated the educational aspirations of drivers, canteen workers, peons and gardeners etc. The staff who had already passed their 10th or 12th exams has also registered their name for further studies in Yashwantrao Chavan Maharashtra Open University for FY, SY and TY BA/BCom. They also run a soft skill training programme for their staff.

Children Activity Centre – They have started Balkridangan for the children of age group 3 years to 10 years. In this they take prayers, physical exercises, team games, songs and rhymes, stories, small drama on personality development, where they prepare the children to enact on their own by giving them the topics. Children come in front of the other group and present themselves. They have also started dance sessions for the on Fridays where children dance on the songs played on the audio CDs and music.

Plant Library – They provide saplings & pots of various flowering plants to other institutes of symbiosis. Maintenance of various campuses of symbiosis is taken care by the Ambedkar Museum.

English for Competitive Exams – Dr Babasaheb Ambedkar Library has launched "English for competitive exams" course on five days a week To overcome the difficulty of English conversation and the interview techniques. Expert in faculty from English Language Teaching Institute of Symbiosis (ELTIS) import the training. Limited seats. Admission on first come first serve basis.

Senior Citizen Centre – This Centre provides training in computers, mobile phone applications to elders who want to keep up contact with young generation. The Centre also arranges lectures, talks of eminent personalities and professionals.

Rabindra Bharati Museum, Kolkata

Rabindra Bharati museum can be considered at the store house of Rabindra Nath Tagore consisting of his original paintings, photographs and other valuable documents which our society is proud of. Rabindra Nath Tagore's contributions to Bengali literature and the Indian modern art movement, as well as his philosophies and accomplishments as an artist, educator and activist are widely known throughout India today.

Rabindra Bharati Museum organises celebration programmes on the first day of the month of Vaishakh, (25th Vaishakh, 22nd Shravana), the birthday and the date of poet's demise respectively. It also celebrates the birth anniversaries of Maharshi Devendranath Tagore, Jyotirindranath, Abanindranath and Dinendranath. Lectures are arranged on different subjects related with the life of Rabindranath during the month of August.

Museum organized several seminars, lectures on Tagore's philosophy, cross cultural communication, modern globalisation that is touch with man. Tagore presented his solutions to this modern globalisation by encouraging "generous and creative" communication between nations. In this way he hoped that the global community could "come into touch with man" through mutual understanding and respect. A proper aesthetic culture should also include the perception and expression of the beautiful in human life and social conduct, as well as in art and literature.

Nehru Memorial Museum and Library, Delhi

Nehru Memorial Museum and library at Teen Murti House, this galleries daily to know and experience our struggle for freedom and the making of a resurgent India.

A series of interlinked exhibitions have been mounted in the museum which provides a vivid account of the life and work of Jawaharlal Nehru. The research and publication division of museum monitors the ongoing research projects of the

Institution, publishes research documents and is also responsible for organizing seminars and lectures. This division has sponsored and published the selected works of important leaders, research projects of research fellows working on various aspects of modern and contemporary Indian history.

The Nehru Memorial Museum and library offers fellowships to scholars to pursue research in

1. Modern Indian History and Contemporary Studies

2. Perspectives in Indian development (social, economic and cultural) and

3. India and changing trends in world economy and polity.

Lectures and seminars, which constitute an important activity of the Nehru Memorial Museum and library, are organized regularly and their deliberations are published.

Gandhi Smarak Sangrahalaya, Barrackpore

The galleries depicting Gandhiji's life and philosophy along with different phases of India's freedom movement. The museum organises various programmes like seminars, dialogues or other such programmes and its research activities.

Activities

- To collect, display, conserve, preserve Gandhiji's records.
- To promote the study, diffusion and understanding of Gandhiji's life and message through the establishment of Sangrahalayas, libraries, auditoriums, study centres, archives, etc., for society interest.
- To publish literature, periodicals, books brochures, booklets to propagate ideals thoughts and teaching of Gandhiji or in the aid of the memorials and to arrange film-show, etc., in furtherance of the objects.

The present course on Gandhian studies which is of three week duration provides an intensive acquaintance with this growing field of knowledge and orient its percipients with the 'truths', goals, values, institutions, and processes of the new society to which the course leads us.

Prasanta Chandra Mahalanobis Memorial Museum and Archives

The objectives of Prasanta Chandra Mahalanobis Memorial Museum and Archives is to bring into light the many splendour personality of Professor Mahalanobis through the permanent exhibition and to preserve the archival materials, for increase the public awareness of the scientific achievements organizational ability, Literary activities and human values upheld by Prasanta Chandra Mahalanobis as well as the activities of the institute founded by him.

The museum and archives stand out as an extraordinary source of original records which delineate the landmarks of the history of the development of statistics **in the** sub-continent spreading over a period of more than fifty years which opened **a new** horizon in the field of research and training in statistical science in India. It preserves the intellectual and personal record of a scientist and organiser whose original thinking and pioneering efforts had set a path for the national development though the application of statistical science in India.

References

www.gandhimmu.org (retrieved on 11.03.2016)

https://eu.wikipedia,org/wiki/viveknandar_illam (retrieved on 15.03.2016)

www.indianetzone.com (retrieved on 12.03.2016)

http://www.symbiosis-ambedkarmemorial.org/about.php (retrieved on 12.07.2017)

www.rbu.ac.in (retrieved on 13.03.2016)

www.digitalcollections.sil.edu (retrieved on 14.03.2016)

www.nehrumemorial.nic.in (retrieved on 14.03.2016)

www.gandhimuseum.org (retrieved on 15.03.2016)

www.isical.ac.in (retrieved on 15.03.2016)

Revisiting Socio-cultural life of Bengal through the collection of Gurusaday Dutt

DHRITI RAY

Abstract

Gurusaday Dutt was a scholar, reformer, administrator and connoisseur of art and culture of Bengal. As an ICS officer he worked in several districts of undivided Bengal in different capacities including District Magistrate. During his stay he experienced with different art forms of rural Bengal and for his intense interest on it he started collecting the art objects those were prevalent and practiced in then society. Those were mainly textiles (*kanthas*, saris), terracotta works, stone sculptures, wood carvings, masks, paintings, moulds, *patachitras*, manuscripts and puppets. With his majority of collection a museum was instituted in Kolkata in 1961 by the Bengal Bratachari Society and named after him as Gurusaday Museum. Few of his collections are now in other museums in India and abroad including the Asutosh Museum of Indian Art, Kolkata and Victoria and Albert Museum, London. The objects narrate the socio-cultural life of the then Bengal including the impact of the Colonial rule on the art and artisans. The paper is based on the collected objects of Gurusaday Dutt, which are in the display of the Gurusaday Museum, Kolkata, to take readers on a revisit to the socio-cultural life of the then Bengal.

Keywords : Gurusaday Dutt, Art Objects, Social Life, Colonial Rule.

Introduction

Bengal is the land of unique arts, crafts, architecture, folk songs, folk dances, festivals and literary works since several hundred years. Each and every province of undivided Bengal holds specific culture, traditions, arts, crafts and performs different rites and rituals. During the colonial period (1757 to 1947) British culture left permanent impression on art objects of all provinces; those reflect then Bengali society. These are the unique sources of history of the period.

Gurusaday Dutt was born on 10th May, 1882 at Birasri, Karimganj in Sylhet District of Bangladesh. He was the first Indian, who stood first in the ICS examination and worked as an ICS officer in the districts of Arrah, Pabna, Bogra, Jessore, Faridpur,

Comilla, Dhaka, Barisal, Khulna, Mymensingh, Birbhum, Bankura, Howrah and Calcutta. He was the District Magistrate of Mymensingh, Director of Industries and Secretary of Local Self Government and Public Health. He was also the Government Chief Whip in the Bengal Legislative Council. From 1930-1933, he was a nominated Member of the Council of State and of the Central Legislative Assembly (the former Parliament of British India). He was also the social reformers of the first half of the twentieth century who thought independently about various avenues of services for the rural people. Saroj Nalini Dutt, his wife who was an eminent social worker, worked extensively in districts of undivided Bengal along with him. In Mymensingh he started a Folk Dance Revival Society and revived the *Jaari* dance that had the spirit of unifying both Hindus and Muslims. Along with it he also revived the *Kaathi, Dhamail, Baul, Jhumur, Brata* and *Dhali* dances of Bengal and started the Bratachari movement in Bengal. To preserve, revive and revitalize the dying folk art traditions, he collected about 2325 exquisite specimens including several heirlooms between1929 to 1941. He spent his lifetime in collecting and studying art objects and handiwork like embroidered *kanthas*, terracotta panels, stone sculptures, wooden carvings, dolls and toys, moulds used for making patterns on sweets or mango-pulp, etc., from the remotest corners of Bengal and wrote in different journals about its wealth and beauty. Majority of his collections and writings are now in the museum of the Bengal Bratachari Society, named after him as Gurusaday Museum at Joka in Kolkata for exhibition, research and studies.

About the Gurusaday Museum, Kolkata

In the year 1961, the then Chief Minister of West Bengal, Dr Bidhan Chandra Ray, inaugurated the Museum building, and on 8th February 1963, Professor Humayun Kabir, the then Union Minister of Education, Govt. of India, declared the galleries open for common people. The Museum was constructed by the Bengal Bratachari Society and houses the lifetime collections of Gurusaday Dutt. Since 1984, the Gurusaday Dutt Folk Art Society is managing the Museum with the financial support from the Ministry of Textiles, Government of India. The Museum has a rich collection of approximately 3300 exquisite objects out of them 2325 objects were collected by Gurusaday Dutt from 1929 to 1941 from different parts of undivided Bengal. These folk art objects reflect the social traditions, beliefs, practices, motifs and culture of undivided Bengal. The museum is a good resource centre for researchers in the field of folk art of Bengal.

Revisit of the socio-cultural life of Bengal

Art is the expression of human thoughts and imagination as well as the representation of the day to day life. Artisans, poets, singers document the socio-cultural, religious, socio-political life through their creations and compositions in both tangible and intangible forms. Through these tangible objects and intangible oral history a tradition

evolves which continues over its time and reminds people generation after generation about the heritage. Similarly, if studied thoroughly the objects in the display of the Gurusaday Museum, one can take a revisit to then Bengali society. Gurusaday Dutt collected the folk art objects in the period when Bengali society was dominated by the British power. Common people at that time observed very closely the colonial style of livings, their attitude towards natives, their suppression, etc., those imbibed new thinking within the artisan to create and document their opinion through their own media. It was also the time to preserve and continue their age old tradition when there was a massive change and turmoil in the surrounding socio-political and religious life. In the various sections of the Gurusaday Museum the entire collection of art objects like puppets, moulds, paintings, masks, sculptures, scrolls, paintings, etc., are segmented that narrates about the contemporary Bengal.

Kantha

The Museum has the largest number of *Kanthas* in the world in its collection – 210 in number – which were collected personally by Gurusaday Dutt, mostly from Faridpur, Jessore, Khulna and Dhaka districts of present Bangladesh. People from all over the world refer to this collection, which were made in the early 19th to early 20th century CE by the Bengali womenfolk. The *Kanthas* or embroidered wraps of Bengali households is the medium of expression of womenfolk about their daily life, their views towards society, their desire and likings. There are seven types of *Kanthas* in this museum including the rare and priceless both sided *sujni kantha* of Late Manada Sundari with inscription. All type of *kanthas* are beautifully embroidered with colourful threads by stitching several layers of old & used cotton *saris* or fine cotton clothes like *dhotis* together. Numerous images of local flora & fauna, human figures in traditional and colonial dresses, geometric structures, folk motifs and *kalkas* (artistic designs) are depicted on these *kanthas*. From these *kanthas*, many social practices and cultures of then society as well as the presence of flora and fauna in that geographical area can be revealed and thus are the unique source documented history of the period. There is a *kantha* made by Muslim womenfolk that can be differentiated easily by others in absence of any anthropomorphic figures and presence of only lamps, sun and moon. Though *kantha* making is very well spread and earlier dominated among the Hindus in then society from this *kantha* it is understood that the *kantha* making was also common among the Muslim society. This tradition is still continuing in both West Bengal and Bangladesh after the partition but surprisingly majority of artisans now in both the sides are found to be Muslims. The seven types of *kanthas* of Bengal, which are present in this museum collection, are stated below:

1. **Sujni kantha or bed-spread:** These were made for any ceremonial purpose or any special occasion to spread on bed in the honour of special guests.

Both-sided Sujni Kantha with inscription made by Late Sundari in 19th CE, Khulna

The *sujni kantha* of late Manada Sundari is the rarest collection of *Kantha* not only this museum, but also in the world. Design is visible from both the sides and name of Manada Sundari is written on one side. The *Kantha* is composed of a big lotus (*satadal padda*) — the most common flower of Bengal forming its central medallion strictly shows the Hindu motif. The British and the Indian males wearing western dresses at its two side borders document the style and dress code and the service of Indian people for the British. Life of women inside the houses as *Andermahal* and market scene and *Babu* culture outside the houses as *Bahirmahal* are beautifully depicted in other two side borders. Women's eagerness to see outside world through the splits of their windows is also beautifully represented in this art work that again confirms the confinement of women inside the houses in then society. It also represents the traditional dresses of folks, hair-styles, *sahib-mem, etc.* Presence of the large number of local animal figures like peacock, testify the presence of the bird in then Bengal before hundred years, which is unavailable today. Presence of variety of fish including prawns proves the reality of the delicacy of fish among the Bengalis since long ago. Depiction of the British People riding on an elephant shows the supremacy of the British. With the help of coloured threads, she has documented the glimpses of the social history of the then Bengal.

2. *Lep kanthas* or winter covering: there are some *lep kanthas* in the display which are beautifully embroidered with many colour threads and tell about the practice and tradition of rural women folk utilizing the discarded cotton piece of clothes.

3. *Bayton kantha* or wrap: Some of this kind of *kathas* is in the collection of the Gurusaday Museum. These are commonly used for tying up books or valuables. Then women folks have utilized this as a medium of their art expression and have embroidered beautifully their thinking. In the following picture of the *Bayton Kantha*,

the artist beautifully represents the British horse rider and also an Indian wearing a pant riding the horse. Presence of peacock, elephant, fish prove the close association of these animals with common people in then society.

Baytan Kantha 19th CE, from Jessore

4. *Rumal kantha* or handkerchief: it shows the artistic sense and dedication of womenfolk towards the artwork to make ordinary things so beautiful. It also tells about the mode of engagement of womenfolk in the era when there was no entertainment like today.

5. *Arshilata kantha* or wrap of mirror: this is the small pieces of embroidered *kanthas* made to cover small mirrors or place the big mirror on it. In the following mirror covering *kantha*, the artist beautifully embroidered Radha-Krishna and gopi in both straight and inverted style with a vision that the inverted figure will be viewed straight in the mirror. Lotus, several flowers and presence of Radha Krishna and a gopi represents the religious belief of the artist.

Arshilata Kantha or Mirror Covering, 19thCE, Khulna

6. *Ooar kantha* or pillow cover: it was a common practice among womenfolk to decorate pillow covers for the aesthetic look of their beds. Few such *Kantha* is also in the museum collection.

7. *Durjani kantha* or wallet: Earlier women folks also made their wallet by stitching pieces of some clothes together to keep their valuables like money, jewelry etc. They also embroidered these wallets beautifully with colourful threads depicting various floral motifs.

Durjani or Wallet Kantha, 19th CE, Faridpur

Wood carvings

In Gurusaday Museum, there are 191 wooden objects, which were collected by Gurusaday Dutt himself from the different districts of undivided Bengal including 72 objects from Jessore, Comilla, Mymensingh and Faridpur districts of present Bangladesh. Wooden objects and carvings show popular Hindu deities and social themes of 18th and 19th centuries in bold and forceful manner. In many wooden carvings impact of colonization is clearly visible, especially in the carving of dresses, faces, themes, etc. Some ornamental figures and architraves indicate the artistic ability and aesthetic taste of the carpenters of the bygone days. Among those objects woman carrying two pitchers from Jessore; European lady; a native man seated on a chair with attendants; a lady enjoying music, etc., from Comilla; Brahmin combed by a barber from Mymensingh are quiet significant and depict the social life of the period (Chakravarti, 2001).

European Lady by Bengali artist of 20th CE, Coomilla is a unique example of colonial influence.

   The beautifully carved wooden object polished in black, represents the thinking of local artists towards white lady or how the black native lady can be imagined in European dress. It also indicates the thematic change of art work due to the constant exposure of the Europeans in then society.

A lady enjoying music—a wooden panel carved by a Bengali artist of 20th CE in Comilla. The panel represents women empowerment among British in the imagination of a local artist.

All these objects clearly indicate the influence of the Europeans or British people whom the native artisans saw closely and generated new thoughts in their creations of art objects. Through their imagination and its subsequent interpretation the beginning of social change in then society can be understood, which is clearly documented in these art objects. Today these objects take us to revisit the genesis of globalization and women empowerment in then orthodox Bengali society.

Terracotta Objects

Terracotta, since last few millenniums remained as one of the important media of expression of human imagination and also to document history. Terracotta plaques had been traditionally used in Bengal since ages to decorate the facades of the temples, in which artists beautifully engraved various episodes from epics, deities or god and goddesses, social life, etc., to aware common people.

A unique collection of 209 ornamental terracotta plaques of 16th to 19th centuries from Jessore, Faridpur can be seen in this museum along with other districts of West Bengal.

The terracotta plaque depicts three European Soldiers wearing the dresses similar to 18th-19th CE European Army in Bengal with arms. During the period this kind of plaques was common in the temple facades—the public gathering points where people could view how the European ruled over them. Apart from the thematic representation, the plaque is an example of beautiful artistic work, fine representation of European people and their typical dress. It was collected from Faridpur.

Masks

Gurusaday Dutt collected a good number of masks from different places of undivided Bengal. These masks are made up of different materials like clay, terracotta, wood and even by dried gourd.

Making of masks and its uses for different purposes like to hang it in front of households as a good omen and for the use during performing arts, etc., were prevalent among the common people of then Bengal. In presence of the European within the close proximity of Bengali society, a fear always persisted among the common folks that made people to think about their protection from various superstitions. The practice of putting demonic masks in front of households was one of them.

These masks narrate about various folk traditions and beliefs across the undivided Bengal even during the colonial period.

Asura Mask of 20th CE made by dried
gourd collected from Mymensingh
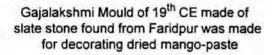
Terracotta mask of Rakshasa,
20th CE, Mymensingh.

Moulds

Moulds are used in Bengali households since a very long time to decorate the eatables like sweetmeat, dried mango-paste, etc. Intricately carved with elaborate designs in clay or stone, the moulds reflects the fancy of the rural folks for the ornamentation, even things that has very short life and thereby reflect their aesthetic taste and preferences. The evidence narrates the social tradition that was well in practice in Bengal.

Gajalakshmi Mould of 19th CE made of slate stone found from Faridpur was made for decorating dried mango-paste

Decorative floral of for Sweetmeat 19th CE from Faridpur made of slate stone

Puppets

Some puppets were collected from few districts of present Bangladesh by Gurusaday Dutt during his tenure of service, and few of them are now in the display of Gurusaday Museum. These were made of paper pulp and decorated with colours. Clothes were fixed to make dress of the puppets. These puppets were more than hundred years old but still narrate the tradition of puppetry in Bengal of bygone days. Apart from puppet made of paper pulp, the museum also has puppet made of pith, which were also collected from Khulna district.

Krishna Puppet of 20th CE Khulna

Radha Puppet of 20th C. AD

Dolls & Toys

Clay or terracotta dolls and toys are the most ancient arts and crafts of India. There are 419 dolls and toys in the museum collection including a good number of objects from Mymensingh, Faridpur, Comilla and Bardhaman districts of undivided Bengal. Each and every doll represents many folk traditions, folk life and rituals of then Bengal. Apart from clay or terracotta and wooden dolls and toys, many colourfully lacquered dolls and toys are also present in this collection.

These are the traditional sasti putul (doll) or kakhepo putul (child on lap doll) of rural Bengal that express the local tradition of Shasti worship in Bengal. These dolls are of 20th CE, collected from Faridpur district.

Gazi pat

Gazi Pat is a form of scroll painting practiced by *patuas* (painters) in rural areas of Bengal. This pat depicts various incidents happened in the life of Gazi Pir. Until the recent past, the narration of the story of Gazi Pir with the help of a Gazi pat was a popular form of entertainment in rural areas, especially in greater Dhaka, Mymensingh, Sylhet, Comilla, Noakhali, Faridpur, Jessore, Khulna and Rajshahi. Those who took part in the performance were the members of the Bediya community and the Muslim by faith. Gurusaday Dutt collected few *Gazi pat* from Comilla district, which are in the collection of Gurusaday Museum (Lokasanskriti Gabeshana, Baishak-Ashwin, 1415 Beng.).

Apart from Gazi Pat Gurusaday Dutt also collected about 139 square *pats* from Jessore and Birbhum districts made of cloth and paper those depicted various social themes like marriage, torture by landlords, evening gatherings of women, etc.

Clay objects

Coloured clay objects are also in this museum, collected by Gurusaday Dutt himself before hundred years from rural parts of the present Bangladesh. Clay object includes coloured *Sara* of Hindu goddesses like *Durga* and *Lakshmi,* idols of Hindu deities, ornaments, etc. These objects help us to understand the continuity of the *sara* tradition and its practices in Bengal.

Mahishasuramardini clay sara
of 20th CE, from Faridpur

Nilambari Jamdani Saree of 20th CE
from Dhaka.

Jamdani Saree

The word *jamdani* is of Persian origin, derived from '*Jam*', meaning flower, and '*Dani*', a vase or a container. The earliest mention of *jamdani* and its development as an industry is found in Dacca (Dhaka). Gurusaday Dutt collected a good number of *jamdani* sarees from then Dhaka, some of them are in the display of the Gurusaday Museum. These sarees narrate the uniqueness, fine artistic work of Bengal, colour and elegancy and overall the richness of the industry in then Bengal, which has been declined in later period.

Archaeological Objects

Gurusaday Dutt collected many archaeological objects including stone sculptures, terracotta vase, fossils, etc., from many districts of undivided Bengal including Dhaka, Birbhum, Medinipur and 24 Parganas, etc. These are mainly sculptures of god and goddesses like Durga, Buddha, Shiva-Parvati, etc., those reflected the religious

practices in Bengal. There is a Porcelain Vase of 2ⁿᵈ Millenium BC, which he had collected from Tamluk, Medinipur.

Shiva-Parvati, 10th CE from
Birbhum

Painted Wooden Manuscript cover, 16th CE
from Birbhum Top – Dasamahavidya
Bottom-Dasavatara

Manuscripts

A good number of manuscripts written on palm leaf, bark and handmade paper are also collected by Gurusaday Dutta which are dated back to 16th-18th CE. He mainly collected these from Birbhum district. Among them the Dasamahavidya, Dasavatara, Durgastratra and Chandipuran are most significant.

Paintings

Gurusaday Dutt collected more than 900 traditional painting of the period 17th to 20th CE from different parts of undivided Bengal. Among them many paintings narrate the socio-religious history of then Bengal. The collection includes many manuscript covers, about hundred *Dasavatara Tash* (playing cards), some *Durga Chalachitras*, many painted terracotta *saras* or lids, square paintings on canvas, etc.

Many of the square paintings are personally commissioned by the local *patuas* or painters of Birbhum for the official residence of Gurusaday Dutt when he was posted in Birbhum as the District Magistrate. Some of them depict then social customs like prevalence of child marriage; rural Birbhum, the house patterns, dresses of folks; beliefs in the *Chakshudan* custom among the Santhals, etc. There are also many scroll paintings and square paintings. A 20th CE *Durga chalchitra* is also in the Gurusaday Museum which was personally collected by Gurusaday Dutt. All these explains about various customs of the Hindu worship and customs prevailed in the then society.

Childmarriage, Birbhum, 20th CE

A village Scene, Birbhum, 20th CE

Chakdhudan Pat of the Santhals, Birbhum, early 20th CE

Durga Chalchitra, Kumartuli, Kolkata, 20th CE

One can know about the religious practices among the Hindu Society and babu culture those were widespread in Kolkata during 19th-20th CE, through the collection of the extremely rare sketch book catalogue of 19th Century Kalighat paintings collected by Gurusaday Dutt from Kolkata.

Jagadhatri, 19th CE, Kolkata

Chinnamasta, a form of Kali, 19th CE, Kolkata

Babu Culture, Kalighat, Kolkata, 19th CE   Nautch Girls, Kalighat, Kolkata, 19th CE

Conclusion

Revisiting Bengal through the collection of folk objects made and collected by Gurusaday Dutt during the period of working in the different districts of West Bengal is an approach to review the objects thematically. Every period influenced Indian art in its unique way and study of these art objects take us back to that period. The collection is the rich source of history of the folk tradition of undivided Bengal those provide opportunity to visitors and scholars to see the folk-treasure and know more about the socio-cultural life of the then Bengal. Apart from preserving and exhibiting the rare collections of Gurusaday Dutt, the Gurusaday Museum also offers classes on folk arts and folklores of Bengal, conducts special outdoor and indoor exhibitions on folk arts, provides research facilities to scholars, organize regular seminars and workshops and also design developmental programs on folk arts & crafts.

References

Chakravarti, S. (2001) *Wood Carvings of Bengal in Gurusaday Museum*. Kolkata: Gurusaday Museum.

Lokasanskriti Gabeshana, Baisakh-Ashwin, 1415 (Bengali)

www.gurusadaymuseum.org (Retrieved on 19.06.2017 and 01.07.2017)

Courtesy

Photographs and relevant information are provided by the Gurusaday Museum, Kolkata and also taken from its official website.

Lives and Stories – Museums Portraying the Nations' Identity

PIYASI BHARASA

Abstract

Museums are the media through which nations tell their stories and represent themselves to the people. They are the products and agents of cultural and social development. The biographical museums serve a platform for displaying the lives and stories of the national heroes and at the same time they portray the nations' cultural identity. Thus, they have a great role to portray the lives and stories of individuals and collectively reveal the nation's identity. In this article, it is argued that the biographical museums not only construct narratives of individuals, but also tell the visitors what lies beyond the individualities. The Gorky Leninskiye in Moscow, the Yamadera Basho Memorial Museum, Japan, President Lincoln's Cottage in USA and Mani Bhavan, Mumbai, India are few examples of biographical museums presently on the focus of this study. This discussion is based on these four biographical museums of the world, which portray a broader arena of cultural or political or the historical identity of the nations.

Keywords : Museums, Biographical Museums, National and Cultural Identity.

Museums display and interpret the material and non-material evidences. They construct and transmit meanings, more often in a broader term. In contemporary museum display, there is an on-going conflict between the construction of meanings that support a collective memory, frequently linked to a linear narrative of progress, and an ambition to act as places of individual and national identity. The article explores how 'biography' in a museum can be used to learn about the nation's history and its identity. The biographical museums are constantly in search of developing the new ways of knowing individual biography and museum history 'investigates the extent to which individuals have been identified with particular era or an incident, and have even "become" national identities. Here individuals' biographies' take issue with the extent to which simple and discrete life stories of individuals can explain national histories'. Objects pervade our life and are imbued with biographical significance to the extent of becoming inseparable from us, since

'the capacity of a person to act as a social subject is defined through his or her relation to the material world, and particularly to certain objects that represent him or her' (Hoskins, 1998: 193). There are much discussions and debate on the issues of national identity, particularly in the fields of historical, social and cultural studies. Museum being the important tool of the cultural heritage, preserves the nation's identity through their collections. This article aims at focusing an understanding of the ways in which biographical museums preserve and carries the national identity.

Gorky Leninskiye Museum, Moscow

Gorky Leninskiey is the country estate, 32 Km south of the Kremlin, where Lenin lived and died. The museum was founded in 1987 (Berton, 2001: 23). It is a unique biographical museum complex of modern Russia, the historical monument of federal value located in the area of Moscow.

Gorky Leninskiye Museum   One of the galleries in the museum

It is the only place where visitors can also appreciate the architectural beauty, which has remained unharmed. It has an original collection of objects of the typical estate of 19th century to the beginning of the 20th century with its unique identity.

Lenin's Rolls-Royce in the Garage
on the ground floor

Dining Room (gallery)

Display

At the entrance to the **museum,** via a glassed-in veranda, there is a gallery where Lenin's jacket, boots and hunting gear are preserved in glass cases. Next room is a **conservatory** with a projector for showing silent films on Lenin and a piano for singsongs in the evening. A special mechanized wheelchair, on display at the foot of the stairs, was a gift from the factory workers to Lenin. In the garage, Lenin's **Rolls-Royce** is on display. It is fitted with caterpillar tracks and skis for travelling across the country in winter, which was converted to run on pure alcohol as it was easier to obtain than petrol during the Civil War. The car was large enough to accommodate at least six bodyguards at a top speed of 40 km/h. The museum premises consist of another building which contains a reconstruction of **Lenin's rooms in the Kremlin. It** existed in the Senate Palace until Yeltsin had the contents moved to Gorki Leninskiey in 1998. The display of Lenin's desk features wall maps that place Russia at the centre of world revolution. In the next gallery, there is a mock-up of a kitchen where he and Krupskaya, his wife ate in their Spartan quarters. A statue of Lenin is also there, which formerly stood in the *grounds of the Kremlin.* The library in the museum complex contains 4000 books and a desk set carved with worker and peasant figures. The museum also preserves country life with the everyday life exposition of Russians of 19th and 20th centuries. Therefore, the visitors can see the rural customs and traditions, folklore culture in this museum.

Expression of National Identity

Vladimir Illich Ulanov commonly known as Lenin was born in 1870. Lenin was the founder of the Russian Communist Party, leader of the 1917 Bolshevik Revolution, and the architect, builder, and first head of the Soviet Union. Lenin spent the years leading up to the 1917 revolution in exile, within Russia and abroad. The Bolsheviks quickly consolidated power by privatizing all aspects of the Soviet economy. Later by cracking down on dissent through the Cheka, or secret police and instituting the

Red Terror, aimed at destroying monarchist and anti-Bolshevik sympathizers during the Russian Civil War. Today in this country there are only the very few museums where visitors can have this dialogue about that very person who influenced the world history. Gorky Leninskiye not only keeps safe memory of Vladimir Lenin in its museums, but it is the only storehouse of material things which surrounded Him in Soviet period. The museum successfully depicts the life and stories of Lenin by preserving the rooms and its entire premises in its original state. It is also unique as it was the last Lenin's museum created in the USSR.

Yamadera Basho Memorial Museum, Japan

In 1989, the Yamadera Basho Memorial Museum was established as part of the cultural building boom in Yamagata celebrating the 100-year anniversary of the founding of the city. The museum is located about 20 minutes by train from Yamagata Station. It is situated on the south side of the steep river valley facing Yamadera to the north.

The Museum focuses on the life of Matsuo Basho (1644–1694) who perfected the art of haiku. Haiku is the concise 5-7-5 syllable verse form, which is now appreciated and written around the world. On display the museum has many treasures from Basho's own handwriting along with works of literati and artists from his time, and of those who followed later. Special exhibitions on related themes are also regularly mounted in the gallery. The spacious grounds and gardens are beautiful all year round, and the facility includes many traditional Japanese style meeting rooms and tea rooms which are regularly used for citizens' tea ceremonies and other cultural programs, including seminars on literature and haiku *taikai* poetry writing contests, in both Japanese and English. The beautiful building in traditional Sukiya – Zukuri tea ceremony room style was designed by the well-known architect Masao Nakamura. Information is also available in English on the exhibitions and on Basho's life and his major work *Oku no Hoshomichi.*

Yamadera Basho Memorial Museum　　　One of the galleries in the museum

A Haiku Verse

Portrait of Matuso Basho (1644–1694)

Expression of National Identity

The remarkable power of Basho's poetry and prose continues today, expanding into cultures he could not have dreamed of. His works, and the life he lived, have been influencing western literature since Ezra Pound popularized imagistichaiku a hundred years ago (Barnhill, 2004: 3). Located on a hilltop known for its panoramic view of Risshakuji Temple, this museum commemorates the famous *Haiku* poet Matsuo Basho, who visited Yamadera in 1689 on the journey chronicled in his travel journal "Narrow Road to the Deep North" The exhibits include displays of Basho's original handwritten poems and the works by his followers. Haiku is one of the major cultural identities in Japan, which was followed in the entire world in the later years.

President Lincoln's Cottage, USA

President Lincoln's Cottage

The desk Lincoln used while writing the Emancipation proclamation.

Galleries in the President Lincoln's Cottage Museum

Lincoln's cottage had been located on a sprawling property landscaped with trees from around the world and surrounded by farms. It was a modest, four-bedroom, two-story home, made of brick, covered with stucco. Historians say that the Lincoln's family used it as the summer home for several years of the presidency, including during the Civil War. Lincoln lived at this cottage with wife Mary and son Tad from summer through fall from 1862 to 1864.

To recreate the museum in this cottage, much of the available history has been pieced together from diaries, letters and newspaper accounts. Also missing were actual furnishings from the home — or even interior pictures that would have helped curators recreate most of the 1860s decor for visitors. So, the present display has been made with the few details they had, which allowed them to recreate curtains, carpet and other items. The museum has secured some furnishings from the Civil War era and a replica of Lincoln's desk, based on the original kept at the White House.

In this museum, visitors will get to know who Lincoln was as a person. Audio and video of actors portraying the president, first lady Mary Lincoln and their associates will recreate stories from the cottage. The decision to emancipate the slaves is the most prominent theme at Lincoln's retreat. "This is one of those places that is kind of hidden in plain sight, and yet it's one of the most significant historic sites," said Richard Moe, president of the National Trust for Historic Preservation.

The president ultimately pursued emancipation as a military strategy to help end the war, but he was fully aware of its significance."If my name ever goes into history, it will be for this act, and my whole soul is in it," – Lincoln said at the document signing. A signed copy of the document, from a private collection in New York, is on view at the museum's opening through April.

Students and other visitors can play the roles of rival cabinet secretaries and debate emancipation through the museum's unique multimedia room. Individual computer screens show the diaries, pictures, letters and arguments of individual secretaries to help spur the discussion, and a moderator can work with teachers to

link the debate to classroom studies. Other exhibits at the cottage museum recount the family life of the home and Lincoln's hiring of an ex-slave, Mary Dines, as a "domestic" — or servant — as well as Lincoln's daily commute on horseback to the White House, tipping his hat to poet and city resident Walt Whitman regularly as he passed by. Tour guides at the museum are trained for all age levels and will be prepared to discuss the sometimes-conflicting views of the Civil War. This museum tries to eventually create an environment for the study of the Lincoln Presidency at the site to support further research and scholarship in conjunction with sites like, Ford's Theatre and the Lincoln Presidential Library in Illinois.

Expression of National Identity

Tours of the Cottage explore Lincoln's ideas and place his experiences here within the larger context of the Civil War and America's struggle to reconcile competing definitions of liberty and equality. The Museum offers intimate tours through the Cottage, using interactive multimedia and traditional storytelling methods to bring President Lincoln to life in a minimally-furnished space. The vibrant, conversational tour provides new perspectives on Lincoln's life, gives space for self-reflection, and connects Lincoln's work to advance freedom with contemporary challenges to human rights. Visitors will leave feeling inspired and motivated to take their own path to greatness. The events and the programmes in the museum build community, share groundbreaking scholarship, advance big ideas, and provide opportunity for new understanding and dialogue about the vital part of American history that unfolded here and its relation to freedom today.

Mani Bhavan, Mumbai

Mani Bhawan was the residence of Mohandas Karamchand Gandhi, when he was staying in Mumbai and was an integral part of India's freedom movement. This heritage structure has now been transformed into a museum and research centre that houses a reference library with over 50000 books and a photo exhibition of the Mahatma's life. The ground floor has well equipped library with catalogue shelves of old time. One of the most valuable possessions of Mani Bhawan is the *Charkha* or the spinning wheel that Mahatma Gandhi used. The *Charkha* subsequently became the symbol of the speed values and principles of Mahatma Gandhi. This is kept in a room, which used to be Gandhiji's living room and working space and has been preserved as far as possible in its original setting. Visitors come to see the life of Mahatma Gandhi being portrayed thorough hundreds of well-crafted figurines in this museum.

Entrance to Mani Bhavan, Mumbai

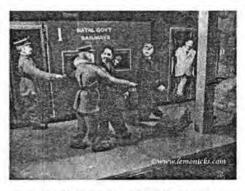One of the Galleries in the museum

Taking mother's permission to go
abroad for higher studies

Being thrown out of the first class
coach in South Africa

Salt Satyagraha or Dandi March

Hey Ram!! Last moment of his life

The Mani Bhawan is one of the most precious historic possessions of the city
and reflects the days of India's struggle and triumph over injustice and is nicely
maintained.

Expression of National Identity

Mohandas Karamchand Gandhi is known to Gandhi's intimate friends and followers as *Bapuji*, to most other Indians, as *Gandhiji*, and to the rest of the world as *'Mahatma'* as addressed by Rabindranath Tagore.

He is also known as the 'Father of the Nation' in India. As the chief architect of the nation's independence movement, *Gandhiji* led the country to emancipation from British rule. He, in shaping all the principal moments of the movement, from the struggle in *Champaran* to the 'non-cooperation movement of 1920-22', the 'civil disobedience movement', the 'Salt Satyagraha', and the 'Quit India Movement', was the authorial and decisive voice. It is under his guidance that the movement, unique among anti-colonial struggles in the Third World, remained largely 'Non-Violent', and it is largely on Gandhiji's account that the movement was bound to be a certain ethical conception of political and public life. He worked in three different countries (and continents): Britain, South Africa and India. Anti-colonial agitator, social reformer, religious thinker and prophet, he brought to the most violent of centuries a form of protest that was based on non-violence (Guha, 2013: 13). Mani Bhavan in Mumbai has successfully encapsulated the life and works of Mahatma Gandhi and his leadership in India's struggle for freedom, especially during 1917 to 1934. From this place, the first phase of non-violent freedom struggle was launched. Satyagraha against the Rowlatt Act was launched from Mani Bhavan in March, 1919. With a view to defy the Indian Press Act, it was also from this place that Gandhiji commenced his weekly bulletin "Satyagrahi" on April 7, 1919. After the disturbance and disorderly scenes at the time of the boycott of the visit of the Prince of Wales on November 17, 1921, Gandhiji started his historic fast at Mani Bhavan on 19th November 1921 to restore peace in the city of Bombay. Mani Bhavan is a place where Gandhiji lived and interacted with his colleagues to mould the freedom movement in the image of the cherished ideals of Truth and Non-violence. It was from the Mani Bhavan that his followers and devotees went forth in the world, being inspired and charged with a sense of service and sacrifice. Even today, Mani Bhavan is a source of inspiration for the visitors from the world over. This museum, therefore in the true sense is portraying the expression of National Identity in India.

Conclusion

The biographical museums raise important methodological questions concerning the narrative, structure and chronology, the representation of change, their influence on the lives of the people. They also portray the national history with the interpretation of biographical objects to the visitors. These museums open up extremely productive and emotional ways of engaging the visitors. The above stated four museums are expressing four different identities of the four nations. As for example, the museum

on 'Basho', might not be able to express the multifaceted identity of the nation itself but it indeed has expressed an integral cultural identity of Japan. Japan is known as the place of 'Haiku' – the famous series of poems written by the great poet Matuso Basho. The same approaches have been also portrayed by the three other museums. These museums can be regarded as the media, capable of connecting the national heroes with the society they belong to and the time that inherits such assets. Within this logical framework, the objects in biographical museums somehow become the carriers of an identity embodied in narratives concerning the biographies that present themselves with the manifestations of the bond formed between these cultural assets and people. On the other hand, the creation of such bonds does not simply take place inside the museum's physical space, but additionally — and more and more — in other spaces (including virtual ones). All these museums constitute different expression of the cultural or political identity of the nations, a close relation between individuals and the people.

Thus, in all the four museums mentioned above, objects are returning to contemporary society again and again with renewed strength and emotions. Whether be it in the case of Gorky Leninskieye museum in Russia or the Mani Bhavan in Mumbai – a new world of materiality and objectivity is emerging with a sense of nationalism that transforms them into new places for questioning and interrogating. The Lincoln's Museum in Washington DC, USA, is precisely portraying the solidarity that surrounds the visitors, captures our attention and leads us, for example, to focus on the nation's glorified history with the objects we get to see, work and speak with. These museums are also the carrier of national integration at the same time. Nationalism thus regains a central position in these museums through the museological discourse and dialogues, which in these ways are constantly invoking the nationalist feelings of the visitors.

References

Basho, Matsuo. (2004). *Basho's Haiku: Selected Poems by Matsuo Basho* with introduction and translation by David Landis Barnhill. Albany: State University of New York Press.

Belz, Herman. (1998). *Abraham Lincoln, Constitutionalism, and Equal Rights in the Civil War Era*. New York: Fordham University Press.

Burlingame, Michael. *(2008). Abraham Lincoln: A Life (2 volumes)*. Baltimore, Maryland: Johns Hopkins University Press.

Earl, Miner. (1980). *Japanese Linked Poetry*. USA: Princeton University Press.

Guha, Ramachandra. (2013). *Gandhi Before India*. New Delhi: Penguin Books India Pvt. Ltd.

Hoskins, J. (1998). *Biographical Objects: How Things Tell the Stories of People's Lives.* New York and London: Routledge.

Lee, Stephen J. (2003). *Lenin and Revolutionary Russia.* London and New York: Routledge.

Matsuo, Basho. (1666). *The Narrow Road to the Deep North*, (translated by Nobuyuki Yuasa). Harmondsworth: Penguin Press.

Matthew, Pinsker. (2003). *Lincoln's Sanctuary: Abraham Lincoln and the Soldiers' Home.* New York: Oxford University Press.

Murrell, Kathleen Berton. *(2001). Discovering the Moscow Countryside: An Illustrated Guide to Russia's Heartland.* Moscow: I B Tauris. p.102.

Ueda, Makoto. (1982). *The Master Haiku Poet, Matsuo Bashō.* Tokyo: Kodansha International.

Yamada-Bochynek, Yoriko. *(1985). Haiku East and West. Bochum.* Berlin: Universitatsverlag Brockmeyer. p. 255.

Acknowledgement

The Narrative of Basava Puran and the Dakkalwar Minstrel Picture Showmen Community of Maharashtra

PRASANNA MANGRULKAR

Abstract

The Dakkalwar is a minstrel picture showmen community. They recite the caste-myth of the Mang caste called the Basav Puran. As a caste rule, a Dakkalwar must earn his livelihood only by reciting the Basav Puran and accepting bhiksha from the Mang community and the Mangs must always cater to all his needs. This rule was devotedly obeyed by the Dakkalwars and the Mangs to such an extent that a Dakkalwar accepts food prepared only by the Mang and do not accepts anything from anybody else other than a Mang.

Keywords : Minstrel Picture Showmen Community, Mang Community, Basav Puran

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"Lord Shankara conferred a boon on Nilayachandaiyyah that until the sun and the moon exists, he shall be revered. Nilayachandaiyyah, doubting the substantiality of the boon, questions God whether that boon would ever become truth. Therefore, Lord Shankara asks him to appoint someone as the witness for the boon, who shall be his dependent forever and Nilayachandaiyyah must never be disloyal to that person.

Nilayachandaiyyah, consenting upon the God's proposal, begins his search for a witness and reaches the Dakshasthala, the place of King Dakshapati. There, Prince Dakkan Muni, who was very beloved to his parents and had been living very luxuriously, attracts Nilayachandaiyyah's attention.

Nilayachandaiyyah takes the prince to the God and informs that Dakkan Muni shall be the witness to the boon conferred to Nilayachandaiyyah. The God, recognizing Dakkan Muni, who actually was his brother in law, wants Nilayachandaiyyah that nurturing Dakkan Muni and fulfilling his needs could be a difficult task for him as he has been living luxuriously and so he should reconsider his decision of appointing Dakkan Muni as the witness.

In reply, Nilayachandaiyyah promised the God that until the sun and moon exists; he shall never be disloyal to Dakkan Muni and shall take care of him like a mother.

Since then Nilayachandaiyyah became the tutelary of Dakkan Muni."

In June 2003, having narrated this story, Amruta Kamble, a *Dakkalwar* minstrel picture showman, defined that Nilayachandaiyyah was the chief ancestor of the Mangs who provided the tutelage to Dakkan Muni of whom the *Dakkalwars* were heirs. Kamble, who was a sexagenarian in 2003, was probably the only *Dakkalwar*, who remembered complete *Basav Puran* and owned the painted scroll of *Basav Puran*. He told that although a wandering tribe, the *Dakkalwars* have now settled down at various places around Aurangabad in the Marathwada region of Maharashtra. They are said to have migrated from Telangana where they are known as *Dakkalwadu*.

From the example of the *Dakkalwars*, it seems that there were two types of minstrel picture-storytellers who traditionally used to earn their livelihood merely through the *bhikshavritti* (भिक्षावृत्ती). Alike the *Chitrakathis*, one type used to accept the *bhiksha* from anybody while the other type used to follow the restriction in accepting the *bhiksha* only from a particular caste without doing any kind of productive work. The *bhiksha* used to be reciprocated by the way of entertainment of the people of that caste by reciting the traditional caste-myths and mythologies. In Marathi, the word "*magate*" (मागते) is used to designate such community. Although, the occupation of these people involved begging and dependency; however, neither the *magates* considered it shameful nor the people who were entertained by such people considered giving *bhiksha* to them as a liability. The *Dakkalwars* belong to the second type. They believed themselves to be the *dependents* of the people of *Mang* caste.

The *Dakkalwars* are the minstrel picture showmen and recite the caste-myth of the *Mang* caste called the *Basav Puran* (बसव पुराण). As a caste rule, a *Dakkalwar* must earn his livelihood only by reciting the *Basav Puran* and accepting *bhiksha* from the *Mang* community and the *Mangs* must always cater to all his needs. This rule was devotedly obeyed by the *Dakkalwars* and the *Mangs* to such an extent that a *Dakkalwar* accepts food prepared only by the *Mang* and do not accepts anything from anybody else other than a *Mang*. Dr Prabhakar Mande (1999: 169) has quoted a fellow *Dakkalwar*, saying, "एक तर देवाचं नाही तर मांगांच आम्ही घेतो! (We accept either from the God or from the *Mangs*)." This is all because Nilayachandaiyyah promised Lord Shankara that he would never be disloyal to Dakkan Muni.

The Dakkalwar Performance

This presentation requires a single performer and the only instrument *Kingri* (किंगरी).

The *Kingri* has two-three strings and three *tumbas* (तुंबा) which are actually three white gourds tied to three-four feet long bamboo stick. The *Dakkalwar's* believe that the three tumbas symbolizes three deities: Brahma, Vishnu and Mahesh respectively. The recitalist sits on the ground and catches this unique instrument by placing his

left hand firmly on the stick where the middle *tumba* is joined to the stick. The instrument remains right in front of the recitalist's chest and he plucks the strings with the middle finger of his right hand. A small wooden image of peacock is seated on top of the *tumba* near the right hand. This peacock is bedecked with the peacock feathers, small jingling bells and golden laces. A small stick is attached to this peacock at its bottom and is inserted in a hole made at the top of the right side *tumba*. It keeps the peacock from falling off or leaving its place. A cord, tied to a small stick attached to the peacock's image, comes out of this *tumba* through another hole. The recitalist winds this cord around his middle finger with which he also plucks the strings. When he does this, the cord is also stretched making the peacock prance and the small bells to jingle. These bells also strike on the *tumba* that produces a delicate, euphonious incessant knocking sound.

Amruta Kamble with Kingri
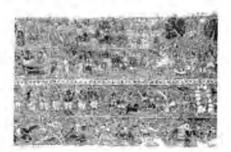
A Fellow Dakkalawar with a
Bag Shindi Leafs and the
Basava Purana Scroll

The presentation of the *Basav Puran*, with the accompaniment of *Kingri*, is popularly called as "मोर नाचवणे" within the *Mang* community. This literally means 'making the peacock dance' This presence of image of peacock on the *Kingri* also has some significance. According to an anecdote, popular within the *Dakkalwars*, long ago, in an open yard, a peacock was prancing in euphoria. A hunter hits the peacock. Terribly wounded, the peacock falls and remains tossing for some time. A fellow *Mang* waters him and rescues its life. Having reaching consciousness, the peacock blesses him with a boon that *Mang* shall never have dearth of anything and promises him to listen to his stories. Since that moment, the peacock has been seated on the *Kingri*.

In the evening, having finished all the day-work, all the *Mang* folks congregate at a place. The chief fellow *Mang* performs the ritual of offerings to the painted scroll, *Kingri* and then the recitation begins which lasts for couple of consecutive days. At the end of the performance, once again the chief fellow *Mang* performs the ritual of offerings to the holy, painted scroll and the instrument – *Kingri*. The *Dakkalwar* performer and his family get presentations of clothes, grains and honorarium. In the beginning, the performer offers *mujra*: the salutation, to his patrons through a recitation addressed to the peacock followed by the main recitation of the *Basav Puran*.

The *Basav Puran*

The *Basav Puran* constitutes the myths related to the origin of the *Mang* caste. The recitation is restricted only to the *Mang*s and listening to which does their heart good. After a short rendering of obeisance to the guru, immediately begins the recitation of *Basav Puran*. Vanquishing of untamed *Basav*: the bull, by the legendary ancestor of the entire *Mang* community: Jamb Rishi, is the main constitute of the narrative of the *Basav Puran*.

A part of the Basava Purana Scroll

Depiction of Ganesh in the Basava Purana

The Description of *Dakkalwar*-Scroll

The *Dakkalwar*s themselves call their scroll depicting the *Basava Puran* as *bada* (बाड) and corresponding to this term, the recitation of *Basav Puran* vernacularly called as *bada ukalne* (बाड उकलणे), which literally means the unfolding the scroll. About twenty to twenty-five feet long and two and half feet wide, this horizontal, fabric scroll has two sticks attached to its both the ends.

Juxtaposition of the figures on the plain, flat background painted in red could be the simplest description of the *Dakkalwar* scroll. The scroll has long decorative strips consisting floral motifs at both the horizontal edges. Another decorative strip with the same kind of floral motifs in the middle of the scroll divides the scroll into two horizontal registers.

A Ganesha-figure, drawn in the upper register in the beginning of the scroll, i.e., near the shorter edge of the scroll, is comparatively bigger than rest of the figures. When a *Dakkalwar* minstrel picture showman starts his performance, the chief *Mang* couple venerates this image of Ganesha and that of certain other deities, which includes Seshashayei Vishnu, Brahma, Mahesha and Kartikeya mounted on peacock, the sun, the moon and Chaturbhuja Durga respectively. The drawings of these deities are also bigger in size.

Various scenes are serially depicted on the scroll, to which, the performer points out with the help of pointer. As the narration proceeds, the drawing of a tree or even a broad vertical strip is devised to differentiate between the two scenes. However, thick, horizontal lines are often devised to divide the space in order to demarcate the scenes.

The figures of women are usually depicted wearing the nine-yard *sakachha* (सकच्छ) or *sakashta* (सकाष्ट) sari with borders, which is the ethnic garment of Maharashtrian women. The hair gathered at the back of the head forming a chignon. In certain examples, the head is covered with the end of part of sari perhaps to show the distinguished class in the society. The jewellery shown on the female figures is limited and its depiction is very simple. It includes nath (नथ), a typical nose ring of Maharashtra fashion, and large ear ornament covering the whole ear. The forehead in the female figures is marked with chiri (चिरी), a fine line of vermillion indicative of the marital status of the women, necklace, stacks of bracelets and anklets.

All the male figures are shown dressed in dhoti or pajama and the *jama*. The gods appear in dhoti and the *uttariya*, whereas the servants, attendants, soldiers and common people wear a kind of short trousers and the jamas. Some male figures are shown sporting moustaches, while all the males are shown donning crowns or turbans. All the figures depicted in the classic convention in which head and feet are depicted in profile while the torso is in the frontal view.

Male Figures in the Basava Purana Scroll

Depiction of Female Figures in the Basava Purana Scroll

The iconography of Kamadhenu or *Gayatri* is very interesting being in therianthropic form. She has the head of a woman wearing earrings, nose-ring,

necklace and a crown. The wings sprout up near her fore-legs and the plumage of peacock-feathers instead of tail. The similar iconic form of *Kamadhenu* also is met with in the leather puppets of Karnataka. Surprisingly enough, this description of *Kamadhenu* approaches to that of *Buraq*: a winged creature, half-human and half-horse, that happens to be the vehicle of Prophet Mohammad.

Depiction of Kamadhenu in   Depiction of Kamadhenu   Buraq
the Basava Purana Scroll   in the Karanataka
                                Leather Puppetry

As a common practice, the *Dakkalwar*s and the owners of the narrative scrolls of Telangana personally do not draw and paint on the scroll. These people usually entrusted this job to the professional painters who also used to do the retouching of colours on the scrolls on fading of colours. After the performance, a scroll is rewound and kept inside a bag specially made up of *Shindi* or *Shindhi* leaves: a tree of wild dates (*Phoenix dactylifera*). Until the next performance, the scroll remains inside this bag in a wound state and the bag is tuck in the bamboo props of the hut exposing it to the rain-water leaking through the roof.

Seshashayi Vishnu in the   A Mang Couple venerating
Basava Purana Scroll   the Basava Purana Scorll

The Style of the Dakkalwar-Scroll

The style of the *Dakkalwar*-scroll painting predominantly expresses affinity with the

style of the *Telangana* Scrolls particularly in the depiction of human figures with head and toes in profile and torso in front view; arrangement of graphical elements in the pictorial space in both styles is overcrowding giving an impression that the elements have been juxtaposed. Predilection for use of floral borders and contrivance of a line, decorative strip to create a division of space in order to show a different ambience or the phenomenon of the depth seen in both the styles of scroll paintings.

Surprisingly enough, the style of mural paintings of the Maratha *Wadas* of Wai, Menavali, Satara resemble the style of the *Dakkalwar*-scroll. Not only these murals but also the *Chitrakathi* paintings of Pinguli and Savantwadi display a substantial resemblance with the stylistic idiom seen in the *Dakkalwar* scroll. This aspect of resemblance tempts one to put forward a hypothesis that those murals of the Maratha *Wadas*, *Chitrakathi* paintings of Pinguli and Savantwadi and the *Dakkalwar* scroll may have been painted by the painters working in a guild. In the Telangana, whence the Dakkalwar migrated, there had been a community of wandering painters called *Nakashi* (Mittal, 1998: 65). They used to paint murals in the temples and mansions of the rich people, paint the scroll for the poor minstrel picture showmen, make a particular kind of three-dimensional images used by the particular minstrel story-tellers of Telangana, make portable shrine used by another story-telling community and also make the palanquins. Therefore, in Telangana, one practically does not find any difference in the style of the murals and that of the scrolls paintings. Similar picture is also discernible in Maharashtra. There was probably a guild of itinerant painters acting in the region, doing all the work related with painting and decoration, ranging from painting the murals in the mansions and palaces of the Maratha noblemen to making illustrations for some manuscripts and making of wooden covers, horoscopes and ritual *patas*: the *Chitra-Gauri Pata*, to decorating vehicles like palanquins, etc.

References

Mande, Prabhakar. (1999) *Mang Ani Tynche Magate* (Marathi). Aurangabad: Godavari Prakashan.

Mittal, Jagdish. (1998) "Painted Scrolls of Deccani Picture Showmen: Seventeenth to Nineteenth Century." In Jyotindra Jain (Ed.) *Picture Showmen: Insight into the Narrative Tradition in Indian Art*, Marg, Vol. 49 (3).

Margaret Cockburn and her Indian collections in the Natural History Museum, London

RANEE PRAKASH

Abstract

Margaret Bushby Laselles Cockburn (b. 2 July 1829, d. 26 March 1928) was a famous naturalist and an amateur ornithologist in Tamilnadu, India. She observed nature and illustrated birds, eggs, nests, animals and several plants in and around Nilghiris (also known as Neilgherry) and corresponded with the famous Indian Civil Servant and naturalist - A.O. Hume. Some of her collections which are housed in the Natural History Museum are discussed.

Keywords : A O Hume, Badagas, Palliyan, Kotagiri, Nilghiris.

Introduction

Born in Salem, Tamil Nadu on the 2nd of July 1829, Margaret Bushby Lascelles Cockburn is renowned as a late 18th and early19th century naturalist and an amateur Ornithologist from the Nilgiris in Southern India. She was born and brought up in India and spent her entire life there. Her father – M D Cockburn was the Collector of the District then. She made numerous observations on local natural history around her and several of these works were reported in the works of Allan Octavian Hume (b. 6 June 1829, d. 31 July 1912). Hume was a famous Ornithologist, political reformer and a member of the Imperial Civil Service (later the Indian Civil Service) in India during the years 1858-1947.

Margaret made paintings of local fauna and flora. The Museum acquired her paintings, fern herbarium sheets and some of the butterfly collections in around late 19th and early 20th century through A O Hume. An entry of Cockburn (Miss) listed on page 330 (Sawyer, 1971) says *A correspondent of Mr. Hume, to whom this lady sent many interesting birds and eggs from the Nilghiri Hills.*

Not only was she drawing the flora and fauna, but she was also recording the dimensions of the birds on the verso of every single page and was skilled in scientific documentation. For example, plate 43 of Yellow Wagtail has a penciled note probably by Hume saying *no, these have long hind claws* (Fig 1.a.). This shows that both Hume and Cockburn shared common interests in ornithology and probably Cockburn

learnt a lot from Hume or it is possible that these notes were penciled by Cockburn herself (Cockburn, 1858).

Another example is the *Ruellia* plant (*Strobilanthes*) which has penciled annotations at the bottom and the verso of the sheet saying *This blue shrub blossoms once every 12 years* (Fig. 1.b.) (Cockburn, 1858). The *Palliyan* tribe use this flowering period as a reference point to record their age (Kielty, 2017).

The brilliant blue colour of the flowers of this plant (*Strobilanthes kunthiana* (Nees) T. Anderson commonly known as *neelakurinji* gives the name of the Nilgiri Hills (Blue Mountain) in Tamil Nadu, southern India (Magee, 2013: 37). Neela means blue in Hindi language. In 2001, the Natural History Museum published a diary of fauna and flora drawn by her containing 112 pages (Cockburn, 2001). A selection of some of the plates from the three volumes (Cockburn, 1858, 2 volumes titled "Neilgherry birds" holding 53 + 43 watercolours respectively; 1 volume titled "Miscellaneous" holding 70 watercolours of plants, insects, eggs, feathers and people) are described here (Fig 1.a. & 1.b).
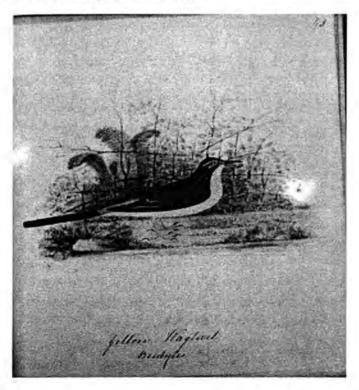
Fig. 1.a. Yellow Wagtail (penciled notes: no, these have long hind claws).
(Copyright: The Trustees, Natural History Museum, London)

Fig.1.b. *Strobilanthes kunthiana* (Nees) T. Anderson (penciled notes: this blue shrub blossoms only once every 12 years). (Copyright: The Trustees, Natural History Museum, London)

Subsequently, Margaret is also celebrated in *Art of India: Images of Nature* (Magee, 2012) and *Women Artists: Images of Nature* (Hart, 2014) showcasing remarkable natural history from the last three centuries.

Some of her plant illustrations include economically and medicinally useful plants such as: *Anacardium indicum, Anacardium occidentalis, Areca catechu, Argyreia splendens, Azadirachta indica, Balsamina sp., Bombax pentadium, Calamus viminalis, Calogyne corrugata, Capsicum frutuscens, Coffea arabica, Crinum sp., Curcuma angustifolia, Gloriosa superba, Gossypium religiosum, Hibiscus angulosus, Jumboo malac, Laceolobium rubrum, Lysimachia leschenaultia, Myristica fragrans, Myristica moschata, Nicotiana tabacum, Oryza sativa, Passiflora*

quadrangularis, Piper nigrum, Psidium pyriferum, Punica granatum, Rhododendron arboreum, Rhodendron spp., Solanum melongena, Thea viridis, Theobroma cacao, Thunbergia sp. and Vanilla aromatica.

Apart from her contribution towards natural history, she also contributed to build a school for the *Badagas* (one of the Indian Tribes in Southern India) and also a church at Kotagiri in 1867 (Francis 1908:127). Margaret was laid to rest on the 26th of March 1928 in Kotagiri.

Botanical & Entomological Collections in the Museum Database (KE-Emu)

A search in KE-Emu retrieved 10 collections of various species of ferns such as: *Bolbitis appendiculata* (Willd.) K.Iwats., *Cheilanthes bullosa* Bedd., *Crypsinus montanus* Sledge, *Cyrtomium anomophyllum* (zenker) Fraser-Jenk., *Doryopteris concolor* (Langsd. & Fisch.) Kuhn, *Dryopteris cochleata* C.Chr., *Elaphoglossum nilgiricum* Krajina ex Sledge, *Lepisorusam aurolepidus* (Sledge) B.K.Nayar & S.Kaur, *Microlepia platyphylla* (D.Don) J.Sm. These were collected from several localities such as Kotagiri, Wynaad, below Neddewuttum and Oatacamund around the Niligiri mountains in the years 1850 and 1880. There might be several other specimens around this period within the Fern Herbarium as not all our collections have been databased yet. Some of the entomological collections which have already been databased can also be searched via the Museum's data portal: www.data.nhm.ac.uk.

Collections in the Library

I have wandered in the Library of the Natural History Museum and have had a visual feast of Margaret's collections showcasing one of the exquisite artworks from the many unrivalled collections held in the Library and her collections have been digitised and can be accessed via the portal: http://www.sciencephoto.com/search?subtype=contributors&searchstring=NHM&media_type=images

Discussion

Although, Margaret had an eye for detail in documenting nature with scientific details such as height, weight and width of birds recorded on verso of the plates, most of the common names that she recorded way back in 1800s are obsolete now (Hart, 2016) and this can be an interesting point for further study. Ethnobotanists, Zoologists and Anthropologists can help to record the current names of the local flora and fauna with the local tribes such as the *Todas* and *Badagas* of Nilgiris (Ethnologue, 2017). It is possible that as tribes become extinct, the common names will become extinct too. It would be interesting to compare the flora and fauna which Margaret her drawn then to the flora and fauna now. Her contribution to recording Indian natural history is amazing and showcases women's substantial role in recording and documenting nature.

The Indian drawing collections at the Natural History Museum are testimony to the wonderful diversity of Indian natural history – the magnificent flora of the different regions and the variety of animals, birds and insects that populate the country. Study of these collections can advance our understanding of the natural sciences and add to a more complete and rounded knowledge of the relationship between India and Britain, between science and art and between the many layers of cultural and economic exchange that took place over the past 250 years (Magee, 2013: 15).

References

Cockburn, M.B.L. (1858).). *Original watercolour drawings of Neilgherry birds [and] Miscellaneous*. 3 volumes of art originals. Madras: CKS Press.

Cockburn, M.B.L. 2001. *The Natural History Museum Diary 2002*. Frances Lincoln. p. 112.

Ethnologue. 2017 Badaga Language. Web page: https://www.ethnologue.com/country/IN/languages . Retrieved 04 Apr 2017

Francis, W (1908). The Nilgiris Madras district gazetteers. page 127

Hart, A. (2014). *Images of Nature: Women Artists*. London: Natural History Museum.

Kielty, M. (2017). *The Lost Gardens of the Raj*. Thursday Online. Web page: http://www.tcs.cam.ac.uk/?p=0001118   Retrieved 04 Apr 2017

Lanjouw, J. and Stafleu, F.A., (1954). *Index Herb. Coll. A-D*. p. 132.

Magee, J. (2013). *The Art of India: Images of Nature*. London: Natural History Museum.

Natural History Museum (2014). Dataset: Collection specimens. http://dx.doi.org/10.5519/0002965. Retrieved: 09:33 12 Apr 2017 (GMT).

Sawyer, F.C. (1971). A short history of the libraries and list of MSS. and original drawings in the British Museum (Natural History). *Bulletin of the British Museum (Natural History) Historical*. London.

Acknowledgement

Promotion of Cultural Tourism in India through Folk Heritage Museums

PRATIK GHOSH

Abstract

The present write-up focuses on the relationship between Indian folk culture and cultural tourism in India. It elaborates on the types of folk culture prevalent in India with reference to folk music, folk dance, folk theatre, folk deities, folk crafts, etc. It also highlights the role of Indian museums to preserve this valuable cultural heritage. The paper is exploratory in nature, based on a review of the literature that carry related information on the varied folk culture of India.

Keywords : Museums, Folk Culture, Heritage, Tourism, India.

Cultural tourism is bringing gradual transformation in the tourism sector in India. One of the most diverse and specific definitions from the 1990s are provided by International Scientific Committee on Cultural Tourism:

> Cultural tourism can be defined as that activity which enables people to experience the different ways of life of other people, thereby gaining at first hand an understanding of their customs, traditions, the physical environment, the intellectual ideas and those places of architectural, historic, archaeological or other cultural significance which remain from earlier times. Cultural tourism differs from recreational tourism in that it seeks to gain an understanding or appreciation of the nature of the place being visited (ICOMOS Charter for Cultural Tourism, Draft April 1997).

According to Hofstede (1997), the core of a culture is formed by the value which in terms of tourism will be the basics for the attraction of a given destinations well. Museums are platforms for cultural integration and stand for presentation of various folk populations in a systematic way. Folk museums of India are a treasure trove of the Indian culture portraying the valuable folk cultural heritage of our country through their collections, regular exhibitions and educational activities like gallery walks, seminars, conferences and workshops with the help of folk communities.

The following paragraphs seek to discuss in detail the prevailing Folk culture in

India and how specialized Museums like Folk Museums facilitate in promoting cultural tourism in India.

Basic Attributes of the Cultural Traditions of India

Folklore is probably a well-acclaimed component of the cultural heritage of a nation. It reflects the essentials of a nation's cultural attributes forming a basis for its cultural and social identity. *'Expressions of folklore'* means productions consisting of characteristic elements of the traditional artistic heritage developed and maintained by a community of our country or by individuals reflecting the traditional artistic expectations of such a community, in particular:

(i)   verbal expressions, such as folk tales, folk poetry and riddles;

(ii) musical expressions, such as folk songs and instrumental music;

(iii) expressions by action, such as folk dances, plays and artistic forms of rituals whether or not reduced to a material form; and

(iv) tangible expressions such as:

   (a) productions of folk art, in particular, drawings, paintings, carvings, sculptures, pottery, terracotta, mosaic, woodwork, metal ware, jewellery, basket weaving, needlework, textiles, carpets, costumes;

   (b) musical instruments;

   (c) architectural forms.

Components of Folk Culture of India and Their Role to Promote the Tourism Industry of the Country

- **Folk Music of India:** India has a rich tradition of folk music with variety of folk styles. Folk music is a mere rustic reflection of the larger Indian society forming an indispensable component of functions such as weddings, engagements and births. Villagers reflect their hopes, fears and aspirations through folk songs associated with planting and harvesting. Folk music is also used for educational purposes. The folk instruments accompanying the music are crafted by the musicians themselves from commonly available materials such as silk, peritoneum, bamboo, coconut shells, etc. Indian folk music elements form a global attraction for cultural tourists, artists and musicians from all over the world. The folk music varieties of India can be classified as follows:

  - *Devotional or spiritual folk songs: Baul Sangeet* (the music of the travelling bards), *Shyama Sangeet* (dedicated to Goddess Kaali) and *Vaishnavite Kirtans* from West Bengal, *Shakunakhar* – the *Kumaoni* form of Ganesh Vandana, the *Krishna Bhajans* from Rajasthan, the *Sopana* songs (*Sopana* meaning flight of stairs leading to the temple and the music was traditionally sung by devotees while sitting on the stairs) from Kerala, etc.

- *Social folk-songs:* *Nyiga* folk song from Arunachal Pradesh containing advices for a newly-wedded bride, the *Baromashya* folk songs from West Bengal sung for welcoming guests, the *Panihari* songs sung by women in Rajasthan describing their daily chores and scarcity of water, the *Chapeli* songs forming an inseparable part of *Kumaoni* weddings, the folk songs of Andhra Pradesh impart sex education when a girl starts menstruating, the *Ropnigeet* and *Katnigeet* of Bihar during the seasons of sowing and harvesting paddy respectively, the song of mourning – *Alhaini* from Himachal Pradesh, the *Hakri* and the *Ladishah* of Jammu and Kashmir describing fairy tales/ love stories and socio-political conditions respectively, the *lullaby Palane* of Maharashtra sung to put a child to sleep, the big crowd-puller at *melas* named *Bair* from Uttar Pradesh, the form of singing which is based on debate format – quite similar to the musical face-offs called *Kavigaan* from West Bengal, etc.

- **Community folk-songs:** *Bhatiyali* music from Bengal was originally created and sung by boatmen.

- **Magico-religious folk songs:** *Artya* from Maharashtra aims to soothe the rage of deities, asking for protection from plague, small pox, etc.

- **Folk Dances of India:** Indian folk dances, often dedicated to the presiding deity of the specific community are performed on special occasions and festivals, to express elation and joy. The most interesting part of a folk dance is its bright and colourful costume and traditional jewellery.

  The workshops on folk dances organized nowadays by certain state tourism boards are the best ever culture immersion options available to tourists. In India, a home stay experience, a stay at a heritage hotel or a visit to a theme village is incomplete without a folk dance performance. The main attraction of the desert safaris of Rajasthan are the *Kalbelia* dance and the fire dance accompanied by music by local *Manganiyar* musicians. Indian folk dances can be classified as follows:

  - **Social folk dances:** *Jagrana* from Jammu and Kashmir performed during post-wedding rituals, the *Jaago* dance of Punjab performed on the night before the wedding, the *Chhathi* dance from Haryana performed on the sixth day of the birth of a male child, the *Dandiya* (stick dance) of Gujarat and the *Dhunuchi naach* (censer dance) of West Bengal – both being an indomitable part of the Navratri celebrations, the *Bou Nritya* from West Bengal – a part of the newly-wedded bride welcoming ceremony, the *Lavani* dance from Maharashtra, the *Chrew* or bamboo dance from Mizoram, etc.

  - **Agricultural folk dances:** *Rouf dance* from Jammu and Kashmir performed during the harvesting season, *Baisakhi* from Punjab during wheat harvesting,

Loor dance of Haryana signifying the sowing of Ravi crops, *Nabanna* – which is a ritualistic dance after the autumn harvest and the *Tushu* dance from West Bengal, the latter consisting of villagers praying for agricultural prosperity using expressions like 'ghee (clarified butter) of thirty two (a number depicting wealth) cows', 'rice of fine paddy', 'pots of gur' (country jaggery), the *Hurka Baul* dance from Uttarakhand during maize harvesting, the *Bihu* dance from Assam during Assamese New year, the *Lambadi* dance of Andhra Pradesh depicting the daily agricultural activities, the *Nongkrem* dance of Meghalaya celebrating ripening of paddy, the *Garia* dance of Tripura – which consists of paying thanks to the God 'Garia' for a bountiful harvest as the life of the people of Tripura revolve around *Jhum* cultivation, etc.

- **Seasonal folk dances:** *Gidda* dance from Punjab during Lohri, the *Gobbi* dance from the Andhra Pradesh during Makar Sankranti, the *Teeyan* dance from Punjab and the *Bhadu* dance from West Bengal performed by women during monsoons, the *Thiruvathirakali* from Kerala performed by women during the Thiruvathira season, etc.

- **Devotional/ Religious folk dances:** *Dhamali* of Kashmir which is a devotional dance by pilgrims going to Ziarat to invoke blessings of God, the *Phumania* of Jammu for praying to deities to protect the cattle and children from natural calamities, the *Chham* dance and the *Chhanak* dance – performed by Buddhist monks of Ladakh and Lahaul-Spiti region in monasteries during festivals, the *Raut Nacha* of Uttar Pradesh which eulogizes the relationship of Lord Krishna with his consort Radha and *gopis*, the *Garba* from Gujarat performed during the Shakti Pujas (Navratri, Sharad Purnima and Vasant Panchami), the *Deodhani* dance of Orissa dedicated to the goddess of snakes – Manasa, the *Pala dance* from Orissa – associated with the cult of 'Satyapir', the *Danda Nata* of Orissa – invoking the blessings of Lord Shiva, the *Kai Silambu Attam Dance* from Karnataka performed in temples during Navratri, the *Karagram dance* of Kerala – performed in praise of the rain goddess 'Mariamman' and river goddess 'Gangai Amman,' etc. Folk dances of India are intricately linked to mythological stories, e.g., the *Bharat Lila* from Orissa depicts the small incident of Subhadra Parinaya from Mahabharata, the *Arjunanritham* of Kerala depicts the dancing expertise of Arjuna from Mahabharata, the *Bhootham Thullal* of Kerala enacts the coming of the ghosts and goblins accompanying Lord Shiva to enjoy the temple festivals, the *Veeranatyam* from Andhra Pradesh depicts the rage of Lord Shiva in his most fierce avatar Veerabhadra, the *Kalikapatadi* folk dance from West Bengal depicts how Lord Shiva calms down Goddess *Kaali* after she is done with slaying the *Asuras*, the *Kirtan* dance performed generally at the evening spiritual gatherings in West Bengal's *Radha-Krishna* temples, the

famous *Garadi* folk dance of Puducherry which is believed to have been performed by the *vanaras* (monkeys) to celebrate Lord Rama's victory over Ravana in the Ramayana, etc.

- **Martial folk dances:** *Povadas* from Maharashtra which is based on the life Chhatrapati Shivaji Maharaj, the *Bratachari Raibenese* dance which consists of sham fighting and acrobatics and the *Ranpa* or *stilt dance* from West Bengal, the masked *Chhau* dance from West Bengal, Bihar and Orissa based on different episodes of the *Mahabharata* and the *Ramayana*, the *Parichakali* or *shield dance* from the Lakshwadeep islands, the *Chaibari Nritya* (a dance mastered by the tea garden workers of Northern Bengal) and *Kukri Nritya* from North Bengal performed by the girls of the community when they ceremoniously hand over their traditional weapon, the Kukri, to their brothers, before they set off for the war, etc.

- **Community folk dances:** *Kalbelia* dance by the snake-charmers of Rajasthan, the *fire dance* by the Rajasthani Banjara community, *Kachchi-Ghodi* dance from the Shekhawati regions, the *Kolyachi* dance of the fishermen folk of Maharashtra, *Ganga Baidya* dance by the snake charmers or Bedes of Bengal, etc.

- **Magico-religious folk dances:** *Brita dance* from West Bengal is traditionally performed by a woman to propitiate the angry deities when she is unable to give birth to a child, the *Malayan Kettu* from the Kannur district of Kerala which was prescribed by healers to women who had miscarriages, the *Kolam Thullal* from Kerala – a ritual dance to get rid of evil spirits, etc.

- **Folk Theatre of India:** Folk Theatre is a composite art form in India with a fusion of elements from music, dance, pantomime, versification, epic and ballad recitation, graphic and plastic arts, religion and festival peasantry. Folk theatre has been used extensively in India to propagate critical social, political and cultural issues in the form of theatrical messages among the people. As an indigenous form it breaks all kinds of formal barriers of human communication and appeals directly to the people.

    Many socio-cultural institutions nowadays are playing an important role in revival, propagation and appreciation of Indian folk theatre through workshops, seminars, fairs and festivals thereby promoting the cultural heritage and tourism prospects of India.

    Indian folk theatre can be broadly divided into two broad categories   Ritual Theatre and Theatre of Entertainment respectively. The two forms thrive together, mutually influencing each other. Most often the folk and traditional forms are mainly narrative or vocal, i.e., singing and recitation based like *Ramlila*, *Rasleela*, *Bhand Nautanki* and *Wang*, without any complicated gestures or movements and

elements of dance. India is also rich in ballad singing traditions such as *Pabuji ki phar* of Rajastan and *Nupipaalaa* of Manipur.

These unique theatrical styles differ from one another in execution, staging, costume, make up and acting style, although there are some broad similarities. South Indian forms emphasize on dance forms like *Kathakali* and *Krishnattam* of Kerala, and actually qualify as dance dramas, while the north Indian forms emphasise on songs, like the *Khyal* of Rajasthan, the *Maach* of Madhya Pradesh, the *Nautanki* of Uttar Pradesh and the *Swang* of Punjab. The *Jatra* of West Bengal, *Tamasha* of Maharashtra and the *Bhavai* of Gujarat stress on dialogues in their execution, the latter two emphasizing on comedy and satire. Puppet theatre also flourished at many places in India. Shadow (*Gombeyatta* of Karnataka, *Ravana Chhaya* of Orissa), Glove (*Gopalila* of Orissa, *Pavai Koothu* of Tamil Nadu), Doll (*Bommalattam* of Tamil Nadu and the Mysore State and *Putul Nautch* of West Bengal) and string puppets (*Kathputli* of Rajasthan and *Sakhi Kundhei* of Orissa) are some of the popular forms in vogue.

- **Folk Deities of India:** In the rural areas of India there are a variety of notions about the nature of gods and goddesses. They are specific to a tribal or caste group, extended family, neighbourhood or village and they are worshipped to achieve a specific end, e.g., good harvest, protection from diseases, fertility, etc. Some examples of such folk deities include:

  - **Manasa Devi:** *Manasa Devi* or the snake Goddess is worshipped mainly in West Bengal and other North-Eastern Indian states to control all the snakes on Earth, for fertility and prosperity. It is believed that snake bite can be cured by worshipping her.

  - **Bonbibi:** *Bonbibi* or the lady of the Sundarban forest in West Bengal is worshipped by honey-collectors and the woodcutters before entering the forest for protection against the tiger attack.

  - **The Seven Sisters or Deities from South India:** They include *Poleramma, Ankamma, Muthyal-amma, Dilli Polasi, Bangaramma, Mathamma,* and *Renuka*, names varying according to localities. These are similar to the *Saatbibis* of West Bengal: *Chandbibi, Olabibi, Ajgaibibi, Jholabibi, Bahadabibi, Jhetunebibi* and *Asanbibi* whom researchers believe to be the transmogrifications of Vedic deities, the *Saptamatrikas* (*Brahmi, Maheshvari, Vaisnavi, Varahi, Indrani* and *Chamundi* or *Yami*) and are worshipped along with *Bonbibi*.

  - **Shitala:** *Shitala* is an ancient folk deity widely worshipped by many faiths in North India and West Bengal, as the pox-goddess. She is the Goddess who cures poxes, sores, ghouls, pustules and diseases.

  - **Gangamma:** *Gangamma* is the incarnation of Shakti and a river goddess of Tirupati, Andhra Pradesh.

- **Iravan or Aravan:** The son of Pandava prince *Arjuna* and the Naga princess *Ulupi*, *Iravan* is the central deity of the cult of Kuttantavar in Tamil Nadu. The cult is of South Indian origin, from a region where he is worshipped as a village deity – *Aravan*. He is also a patron god of well-known transgender communities called *Ali*.

- **Aiyanar:** *Aiyanar* is a Hindu village god of Tamil Nadu, primarily worshipped as a guardian deity who protects the rural villages. The temples of *Aiyanar* are usually flanked by gigantic and colourful statues of him and his companions riding horses or elephants.

- **Ashok Sundari:** According to Padma Purana (Hindu religious text), *Ashok Sundari* is a daughter of Shiva and Parvati which was created by Kalpavriksha (a tree that fulfils wishes). *Ashok Sundari* is a compound of two words, *Ashok* (one who gets rid of sorrow) and *Sundari* (one who is beautiful); therefore *Ashok Sundari* was a beautiful deity who took away the sorrows of her mother. Although a minor deity, she is talked about in Gujarati folk tales.

- **Golu Devata:** *Golu Devata* or *Lord Golu*, as popularly known, is a historical and mythological God of the Kumaun Himalaya Region in the state of Uttarakhand. *Lord Golu* is considered as an incarnation of Gaur Bhairav (Lord Shiva). He is also regarded as dispenser of justice by the devotees with extreme faiths.

- **Gogaji:** *Gogaji*, also known as *Jahar Veer Gogga* is a folk deity, worshiped in northern states of India especially in Rajasthan, Uttarakhand, and Uttar Pradesh. He is a warrior-hero of the region, venerated as a saint and a 'snake-god' He is worshiped as a peer among Hindus.

- **Karni Mata:** *Karni Mata* is worshiped as the incarnation of the goddess *Durga* by her followers. She is an official deity of the royal family of Jodhpur and Bikaner.

- **Goddess Banai:** *Banai* is a form of the god Shiva, worshipped in the Deccan – predominantly in the Indian states of Maharashtra and Karnataka.

- **Vithoba, Vitthala, Panduranga:** *Vithoba*, also known as *Vitthala* and *Panduranga*, is predominantly worshipped in the states of Maharastra, Karnataka, Goa, Telengana and Andhra Pradesh. He is generally considered a manifestation of the god *Vishnu* or his *Avatar Krishna*. *Vithoba* is often depicted as a dark young boy, standing arms akimbo ona brick, sometimes accompanied by his main consort *Rakhumai*.

- **Guru Jambeshwar:** *Shree Guru Jambeshwar Bhagwan* was the founder of the Bishnoi community in Rajasthan who preached the worship of *Hari* (a name for Lord Vishnu), taught that God is omnipresent. He preached

protection of plants and animals to peacefully coexist with nature.

- **Folklore and Folktales of India:** They range from the *Panchatantras*, the *Jatakas*, *Hitopodeshas*, the *Akbar-Birbal*, and *Tenali Rama* to the religious *Vratkathas* as well as localised versions of the stories of Ramayana and Mahabharata. Examples of important storytelling traditions from India include "*Kaavad Bachana*" from Rajasthan where the prop is a '*kaavad*' shrine – a colourful cupboard depicting the stories from epics like *Ramayana* and *Mahabharata* as well as the *Puranas* – with which the storyteller takes the listener to a visual and sacred journey. In West Bengal this tradition is named as '*Pater Gaan*', where the singer unfolds a scroll painting while singing songs describing the events depicted on the scroll. The organization named *Bangla Natak Dot Com* organizes a festival named *Pat Maya* in West Bengal highlighting the tradition of "*Pater Gaan*"

- **Folk Crafts of India:** The traditional folk arts and crafts from various parts of India are transmitted from one generation of folk artists and craftsmen to the next without any formal training. Examples include the beautiful *sindoor-boxes* – crafted out of wood/ stone/ clay and the rainbow-hued bangles of metal/ lac/ glass, common among Indian tourist souvenirs and are found all over India; the rich embroidery from Kutch regions and the *Bandhni* tie-and-dye fabrics from Gujarat; the mirror-work fabrics, block printed fabrics and *Phad* paintings (depicting stories of local folk heroes like *Gogaji*, *Pabuji*, etc.) from Rajasthan; the puppets and weaving crafts from Andhra Pradesh; the terracotta toys, conch-shell crafts, *Nakshi Kanthas* (based on local folk tales) and *Kalighat Patachitras* of West Bengal (which were also used as the visual component of '*Pat-er Gaan*'); the applique works and the *Odissi Patachitras* (based on motifs of Lord Jagannath and Radha-Krishna), paper machie products from Jammu and Kashmir, the bamboo crafts of North-eastern states, the Ramayana-based *Madhubani* paintings of Bihar, *Phulkari* fabrics from Punjab, *Warli* paintings from Maharashtra, the *Kalamkari* and *Tanjore* (showcasing the divine pairings of Vishnu-Lakshmi or Shiva-Parvati) paintings from South India, the *Chikankari* of Lucknow, the floor paintings – a form of *Yantra* – drawn to welcome visitors at the entrance of a house (known by the different names of *Alpana*, *Rangoli*, *Kolam*, etc.) and even the beautiful *Mehendi* designs admired by the foreigners.

   Due to increased connectivity nowadays, both Indian tourists and foreigners are traveiling extensively into rural areas to witness the life of the local population of which the folk arts and crafts are an indispensable part. Some of the important villages which have gained significance are *Raghurajpur* and *Pipli* in Orissa, *Shantiniketan* in the district of Birbhum of West Bengal, the *Kutch* regions of Gujarat, the regions producing *Madhubani* art in Bihar, etc. Local folk arts and

crafts are highlighted during several tourism promotional festivals held all over India like the *Taj Mahotsav* in Agra, the *Ajanta Ellora Festival* in Maharashtra, the *International Folk Festival* in Himachal Pradesh, the *Gurez Festival* in Jammu and Kashmir, the *Pinjore Heritage Festival* in Punjab, the *Kutch Utsav* in Gujarat as well as festivals specially dedicated to arts and crafts like the *Surajkund Crafts Festival* in Haryana, the *Ashtamudi Craft* and *Art Festival* in Kerala, the *Margao Crafts Festival* in Goa, etc. Folk handicrafts are important mediators in bringing tourists close to a culture.

Role of Museums in India to Preserve the Folk Cultural Heritage

Given below are some notable examples from Folk Museums of India highlighting their ways of portraying Folk cultural heritage of India:

- **Folklore Museum of Mysore (in University of Mysore, founded in 1968)** – With 6500 folklore art and crafts from Karnataka on display, the museum is acclaimed to be one of the biggest of its kind in Asia. Temple chariots, wooden images from Mekkekatte, religious objects, belonging to *Soliga* tribe, etc., lamps, ornamental wooden altar, costumes of *Yakshagana* plays, masks, boundary goddess, joint puppets, village deities, marionettes, dolls (of saw-dust and leather), wood carvings, cooking utensils, churns, jewelry, metal ware, fold weapons, agriculture implements, pots, beads, baskets, weaving, folk musical instruments, textiles, folk games for children form important objects under display.

- **Museum of Himachal Culture and Folk Art in Himachal Pradesh (in Manali, founded in 1998)** – The Museum is well reputed for portrayal of Art, Culture and Tourism of Himachal Pradesh. The museum displays models of temples, old houses and forts, traditional dresses, utensils, musical and ritual instruments, wood carving, etc. It reveals the early human activities, their day-to-day life and their living style. It also portrays the richness in the production of handicrafts in handlooms, wood carvings, stone vessels, utensils, house construction, and other day to day work of life.

- **Shreyas Folk Museum in Ahmedabad (on Shreyas Tekra hill of Ambavadi near Sabarmati, established in 1977)** – The Museum is a centre for viewing the folk culture of Gujarat. The museum is a tribute to the local artisans. Displayed objects include *Kathi, Rabri, Ahir, Mer, Charan, Bharvad, Kanbi, Koli, Bhansali, Rajput, Brahmin, Vania, Meghaval, Khoja Bohra, Meman, Miana,* colourful works of embroidery, wood carving, metal work, bead work and utensils, leather work, costumes, paintings and animal decorations and objects of household usage. This museum is divided into three sections – the **Shreyas Kalpana Mangaldas Balayatan Museum** displaying toys, crafts and performing arts, weapons, masks, etc. from over 54 States. **Kathani** is a gallery of the fairs and festivals held at

Shreyas Folk Museum, which include puppet and stage shows, shadow plays, folk and classical performances of art and craft. **Shreyas sangeeta Vadyakhand** houses more than 125 strings, bow, percussion and wind musical instruments of India.

- **Kerala Folklore Theatre and Museum in Kerala (Thevara in Kochi, opened in 2009)** – The Museum is built in the Malabar, Cochin and Travancore style of architecture. It has a huge collection of wood works from Kerala. Artefacts like masks, sculptures (in wood, stone and bronze), costumes of traditional and ritual art forms, musical instruments, traditional jewellery, manuscripts of rare medicinal and astrological secrets, and Stone-Age utensils are all preserved in this museum. The museum also showcases the costumes of dance forms like *Mohiniyattom, Kathakali, Thullal, Theyyam* and also some inscriptions and manuscripts from some of the oldest temples and churches in South India. Different folk art performances like *Stringpuppet, Kalaripayattu, Thira* (ritualistic art form), etc., are also performed in this museum.

- **Gurusaday Museum in West Bengal** (Kolkata, founded in 1961) – The Gurusaday Museum is a treasure trove of Folk and Tribal Arts and Crafts of West Bengal. The museum was founded by Bengal Bratachari Society with 2325 items. It has over 3300 exhibits of folk arts and crafts, showcasing the vitality of rural life, its social traditions, religious beliefs, motifs and cultural influences of West Bengal.

- **Ethnographic Museum in West Bengal (Kolkata, established in 1955)** – The museum was built by the Cultural Research Institute of West Bengal Government. Displayed objects include hunting tools and equipment, fishing gears, dresses and ornaments, utensils, furniture, spinning and weaving aids and also objects relating to art and religion. It stores photograph and tape-records of folk music depicting lifestyle of the tribes of West Bengal.

- **Akshaya Kumar Maitreya Heritage Museum, West Bengal (University of North Bengal, Siliguri, established in February, 1965)** – The museum aims to collect, preserve and study archaeological relics lying scattered in the six districts of North Bengal and Sub-Himalayan Region. Collections include sculptures, coins, paintings, manuscripts, terracotta, etc depicting the history and heritage of North Bengal. The Folk Art section of North Bengal and Sub-Himalayan Region consists of wooden masks, textiles, ornaments, arms and weapons, ivory works, fishing equipment of North Bengal, traditional musical instruments of North Bengal and Sub-Himalayan Region and *pata chitras*.

Conclusion

Folk culture of India has facilitated the growth and diversification of the Indian tourism **industry**. Local and regional Tour operators, local people and tourism marketing **organiz**ations are benefitted financially by Folk culture tourism. Tourists are also benefitted by gaining the traditional knowledge. Through this write up it is seen how Folk Museums may play a prominent role in highlighting the folk heritage in India. On the other hand, social communities can use museums as cultural platforms to educate and communicate about their heritage, which may also promote the tourism industry of our country. There is an urgent need for museums and community groups to promote and preserve the nation's cultural heritage together. Indigenization of the museum offer communities new approaches to preserve, present and transmit culture. The activities of community based cultural institutions and the gradual infusion of community groups as staff into the museum profession is gradually changing the museum practice in India. The initiative of promoting folk cultural tourism will rejuvenate the art forms and bring a new hope to the folk art performers generally belonging to backward communities of India. With the advent of urbanization, traditional knowledge about culture is not being passed on to future generation. As such precious art forms are getting obsolete. It is here that Museums serve as a mediator to bridge the gap between the generations and share the community knowledge to a diverse range of tourists. Hence, we may conclude that, we cannot imagine cultural museums without community participation and any communities without museum interruption in countries like India.

References

Basa, Kishor K. (2010). *Multiple Heritages: Role of Specialized Museums in India.* New Delhi: Serial Publications.

Chakraborti, B. (2010). *Folk Folklore and Folkloristics: Interpretation of society and folklore.* Kolkata: Mitram.

Department of Ancient History, Culture, and Archaeology (1988). *Rural Life and Folk Culture in Ancient India.* Proceedings of the Seminar, held at Allahabad in 1985, University of Allahabad.

Dhamija, J. (1970). *Indian folk arts and crafts – India, the land and people.* New Delhi: National Book Trust.

Ghosh, Asok K. (1976). "Ethnographic Museum – A Design of human Integration: A Plea for Anthropology Museums in India." *The Eastern Anthropologist.* Vol 29. No 1, Kolkata.

Gimblett-Kirshenblatt, Barbara. (2004). "Intangible Heritage as Metacultural Production." *Museum International* 56: 1–2.

Greenhill, Eilean Hooper. 1995. "Museums and the shaping of the knowledge." *Report on Safeguarding Intangible Heritage and Sustainable Cultural Tourism: Opportunities and Challenges,* UNESCO-EIIHCAP Regional Meeting, Hué,

Vietnam, 11–13 December 2007

Hofstede, G. (1997). *Cultures and Organizations: Software of the Mind*. New York: McGraw Hill.

Hollander, Julia. (2007). *Indian Folk Theatres*. London: Routledge.

ICOMOS Charter for Cultural Tourism (1997). *Definition of Cultural Tourism*. Retrieved July, 10, 2016 from http://www.icomos.org/tourism/.

Pattanaik, D. (2006). *Myth-Mithya: A Handbook of Hindu Mythology*. New Delhi: Penguin Books Limited.

Sharma, Manorma. (2004). *Folk India: a comprehensive study of Indian folk music and culture*. New Delhi: Sundeep Prakashan.

Talboys, G and K. (2000). *Museum educator's handbook*. Aldershot: Ashgate.

Accessibility to Archival Documents through Digitization: A Case Study

ISHANI CHATTERJEE

Abstract

Socio-religious reformation in Bengal Renaissance was a landmark event in the history of mankind. It pushed forward the society to think everything rationally, to fight for progressive ideas and to welcome scientific knowledge. The early 19th century was marked by the hungry quest for science and technology of the western world. In India, social reformers and scientists played an important role to spread rationalistic ideas among the people. Direct and indirect effect of Bengal Renaissance prepared ground for the emergence of Science Museum in India.

Keywords : Digitization, Archival Documents, Visitor, Biographical Museum.

J C Bose Museum is a special attraction in the Main Campus of Bose Institute, located adjacent to Rajabazar Science College, Sealdah, Kolkata. It is a Biographical Museum intending to preserve the intellectual legacy of the legendary polymath – Acharya Jagadis Chandra Bose. The Museum is a treasure house containing repository of archival documents, biographical objects, commemorative items and scientific instruments of the scientist. The author has been fortunate to join her service as a Curator of this reputed Biographical Museum. When I first joined my service as a Curator at J C Bose Museum, Bose Institute, I was overwhelmed to see the immense treasure lying in the reserve of its archival collection! After going through the archival documents preserved within various Folders, the idea that flashed into my mind was that those documents could be used to supplement the existing exhibits.

As days passed by, my Senior officers handed me some envelopes to keep in the reserve. These envelopes contained something more precious than books! They were the original handwritten notebooks of Jagadis Chandra Bose! Few people get to see the original handwritten notes of such an eminent scientist! I was overjoyed and tried to venture out into the contents. However to my utter discontent, I found that the notebooks were too brittle to handle. Most of the pages were full of insect tunnels, had turned yellow, and were fragile bearing fox marks. Some of the pages have detached from the binding and lying loose. Fitting myself with a pair of archival

gloves, I tried to study the contents meticulously. After going through the notebooks and gathering information from my Seniors, it became evident that the notebooks were indeed significant, as they centered round the following:

1. J C Bose had published a book in 1922 entitled "*Abyakto*", a compilation of various science fictions. One of the notebooks contained the Bengali Manuscripts of those stories!
2. J C Bose was not only the pioneer in his physical and biological experiments, but was known for designing his entire research instrument himself! One notebook contained detailed description of his instruments.
3. Notebook containing the manuscript of the lecture delivered during inauguration of Bose Institute in 1917
4. Visitors Book of Bose Institute since 1917.
5. Visitor Donation Book.
6. Lecture notes in Physics/ Chemistry/ Botany probably when he was a college student.

These were the things which we thought would create interest to not only scientists, but also students and general visitors visiting the Museum. So we were thinking of ways to display them. Since the pages were so brittle, we prioritized conservation and restoration before display. But after further discussion, we came to a unanimous decision that the notebooks need to be digitized before any restoration work. No reputed Institution in Kolkata was willing to digitize any document (however valuable it may be) due to the preoccupations with their own work schedule. Soon we had a chance encounter with the Director of Sabarmati Ashram, Ahmedabad, who had done an incredible job of digitization of Gandhi related documents and had put them in a website. He felt our need for digitizing the archival documents and offered help from his organization. So we geared up with our preparations. The first step was careful packaging and proper handling of the brittle notebooks so that they suffered minimal movement from vibration during the transportation from Kolkata to Ahmedabad. Our administrative staff were quite adept in packing and took enough care for correct padding and wrapping the notebooks. Finally the objects were ready for transport.

At Sabarmati, there exists a separate digitization unit. On submitting our documents, digitization was carried out in the following steps:

1. Scanning all the pages using a camera based scanner, where there was no physical intervention of the brittle pages.
2. Generating TIFF files followed by Quality checking for colour, accuracy, formatting and sequencing.

3. Forwarding the Approved files from scan department to Gandhi Heritage Portal 1 (GHP) at Sabarmati Ashram.
4. Performing Quality checking once again by GHP till the finest output was obtained.
5. Final outputs were obtained in TIFFs and PDFs.

So the result was that we had the opportunity of printing the digitized images, view them through our websites and so on. We received tremendous cooperation from all the staff and under the able guidance of the Director we got a brilliant output – digitized format of all the notebooks! The entire work took less than a week to complete! Upon the advice of my seniors, print outs of all the digitized pages were obtained and bound. Based on the contents of the diaries, a title was given to each of them that were embossed on the hard cover. Finally we brought the digitized diaries and kept them for display at our Museum! The brittle notebooks were once again packed by the experts and brought back safely.

Since Bose Institute has embarked on the Centenary year, display of J C Bose's original diaries formed the prime attraction on our Foundation Day, i.e., November 30, that followed a few days after we displayed them.

The work was done with such efficiency that not a single page suffered any misplacement or further damage! Even the authorities of Sabarmati Ashram expressed their gratitude for having given this job of digitizing such valuable and precious documents of the Indian polymath! Thus after the process of digitization, the following observations have been made:

a. **A drastic change in Visitor's attitude**

Visitors now feel thrilled to take the digitized notebooks in their own hands and examine the handwritten notes of J Bose. School students find these notebooks as the most enjoyable part of the museum since they could handle these *precious objects* themselves! Researchers find immense satisfaction in going through the instrument making process. Historians dig into the donations received by Bose from different *Maharajas* in different parts of India who contributed towards development of this Institute. These facts would have remained unknown had we not had the opportunity of viewing the digitized version.

b. **Interesting data revealed**

Many unknown facts were revealed in a short time after going through the digitized version of the notebooks:

• One notebook contains the details of all instruments designed by J C Bose along with dimensions, and the persons allotted for building each part.
• One notebook contains the experimental calculations and findings during his research works.

- The Vistors' book is a record of eminent scientists and personalities who visited Bose Institute after its inauguration. This includes Aldous Huxley, Arnold Sommerfeld, P Curie, Ho Chi Minh, G Dawson and so on.
- The college notes were during Bose's tenure at Christ's College, Cambridge and given by leading scientists like Francis Darwin, Lord Kelvin, Lord Rayleigh and so on.

c. **New dimension to regular work**

Digitization has added a new dimension to our regular work; now we are in the process of transcribing each and every page of the notebooks and getting fascinating information regularly that would not have been possible otherwise.

d. **Source of primary data**

The digitized notebooks thus form our primary data that supplements some of the known secondary data.

Conclusion

What we feel is that by climbing this initial step, we can dig deeper into other such archival documents in the future. So if one really wants to seek happiness through the eyes of the visitors in a Biographical museum with vast repository of archival documents, just go for digitization. It is indeed a way of making the significant documents accessible to the visitors who will feel their visit to be a memorable one!

Acknowledgement

I am grateful for the kind help and cooperation from Professor Dipankar Home, Chairman, J C Bose Centre; Professor Gautam Basu, Vice Chairman, J C Bose Centre; and Shri Tarun Kumar Maji, OS (Publication) in providing me with the documents and permitting to digitize them. I owe my thanks to Dr Tridip Suhrud, Director of Sabarmati Ashram Preservation and Memorial Trust, Ahmedabad for extending his kind help in facilitating the digitization of the notebooks.

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[1]The Gandhi Heritage Portal preserves, protects, and disseminates original writings of Mohandas K. Gandhi and makes available to the world the large corpus of "Fundamental Works" which are useful for any comprehensive study of the life and thought of Gandhiji. The Government of India and its Ministry of Culture, acting on the recommendation of the Gandhi Heritage Sites Committee headed by Shri Gopal Krishna Gandhi, gave the responsibility of conceptualizing, designing, developing and maintaining the Gandhi Heritage Portal to the Sabarmati Ashram Preservation and Memorial Trust.

Bio-Cultural Sustainability: A Need for Cognizance

SUDESHNA DAS

Abstract

Biological resources are the basis upon which we tend to grow our network of civilization. Continuous destruction of world natural resource is a great concern for all the humanity's survival as well as the sustainability of the environment. In the conservation of biological resource it is quite evident that biological diversity and cultural diversity is inseparably interlinked. The article attempts to understand the need for sustainable development of bio-cultural diversity by embracing traditional environmental knowledge and scope for the museum community in understanding the challenges and opportunities by interacting with the indigenous communities to facilitate awareness towards the conservation of Cultural diversity and biological diversity.

Keywords : Bio-cultural Diversity, Sustainable Development, Museums, Traditional Knowledge.

Human beings are different from each other both culturally and linguistically. This cultural diversification is evolved from complex ecosystems in nature. Culture is always evolving. It provides flexibility to human society; similarly biodiversity gives flexibility to ecosystems. In the present day, humans are connecting more and more as diverse cultures adapting into the model of Western society. As a result human outlooks toward the both nature and culture are getting changed every passing day. As linguist Peter Mühlhäusler said, we are developing cultural blind spots.

Natural resource conservation is a widely discussed topic among many organizations, environmentalists, institutions, scholars, and the common people in recent eras. When it comes to the subject, the spot light has been mainly focused towards biological diversity, or biodiversity, often underestimating the facts that cultural part of the society equally plays a very important role towards the conservation and protection of biological diversity. In many cases indigenous groups have contributed towards protection and regeneration of biological diversity of a particular place. Humans being inherent fragments of ecosystems hold the responsibility to respect of their own actions and requirements to facilitate a successful conservation planning. Bio-cultural diversity is the link between biological diversity and human

diversity. Different cultures and peoples recognize and understand biological diversity in different manner, based on their individual traditional practices and knowledge (Posey, 1999).

Biodiversity is acknowledged as an indispensable resource on which our communities and world depends on and holds the fate of the natural resources for future generation's survival. Conservationists alongside with biologists and ecologists, are working to recognize the solutions to biological problems, that are there in our of social, cultural, and economic structures, species and ecosystems are being evaluated in economic terms in order to analyze the price of using and conserving biodiversity. Now concerns are also being focused on to the relationship between biodiversity and cultural diversity. This is mainly because many of the world's areas with high biological diversity are also shared by indigenous and traditional peoples, which led to derive the Declaration of Belem (1988) – an 'inextricable link' between biological and cultural diversity (Posey, 1999).

Indigenous communities have adopted a not so simple arrangement for the natural world, showing a profound understanding of the surrounding environment. Indigenous peoples' traditional ways of knowing and living have been filtered over many years of experiences and relationships with living beings and places. This Traditional environmental knowledge is embedded in indigenous names, oral tradition and subjected to be lost when a community adapts to another language. A biological hotspot is expected to be a linguistic hotspot. 70% of the world's languages are found within the earth's biodiversity hotspots. Studies acknowledged that high biodiversity areas also contains high linguistic diversity and many these important environmental areas have been degraded over time, resulting in loss of cultures and languages in the area. Out of the 6,900 or more languages spoken on Earth, more than 4,800 occurred in regions containing high biodiversity (PNAS 2011). Languages evolve for some of the same reasons that organisms do such as geographical separation, North east India would be a good example, consisting only 7.9 % of the country's total geographical area but is home to more than 75% of languages belonging to the four language families, viz. Indo-Aryan, Tibeto-Burman, Austro-Asiatic and Dravidian.

According to a study carried out by the Worldwide Fund for Nature (WWF), there are 6,500 linguistic groups in the 200 eco-regions of the world, and, according to the data presented in this roundtable, there are said to be over 350 million indigenous inhabitants in the world, in over 70 countries; of the 6,000 cultures existing in the world, 4,500 are indigenous. "In the last century, the world lost 4,000 of its 10,000 languages. It is estimated that 50 per cent of these languages, are in danger of extinction." The knowledge of indigenous peoples about values in relation to mother earth and the sustainable use of resources must create the base of education for livelihood and environmental sustainability. According to IUCN Red List of Threatened

Species 2016 around 725 plant species are flagged under critically endangered where as the number in 2000 was 44. In India number of documented species are 91,000 of animals and 45,500 species of plants in its ten bio-geographic regions. Nearly 6,500 native plants are still used prominently in indigenous healthcare systems. In India the Eastern Himalayas and the regions of North east India combine one of the hot spots among the 34 biodiversity hotspots of the world. NE India represents a distinct bio-geographic region enriched with biodiversity, ethnic culture and folk lore tradition. Today world's hot spots or regions with a high number of species unique to that particular location suffer habitat loss of at least 70%. These areas contain approximately 3,202 languages, almost half of all the languages spoken throughout the world. Many of such languages are exclusive to the zone and are spoken by very few people, leaving them vulnerable to extinction.

When a language disappears, with it the traditional knowledge also disappears which is unique to those languages threatening the loss of environmental knowledge. Indigenous languages tend to get replaced by those related to a contemporary industrial economy in the course of different changes. Settlement and migration out of traditional habitats, affect the acquirement of this knowledge. Subsistence-foraging activities impact the diversity of species, habitats, and function. This rapid socio-economic and political change affects local societies, separating them from their traditional ways of life, or even removing them from their original environments. Gradually causing language and culture shift caused by adoption of a different, in general majority or otherwise dominant, language and culture. The names, uses, and preparation of medicines, the methods of farming, fishing and hunting are disappearing, not to mention the vast array of spiritual and religious beliefs and practices which are as diverse as the languages themselves. 'Indigenous' people around the world have been protecting both individual species and the link between biodiversity and cultural diversity. In many parts of the world natural features and habitats are often protected by religious taboos and considered sacred by community members. Survived due to strong cultural belief and practices these areas acts as reservoirs of local biodiversity (Laird, 1999). For example, In Jayanti of Jalpaiguri district, villagers continue to protect large catfish populations in a sacred pond inside a sacred grove (Deb 2005). Villagers of Hari Bhola in Bagh Duar in the same district maintain an old SG attached to the ruins of two temples since the year 1496 (Deb 2007 a). Hunting and any sinful or pollutive acts inside the SG are strictly prohibited. Understanding the surrounding thus indigenous people have a spiritual relationship with their habitat representing an associated identity for both the tribe and the forest or the groves (Groenfeldt, 2003), making them value nature differently than ecologically trained conservationists and biologists (Posey, 1999). As per UNESCO's Atlas of the World's Languages in Danger, at least 43% of the estimated 7000+ languages spoken in the world are endangered.

As indicated by Harmon and Loh one in four of the world's 7000 languages are

at current threat of extinction, confirming a rapid decline in linguistic diversity and biodiversity which is approximately 30% since 1970. Globalization and migration due to climatic change impacts indigenous knowledge flow along with political dynamics, and property rights. It is very difficult to predict the outcome of such kind of change. Rate of speciation has been adversely affected due to which many species have disappeared from the earth and many are facing varying degrees of threat of extinction. Ever-increasing human population, habitat destruction (Deforestation) and fragmentation, overuse of natural resources, impact of non-native/exotic species, climate change, and natural disasters are few of the many causes of bio-diversity loss. There is a very close relation between climate change and biodiversity. In a developing country such as India, the forms and origins of habitat destruction, which is a major cause of biodiversity loss, are associated to ever-increasing pressure of human population together with their developmental activities for the better living of mankind.

Forced by several factors climate change is frequently considered a "threat multiplier," it challenges the constancy and growth around the world by aggravating fundamental conditions of susceptibility. Coral reef mortality has increases and erosion is accelerated due to increasing temperature. In 1998, 16% of the world's corals died due to higher temperature. Scientists estimate calcification could decline 17-35% below pre-industrial level by 2100. Rural-urban migration of younger generation is more likely to be for economic or educational reasons, whereas migration across nations may be for social, educational, economic or political reasons. When people migrate to a new environment they carry their knowledge and expressions with them and at the same time adapts to the likely changes of the new environment. But in the process the core essence of their basic traditional knowledge becomes diluted in the process, resulting in the loss of information they hold. This process is also responsible for the loss of language. Globalization, migration and urbanization are all noted as contributing factors for both deforestation and language loss. "Ultimately both biodiversity and linguistic diversity are diminishing as a result of human population growth, increasing consumption and economic globalization which are eroding the differences between one part of the world and another" (Harmon and Loh, 2014). It is estimated that post-independence, India has lost 4,696 million hectares of forest land, while 0.07 million hectares of forest land have been illegally encroached upon, 4.37 million hectares has been subjected to cultivation, 0.52 million hectares given to river valley projects, 0.14 million hectares to industries and townships, 0.16 million hectares for transmission lines and roads and rest for miscellaneous purposes (MoEF, 2014).

Losses of language and traditional knowledge have direct impact on sustainable development. Sustainability demands understanding of the interconnected problems of bio-cultural diversity. Sustainable development requires moral vision of cultural

aspiration in harmony with the nature to maintain the ecological balance. In indigenous society cultural value and religious belief together resist the desecration and preservation of natural resources for future generation. There are several needs in our life and it is very difficult to decide which need to be met, but it is also very important to have sustainable development for wellbeing of the generations ahead. Most indigenous community manages their resources in sustainable manner. For such sustainable management many protected areas able to remain into existence.

Bio-cultural diversity is important to explicitly recognize the role played by human diversity in biodiversity conservation because biodiversity represents a source of raw material on which the processes of evolution depend. The less diversity there is, the greater the chance that life itself could be destroyed through lack of resilience to environmental change. Biodiversity needs to be maintained because it provides humans with different ways of understanding and interacting with the world and ultimately offers different possibilities for human futures (Milton, 1996).

Humanity is balanced on the two pillars – Biodiversity and Cultural diversity. It has been recognized that the conservation of biodiversity is integrally related to the preservation of cultural diversity and that indigenous peoples and local communities hold traditional ecological knowledge of great potential value and importance in global efforts to achieve sustainable development objectives. The task of promoting sustainable development, bio-cultural diversity and threat of loss of languages and connections to land is immense along with the experts on the field museums can help in understanding the challenges and opportunities by interacting with the indigenous communities by documenting and analyzing the ways in which rural, indigenous institutions are undertaking the challenge of sustainably managing biological resources. This might be achieved by engaging communities in active participation with the museums. Connecting local indigenous groups with each other can help to facilitate the awareness by defending their connection to their land, their language, and by continuing their engagement with their environment, indigenous people are contributing, not only to their daily lives but to global diversity as well. We need to work on how the needs and knowledge of increasingly diluting communities can be balanced with the obligation to conserve diminishing biological resources. Studies demonstrate that efforts to sustain biodiversity can significantly benefited by engaging with local communities on one hand and museums along with anthropologists and linguists on the other hand, where the communities share their unique traditional ecological knowledge, while the latter can serve as bridges between traditional knowledge and eco-science.

Traditional knowledge can provide significant information about how climatic changes affect the environment and how it impacts cultures that are depended upon local eco-systems. Many indigenous people follow traditional way of life based on seasonal patterns of preparation, harvest and utilization, which are reflected in

practices, stories and language. Groups who exercise these capacities in specific territories often have information on climate trends extending back through countless generations. The conservation of these ways of life requires aptitude to observe record and make assessments on information about relationships with in the ecosystem using various indicators and can help to prepare and adapt to climate change. The strategies that particular indigenous peoples used historically to identify, understand and cope with environmental changes are reemerging as important sources of information pertaining to the climate challenges gaining wide public attention today.

Biological resources are the pillars upon which we build civilizations. Nature's products support varied industries as agriculture, cosmetics, pharmaceuticals, pulp and paper, horticulture, construction and waste treatment. This means that we need to conserve biodiversity because all life, including human life, our personal health and the health of our economy and human society depend on the continuous supply of the good and services provided by ecosystems which are extremely costly and is not even impossible to replace.

The concept of the sustainable use of biological diversity, one of the three objectives of the Convention on Biological Diversity, is inherent in the value systems of indigenous and traditional societies.

The perspective of human existence and growth is directly dependent on natural resources. But this growth is measured in respect of economic scale, which is not confined within the limited utilization of natural resources. Different cultural perspectives provide us unconventional traditions of considering human action and its relation towards the natural world. It needs to be understood that traditional practices once lost, are hard to recreate, and timely documentation, compilation, and dissemination of eroding knowledge of biodiversity and the use of food culture for promoting positive behaviors is absolutely necessary. Researchers around the world are trying to understand why endangered cultures and languages correspond with endangered species. But it is assumed that the indigenous cultures and languages make ecosystem and wild life preservation possible. The research data and findings of the correlation between biodiversity and linguistic-cultural diversity are very important for developing strategies for preserving both cultural and biological diversity.

To change the present unsustainable forms of production and consumption, it is imperative that all the standards and amenities underwriting to the sustainability and health of human being and the planet are accounted for, mainly including traits of cultural and biological diversity.

As a first step, there should be the recognition that most of the problems of loss of biological diversity, weakening of cultural diversity and the poverty phenomenon, which has been dealt with separately, are in fact closely connected

and relevant to sustainable development and therefore require a holistic and more comprehensive approach for action at all levels.

Therefore definite strategies should be recognized and actions should be taken. Proper concern should be given to the practice of policy negotiation, followed by the development and consequent implementation of policy structures, action plans and legal implementation.

References

Asian Development Bank (2012) *Addressing Climate Change and Migration in Asia and the Pacific* (Final Reprot). Accessed on 15 January 2015 from https://www.adb.org/sites/default/files/publication/29662/addressing-climate-change-migration.pdf

Chapter 5, *Religion, tribe, settlement, landform and sacred groves in west Bengal*.http://shodhganga.inflibnet.ac.in/bitstream/10603/29440/10/10_chapter%205.pdf Accessed on 23 January 2017

Cocks, Michelle (2006) *Biocultural Diversity: Moving Beyond the Realm of 'Indigenous' and 'Local' People.* http://library.wur.nl/WebQuery/wurpubs/fulltext/16747. Accessed on 4 April 2017

Deb, D. (2005) *Sacred Groves of West Bengal: A Model of Community Forest Management?* http://cintdis.org/images/PDF/SG-UEA.pdf, Accessed on 26 December 2016

Deforestation Linked to Language Loss, Language magazine. https://languagemagazine.com/deforestation-linked-to-language-loss/, accessed on 4 April 2017

Gorenfloa J L, Romaineb Suzanne, Mittermeierc A Russell, and Walker-Painemillad Kristen (2011) *Co-occurrence of linguistic and biological diversity in biodiversity hotspots and high biodiversity wilderness areas* http://www.pnas.org/content/109/21/8032.full.pdf, Accessed on 3 December 2015

Harmon D, Loh J. (2014) *Preserving Biocultural Diversity.* https://www.nytimes.com/2014/08/13/opinion/preserving-biocultural-diversity.html?_r=0, Accessed on 26 December 2016

Infield, M. (2001) *Cultural values: a forgotten strategy for building community support for protected areas in Africa. Conservation Biology* 15(3): 800-802. https://www.researchgate.net/publication/249432223_Cultural_Values_a_Forgotten_Strategy_for_Building_Community_Support_for_Protected_Areas_in_Africa. Accessed on 4 April 2017

Kinver, Mark. (2012) *Study links biodiversity and language loss.* http://www.bbc.com/news/science-environment-18020636. Accessed on 14 August 2016

Kyle, Powys Whyte. (2015) *The Ethics of Traditional Knowledge Exchange in Climate Change Initiatives,* https://earthzine.org/2015/07/31/the-ethics-of-traditional-knowledge- exchange-in-climate-change-initiatives/. Accessed on 10 June 2015

Laird, S A (1999) *Forests, culture and conservation.* In Posey, D A (ed.), *Cultural and Spiritual Values Biodiversity,* UNEP and Intermediate Technology Publications, London, UK, Accessed on 4 April 2017 from http:// staging.unep.org/pdf/Cultural_Spiritual_thebible.pdf

McNeil, B I, Matear R J and Barnes D J. (2004) *Coral reef calcification and climate change: the effect of ocean warming,* https://www.esrl.noaa.gov/gmd/icdc7/ proceedings/abstracts/mcneil1HI75.pdf. Accessed on 31 March 2015

Milton, K. (1996) Environmentalism and Cultural Theory. Exploring the Role of Anthropology in Environmental Discourse, Routledge, London and New York, Accessed on 4 April 2017 from http://14.139.206.50:8080/jspui/bitstream/1/2724/ 1/Milton,%20Kay%20-%20 Environmentalism%20and%20Cultural%20 Theory.pdf

MoEF, *NBAP* (2014), https://www.cbd.int/doc/world/in/in-nbsap-v3-en.pdf. Accessed on 26 January 2017

MoEF, *NBAP* (2008), http://envfor.nic.in/divisions/csurv/Approved_NBAP.pdf Accessed on 24 January 2016

Posey, D A. (1999), *Cultural and spiritual values of biodiversity: A complementary contribution to the global biodiversity assessment.* In Posey, D A (ed.), Cultural and Spiritual Values of Biodiversity, UNEP and Intermediate Technology Publications, London, UK, pp. 1-19. http://staging.unep.org/pdf/ Cultural_Spiritual_thebible.pdf. Accessed on 16 December 2016

Staff Reporter (2013)*130 living languages in region – 'Wealth' of variants in NE, says surveyor.* Accessed on 3 September 2015 from https:// www.telegraphindia.com/1130718/jsp/frontpage/story_17129872.jsp#. WQY01UWGMrg.

The Declaration of Belem. (1988) http://www.ethnobiology.net/wp-content/uploads/ Decl-Belem-Eng- from-Posey.pdf. Accessed on 15 January 2017UNESCO and UNEP (2003) *Cultural Diversity and Biodiversity for Sustainable Development.* Accessed on 28 February 2012 from http://unesdoc.unesco.org/images/0013/ 001322/132262e.pdf

Vidal, John, (2014) *As forests are cleared and species vanish, there's one other loss: a world of languages,* Accessed on 15 April 2017 from https:// www.theguardian.com/environment/2014/jun/08/why-we-are-losing-a-world-of-languages

ZSI. (2011) *Proceedings of the national seminar on traditional knowledge and social practices promoting biodiversity conservation.* Accessed on 17 October 2015 from http://faunaofindia.nic.in/PDFVolumes/spb/058/index.pdf

Personalising the Museum Experience: Making the Right Connection

KANIKA MONDAL AND SUNJAY JAIN

Abstract

The article is motivated by the challenge faced by our museums to become relevant and meaningful to people. The premise is that strategies to personalise consumer experience need to be adapted. It identifies and illuminates the levers that can be used to make museums customer-centric and personalise museum offerings.

In his article 'Museum Education/ Interpretation: The Need for Definition', John R. Dunn (1977) makes a serious attempt to clear the confusion between education and interpretation, the two frequently and interchangeably used terms in museum literature. He delineates difference between museum education and interpretation and clarifies the confusion by providing working definitions and distinguishing them by the way they accomplish their common purpose, i.e., making people learn. Dunn postulates that an important characteristic of interpretation is personalisation of services in contrast to the education which takes place in a formal setting with an intention to teach. He defines museum interpretation as: "Activities that responsibly explain, and/ or display the collection in such a personalized manner as to make its background, significance, meaning and qualities appealing and relevant to the various museum publics" (p.15).

The central idea of Dunn's definition is presenting and explaining collections in a personalised manner. This is a valuable concept that encapsulates not just sensitivity to consumers, but also sincerity and spontaneity with it. Further, it assumes greater importance in today's hyper-competitive consumer-driven world than ever before. But unfortunately the concept of personalisation is lost somewhere in the din over use of modern technology, marketing, accessibility, virtual museum and intangible heritage in our museum literature and discourses. There is no doubt that the concept of personalisation is an old one, but has always been undervalued and ignored by our museums. Therefore, there is clearly a need to amplify it in Indian context. This article attempts to grasp the granularity of the concept of personalisation.

It gleans the essentials for personalisation of museum services (in on-site real setting) and brings to the fore issues that should allow us to rethink our business processes and service models and update our museological posture. It rests on three main assumptions. One, the impact of personalisation under-load is debilitating on the experience of visitors and detrimental to the popularity of our museums. Two, people like and value attention, informality, choice and autonomy. And three, personalisation is the knitting which can bring museums and society closer and serve as the lynchpin of success.

To put the concept of personalisation in perspective we first need to understand what we mean by it and then identify its implementable aspects. Personalisation is a way of consumer orientation and is envisioned in various forms such as adapting to consumers; user autonomy; user-led services; giving choice and control to users; and supporting individual users. All the forms underscore connectivity with consumers and imply looking beyond producer-led services and one-size-fit-all approach. Thus personalisation can be conceptualised as designing consumer-centric value propositions aimed to give experiences from consumers' point of view. If we dig a little deeper, we will come across a number of interlinked enablers at its core. The three major enablers that merit attention are discussed here.

Audience Advocacy

'Audience advocacy' means speaking for or on behalf of audiences. It includes representing the interests and safeguarding their rights. Its unique aspect is customer perspective and role is to create value for customers by understanding consumer dynamics and adapting customer-driven strategies to become relevant and meaningful. It is a valuable concept and has been recognised by museums and professional organisations. The Standing Professional Committee on Education, American Association of Museums (AAM 2005, p.10), has included the concept of advocacy in the *Professional Standards for Museum Educators* and emphasizes that 'Museum educators facilitate a spirit of teamwork and collaboration within the museum to promote the best interest of audiences'. Eilean Hooper-Greenhill (1991, pp. 190-192) has elaborately expressed the role of 'audience advocate':

> The 'audience advocate' helps to improve the general experience of the museum including facilities for physical comfort; special and intellectual orientation; varieties of pace, style and communicative approaches of successive displays within the building; and the interaction between the museum staff and the public. The 'audience advocate' identifies those sections of the potential audience that are not involved because the experience the institution offers does not relate to their specific needs.

Thus, 'audience advocacy' is an integrated conceptualised approach that embraces all aspects of museum community interface. It involves developing and structuring of museum's resources, policies and practices to make museum

offerings relevant and meaningful to visitors and non-visitors by understanding and responding to their needs and expectations. It requires teamwork, coordinated effort and strong communication within the museum and with the audiences.

We can see parallels of 'audience advocacy', for example, in the 'Multicultural Audience Development Initiative' (MADI) by The Metropolitan Museum of Art (MET), New York, and the 'Audience Development Strategy' of the Derby Museums, Derby.

MADI was launched in 1998 with the purpose of engaging and educating communities with diverse background and ancestries. To accomplish this goal, the museum reaches out to diverse communities living in New York and works towards increasing awareness of its collections and programmes and cultivating relationships with communities. This is being done with the help of a Multicultural Advisory Committee that has representation of leaders of various communities and organisations. The committee serves as a link between the museum and communities and provides fresh and refined perspectives and defines strategies for synergetic relationships. The initiative has helped the museum in energising participation of the communities and promoting and diversifying its visitorship by addressing specific needs of diverse audiences.

The Derby Museums (2016a), a consortium of three sites, has taken a long-term strategic view supported by a defining framework that has five related key components. One, Increasing Access: Attracting wider audiences by providing widest possible access to the museums' resources and services by removing all kinds of barriers such as physical, intellectual, psychological, temporal and financial.

Two, Engaging Communities: Building relationships with actual and potential audiences by involving them in developing and delivering museum offerings. Three, Representation: Reflecting the diversity of Derby's communities by representing diverse cultures and audiences, and by creating personal relevance for communities. Four, Social Impact: Contributing to the quality of people's life in Derby by promoting sustainable communities, social inclusion, community cohesion and regeneration. Derby Museums believes that contributing to social change will build their prominence and value in the community and make the museum more central to people's lives. This finds support in the evaluation studies done by them which reveal that 'museums help people to acquire new skills and knowledge, increase confidence and self-esteem, and challenge attitudes, promote a positive reinforcement of identity and cross-cultural understanding' (p.7).

Five, Organisational Development: Building capacity to be a pioneer in audience development by doing high quality and sustainable work. They have recognised the need for leadership, teamwork, communication and committed and trained staff.

The examples of MET and Derby Museums reveal that the concept of 'audience advocacy' is not only theoretically valid but also practically successful in giving voice to communities. Here it is worth mentioning the example of Nottingham Castle

Museum. In their textile gallery thoughts of visitors are included along with the curator's in the exhibition text (Figure 1). Thus, 'audience advocacy' has changed the way museums used to develop and offer public programmes by doing audience research and creating long term commitment, concentrated focus and strong communication between museum and community.

Co-creation

The concept of 'audience advocacy' leads us to the next point: co-creation which is the hallmark of consumer centricity. It aligns the producers and recipients of the offerings and brings them together to jointly explore, shape and create customer-centric solutions. Co-creation is an interactive process and recognises the power of consumer inputs and participation. Interaction with consumers can lead to innovations by identifying their unmet needs which they may not be aware of or are not able to express.

Museums often seen as reluctant to engage with their audiences are now forthcoming in inviting them to chime in. They, in spite of being the final authority in decision making, are willing to elicit opinion of their audiences and try to get their thoughts. They have started involving them in the planning process and are asking them to review their product ideas and make suggestions.

The Derby Museums is an exemplary museum that has successfully executed the co-creation strategy. They call it 'co-production' and follow a Human-Centred Design methodology involving a series of six steps: (1) define; (2) understand; (3) think and imagine; (4) model and prototype; (5) test and evaluate; (6) produce and share (Derby Museums 2016b). The underlying approach is unique, open-ended and experimental. The starting point of all projects is the Project Lab that provides an open platform where all the stakeholders can share their ideas and contribute to project development.

A noteworthy example of Derby Museums' co-production strategy is the natural history gallery reorganised as 'Notice Nature Feel Joy Gallery' It was a collaborative endeavour between the museum and its public. The project involved volunteers, visitors, artists, university students, entomologists and taxidermists who contributed their ideas, expertise and skills in numerous ways to re-create the display. The project also comprised five major creative commissions led by experts who in sync with the museum's strategy of co-production, involved public at every stage of their work. Some of the major co-produced components of this project are briefly described in Table 1.

CO-PRODUCED COMPONENTS: COMMUNITY'S CONTRIBUTION
Soundscape Visitors contributed natural sounds to compose an evocative digitalised soundscape. One visitor donated a historic recording of a nightingale recorded in 1949.
Case of Beetles Contains a drawing of a beetle made by a six year old in Project Lab (Figure 2).
Shell Vitrines Visitors prepared designs for these cases based on museum's shell collection.
Forest of Birds Museum staff, commissioned taxidermist and visitors co-created this unique installation of birds. Visitors' responses and feedbacks were taken and incorporated all through the process of its creation.
Step Stools Eight product designing students co-designed two step stools for use by visitors of different heights (Figure 3).
Labels for Specimens Preserved in Spirit Forty two graphic designing students collaborated with the museum staff and put forward their ideas for interactive labels; the best one was implemented.
Photography of Birds' Eggs A recent photography graduate worked on a placement with the museum to photograph birds' eggs which were used to develop interpretive guides and a set of retail postcards.
Jigsaw and Riddles Two volunteers, an illustrator and a poet were commissioned to create these fun games for children (Figure 4).
Selection of Specimens and Monitoring of the Project Twenty eight experts and specialist from other museums and public organisations were involved in selection of specimens and monitoring the project's progress at different stages of re-development.
Short Stories Booklet 'Hello Hubmarine', a creative writing group, co-produced with the staff a book of short stories based on six specimens from the museum's natural history collection.
Bird Stickers, Cards, T-Shirts and Bags 'Super Nature Volunteers' designed four illustrations for 'public vote for a nature mascot' campaign. These are now being made into cards, T-shirts and bags for retail purpose (Figure 5).

Cleaning of Birds Two conservation students from Lincoln University, cleaned many birds and coached other volunteers in basic conservation processes.
@DMNature Twitter Account Visitors' responses and ideas gathered during the project lab led to the creation of @DMNature Twitter account and other tools that are being employed to gather visitor feedback.
Gallery Guides Visitors and the museum's staff co-produced fourteen self-exploratory gallery guides, one for each category of museum's natural history collection.

The success of the project is well described in a review by Dave Freak (2015, p. 47), a writer, editor, arts consultant and programmer. He comments: 'Derby Museum's faith in the process of collaboration has resulted in a playful, imaginative, engaging and distinctive exhibition, with an influence that reaches far beyond the gallery walls'. He appreciates the execution of the central theme 'noticing nature' by engaging visitors emotionally and intellectually; resulting in a shift in behaviour patterns from passive to active.

Menu of Choices

Another determinant of personalised services is the 'menu of choices'. In comparison to 'co-creation' which allows personal touch by involving consumers in decisions what is to be produced and how it is to be produced, 'menu of choices' opens an avenue for consumers to decide what is to be consumed and how it is to be consumed. It empowers them to make decisions to choose an activity that matches with their interests, motivations and abilities.

Offering a 'menu of choices' means museums will have to face the diversity that their audiences bring in. The key to handle diversity successfully is: accept and respect differences without compromising equal opportunity. It is a thought-provoking approach which treats visitors differently but with equity. Since all visitors are different in terms of motivation, learning needs and abilities, likings and preferences, etc., museums need to personalise their approach to address their heterogeneity. Yet, when it comes to human or civil rights, the approach is same for all. It means museums need to stick to the policy of non-discrimination which is non-negotiable and inviolable.

There is no dearth of ways to create 'menu of choices'. A logical way is to look at the scope of the museum and its offerings and uncover possibilities of:

1) Diversification in product portfolio: widening the range of offerings by adding new and variety of products (Figure 6).

2) Adding features: including activities such as demonstrations, seminars, workshops and story-telling; or things such as take away labels, text in Braille, catalogues and audio-guides in an exhibition to enhance its ability to gratify diverse needs (Figures 7–9).

3) Using multiple senses: using all the five human senses? sight, hearing, smell, taste and touch? to cater to different likings and preferences.

4) Multiple interpretations: explaining exhibits from different perspectives such as aesthetic, political, social and economic.

5) Multilevel interpretations: explaining exhibits at different levels of comprehension from simple to complex.

6) Presenting multiple views: presenting multiple views on an issue or a theme, instead of presenting curator's viewpoint, so that people can construct their own meanings.

The concept of personalisation should be a pillar of museum reform. It is the way through which museums can adjust to the market challenges and attempt to shift their orbits. Therefore, this consumer-centric concept must be embraced by any museum irrespective of its size or scope and used as a marketing hook to enhance the museum visitors' inveterate pleasure of walking around in galleries. The cluster of issues explained in this paper can help in identifying appropriate personalisation mechanisms for the visitors and preparing an appropriate mix of personalisation plan while designing museum packages for them. Dealing effectively with the personalisation strategies will be a major challenge for our museums; therefore, we must take advantage of our inherent strengths and demonstrate our ability to make a difference.

References

American Association of Museums, 2005. *Excellence in Practice: Museum Education Principles and Standards.* Washington: American Association of Museums.

Derby Museums, 2016a. *Derby Museums Audience Development Strategy 2016/ 17* Derby: Derby Museums.

Derby Museums, 2016b. *Derby Museums Human-Centred Design & Co-production Handbook.* Version 4.0. Derby: Derby Museums.

Dunn, John, R., 1977 "Museum education/ interpretation: The need for definition." *Gazette*, Vol. 10, no. 1, Winter.

Freak, Dave, October 2015. "Notice Nature Feel Joy, Derby Museums and Art Gallery." *Museums Journal.* London: Museums Association.

Hooper-Greenhill, Eilean, 1991. *Museum and Gallery Education.* Leicester: Leicester University Press.

Web Reference

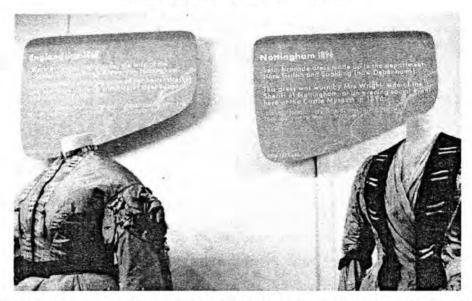http://www.metmuseum.org/ accessed on 1st May 2017

Figure 1: Exhibit labels containing visitor's thoughts in small point size, Nottingham Castle Museum, UK
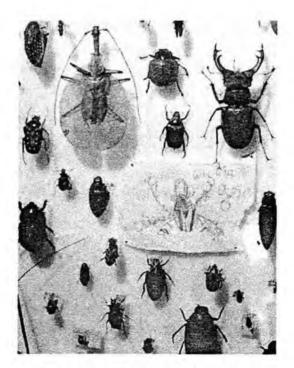

Figure 2: Beetle case, Derby Museums, UK

Figure 3: Concept of step stools, Derby Museums

Figure 4: Riddle Wings, Notice Nature Feel Joy Gallery, Derby Museums

Figure 5: 'Buy a Bird' – Public vote for a nature mascot Campaign, Notice Nature Feel Joy Gallery, Derby Museums

Figure 6: 'Maker Bar' – one of the five interactive zones at Silk Mill, offering a range of craft activities in the 'Maker Bar Menu' for children to choose from, Derby Museums

Figure 7: A visitor creating his own digitalised motifs based on miniature paintings, CSMVS, Mumbai

Figure 8: 'Make your own coin' – a hands-on activity where visitors can select a motif and mint a coin, CSMVS, Mumbai

Figure 9: 'Make your own gift tag' – visitors can create a take away souvenir ornated with Chinese good-luck motifs of their choice, CSMVS, Mumbai

Natural Heritage: Indian Visitor Interpretation Centres, Connecting Mass – Case studies

SHOUNAK BAGCHI

Abstract

Being in Anthropocene epoch the exploitation of environment and nature is in its peak. Natural Heritage is irreplaceable sources for life and inspiration. UNESCO declared seven Natural Heritage sites in India and provides funds too for spreading awareness in mass. Nature tourism is one of the new traits of this century. Interpretation Centres can orient the visitors about the natural heritage value, understanding of conservation, environment appreciation and situation of that area. This can create awareness and resulting into social beneficial impact in long term. By case studies this paper tries to explore activities and achievements of few such Interpretation Centres.

Keywords : Natural Heritage, India, UNESCO, Interpretation Centre, Awareness.

Introduction

It is the need of the hour to create awareness among people of all strata through campaigning, workshop and various other activities about the importance and value of nature as heritage. A balance between human nature interactions can be triggered by involving future generation passionately through different activities based on nature and environment awareness. "Preserving Earth's biodiversity holds the key to human survival" (Singh et. al. 2009: 42). In the inaugural speech of World conference on environment, 25th March 2017 in Vigyan Bhaban, New Delhi, former President of India, Mr Pranab Mukherjee, pointed out about the time for action by saying "Environmental degeneration and its effect on health is no longer in the theoretical premises", He also quoted from Mahatma Gandhi's words that "Earth provides enough to provide everybody's need but not everybody's greed" emphasize the time to care nature and its heritage.

In India like other developing countries museums are primarily seen as a tool of mass education, nature interpretation centres can do the same too. Inscription of a site in World Heritage List brings an interest in public awareness for the site and its outstanding values, thus also increasing the tourist activities at the site. UNESCO

declared 84 Natural Heritage Sites throughout the World among which seven are in India. These are Keoladeo National Park, Kaziranga National Park, Manas Wildlife Sanctuary (1985), Sundarban National Park (1987), Nanda Devi and Valley of Flowers National Park (1988), Western Ghats (2012), Great Himalaya National Park Conservation Area (2014). More six are in process of nomination (UNESCO World Heritage Desk Diary, 2016). Few of them having their own Visitor Interpretation Centres, the displays and engagement programme activities in these centres must possess the natural heritage value in such a manner so that it can transform the awareness in different circumstances to the mass.

Basis of the Topic

"McNeely's (1990) categorization of India as one the twelve mega diversity countries in the world paved the way for its placement on the World's conservation map" (Chatterjee, Salkia, Dutta, Ghosh, Pangging and Goswami; 2006: 7).

UNESCO provided funds in the natural heritage field for training courses in wetland management, wild lands planning, forestry, environmental education, agroforestry and management of protected areas in arid land. (World Heritage Information Kit, 2005) Mission of UNESCO states to encourage participation of the local population in the preservation of their cultural and natural heritage.

It is impossible to include all the rich natural heritage site of India in the list of UNESCO World Natural Heritage. Awareness about natural heritage and environment is the main aim and to fulfil it, the mass of the country must be connected with the subject. Beyond the national and regional museums of natural history, zoos, aquaria, botanic gardens; Interpretation Centres based on natural heritage are few of the institutions which have the capability to connect mass population. As these centres and their representation are much focused on the area they located. If touristic attraction sites with Natural Heritage possess visitor interpretation facility have better chance to connect viewers about the natural heritage. By this process it is easier to achieve the objective of awareness and spread the message about the need of nature in healthy human sustenance. The successful interpretation centre display interprets nature, thought and situation. It is only possible to understand the world around if one understands the nature.

Case Studies:
Salim Ali Visitor Interpretation Centre, Keoladeo National Park, Bharatpur

Bharatpur is a famous tourist destination of Rajasthan and specially prized for the National Park, which acts as the home of more than 300 species of birds including the migratory ones in winter months and many other faunal diversity. After the UNESCO declaration as World Natural Heritage site in 1985, Salim Ali Visitor Interpretation Centre inaugurated in 2006 and run by the joint collaboration with

Rajasthan Forest Department, World Wild Fund for Nature India and D Swarovski & co.

The Interpretation Centre named after Dr Salim Ali, one of the pioneer Indian ornithologists, who took a massive role in the development of Keoladeo National Park. The Centre reaches out to a wide range of people and provides information on the wetland and its unique characteristics through exhibits, nature trails, training and other resource materials. Their main aim is to protect the wetland ecology and habitat that ensure the National Park to support the vibrant biodiversity. Centre for Media Studies (CMS) in association with Wildlife Institute of India (WII) and Forest Department of Rajasthan organized a series of programmes from Salim Ali Visitor Interpretation Centre, Keoladeo National Park (UNESCO-IUCN Enhancing our Heritage Project: Technical Report, No. 8, 2005). These workshops, enhanced communications, interpretation skills and capabilities for effective tourism management are based from the Visitor Interpretation Centre. Different communities including local people, forest staff, forest officials, school groups and youth enhanced their communicative skill and knowledge about natural heritage interpretation through these projects.

Salim Ali Visitor Interpretation Centre received the award at the third International Conference, Wetland Link International (WLI) Symposium, held in Malaysia in November 23, 2010. The aim of the award is to identify and reward the best practice wetland centres in Asia. The centre contributed to deliver message on the importance of wetland, behavioural change in public and build capacity for communication, education, participation and awareness in public (CEPA) Programme in wetland conservation. Head of WLI, Mr Chris Rostron, said "Salim Ali Visitor Interpretation Centre has been awarded the award due to its great range of work, from education sessions with schools, to outreach work to local communities excluded from the park and working even with local people working in the Park itself" (Global recognition for Salim Ali Visitor Interpretation Centre, Bharatpur, 2010)

The Centre took the initiative to protect the ecological integrity of ecosystem by the interpretation material and displays. They engaged children of villages situated outside of the National Park in a long term project called "The Water for Life" and convey the message of environmental awareness. The programme engaged more than 1800 children in previous years. According to the recent data collected, more than 5,00,000 visitors visit it (Forest Department, Keoladeo National Park).

Interpretation Centre, Valley of Flowers National Park, Ghangaria
"The Himalaya has a rich flora. The total number including the subtropical species is about 9000" (Polunin, Stainton, 2001). The Valley of Flowers National Park houses approximately 600 species of flora among them 45 are medicinally important to the local community and many are endangered and endemic too. Nanda Devi and Valley

of Flowers National park enlisted in the UNESCO World Natural Heritage list in 1988, which is well known for its flora, shelters a huge faunal diversity too including snow leopard, musk deer, blue ship, ungulates, Himalayan vulture, Asiatic black bear, brown bear, etc. The "High biological diversity is often related to the forest cover of a region" (Chatterjee, Salkia, Dutta, Ghosh, Pangging and Goswami; 2006: 7) The Interpretation Centre established in 2013 and managed by an NGO (Eco Development Committee, Bhyundar [EDC], under NDBR, Forest Division, Joshimath). "The problem of solid waste is increasing at an alarming rate because of the heavy influx of tourists and insufficient management response" (Tiwari et al., 2010). This NGO has taken initiative to maintain the ecological balance by involving and transfer awareness to the local community. Cleanliness, Environment and Natural Heritage education by the display in the Interpretation Centre, awareness about the ecological balance, recycling and proper disposal of plastic are main aim of the Centre. They placed dustbin along the side of the path through the National park and non-bio-degradable waste collected in proper disposal bags.

The Centre provides Nature Guide to interpret the natural heritage to the interested visitors and nature lovers with a fixed charge. By the initiative of the NGO and the Interpretation Centre 50 tons, of old garbage was lifted from various points of 19 km route of Valley of Flowers National Park by the local community of village and sent for recycling. This has become a model in the state. Week-wise log of flowering and weathering time of different flowers is being prepared and kept in the Interpretation Centre so the interested viewers can get the information.
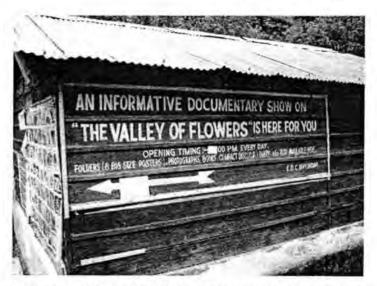

Plate 1: Wall poster to aware the visitors about the documentary show in the Interpretation Centre.

Plate 2: Message of recycle to save the nature on biodegradable carrier bag, used in the souvenir desk of Interpretation Centre.

"A fully equipped high-tech computer run reception-cum-information centre has been constructed at Ghangaria where film/slide shows about the park and its value has been shown to tourists daily. This served as educational centre to tourists who come for Hemkund Sahib and the park. It is being successfully run by three well trained local girls. Orientation courses for the local photographers and guides have been conducted at Ghangaria Interpretation Centre in which 264 local boys and girls have been trained. EDC and the Interpretation Centre very successfully introduced this awareness system by involving all the stake holders in a participatory process. This activity was awarded Prime Minister Award for Excellence in Public Administration in 2006" (Gangte, 2016).

According to the recent data collected, more than 1,00,000 visitors visit it (Forest Check Post, Valley of Flowers National Park).

Visitor Interpretation Centre, Guindy National Park, Chennai

The National Park is one of the smallest one in the country with many special features like its location in the mid of a metropolitan city, both in-situ and ex-situ conservation strategy. The National Park is rich in biodiversity especially in herpetic fauna. Chennai

Snake Park gained statutory recognition as a medium zoo from Central Zoo Authority in 1995 and established the Interpretation Centre in 2010, first of its kind digital infotainment based Visitor Interpretation Centre with static and dioramic display system. "India has around 300 species of Amphibians, 520 species of Reptiles and new species are being discovered at a rapid pace now and then" (Ganesh, 2015). The Interpretation Centre has almost all preserved representatives of amphibians and reptiles distributed throughout India. Additionally endemic species that are confined only to some biodiversity hot spots like Western Ghats, Himalaya eastern region, Andaman and Nicobar Islands are displayed in the collection. Valuable collection of herpetologists like J E Gray, A C L G Gunther, G A Bonlenger and Malcom Smith are included in the collection too.

With the aim of spreading awareness the centre organize nature camp for school students and workshops for interested participants. According to the recent data collected, more than 7,00,000 visitors visit it (Entry of Snake Park, Guindy National Park).
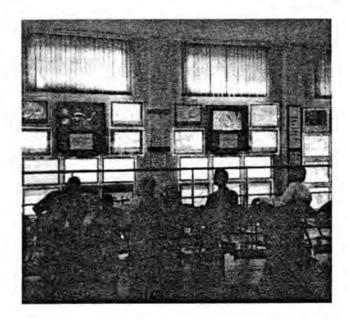

Plate 3: Infotainment based display engaging visitors of different age groups in the Interpretation centre.

Plate 4: Workshop organized to save snake biodiversity in the Interpretation Centre.

Conclusion

The findings from all three case studies strongly demonstrate the effectiveness of work to connecting mass; including visitors, local community of different economic level, school groups and nature lovers. World Heritage Sites belong to all the people of the World, irrespective of the territory on which they are located. (World Heritage Information Kit, 2005) The activities like those adopted by the centres yield positive results in awareness of Natural Heritage.

Alongside with the individual institutional try, it is necessary to bring all stakeholders of natural heritage of India to one platform to strengthen the campaign and spreading awareness, importance and knowledge about natural heritage. Recently National Biodiversity Authority (NBA) took the decision to incorporate the hands-on lesson and training activity on surrounding nature in the syllabus of State School Education System. West Bengal Syllabus Committee Chairman, Avik Mukherjee, stated "Biodiversity as a subject is already introduced in the syllabi of III-VIII standard and the hands-on training will trigger up the learning process," The Course will focus on educational visits to different institutions like Botanic gardens, Zoo, etc. Visitor Interpretation Centre dealing with Natural Heritage can help this programme too. The step is a positive attitude towards the bonding with natural heritage from childhood. Parthiba Basu of the Department of Zoology, University of

Calcutta, said "If Environmental conservation learning included in childhood curricula, the society will get the result in long term" (Tarafdar, ABP, March 25th 2017). Finally it can be said it is the time for the shift to Anthropocentrism to ecocentrism, which can save the mother Earth along the human beings.

Reference

Chatterjee, S, Saikia, A, Dutta, P, Ghosh, D, Pangging, G and Goswami, A. K. (2006). *Biodiversity Significance of North East India.* Retrieved on 15.02.2017 from http://trpenvis.nic.in/test/doc_files/BiodiversitySignificance NEIndia_WWF. pdf

Ganesh, R S, (2015). *An Illustrated Guide to Common Indian Amphibians & Reptiles.* Chennai: Chennai Snake Park Trust. pp. 2-3.

Gangte, B, (2016). *Ecotourism: An Opportunity for Conservation and Livelihood.* Retrieved on 06.02.2017 from http://www.teriuniversity.ac.in/mct/pdf/assignment/BK-Gangte.pdf

Global recognition for Salim Ali Visitor Interpretation Centre, Bharatpur. (2010). Retrieved on 06.02.2017 from https://www.wwfindia.org/?5120/salim-ali-visitor-interpretation-centre-bharatpur

Polunin, O, Stainton, A. (2001). *Flowers of Himalaya.* New Delhi: Oxford University Press. xxii.

Singh, et al. (2009). *Biodiversity Conservation and natural resources in North East India with special reference to Manipur.* NeBIO, 1(1)

Tarafdar, S, (25th March 2017). ABP: 6.

UNESCO-IUCN Enhancing our Heritage Project: Monitoring and Managing for Success in Natural World Heritage Sites, Technical Report No. 8. (2005). Retrieved on 21.03.2017 from http://whc.unesco.org/en/eoh/

UNESCO World Heritage Desk Diary. (2016). Paris.

World Heritage Information Kit, (2005). Paris: UNESCO World Heritage Centre. Retrieved on 11.03.2017 from http://whc.unesco.org

Stone Age Implements of Bagdiha: A Preliminary Observation

WORREL KUMAR BAIN

Abstract

During prehistoric period there were few nuclear zones where prehistoric population inhabited for a long time under favourable environmental and geographical condition and Bankura district of West Bengal is one of such regions which have yielded rich prehistoric cultural materials. There are many Stone Age sites in this district and among them Susunia hill and its adjoining areas on Gandheswari River valley is one of the conspicuous prehistoric cultural zone marked by Lower Palaeolithic to onward prehistoric cultural stage. It is one of the important regions in India where Quaternary deposits occur in association with Stone Age artefacts of all prehistoric cultural periods. The paper is based on the fieldwork near Bagdiha village which is located in the north eastern side of the Gandheswari River, a tributary of Dwarakeswar in Bankura district and it has reviled the implementiferous sediments of the area. Detailed study on the stone implements of this locality has been made. Besides this, the study also highlighted the palaeoenvironment of the locality.

Keywords : Bankura, Susunia Hill region, Bagdiha, Stratigraphy, Archaeological Findings, Culture Area.

Introduction

Humankind has been evolved over several million years by living in and utilizing 'nature' and by assimilating it into 'culture'. Indeed, the technological and cultural advancement of the species has been widely acknowledged to rest upon human domination and control of nature (Ellen & Fukui, 1996). Each geographical region in the world constitutes a special ecosystem – an interrelated habitat for plants and animals shaped by climate and terrain. These ecological factors have a strong effect on culture as well. As a part of nature, society arises out of an ecological basis that we cannot ignore. Most of the civilization both in its advance and decline reflects how people are able to manage their ecosystem which they lived in. Human culture derives largely from its first stage, i.e., Stone Age characterized by the ability

to make and use of stone tools. It is prominent that prehistoric people exploited and shaped their local environment for their survival.

In India, during Pleistocene period, Palaeolithic colonization had been evidently taken place in various eco-geographic zones on the basis of their survival requirements. The survival strategy and the modes of subsistence had been changed time to time. The strategic transformation from hunting gathering to that of deliberated food production was neither smooth nor easy to articulate. In fact the process of economic transformation did not happened radically. There were few nuclear zones where the transformation of the mode of subsistence patterns of our early ancestors initiated under favourable environmental and geographical conditions.

West Bengal comprises an area about 87,616 sq.km. which lies between the geographical coordinates of $21^0 38$ N $- 27^0 10$ N and $87^0 49$ E $- 89^0 50$E and divided primarily into three geomorphological regions, viz., (1) Extra Peninsular region of north, (2) Peninsular mass of the south west and (3) Alluvial and deltaic plains of the south and east (GSI,1974). Of these regions, the south western part constitutes a rolling upland with the presence of several hills and virtually an extension of Chota Nagpur Plateau. The districts come under this region are Purulia, Bankura, West Midnapur, two small segments of Western Burdwan and a part of western Birbhum.

The present surface of this region has been derived many through the process of degradation. This tract of the land is considered as the old landmass of West Bengal and the Achaean representing the oldest rocks in the form of Gneiss and Schist are exposed in places. The whole land surface consists of alternate ridges and depression (Samanta, 1992).

The evidence of past human culture in India dated back to about two million years ago and found from various eco-geographical zones. The ancestry of human culture in the state West Bengal can be traced back to the earliest cultural phase, i.e., Palaeolithic. The Palaeolithic culture of West Bengal has been reported mainly from the south western part. Cultural evidences of the prehistoric past of this part of West Bengal have been reported from the districts of this region which are mentioned above by the investigator.

Bankura, a district situated in the south western part of West Bengal, is the important landmark for the evidences of the prehistoric cultures. Large numbers of Stone Age locality of different prehistoric cultural phase have been reported from various parts of this district and among them Susunia hill region and its surrounding area are most important for archaeological as well as Palaeontological study. This region gives important insight about the sequence of Stone Age culture of Bengal Basin. This area is significant for Indian archaeology because large numbers of stone artefacts have been reported from this area (IAR, 1965; 1966; 1967). From the artefact typology and its stratigraphic interpretation suggest that prehistoric colonization occurred in this region from Middle Pleistocene.

The Susunia hill and its adjoining regions were firstly explored by the Directorate of Archaeology, Government of West Bengal on the supervision of P C Dasgupta and discovered not less than forty Stone Age localities and collected more than thousand artefacts (Dasgupta, 1963; 1966). This work was path breaking due to lots of Stone Age sites in this area as well as volume of collection. Unfortunately, his antiquarian approach failed to gather relevant data for the reconstruction of the implementiferous geo chronological horizons yielding different categories of lithic artefacts ranging from Palaeolithic to polished stone artefacts (Neolith). The significance of this discovery lies in the fact that the work helped the archaeologists to identify the area surrounding the Susunia hill as a geographical zone associated with the movement of prehistoric man. After that Archaeological Survey of India investigated this hill region and found good amount of Stone Age implements. They tried to reconstruct the Pleistocene environment on the basis of exposed stratigraphic sections as well as few trial excavations (IAR, 1965; 1966; 1967). Archaeology and Museum unit of Department of History, University of Delhi, explored and excavated this area in connection with their investigation on the prehistory of West Bengal and adjoining regions of Chota Nagpur, Jharkhand and Odisha during 1981-1984 (Chakraborty et al 1982a & 1982b; Chakraborty and Chattopadhyay, 1984a & 1984b). Studies on Susunia hill region was also conducted by University of Calcutta (Bhattacharya, 1990) and Anthropological Survey of India (Sankhyan et al, 2009). Bhattacharya's work has given some important insight about the geo-archaeological context of this area and on the other hand Anthropological Survey of India's study has given the comparisons between lithic and Pleistocene fossil remains of Susunia hill area and Central Narmada Valley. This area is also explored by Dutta and his study reveals that Gandheswari river valley is one of the most important focal areas of the Acheulean culture of West Bengal (Dutta, 2009). Though the history of the archaeological study of south western part of West Bengal dated back almost one and half century, the study of the remains of the animals which reigned on the earth along with primitive man in remote past is not very old. During the sixties of twentieth century, Directorate of Archaeology, Government of West Bengal recovered some vertebrate fossils around the Stone Age localities in Susunia hill area. These collections were later studied by Geological Survey of India and they also made survey in that region to obtain geological data and collected more fossil remains (Sastry, 1968). A number of important fossils mostly of mammals like *Palacoxodon namadicus, Bubalus palaendicus, Equus namadicus, Bos namadicus*, etc., were collected during this exploration and according to Geological Survey of India; the age of the collected fossil remains belongs to Upper Pleistocene. In this context, study of Anthropological Survey of India give important information about the age of the fossil remains and according to them, the fossil remains of Susunia hill region are very much similar to the Late Middle Pleistocene to Early Late Pleistocene
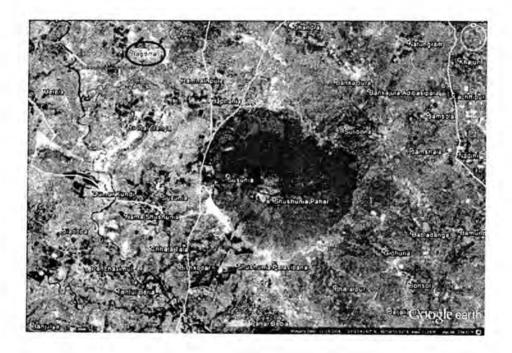
Narmada Fauna (Sankhyan et al, 2009). Dutta (1976) found the fossil remains of Asian lion and spotted hyena from Susunia which are the most important findings for the Palaeontological studies in India. Zoological Survey of India during 1969 studied Susunia hill region and found large number of fossil remains such as *Bos* sp., *Miotragoceros cf. punjabicus*, etc. (Banerjee and Saha, 1976; Banerjee et al. 1987), and they also found the fossil remains of giraffe from this area (Banerjee & Ghosh, 1977).

Physiographic and Geological Context of the Studied Area and its Surroundings

Bankura, a district of the state of West Bengal has been described as the link between the plains of Bengal on the east and Chota Nagpur plateau on the west. Geographically, the district Bankura is divided into three categories, *viz.*, (a) the hilly zone of west, (b) the undulating red soil area of the centre and the alluvial flat plain in the east (Neogi, 2011). The greater portion of the district consists of a rolling country covered by laterite and alluvium while metamorphic or gneissose rocks are found to be the extreme west, to the east there is a wide plain of recent alluvium. The most characteristic geological feature of the district is the area of the laterite and associated rocks of sand and gravel. According to Ghosh (1966a), laterite is a peculiar formation in India and is most wide spread during Pleistocene in peninsular region. Besides India, other tropical regions like Africa, Burma, etc., also contain laterite and the particular process which among the geologist is commonly called laterization.

North-Western Bankura is a tract of open rolling land where the monotony is interrupted only few isolated hills like Susunia and Biharinath. Susunia hill is situated in the western part of the district. The area has the evidence of denudation of the Chota Nagpur plateau. There are also some residual flat top, low hill of Pre-Cambrian age which are deeply weathered forming lateritic crusts at the top. There are older rocks of the Archean system like dolerite, granite, gneiss, schist, quartz, quartzite and lime stone while the Gondwana system include sand stone (Neogi, 2011). The rivers of the area flow from the north-east to the south-west in courses roughly parallel to one another. They are mostly hill streams rising from the upland portion of this district and having only a seasonal flow of water during an immediate after the rainy season. In the western part of this district, the rivers mostly flow between well consolidated banks formed of older alluvial deposits with lateritic capped rock cropping up here and there towards the reams approach the flat alluvial plains. The banks of the rivers are composed of unconsolidated sand and silt which have allowed some changes in general course of the rivers over years. The most prevalent soil type in this region is red soil with distribution of ferruginous concretion. A calcareous brown soil having nodules of $CaCO_3$ at different of the soil profile is frequently found.

Gandheswari, a tributary of Dwarakeswar River is flowing from north-west direction to south-west direction of Susunia hill. Gandheswari and some of its channel is the main water flow of this region. This river is originated in the north-western part of Chhatna and covering a length of 32 kilometres from the source to mouth. The valley of this river is one of the important areas where geomorphological units are associated with Stone Age lithic assemblage. According to Dutta (2009, this valley documents sites from Acheulean culture onwards. According to Neogi (2011), the soils and the palaeosols of this area are the source of information for paleo ecology and human occupations and can provide amazing details of early hominin environmental condition.
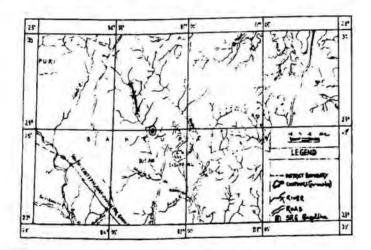

Location of the Site Bagdiha and the river Gandheswari (Image taken from Google Earth)

Panoramic Views of the Site

The present study has been carried out near the Bagdiha Village (23°25' N; 86°59'30 E) of Chhatna block of Bankura district. The site is situated near a channel of Gandheswari named Bali. The author has chosen this locality because earlier studies paid less attention in this particular Stone Age locality.

Topographic Map of the Area locating the site Bagdiha
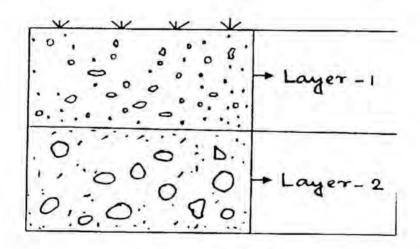
Stratigraphic Observation

Large numbers of exposed section have been observed during study. The natural slope is form north-north west to south-south east direction. Besides the exposed sections, a numbers of bed rock are exposed in studied locality. Local earth quarries (from where local people collected sticky coloured clay to build, repair and decorated their houses) have been observed. It is important to note that, in some places the local cultivators in their endeavour to convert unfertile and pebbly land surface to

the plots of cultivable fields, did reclamation by removing the sheet of upper most surface. Few depositional mounds have taken place along the bank of the river channel Bali.

During present investigation, Pleistocene stratigraphy of this region is understood from naturally exposed section of Quaternary deposits. It has been noticed that Pleistocene deposit of this area is mostly fluvial in origin. Pleistocene sedimentary beds as identified from the observation at different places of the same locality reveal geomorphological sequence of depositional events. The rock at the bottom of few exposed sections is Archean. There are six exposed sections are studied.
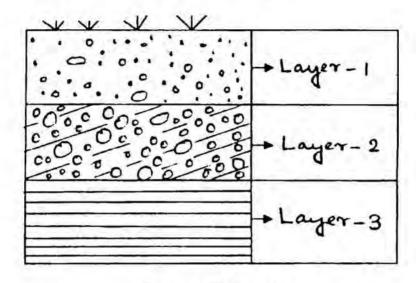
Section 1

From the section, two layers have been identified. Layer 1 consists of alluvial soil, sand and murum. The texture of this layer is not fine. Layer 2 consists of lateritic soil with murum, lose gravels and silt. The texture of this layer is coarse.
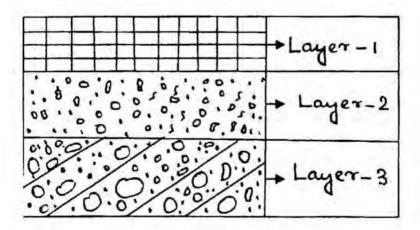

Stratigraphy – Section 1

Section 2

There are three layers have been observed from this section. Layer 1 consists of top soil and small gravels, Layer 2 consists of laterite, gravel and boulder and the texture of this layer is coarse. The colour of this layer is reddish. Third layer is consisting of mottled clay.
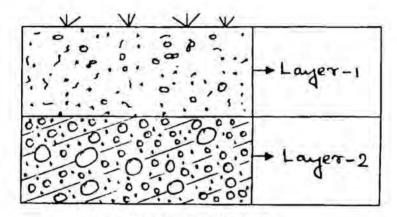
Stratigraphy – Section 2

Section 3

This section is very close to the channel, Bali. Like section 2, three layers are also observed from this section. Layer 1 consists of yellow silty clayey soil. Layer 2 made of yellow to Yellowish brown silty loam with kankar and layer 3 consists of lateritic mixed with pebble and cobble.
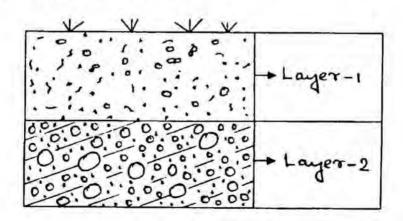

Stratigraphy – Section 3

Section 4

Two layers have been observed from this section. Alluvial soil along with sand and murum made the Layer 1. The texture of this layer is not fine and it is yellowish brown in colour. Layer 2 consists of laterite, murum, gravel and silt. Its texture is coarse.
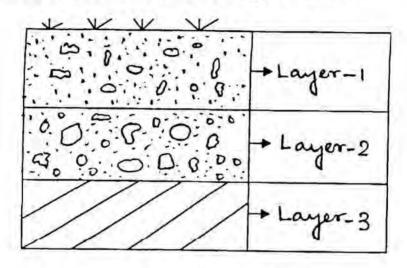

Stratigraphy – Section 4

Section 5

This section is situated near the Gandheswari River where channel Bali joins with her. Three layers have been observed from the section. Layer 3 is consisting of bed rock. The bed rock is capped by a layer consists of lateritic nodules, fine grained laterite, loose gravels of various sized and silt which is layer 2. Layer 1 consists of recent alluvial deposition with calcrete.

Stratigraphy – Section 5

Section 6

From this section, three layers have been observed. Layer 1 consists of recent alluvial deposition mixed with sand and calcrete. Layer 2 consists of lose gravels of various sized and mixed with murum and the Layer 3 is bed rock.

Stratigraphy – Section 6

During investigation it has been noticed that, the oldest Quaternary deposit of this locality either lateritic gravel bed or an extended braided stream deposit of gravel, boulder, pebble and sand. The bed of braided stream deposit has been observed in this locality. The bed is mostly greyish yellow sandy clayey material cemented by calcium carbonate. The shape of the gravels and pebbles varied from rounder to sun rounder. The deposit does not show regular order of sorting and remains ungraded and unstratified. It has been observed that this deposit in some cases rests on bed rock. It has been also noticed that, in some exposed sections the bed rock is capped by loose gravels, lateritic nodules (murum) and silt. This layer is underlined by recent alluvial deposition mixed with calcrete nodules and kankar.

Archaeological Findings and Analysis

Cultural evidence of prehistoric past has been recovered both surface and stratified in-situ context from the studied locality. It is important to mention that, most of the Stone Age artefacts of this area have been found abundantly from the surface. Altogether 115 stone artefacts have been recovered including both finished and unfinished artefacts.

Typology

Among the 115 specimens, 87 specimens have been selected for classification as core, flake and finished tools and others are classified as unfinished and broken tools. Out of 87 specimens, there are 15 cores, 27 flakes and 45 finished tools. Finished tools have been classified as pebble tools, flake tools and blade tools. Among the 45 tools, there are 9 pebble tools, 31 flake tools and 5 blade tools. Out of 9 pebble tools, there are 4 hand axes, 2 scrapers and 3 choppers; among the flake tools, there are 19 scrapers, 3 knives, 4 borers and 5 points. Among the blade tools, there only one type of artefact has been found, i.e., flake blade.

After a detailed analysis on recovered lithic specimens, it can be suggests that typologically the pebble tools seems to be Lower Palaeolithic in nature and the flake tools come under Middle Palaeolithic period and onward cultural phases. Scrapers are divided into four types, *viz.*, side scrapers, double sided scrapers, end scrapers and side cum end scrapers. Among the knives, one blunted backed knife has been observed. Points are bifacial in nature. Among the flake blades, two flake blades are retouched along its margin and rests are unretouched. 12 unfinished tools and 16 broken tools have been identified from the total spacemen. Investigator previously discussed that most of the artefacts were collected from surface so the stratigraphic context of that artefacts is unknown to him. Table 1 shows the percentage value of the total lithic specimen, Table 2 shows percentage value of finished tools based on typology and Table 3 shows the percentage of finished tools based on stone tool tradition.

Table 1: Percentage of total lithic specimens

ARTEFACT TYPES	NUMBERS	PERCENTAGE
Core	15	13.04
Flake	27	23.48
Finished tools	45	39.13
Unfinished tools	12	10.43
Broken tools	16	13.92
Total	**115**	**100**

Analysis of Table 1

Table 1 shows that among the lithic specimens, percentage of finished tool is highest (39.13) and percentage of unfinished tools is lowest (10.43). The percentage figures of table 1 are reflected in following pie chart.
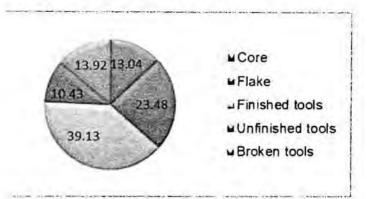
Legend:
- Core
- Flake
- Finished tools
- Unfinished tools
- Broken tools

(Pie chart values: 13.92, 13.04, 10.43, 23.48, 39.13)

Table 2: Percentage of finished tools based on typology

Artefact Types	Artefact Subtypes	Numbers	Percentage
Hand axe	Triangular	3	6.67
	Almond	1	2.22
Total		4	8.89
Chopper	Bifacial	3	6.66
Total		3	6.66
Scraper	Side Scraper	9	20
	Double sided Scraper	4	8.89
	End Scraper	6	13.35
	Side cum End Scraper	2	4.44
Total		21	46.68
Knife	Large Knife	2	4.44
	Blunted backed Knife	1	2.22
Total		3	6.66
Borer		4	8.89
Total		4	8.89
Point	Unifacial Point	3	6.67
	Bifacial Point	2	4.44
Total		5	11.11
Flake Blade		5	11.11
Total		5	11.11
Grand Total		45	100

Analysis of Table 2

Table 2 shows that among the finished tools which are recovered during **present** study, percentage of scraper is highest and that is 46.68. It is dominated over other tool types such as hand axe (8.89%), chopper (6.66%), knife (6.66%), borer (8.89%), point (11.11%) and flake blade (11.11%). The percentage figures of Table 2 reflected in following pie chart.
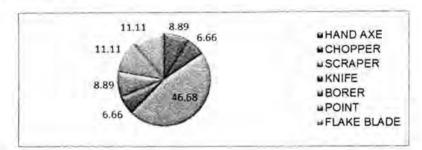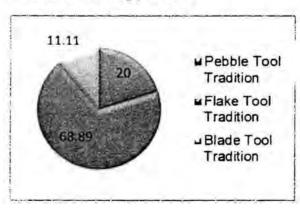

Table 3: Percentage of finished tools based on stone tool tradition

Artefact Tradition	Number	Percentage
Pebble Tool Tradition	9	20
Flake Tool Tradition	31	68.89
Blade Tool Tradition	5	11.11
Total	45	100

Analysis of Table 3

Table 3 shows among the finished tools which are recovered during present investigation, 20% tools come under pebble tool tradition, 68.89% tools come under flake tool tradition and 11.11% tools come under blade tool tradition. The percentage figures of table 3 reflected in following pie chart.
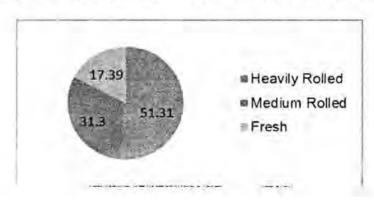
State of Preservation

The artefacts which are recovered from surface, most of them are weathered and patinated due to natural forces like river action or the nature of the deposition. According to Ray et al. (2010) the preservation of the artefacts not only depends on the physical forces of nature and post depositional environment but also on the nature of the raw materials that were used to make those artefacts and the relative age of the artefact also. It is interesting to observe that the artefacts that were recovered from cemented boulder gravel deposit show extensive rolling and on the other hand, the artefacts that were recovered from surface of alluvium mixed with murum, quartz particles show relatively less rolled than the artefacts that were recovered from boulder gravel deposition. Artefacts, recovered from loose gravel mixed with yellowish brown silt, kankar and calcrete nodules, show its freshness condition. The rolled artefacts, which were recovered from the studied locality, indicate that they were transported fluvially from other place and deposited here. Table 4 shows the percentage value of the artefacts based on their state of preservation.

Table 4: Percentage of artefacts based on their state of preservation

Type of preservation	Numbers	Percentage
Heavily Rolled	59	51.31
Medium Rolled	36	31.30
Fresh	20	17.39
All Total	115	100

Analysis of Table 4

Table 4 shows that, in the studied lithic artefacts of the site, the percentage of heavily rolled artefact is highest and that is (51.31) and the percentage of fresh artefacts is lowest, that is (17.39) and the corresponding percentage of medium rolled artefact is (31.30). The percentage figures of table 4 reflected in following pie chart.
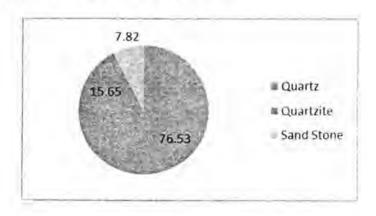
Raw Material

Quartz, quartzite and sand stone were used as raw materials for manufacturing the artefacts. During investigation it has been observed that a large numbers of above said rock types situated in and around the studied area as gravels, pebbles. The heavy duty artefacts such as hand axe, chopper and few scrapers are made on quartzite. It has been observed that hand axe is also made of quartz. Light duty artefacts such as scraper, borer, point, and knife are made of quartz. Few scrapers are made on sand stone also. Various types of quartz such as milky quartz, cherty quartz and glassy quartz were exploited to manufacture the artefacts. Table 5 shows the frequency distribution of raw material types of the recovered lithic assemblage.

Table 5: Percentage of raw material types in total lithic assemblage

Raw material types	Numbers	Percentage
Quartz	88	76.53
Quartzite	18	15.65
Sand Stone	9	7.82
Total	115	100

Analysis of Table 5

Table 5 shows that the percentage of the quartz as raw material is high (76.53) in total lithic assemblage. Out of 115 specimens, 88 Specimens are made of quartz, 18 are made of quartzite and 9 are made of sand stone. As raw materials, the percentage of quartzite and sand stone are 15.65 and 7.82. The percentage figures of Table 5 are reflected in the following pie chart.

Brief Description of the Recovered Artefacts

Artefacts Recovered from the Area of Study

Hand axe

Hand axes made on pebble core. They have flake scars on both surfaces. The nature of flake scars indicates the hard hammer percussion. The tool shows variation both in shape and size. The shapes of the hand axes are almond and triangular (see, Table 2).

Typologically the hand axes look like early Acheulean because they have lack of sense of refinement and possess thick mid sections and large flake scars. One hand axe shows few secondary flake scars along its margin. Most of the hand axes are rolled and patinated. It suggests that these artefacts are transported fluvially from other place or places.

Hand axe lying on the surface of the Site

Chopper

Choppers of the studied locality are bifacially flaked. They are made of quartz pebbles. The workmanship of these tools is crude in nature. The artefacts have pebbly cortex at the butt end covering both dorsal and ventral surface. Secondary flake scars are completely absent. The nature and the type of flake scars on the choppers indicate direct percussion method.

Chopper lying on the surface of the site

Scraper

Scrapers are made on both pebble core and flake. Dimension of the scrapers vary (see Table 6). Both quartzite and quartz are exploited for manufacturing the tools. Scrapers made on pebble core show deep flake scars which are primary in nature and less in numbers but the scrapers made on flakes have small flake scars than the scrapers made on core. It is important to note that the scrapers made on flake have small flake scars along the working edge of the tools with alternate order. Nature of the flake scars on scrapers show hard hammer percussion. During analysis, it has been observed some scrapers on flake have slightly convex cutting edge and others have straight cutting edge. The investigator has mentioned earlier about the types of the scrapers which he have recovered from the study area. End scrapers have step ended flake scars along its working end. Some scrapers have faceted platforms.

Scrapers after Analysis

Borer

Borers are made on cherty quartz as well as milky quartz. The tools show prominent bulb of percussion. Very few borers have faceted striking platform. One borer has defused bulb of percussion which indicates the soft hammer percussion technique. The dorsal surface of the borers possesses flake scars and they are small in size. Working area of the artefacts carries very low amount of retouching.

Point

Points are made on flake. It has two shapes such as elongated and triangular. Few points show defused bulb of percussion. The tip portion of most of the artefacts is mostly unworked. The artefacts are quite fresh in nature than the other artefacts which are recovered from the same locality. Few artefacts carry faceted platform.

Point

Knife

The tools are mainly made on large flake. Flake shows prominent bulb of percussion. The knives generally bear thick natural back on one side and a cutting edge with regular retouching on another side. Small flake scars are found along the working end of the artefacts.

Flake Blade

Flake Blades generally bear narrow and plain platform. The tools show tiny bulb of percussion which is the indication of soft hammer percussion. Very few tools are retouched and retouching has been observed along the margins. The tools bear faceted platform.
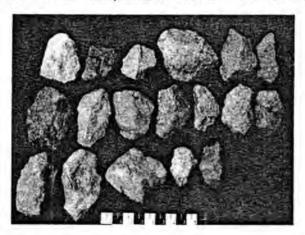
Broken and Unfinished Tools

Altogether 16 broken and 12 unfinished tools have been recovered during

investigation (see Table 1). Broken tools are mostly made on quartz and the unfinished tools are made on quartz and quartzite. Few broken tools show bulbar surface of flake detachment. They have faceted platform. The investigator is unable to find the typological attributes from the broken tools. However from the size and shape of some recovered broken tools, it appears that they are scraping tools and one tool indicates the tip portion of a pointed tool. Unfinished tools show very few flake scars on their dorsal surface. They are rolled and weathered in nature. Few flake scars of the artefacts are large and deep. There are no alternate flaking is found along the edges of the tools.

Flake

Both retouched and un-retouched flakes have analysed and regular retouching has been found along the margins of some flakes. Small flake scars have been noticed in flakes. Some flakes are angular and few are rectangular in shape. Some flakes have concave shapes. Large flakes bear flake scars on its dorsal surfaces. Retouched flakes show both large and small shallow flake scars. Few flakes show cortical platform surface. Faceted platforms also observed in some flakes.

Flakes

Core

The detailed analysis on cores shows that most of the cores bear scars over its body and few cores have some amount of cortex. Cores prominently show negative bulb of percussion. Pebble cores are big in size and for flake cores, in most cases they are flaked along the periphery and have centrally directed flake scars.

Table 6: Metric value of the recovered artefacts

Artefact types	Dimension					
	Length (cm)		Breadth (cm)		Thickness (cm)	
	Max.	Min.	Max.	Min.	Max.	Min.
Hand axe	13.8	10.9	10.1	6.4	5.8	3.7
Chopper	9.4	8.1	8	7.8	5.6	4.6
Scraper	9.6	5.1	6.9	2.5	3.2	1.7
Borer	5.3	5	4.5	4.1	2.4	1.5
Point	6.3	3.9	4.9	3	1.3	1.1
Knife	10	5.8	6.5	4.8	3.8	2.6
Flake Blade	7.2	5.1	3.5	1.7	2	1.4
Flake	8	2.1	7.5	0.8	3.2	1.2
Core	9.8	4.2	8.2	3.7	6.4	4.1

Analysis of Table 6

So far the dimension of the artefacts are concerned, the pebble tools are bigger and longer than flake tools. The table clearly shows that lower Palaeolithic tools such as hand axe, chopper is larger than middle Palaeolithic tools such as scrapers, borer, etc., and the tools of onward cultural stages which have recovered from the studied locality. So it can be say that due to use of various stone tool manufacturing technologies as well as available raw material size and shape, the dimension (such as length, breadth and thickness) of the tools has changed.

Observation

The behavioural evidence of the past people such as stone tools and other remains such as habitational structures, faunal remains, etc., directly reflect human activity. Among the behavioural evidences of past human, the lithic remains are most important because it is one of the best signatures of our ancestor during prehistoric times. These remains give more detailed picture of the past human behaviour and it is the common prehistoric cultural remains available to us. Susunia hill and its surrounding region is important for Stone Age cultures for eastern India and this region is one of the key area where stone age artefacts are associated with Pleistocene mammalian fauna. As the investigator previously stated that why he has chosen this locality for study so from his point of view, the present study is a primary attempt to make some observation on the Stone Age implements as well as the quaternary deposit of the site. Present study reveals that lithic assemblages related to the Stone Age people activity in Susunia hill region and its surrounding

areas begins effectively with the use of Acheulean variety of Lower Palaeolithic artefacts. The site Bagdiha eventually provides both finished and unfinished artefacts belonging specifically to Palaeolithic culture of Eastern India. A detailed and descriptive study on recovered artefacts unfolds the exact typological understanding regarding various Palaeolithic artefacts manufactured and used by early man. Detailed study on geography and topography of the area suggests that due to available food recourses, water as well as enough raw materials for making artefacts incest prehistoric population to inhabit here. All these facilities made this area one of the earliest habitat of Stone Age people in Eastern India. The study has also revealed the availability of different raw materials used by the prehistoric man for manufacturing their desirable tools. As most of the tools are made on quartz, it should be accounted the degree of manufacturing skills for the work specific tools. The craftsmanship employed making Acheulean artefacts on quartz, sand stone can compare with the highest skill of tool making technology of the Acheulean man in the global context. The study also gives some important geomorphological observation about the studied locality which helps to reconstruct the paleo environment of the area. The study shows that the area which is close to Gandheswari River influenced by climatic change. As a result, the gravels, pebbles and silt are found in the exposed sections. It is interesting to mention that the places away from Gandheswari River, a thick deposition of secondary laterite has been observed. It may be suggested that primary laterite being weathered, had come down and deposited in the lower level. This area has experienced wet and dry climatic cycles of Pleistocene period. The forces of water flowing in the river transported large amount of gravels, pebbles and other natural objects which has changed the landscape of the studied locality to a great extent.

It is previously stated that Susunia hill region of Bankura district of West Bengal is an important land mark for the Stone Age cultures. Different types of stone tools of various cultural periods suggest that our early ancestors inhabited in this eco-geographic zone for a long period of time due to favourable environmental condition. In the studied locality man-land relationship has been observed. The geomorphological units which are associated with prehistoric lithic assemblages show the mode of interaction between man and environment. Also the soil and palaeosol are the source of information for paleoecology and human occupations and it gives amazing details of early hominin environmental conditions of this part of West Bengal. The stone tools of this region are mostly recovered from in and around the channels of Gandheswari River. Few are recovered close to the main river course. During prehistoric time the area has been frequently exposed to flood and present study shows that Quaternary stratigraphy of this region is of fluvial origin. But various channels and runnels of Gandheswari were not exposed the same way

and for this reason Palaeolithic population of this area preferred to live near the channels of the main river. From the field study this issue has been encountered and as a result a good amount of cultural materials of prehistoric past of this area have been recovered in and around the channels. The study of landscape in archaeology is generally called as Landscape Archaeology. It studies the ways in which people constituted and used the environment around them. The key feature that distinguishes Landscape archaeology from other archaeological approaches to sites, reveal that there is an explicit emphasis on site's relationships between material culture, human alteration of land/ cultural modification to landscape and the natural environment. The study of landscape archaeology sometimes referred to as the archaeology of the cultural landscape. Present study has touched some aspects of Landscape archaeology. The Susunia hill area can be considered as a Palaeolithic cultural zone. Among the stone tools that are recovered in present study as well as previous studies by different scholars exhibits large numbers of palaeoliths. Though cultural artefacts of onward cultural phases have been recovered but they are quite less in numbers and not frequently found. Another important observation is that among the reported Stone Age sites of this region, the Palaeolithic sites are huge in number. Palaeolithic artefacts of this region are dominated by Acheulean. It can be suggested that this region is the eastern most extension of the Acheulean cultural zone of the subcontinent. If we look at the Stone Age subsistence pattern of this region we can observe that they were hunters and gatherers. The inference may be drawn from the fact that large number of palaeoliths has been recovered such as hand axe, cleaver, chopper, and large scrapers, etc., which are typical to the hunting gathering mode of subsistence of our early ancestors. It has been observed that characteristic palaeoliths are associated with the artefacts of onward cultural periods. One can say that hunting gathering as a mode of subsistence pattern survived in this region for a long period.

In the light of the above we can say that Susunia hill region and its surrounding area is the prehistoric cultural zone or cultural area dominated by Palaeoliths. In anthropology, a cultural region/cultural area/ culture area refers to a geographical area with one relatively homogenous human activity or complex of activities. These often associated with an ethno-linguistic group and the territory it inhabits. The concept of culture area was originated by museum curators and ethnologists during the late 1800s as means of arranging exhibits. The Culture area is a concept in which a geographic region and time sequence is characterized by substantially uniform environment and culture. In Susunia area, the Palaeolithic culture had sustained for a long time. Due to lack of hominid fossil remains in this region we are unable to get the information about the people of that contemporary time period but on the basis of stone tools, this area can be considered as prehistoric cultural zone of West Bengal.

References

Banerjee, S and Saha, U. (1976) "On the occurrence of *Bos namadicus falconer* from the prehistoric site Susunia, District Bankura, West Bengal." *Current Science*, 45(5): 186-187

Banerjee, S; Saha, K D and Roy, S K. (1987) "Occurrence of fossil *Miotragocerus cf. punjabicus* (Pilgrim) Mammalian. Artiodactyla: Bovide from the Pleistocene deposits of Susunia, Bankura, West Bengal." *Bull. Surv. India.* 8 (1-13): 67-70

Banerjee, S and Ghosh, M. (1977) "On the occurrence of Giraffe, *Giraffe cf. camelopardalis brisson* from the prehistoric site Susunia." *Calcutta*, 43: 368-370

Bhattacharya, M B. (1990) "Prehistoric Industries and Geochronology of the Gandheswari: A Geo-Cultural study in the Upland Bengal." *Journal of the Indian Anthropological Society*, 25(1): 82-87

Chakrabarty, D K; Bhattacharya, D K and Chattopadhyay, R K. (1982a) "Lithic Industries of Bankura. *Puratattava*, 11: 39-48

Chakrabarty, D K; Bhattacharya, D K and Chattopadhyay, R K. (1982b) "Lithic Industries of Purulia." *Man and Environment*, 7: 131-141

Chakrabarty, D K and Chattopadhyay, R K. (1984a) "Prehistoric Stratigraphy in West Bengal: The evidence from Burdwan and Midnapur." *Man and Environment*, 8: 39-48

Chakrabarty, D K and Chattopadhyay, R K. (1984b) "The lithic industries of Tarapheni and Bhairabbanki valleys, West Bengal." *The Calcutta Review*, 1: 41-43

Dasgupta, P C. (1963) "Archaeological discovery in West Bengal." *Bulletin No – 1. Directorate of Archaeology, Government of West Bengal.*

Dasgupta, P C. (1966). *Exploring Bengal's Past.* Calcutta.

Dutta, A K. (1976) "Occurrence of fossil lion and spotted hyaena from Pleistocene deposits of Susunia, Bankura, West Bengal." *Journal of Geological Society of India*, 17(3): 386-391

Dutta, A K. (2009) "Understanding Acheulean Culture in Gandheswari river valley, Bankura, West Bengal, India." In R. Ray & V. Jayaswal (Eds.), *Status of prehistoric studies in the twenty first century in India* (pp. 25-33). Bar International Series. England: Archaeo Press

Ellen, R F and Fukui, K (Eds.). (1996) *Redefining Nature: Ecology, Culture, and Domestication.* Washington DC: Berg

Ghosh, A K. (1966a). The Stone Age Culture of West Bengal. Unpublished PRS Thesis. Calcutta University

GSI. (1974) *Miscellaneous Publication*, 30: 135-143

IAR. (1965) *Indian Archaeology – A Review*

IAR. (1966) *Indian Archaeology – A Review*

IAR. (1967) *Indian Archaeology – A Review*

Neogi, S. (2011) "Scope of Geoarchaeology in depicting the Early Hominin Environment in the Gandheswari River Basin of Bankura district, West Bengal." *The Indian Journal of Spatial Science*, ii (2): 1-4

Sastry, M V A. (1968) "Pleistocene vertebrates from Susunia, Bankura district, West Bengal." *Indian Minerals*, 20 (2), 195-197

Samanta, B. (1992) "Newly discovered Stone Age sites in Purulia." *Pratna Samiksha*. Directorate of Archaeology. Government of West Bengal, 1: 61-64

Sankhyan, A R; Dewangan, L N; Chakraborty, S; Prabha, S; Kundu, S and Rao, V R. (2009) "Re-looking at Prehistoric Susunia, West Bengal." In A R Sankhyan (Ed.), *Asian Perspectives on Human Evolution* (pp. 154-158), India: Serials Publications

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ISSN: 2278-9685 (Print)

UGC Approved Journal (Sl. No. 47757)

Frequency: Annual

Journal of the Department of Museology, published by the University of Calcutta, is a refereed journal for the Museologists and museum professionals, including students and research scholars. Museology being multi-disciplinary in nature, contributions of papers from the related disciplines of natural & social sciences, and art & humanities are also welcome. It is published since 2002.

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